

## **Social participation, altruism and learning opportunism: A phenomenography of adults' learning through workplace experiences in rural community volunteering**

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*Workplace experiences are central to adults' learning and development, providing opportunities for significant and valuable lifelong learning. Research into adults' learning in volunteer work attests to its significance and value across the spectrum of adult learning, serving instrumental, social, and altruistic purposes for the learner and enriching lives through furnishing individual, collective and broader community benefits. But how does adults' learning through workplace experiences in community volunteering contribute to their agency and lifelong learning while also generating wider collective benefits? What are people learning, and what are the learning incentives, processes, mechanisms and affordances at play? This article reports selected findings from a phenomenographic investigation into a group of community volunteers' experiences of workplace learning in a social enterprise in an Australian rural town coming to grips with transitioning to life in a digital era. The findings illuminate the experience of community-based workplace learning from the adult learner's perspective, and specifically, learning embedded in social participation in rural community volunteering and associational life, providing new insights about adults' experience of*

*learning through volunteering in the interests of understanding and furthering their own lifelong learning and development goals while contributing to their communities of interest, practice and place.*

**Keywords:** *lifelong learning, adult learning, informal learning, community volunteering, community informatics, phenomenography*

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## **Introduction**

Adults' experiences of volunteering are as diverse as the purposes for and circumstances of their engagement. Studies of volunteering in rural Australia report differences between volunteering in metropolitan and rural areas related to demographics and the nature of employment and associational life in rural communities, highlighting overlapping networks, fewer available resources and a preference for informal learning among rural volunteers (Kilpatrick et al, 2010; McLachlan & Arden, 2009; Davies & Lockstone-Binney, 2018). There are also different types of volunteers, ranging from "classic community volunteers" with a regular and sustained commitment to one or more groups or organisations to "episodic volunteers", whose volunteering is likely to be more conditional on meeting their own needs (Schugurensky et al., 2010, p. 82). Notwithstanding this diversity, when individuals choose to contribute their time and skills – or labour – to a local community group or organisation with a service mission, they are invariably participating in work activities, and concomitantly, workplace learning experiences.

When considering settings for community volunteering, so-called 'third sector', or 'civil society' models – such as place-based learning communities, neighbourhood houses, men's and women's sheds, charitable organisations and other social enterprises – are well situated to afford the kinds of learning opportunities that cater for diverse adult learners' development needs, goals and lifespan trajectories. This article draws on the findings of an investigation into volunteers' experiences of workplace learning in a community organisation in an Australian rural town seeking to harness the possibilities presented by digital technologies and the Internet for enhancing social connectivity,

community engagement and participation in lifelong learning among its residents. The focus of the study is on these volunteers' engagement in workplace learning experiences in the context of their involvement in the organisation's activities, including the development, management, delivery and use of its services, facilities and technologies.

## Literature Review

Adults' learning in the context of their volunteer work is typically labelled as being 'informal' to distinguish it from more structured training and formal education. Extensive studies into volunteers' learning confirm its breadth, depth and significance, with increased confidence, self-esteem, personal agency and organisational leadership skills reportedly the most frequently highlighted outcome areas for volunteers (Elsdon, 1995; Kavanaugh et al., 2009; Livingstone, 2010; Plant, 2014; Schugurensky et al., 2010). Theorising about the content, processes and mechanisms of volunteers' learning includes differentiating between learning that is intentional (where learning is the object of activity) and incidental learning (where learning is a by-product of other goal-directed activity) (Duguid et al., 2013). The social and situated nature of learning and cognition and elaborations on the "relations between social and personal contributions to learning and development" (Billett & Choy, 2013, p. 266), such as the significance of individuals' emotional engagement in learning (Illeris, 2007), appear as theoretical contributions to emerging understandings of the processes and mechanisms of learning through work experiences, with implications for learning through volunteer work.

Of particular importance for the study of community volunteers' learning is the correlation between high levels of both individual and group learning and development and an organisation's "commitment to learning and social or caring objectives" (Elsdon, 1995, p. 120). In such organisations, volunteers' learning is found to be afforded by and occur through their engagement in collaborative activities in a supportive environment that enables: "friendship, reciprocity and trust" to develop, contributing to both individual and community well-being (Field, 2005, p. 30; Golding et al., 2021) and with an "emphasis on certain themes depend[ing] on the mission of the organisation" in which people are participating (Duguid et al., 2013, p. 239).

In a digital era, adult learners traverse and draw on resources in online, offline and blended spheres as they participate in contemporary social practices (Erstad & Silseth, 2023), such as community volunteering. Research points to expanded opportunities for significant social learning afforded by digital information and communications technologies in civil society settings and highlights the important role played by voluntary groups and associations in community information communication and dissemination (Brown & Adler, 2008; Field, 2005; Kavanaugh et al., 2009). Informal learning about information technology is also regarded as a necessary corollary of the work of third sector community groups and associations in a digital society, where learning occurs in communities of interest and communities and networks of practice through mechanisms and processes of cognitive apprenticeship, distributed cognition, collaborative inquiry, and collective action towards achievement of agreed developmental goals (Merkel et al., 2005). In this theorising, knowing is situated, often distributed and “always mediated by artifacts”, with knowledge linked to human agency in terms of “people’s ability to act, participate, and make appropriate and informed decisions in *sociotechnical environments* [emphasis in original]” (Fischer et al., 2009 p. 77). This, in turn, is seen to contribute to building sociotechnical capital, a term used to refer to “productive combinations of social relations and information communications technologies” (Resnick, 2002, p. 649).

However, there is still relatively little known about the subjective experiences of learning among diverse volunteers in community-based sociotechnical learning and working environments, and in particular, how digital technologies interface with and impact volunteers’ learning as they go about their work. Moreover, despite wide acknowledgment of the pervasiveness of significant and valuable learning in volunteer work, there is consensus in the literature that there is still much to be learned about the nature of adults’ learning in diverse workplace settings (Billett & Choy, 2013) and in particular about the informal learning of volunteers (McGivney, 2006). This is especially the case for rural volunteers, who are even less likely than their urban counterparts to explicitly differentiate learning experiences from other volunteering activities (Kilpatrick et al., 2010). Further, volunteers’ experiences of supporting others’ learning – and concomitantly, learning about learning itself as a content domain – is not strongly thematized in the

literature. Indeed, rather than being identified as a specific, valued learning outcome in its own right, volunteers' learning about informal learning and teaching is often conflated with leadership, communication and interpersonal skills, self-efficacy, advocacy, community support, social awareness, and 'helping people' (Duguid et al., 2013; Kilpatrick et al., 2010). Therefore, investigating volunteers' learning about their own and others' learning, including the dynamics of guided learning at work (Billett, 2008) and "the invisible work of informal teaching" (Church et al., 2010, p. 138), are seen as central to understanding the full picture of adults' learning in volunteer work.

## **Research Context and Participants**

GraniteNet is a rural Community Informatics project which began in 2006 as a Participatory Action Research collaboration between researchers from a regional university and members of a rural community located close to the border between New South Wales and Queensland, Australia, where it continued operating until 2018. Like Australia, many countries and communities have been working in recent decades on strategies to build the capacity of their citizens for active participation in work, civil society and lifelong and life-wide learning in the digital era. Such strategies include the Learning Communities movement, in which towns, cities, and communities adopt a "learning-based approach to community development...with a framework in which lifelong learning is the organising principle and social goal" (Faris, 2005, p. 31) and grass-roots community technology (Community Informatics) initiatives seeking to leverage digital technologies and the Internet to support the achievement of community development and digital inclusion goals (Gurstein, 2000). Informed by these principles, the GraniteNet project's vision was the development and implementation of a community owned, designed and managed online portal that would support individual and community development and capacity building (McLachlan & Arden, 2009). The adult learners in this context, ranging in age from 17 to 75 years, are local volunteers providing, and community members accessing, the organisation's digital inclusion services. The GraniteNet working-learning environment is both 'real' and 'virtual', comprised of a community technology centre, or hub, and a community web portal, both run by a voluntary management committee. This investigation into rural community volunteers' learning in the

blended Community Informatics and Learning Community initiative, focusing specifically on the experiences of learning from the volunteer learner-worker's perspective, tells us much about how this learning occurs, why it is particularly important and effective and the conditions under which it flourishes. It also sheds light on how digital technologies are implicated in, and impact on, volunteers' learning.

## **Research Design and Methods**

### ***A phenomenographic approach to investigating GraniteNet volunteers' experiences of learning***

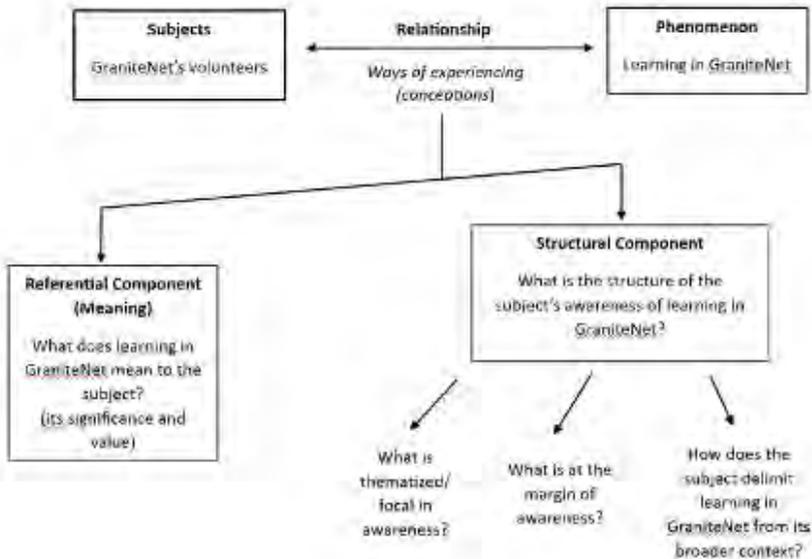
Phenomenography (Marton & Booth, 1997), a qualitative research approach to investigating learning from the learner's perspective, was selected to investigate variation in the ways that the GraniteNet volunteers experienced learning in the context of their volunteering work. Phenomenography reflects a broadly situated cognitivist epistemology that sees learning as individuals coming to know, understand and experience the world – and phenomena in and of the world – in newer and ever more complex, profound and complete ways (Marton, 1998; Marton & Booth, 1997). The focus is on identifying variations, rather than commonalities, in these understandings and experiences, with the characterisation “of a certain way of understanding a phenomenon (especially in relation to other possible ways of understanding the same phenomenon)”, being of interest (Marton, 1988 pp. 180-1). For the purposes of analysis, a way of experiencing something is comprised of a referential and a structural component, which are said to be co-constitutive and “dialectically intertwined” (Akerlind, 2005 p. 70). The referential component refers to the meaning that the phenomenon has for the subject (for example, its significance and value), and the structural component “describes how relevant parts of the world are seen and are related” with reference to:

1. what is thematized or focal in [the participant's] awareness;
2. what is at the margin of awareness or in the ground; and
3. how the subject delimits or discerns the object from its context (Bruce, 1990, p. 6).

Figure 1 is a graphical representation of this relational perspective

applied to conceptualising and analysing GraniteNet volunteers' experiences of learning.

**Figure 1: Referential and structural aspects of awareness of learning in GraniteNet**



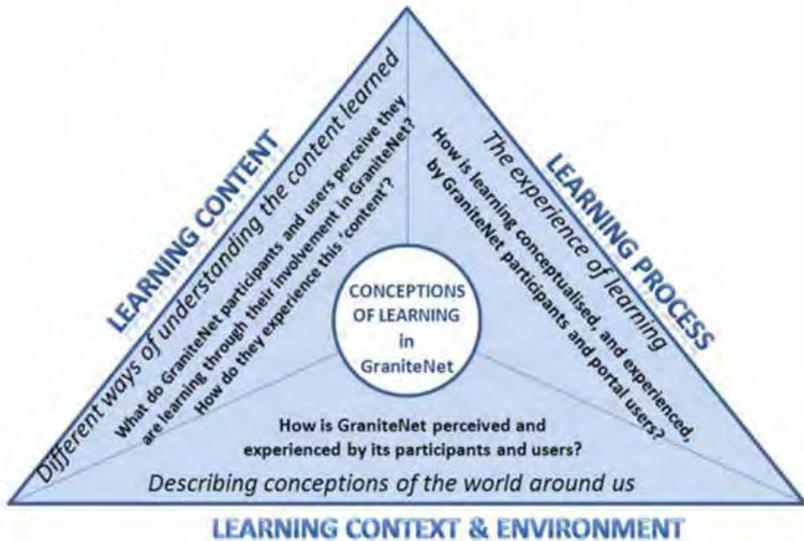
Using a structured phenomenographic interview procedure incorporating mind mapping, twenty GraniteNet volunteers' diverse ways of experiencing learning in the context of their volunteering were probed to illuminate three different learning aspects adapted from Marton (1988, p. 5):

1. The experience of the learning *process* (the learner's experience of how learning occurs)
2. Different ways of understanding the *content* learnt (the learner's experience of what is being learned)
3. Describing conceptions of the world around us (the learner's experience of GraniteNet as *the learning context and environment*).

Together, these provide an over-arching holistic conceptual framework for investigating the nature of participants' qualitatively different ways

of experiencing learning in GraniteNet. Figure 2 illustrates how the three learning aspects (content, process and context and environment) – incorporating both the ‘what’ and ‘how’ of learning as well as the context for learning – are seen to constitute, holistically, participants’ conceptions and experiences of learning.

**Figure 2: Conceptual and analytical framework for the study**



In this framework, the scope of the content dimension of learning includes knowledge, skills, attitudes and literacies (with a focus on digital literacies) as well as personal development learning, learning to learn, learning to adapt to and manage change, and learning to negotiate life trajectories and manage life transitions (Illeris, 2007). The learning process is theorized with reference to how learning occurs and what makes this learning possible (or the mechanisms of learning (Sfard, 1998)), focusing on the learner’s motivation or incentive, intentional experience (or noesis), and awareness, making a distinction between activities that have an explicit learning-related goal, and those where learning is a by-product of (or incidental to) other goal-focused activity. As previously noted, the GraniteNet learning environment is theorized as a sociotechnical learning environment, whereby “technological

artefacts are enmeshed in our activities and our connections to other people” (Tuominen et al., 2005, p. 339). A socio-technical environment is therefore an environment in which these relations and dependencies are thematised.

### **Sampling**

The sample for the GraniteNet case study comprised 20 participants recruited from among the broader pool of volunteers, including 13 females and seven males, of whom seven were aged between 26-54 years, six between 55-64 years, four over 65 and three under 25 years of age. Three participants identified as being from a culturally and linguistically diverse background and two as having a significant disability. In phenomenography, the emphasis is on heterogeneity (rather than representativeness) of the sample (Akerlind, 2002). Therefore, the following volunteer sub-groups were targeted to maximise the diversity of perspectives and experiences:

- members of the GraniteNet Incorporated management committee
- volunteers involved in the day-to-day administration and delivery of services from the community technology hub delivering basic computer skills training to community members on-site, including a “Senior’s Kiosk” service for older community members
- volunteers responsible for editing their community group’s or club’s web page on the GraniteNet community portal (known as “Content Editors”), and community bloggers (some online only, some both on-site and online)
- volunteers involved primarily in activities related to the administration of the GraniteNet community web portal (web administrators) and training of community group Content Editors
- other community users of GraniteNet’s on-site and online services.

Former as well as current volunteers were included in the sample to maximise the trustworthiness of the data.

### **Data Collection and Analysis**

On receipt of university ethics clearance, individual structured interviews of one hour's duration were conducted in private in a location of participants' choosing, recorded with their permission and transcribed. At the start of their interview, each participant was asked to draw two simple mind maps: the first of their perspectives and experiences of being a volunteer at GraniteNet, and the second focused specifically on "Learning in GraniteNet". They were then asked to "talk through" their mind maps during the interview. This approach precluded the need for initial direct questioning of participants about their perspectives and experiences, thereby eliciting participants' own elaborations of their mind maps. These elaborations were interspersed as required with the interviewer's prompts to probe concrete and reflective experiences and awareness of different aspects of a significant learning event or critical incident. Interview transcripts and mind maps were then subject to iterative stages of phenomenographic analysis following a systematic procedure synthesised from accounts in the literature (Akerlind, 2002; Bruce, 1990; Marton & Booth, 1997), with various ways of experiencing learning in GraniteNet identified in the data with reference to the study's conceptual and analytical frameworks. The phenomenographic data analysis process comprised the following steps as an iterative process:

1. inspection of individual interview transcripts to discover discrete ways of experiencing learning in GraniteNet with reference to qualitatively distinct meanings (referential aspect)
2. sorting of data extracts (quotations) into "pools of meanings" (Marton, 1998, p. 198), moving backwards and forwards between individual transcripts, mind maps and identified conceptions
3. focusing alternately on referential and structural components of awareness (see Figure 1) to illuminate dimensions of variation and differentiating conceptions based on these dimensions
4. gradual refining of conceptions into a "stabilised system of meanings" (Marton, 1998, p. 190) represented by a set of discrete and structurally related ways of experiencing learning in GraniteNet

5. devising and labelling categories of description with supporting quotes and mind maps representing the conception in each category and constructing the “outcome space” (Marton, 1998, p. 189) illustrating the categories and their structural relationships.

## **Findings and Discussion**

Critical variations in ways of experiencing learning discovered in the data formed the basis for the consolidation of a set of seven qualitatively distinct, structurally related conceptions of learning in GraniteNet, reflecting the collective experience of the participant sample at the time of the research. These are now presented in the categories of description that constitute the study’s findings or ‘outcome space’, followed by a discussion. It is important to note that no single category or conception represents the perspective of any one individual participant; rather, the categories describe the range of qualitatively different ways of experiencing learning in the context of GraniteNet, reflected in the data, any number and combination of which may characterise an individual volunteer’s experience at the time. The findings are thus representative of the set of significant variations in the participating volunteers’ experiences of learning through their volunteer work, at the collective level. Therefore, when reading the findings, readers familiar with the field of volunteers’ informal learning in this context – either through lived experience as a volunteer or through research with community volunteers – will recognize meanings reflected in the data that are familiar to them as well as some that are new to them. What readers will not see in these findings are individual volunteers’ stories or narratives of their experiences of learning in their volunteer work.

### ***Outcome Space: Seven qualitatively different ways of experiencing learning in GraniteNet***

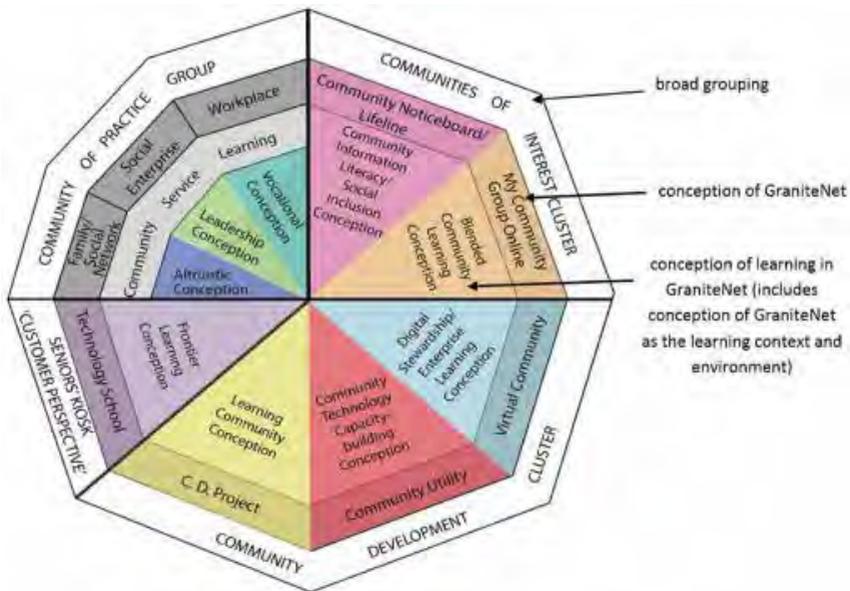
Learning in GraniteNet is variously experienced by volunteers as:

1. conquering a technology frontier (Frontier Learning conception)
2. contributing to a worthy cause (Community/Service Learning conception)
3. connecting with my community (Social Inclusion/Community Information Literacy conception)

4. interacting with the community in groups (Blended Community Learning conception)
5. creating my local community online (Digital Stewardship/Enterprise Learning conception)
6. helping people learning to live in a digital world (Community Technology Capacity-building conception)
7. driving the lifelong learning community (Learning Community conception).

These seven categories of description coalesce into four distinct groupings, each of which reflects a particular perspective of GraniteNet as the learning context and environment: a Seniors Kiosk Customer Perspective (Category 1); a Community of Practice Group (Category 2) comprised of three sub-categories, each with a particular emphasis; a Communities of Interest Cluster (Categories 3 and 4); and a Community Development Cluster (Categories 5, 6 and 7). This categorisation of conceptions and groupings is presented in diagrammatic form in Figure 3, revealing critical variations in participants' ways of experiencing learning in the context of their volunteer work.

**Figure 3: Variation in experiences of learning through volunteering in GraniteNet**



The ways of experiencing learning in these categories and groupings are now explained, highlighting the structural relationships among the categories and supported with quotations from the interviews that articulate critical aspects of learning thematized in the conception in each category.

***From learning as acquisition to learning as participation: The trajectory from frontier learning (Category 1) to learning as “a two-way street” (Category 2)***

The object of activity in the Frontier Learning conception in Category 1 (Seniors’ Kiosk Customer Perspective) is learning about and learning to use digital technologies in GraniteNet’s physical space of the community technology hub, experienced as “conquering” a new frontier:

*“Just keeping the brain alive and try to beat those nerves and take courage.”*

GraniteNet is experienced as a dedicated learning environment in which the experience of learning is ‘de-situated’ from the authentic contexts in which the learning is to be applied and, as such, is experienced as the

**acquisition of knowledge and skills:**

*“Somebody told me about GraniteNet...it’s where you can go to get your learning – I call it school”.*

**The primary motivation or incentive for learning basic digital literacy skills is to communicate with family and reconnect with friends (social participation):**

*“There must be so many lonely people out there that really, like me, I was ashamed of not knowing anything. I would never ask for help. It’s only the kids giving me this thing. I just had to do it”.*

*“The contact, being in contact with people.”*

**A growing awareness of the affordances of digital technologies for enhancing the quality of life of frail elderly people is also thematised in the data, reflecting an altruistic aspect that suggests an expanding awareness in the form of an emergent affiliation with GraniteNet’s digital inclusion mission:**

*“If you had the opportunity, maybe you could teach someone... Help in a simple way. Not too much technology”.*

**In contrast, the experience of learning in the Community/Service Learning conception in Category 2 (the Community of Practice Group in Figure 3) is situated in the work experiences of a community of volunteers (which can be characterised as a community of practice with reference to Wenger (2009)), where the primary object of learning is building capability to be able to contribute to the helping work of the organisation. In the Altruistic emphasis, which is at the core of this conception, the motivation for participation in GraniteNet’s volunteering activities is to contribute to the worthy cause of helping others (altruism) and social inclusion:**

*“All I knew was that I wanted to help, because I like being a volunteer, not just here, I just like being a volunteer, for a good purpose; a good cause. It makes me feel good to be able to offer these services”.*

*“Too many of them are scared and it’s nice to see the joy on someone’s face and the happiness when they say, ‘I know how to*

*do this; oh look—I can do this! Now can I learn that!”.*

As such, GraniteNet is experienced as a “family” and a “social network”, with relational aspects of the learning environment thematized in which learning is experienced as reciprocal – “a two-way street” – reflecting a movement from the experience of learning as acquisition (in Category 1) to learning as participation:

*“Learning here is all of us teaching each other and sometimes our clients accidentally teach us, because we then have to think when they have a sticky question we don’t know about...so along the way we all learn.”*

The significance and value of incidental learning through ‘teaching’ others is thematized, along with learning how to ‘teach’ others digital literacy skills:

*“I don’t [know what I’m going to learn] until it crops up. The Android Tablet, I don’t know how that works, but I will learn about that when it comes.”*

*“It comes down to their ability to learn really. I show them the way that I know, and they might not be able to grasp that, so I would have to think of a different way to teach them. We can’t all learn the same way”.*

### ***Vocational learning***

In the Vocational emphasis of the experience of learning in Category 2, the positive relational aspects of the work environment are also highlighted, with GraniteNet experienced as a “friendly workplace”, and the experience of learning characterised by a heightened awareness of instrumental learning linked to formal training and vocational goals:

*“Because I’m also in a business admin course so everything that I learn in that also relates to what we do here”.*

Learning “signposts” are provided in the form of feedback from co-workers and mentors and via reference to codified, vocational competencies linked to formal vocational education programs:

*“I try and get as much feedback as possible in every aspect that I*

*think I need to learn.”*

*“I haven’t done anything with computers before I started at a TAFE course, so it’s interesting for me to see where I am in the region of computers”.*

*“I don’t know where I got the idea that I’m alright with that, except with people from here...my work fellows. Not the people who are here to learn. Obviously, I know more than they do.”*

This benchmarking affords what Eraut (2004) describes as “mutual enhancement through integrated learning”, whereby:

*[t]he more formal knowledge gained in working for a qualification is used to enhance the quality of ongoing informal learning in the workplace, while at the same time using the experience to modify that formal knowledge or make it more usable in yet other workplace situations (p. 67).*

### ***Leadership learning***

The experience of learning in the Leadership emphasis of Category 2 is collaborative, involving a strong identification with the organisation, and with both individual and collective learning experiences reflected:

*“Learn to do things properly, how to run things and how to change the whole atmosphere. Learning that there are times that we really have to put our thinking caps on. That’s when I realised the only way to go forward is to sort the mess out; is to know. And if I couldn’t think of something, go and learn how.”*

Identification with the organisation’s “social and caring objectives” (Elsdon 1995, p. 120) along with a concern for its precarious circumstances as a “*risky business*” and a willingness to “*step up*” and take significant personal risks in the interests of the organisation’s survival provide the catalyst for significant personal development and organisational leadership learning, confirming the findings of the aforementioned earlier studies:

*“The major lift in self-confidence which I applied, when I was*

*voted in as President. I recall that I was running around for about two weeks, saying “Oh my god, what will I do?” But in all honesty, it’s drastically helped me to become who I am now and I’m very happy with that person”.*

***Learning about ‘my community’ and learning with others online: Community information literacy, blended community learning and distributed community leadership (Categories 3 and 4)***

Contrasting with the conceptions of learning in Categories 1 and 2, which are epistemologically situated in the face-to-face environment of the community technology hub, the two conceptions in the Communities of Interest cluster in Categories 3 and 4 (see Figure 3) are characterised by a focus on activity situated in the virtual environment of the community web portal – the domain of GraniteNet’s diverse communities of interest:

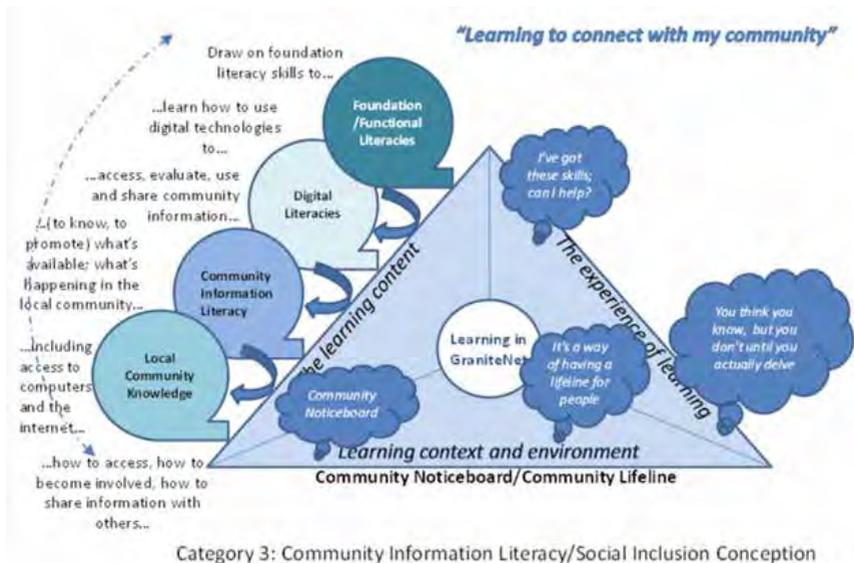
*“For me, the biggest thing is the [GraniteNet] website and most of this all belongs to the website and that’s the bit that interests me and the community groups are the crux of it”.*

Focal in awareness is using digital technologies and specifically the GraniteNet community web portal to learn about, learn how to connect with and participate in the life of the local community, again revealing an altruistic motivation:

*“A lifeline for people who maybe can’t get out of their own home. What is happening in the world? It offers a way to communicate; it offers a way of getting information.”*

Figure 4 is an example of how the discrete meanings and structure of awareness of the experience of learning discovered in the interview transcripts and mind maps – analysed with reference to the anatomy of experience in Figure 1 – were subsequently interpreted and mapped to the analytical framework in Figure 2 to enable determination of a distinct way of experiencing learning in this category with reference to the learning content, process and environment dimensions.

**Figure 4: Example of mapping participants' conceptions of learning to the analytical framework (Category 3 – Community Information Literacy/Social Inclusion Conception)**



Also in the Communities of Interest Cluster, the Blended Community Learning conception in Category 4 reveals an expanded awareness that includes a focus on enabling learning-focused online community interactions, distinguished from information dissemination:

*“This is about learning activities as opposed to information. The Community Noticeboard is great for information, but if you want to know what activities can I get involved in...So it’s a community of learners about a particular interest.”*

There is also an emerging kind of community leadership role reflected in this cluster, which can be characterised as a community sociotechnical leadership practice, situated in the practices of the GraniteNet community group Content Editor role:

*“That is where I think, instead of people sitting in little groups and saying, ‘Okay we are just going to sit here and do what we like doing’, to think more outside and how they can connect with others and then share their skills.”*

*“Linking the community groups with volunteers and people who are interested. Letting people know about all the different community groups here—both the local and new people in town.”*

This is an example of the new opportunities for social learning and community participation afforded by digital communications technologies discussed earlier with reference to the work of Kavanaugh et al. (2009) and Merkel et al. (2005).

***“Cultivating the possible”: The community development cluster (Categories 5, 6 and 7)***

The focus of learning in the three conceptions in the Community Development Cluster in Figure 3 is learning about how digital technologies can be used for community development purposes (that is, Community Informatics). The dominant learning metaphors reflect different conceptions of digital technologies and the internet, which are viewed variously as: “a kind of gateway for the local community”, affording entry into a “new realm” of local community life online (Category 5); a “window” between the world of the local, proximate community and the world “out there” (Category 6); and, in Category 7, as lifelong learning catalyst:

*“So, on the one hand there’s our opportunity to contribute to digital literacy, but on the other, is just to use GraniteNet as a mechanism and vehicle for a raft of learning opportunities”.*

The experience of learning in the three conceptions in this cluster is coloured by imaginative problem-solving, experimentation and enterprise:

*“So, it’s trial and error; in reality, there is no perfect way to do it and I am not a genius at codes. I know people out there that will write a program and get it spot on the first time. I’m not one of them, so trial and error is a big part of it”.*

*“I felt very engaged...it’s been a great experiment. Sometimes you’re out there on a limb, not knowing if you should continue to drive it or just let it go. I guess we were like guinea pigs. We were just testing it out... and you have to be dragged along with the trial and error of things”.*

*“I have always been interested and involved in IT and have always dabbled in web development a little bit, for personal things. I think that what GraniteNet has enabled me to do is to take that to the next step”.*

Bruner (2012, pp. 28-29) refers to these processes of “generating and testing possibilities” for change as “cultivating the possible”, which he theorises – as informal learning – with the object of learning being to “open up realms of possibility”.

Having presented an over-arching account of the phenomenographic outcome space, the focus now shifts to drilling down into the specifics of the “why, what and how” of volunteers’ learning.

### ***What are volunteers learning?***

Analysis of participants’ conceptions and experiences of what they are learning in the context of their involvement in GraniteNet reveals significant and valuable learning occurring in a diverse range of areas, confirming findings reported in the literature, but using “much more far-reaching categories” (Illeris, 2007, p. 74) to reflect the breadth and depth of meanings, understandings and dispositions inherent in participants’ own expressions of their learning. Table 1 presents this learning content organised into seven content domains, mapped to their relevant categories in the study’s outcome space in which this content is thematized in the data. It shows how GraniteNet’s emphasis on certain themes reflects the organisation’s altruistic mission as a community technology capacity-building project with a digital and social inclusion mission and a focus on promoting lifelong learning.

**Table 1: Learning content across seven content domains mapped to conceptions of learning in the outcome space.**

CONTENT DOMAINS	SPECIFIC CONTENT	CONCEPTIONS OF LEARNING IN GRANITENET
<b>1. Technology/Sociotechnical</b>	<ul style="list-style-type: none"> <li>Digital literacies (learning about and learning to use technologies for a range of purposes)</li> <li>GraniteNet Content Editor Skill Set</li> <li>Web design and development</li> <li>Programming skills</li> <li>Technology stewarding</li> <li>Community Informatics</li> </ul>	<p>All categories</p> <p>Communities of Interest cluster (Cat 3 and 4)</p> <p>Digital Stewardship (Cat 5)</p> <p>Community Technology Capacity-building (Cat 6), Learning Community (Cat 7)</p>
<b>2. Community</b>	<ul style="list-style-type: none"> <li>Participatory democracy</li> <li>Civic engagement</li> <li>Local community knowledge</li> <li>Blended community learning</li> <li>Distributed community leadership</li> <li>Community development</li> </ul>	<p>Community of Practice group (Cat 2A, B, C)</p> <p>Community Information Literacy/Social Inclusion (Cat 3)</p> <p>Blended Community Learning (Cat 4)</p> <p>Community Technology Capacity-building (Cat 6), Learning Community (Cat 7)</p>
<b>3. Learning</b>	<ul style="list-style-type: none"> <li>Learning about one's own learning (meta-learning)</li> <li>Facilitating adults' digital literacy learning</li> <li>Learning about one's own and others' community information needs (Community Information Literacy)</li> <li>Blended community learning</li> <li>Action learning/research</li> <li>Lifelong learning</li> </ul>	<p>All categories</p> <p>Community of Practice group (Cat 2A, B, C)</p> <p>Communities of Interest cluster (Cat 3 and 4)</p> <p>Community Technology Capacity-building (Cat 6), Learning Community (Cat 7)</p>
<b>4. Special Interest</b>	<ul style="list-style-type: none"> <li>Knowledge and skills in the specialised domain of the community of interest</li> </ul>	<p>Communities of Interest cluster (Cat 3 and 4)</p>
<b>5. Vocational</b>	<ul style="list-style-type: none"> <li>Vocational competencies and literacies</li> <li>Career development learning</li> <li>Enterprise learning</li> </ul>	<p>(Community) Service Learning – Vocational Emphasis (Cat 2B)</p> <p>Digital Stewardship/Enterprise Learning (Cat 5)</p>
<b>6. Personal/Relational</b>	<ul style="list-style-type: none"> <li>Self-efficacy/confidence</li> <li>Personal agency/development</li> <li>Generic skills and attributes (social competence, social awareness, communication, interpersonal and leadership skills)</li> </ul>	<p>Frontier Learning (Cat 1)</p> <p>Community of Practice group (Cat 2)</p>
<b>7. Organisational</b>	<ul style="list-style-type: none"> <li>Organisational knowledge and know-how</li> <li>Participatory democracy and governance</li> <li>Organisational management and development</li> </ul>	<p>Community of Practice group (Cat 2)</p>

Thus, as Table 1 shows, the findings reveal significant and valuable learning in the following three closely interrelated content domains to be reflected in all categories in the outcome space:

- Technology/socio-technical learning content, from basic digital literacy skills (Categories 1 and 2), information literacy (Category 3) and the GraniteNet Content Editor Skills Set and distributed community leadership (Category 4), to the more complex skills required for technology stewardship (Category 5) and leveraging digital technologies for community development (Community Informatics) (Categories 6 and 7)
- content in the Community domain, including local community knowledge (Categories 1 and 3); participatory democracy (Category 2); community information literacy (Category 3); distributed community leadership (Category 4); and community engagement and development processes focused on promotion of digital inclusion and lifelong learning (Categories 5, 6 and 7)
- learning about Learning as a content domain, including: learning about one's own learning linked to metacognitive and reflexive learning and learning about adults' digital literacy learning and how it can be facilitated (Categories 1 and 2); learning about one's own and others digital information needs (Categories 3 and 5); facilitating blended community learning (Category 4); and community engagement and development processes focused on promotion of digital inclusion and lifelong learning (Categories 6 and 7).

As such, learning content in the Technology/Socio-technical domain interfaces with content in the Community and Learning domains:

(i) reflecting the social shaping of technology through community (Wenger et al., 2009):

*“For [Community Group D], I took it upon myself to create the webpage and to set it up and also to include a little bit of a pictorial ...It was fun to do and a learning exercise for me. I just had fun putting it together and hopefully encouraging people to consider the [Community Group D] as something to come along and have fun with”.*

(ii) illuminating the dynamics of “the invisible work of informal teaching” (Church et al., 2010, p. 138):

*“When you are a volunteer and when you are helping somebody, believe it or not, you are the teacher. Therefore you are teaching that person and that person is learning... I find it more ‘feel good’ to learn with teaching”.*

(iii) and reflecting a growing capacity among volunteers for metacognition and reflexivity in the interests of understanding and furthering their own learning:

*“I learn more doing it for somebody else rather doing it for myself. It doesn’t stick, up here in my brain, when I’m doing it for myself, but if I’m helping someone else out, then it sticks with me longer, if that makes sense.”*

### ***How are volunteers learning? Ways of experiencing the processes of learning***

Analysis of participants’ expressions of their experiences of the processes of learning reveals this learning to be first and foremost a function of social participation (Wenger, 2009) or interaction (Illeris, 2007) in the context of volunteer work in GraniteNet’s hybrid socio-technical working/learning environments. For Wenger (2009, p. 210), social participation refers to “processes of being active participants in the practices of social communities and constructing identities in relation to these communities”. This learning may be experienced as an individual or a collective phenomenon but is predominantly practical and relational in nature. Further analysis and synthesis of these learning processes as they are represented in conceptions of learning in the study’s outcome space reveals seven primary learning processes, including five individual learning processes and two collective learning processes, as shown in Table 2.

**Table 2: Individual and collective learning processes in GraniteNet**

<i>Individual learning processes</i>	<p>Practical learning-by-doing (intentional and incidental), implicated in all other learning processes</p> <p>Intentional learning through trial and error, experimentation, deliberation, problem-solving and reflection in and on action</p> <p>Learning through instructing, showing, helping, guiding and mentoring others (teaching digital literacy skills)</p> <p>Learning through observing, seeking feedback, benchmarking, appraisal and meta-learning</p> <p>Seeking, using and sharing information for learning in sociotechnical environments through exploration, navigation, discovery, problem-solving, experimentation, creation, construction, representation, reification and bricolage</p>
<i>Collective learning processes</i>	<p>Collaborative problem-solving, inquiry and action learning</p> <p>Blended community and network learning – communication, sharing/exchange, co-construction, cultivation, connection, networking</p>

### ***What makes this learning possible?***

To answer the question about what makes learning possible for GraniteNet's volunteers, consideration is given to learning incentives (Illeris, 2007), learning mechanisms (subsumed as part of the learning process) (Sfard, 1998), and the interaction between the qualities the learner brings to the learning setting and the affordances of the learning environment (Billett, 2008). Illeris (2007, p. 26) notes that the experience of learning, including the content that is learned, is always "marked" by the nature of the learning incentive that has motivated the learner's engagement in learning, including the learner's attitude, motivation and volition. As the previous descriptions of the experience of learning in the seven categories in the outcome space show, family, organisational and community affiliation (membership and belonging), altruism (helping others), and learning opportunism (seeking out and taking advantage of learning opportunities to achieve personal learning goals) emerge in the data as significant learning motivators or incentives across all categories in the outcome space.

Subsumed under the umbrella of social participation, the data reveal five primary mechanisms of learning: communication, interaction, connection, information and exposure to variation. Of particular interest is learning through exposure to variation – referred to as variation theory of learning, whereby “discerning variation brings about learning” (Bruce, 2006, p. 6). This involves learners developing an awareness of how others see the world, and of others’ experiences of the world and phenomena of interest, through interaction with different and familiar others and objects in face-to-face, online and blended environments, as illustrated in these quotations:

*“Being at GraniteNet has made me see in myself, compared to what is here, where I am in the region of computers”.*

*“And of course, working with people say, like [Glen] and [Peter], I was always learning technical stuff because they obviously knew—they were both quite different—but they both knew completely different things from my experience, so I am always learning”.*

*“See how different communities give different priorities or different focus to supporting the kind of things we were doing in Granite Net... Figuring out what would and what wouldn’t work in our community”.*

Linked to the “learning opportunism” incentive discussed above, learning is also a function of individuals’ own levels of personal agency, self-confidence, and self-efficacy—as qualities the individual brings to the learning setting—and the extent to which the working environment actively supports this kind of self-directed learning (Billett, 2008; Brockett & Hiemstra, 1991; Eraut, 2004):

*“Just watching the people here that have been at GraniteNet before, observe what they are doing and how they have done it and give it a go, see my chance. At the moment, I’m still waiting for my turn—once my confidence is up.”*

*“It was good feeling like that you had a voice”.*

However, “individuals’ freedom and capacity to secure their intentions are limited by the activities their work enables” (Billett, 2008, pp.

40-41). Barriers to learning include those reported in the literature on learning in associational life and volunteer work related to what Eraut (2011, p. 192) refers to as “the allocation and structuring of work” (p. 192), whereby the fluid, and at times, ad-hoc nature of community organisations run entirely by volunteers can result in discontinuities in participation resulting in a disorganised working environment that can negatively impact on workplace learning opportunities:

*“There is no paid employee; it’s all relying on volunteers. As a new volunteer, it’s really confronting in a way. You say, “My god, what’s going on here? You have to figure it out yourself. So you either swim or sink.”*

## **Conclusion**

The above findings contribute to knowledge about the experience of learning in volunteer work from the learner’s perspective, and specifically, learning embedded in social participation in rural community volunteering and associational life in the digital era. Based on these findings, the conclusion can be drawn that GraniteNet volunteers at the time of the study were experiencing significant and valuable learning through their workplace experiences that were not only serving an instrumental purpose in terms of being a means to a desired or valued end, but also the kind of learning that “furnish[es]... direct increments to the enriching of lives” (Dewey, 1916, 2008, Ch 18 Educational Values 2, The valuation of studies, para 2). The field of adult education practice embraces many different kinds of practitioner on a continuum from the full-time, professional adult educator to individuals whose vocational and community activities have implications for adult learning (Usher & Bryant, 1989). The findings reveal how GraniteNet volunteers perform a range of activities that have significant implications for adult learning, from teaching older adults basic digital literacy skills in a face-to-face, informal learning environment to facilitating community and network learning via sharing of information and knowledge in blended online and face-to face learning communities. Further, the significant educative effect of learning in participatory democracy, associational life and volunteer work reported in the literature and confirmed by this study’s findings is shown to be further expanded through the “combination of digital interactions with offline

encounters” (Field, 2005, p. 148) afforded by GraniteNet’s hybrid socio-technical working and learning environments. At its best, the affordances of GraniteNet for learning in community with others—and in the service of others—are realised through and leverage off the synergies generated by the alchemy of altruism, learning opportunism, exposure to variation, a strong sense of (local) community, an interest in digital technologies, a sense of shared purpose, and reciprocal learning and collective action nurtured in the crucible of a positive sociotechnical learning and working environment.

Related to this are new understandings and insights generated about learning through volunteering as a phenomenon linked to adults’ growing capacity for metacognition and reflexivity in the interests of understanding and furthering their own learning. Most significantly, the findings reveal how, as community volunteers contributing to the organisation’s digital inclusion work, adult learners themselves can exercise their agency to become experts in understanding and facilitating their own learning while also developing their capacities to support others’ learning through the practice of doing so (Usher & Bryant, 1989), shedding light on the mechanisms through which adults’ learning through workplace experiences in community volunteering contribute to their agency and lifelong learning while also generating wider collective benefits.

## References

- Akerlind, G. (2002). Principles and practices in phenomenographic research. *Proceedings of the international symposium on current issues in phenomenography*. Canberra
- Billett, S. (2008). Learning throughout working life: A relational interdependence between personal and social agency. *British Journal of Educational Studies*, 56(1), 39-58, DOI: 10.1111/j.1467-8527.2007.00394.
- Billett, S., & Choy, S. (2013). Learning through work: Emerging perspectives and new challenges. *Journal of Workplace Learning*, 25(4), 264-276, DOI: 10.1108/13665621311316447
- Brockett, R., & Hiemstra, R. (1991). A conceptual framework for understanding self-direction in adult learning. In *Self-Direction in Adult Learning: Perspectives on Theory, Research, and Practice*. Retrieved from <https://infed.org/mobi/a-conceptual-framework-for-understanding-self-direction->

in-adult-learning/

- Brown, J., & Adler, R. (2008). Minds on fire: Open education, the long tail and learning 2.0. *EDUCAUSE Review*, (January - February), 16-32
- Bruce, C. (2006). Changing foci and expanding horizons: Some reflections on directions for phenomenography and variation theory. In C. Bruce (Ed.), *Proceedings phenomenography and variation theory: The ways forward*. Faculty of Education, University of Hong Kong
- Bruner, J. (2012). Cultivating the possible. *Learning Landscapes*, 5(2), 27-33. DOI: <https://doi.org/10.36510/learnland.v5i2.548>
- Church, K., Frazee, C., & Panitch, M. (2010). Beginning from disability to study a corporate organisation of learning. In D. Livingstone (Ed.), *Learning in paid and unpaid work. Survey and case study findings*, (pp. 137-154). Routledge
- Davies, L., & Lockstone-Binney, K. (2018). Who are the future volunteers in rural places? Understanding the demographic and background characteristics of non-retired rural volunteers, why they volunteer and their future migration intentions. *Journal of Rural Studies*, 60, 167-175 <https://doi.org/10.1016/j.jrurstud.2018.04.003>.
- Dewey, J. (1916, 2008). Democracy and education (Vol. 852). (D. Reed, Trans.) Gutenberg. Retrieved from <https://www.gutenberg.org/files/852/852-h/852-h.htm>
- Duguid, F., Mundel, K., Schugurensky, D., & Haggerty, M. (2013). The nature and benefits of volunteers' informal learning. In F. Duguid, K. Mundel, & D. Schugurensky (Eds.), *Volunteer work, informal learning and social action*, (pp. 219-236). Sense
- Eraut, M. (2004). Informal learning in the workplace. *Studies in Continuing Education*, 26(2), 247-273. <https://doi.org/10.1080/158037042000225245>
- Eraut, M. (2011). How researching learning at work can lead to tools for enhancing learning. In M. Malloch, L. Cairns, K. Evans, & B. O'Connor (Eds.), *The SAGE handbook of workplace learning*, (pp. 181-197). Sage
- Erstad, O., & Silseth, K. (2023). Rethinking the boundaries of learning in a digital age. *Learning, Media and Technology* 48(4), 557-565. [doi.org/10.1080/017439884.2023.2260977](https://doi.org/10.1080/017439884.2023.2260977)
- Field, J. (2005). *Social capital and lifelong learning*. The Policy Press
- Fischer, G., Rohde, M., & Wulf, M. (2009). Community-based learning: The core competency of residential, research-based universities. In *Learning in communities: Interdisciplinary perspectives on human centred information technology*, (pp. 75-110) Springer Verlag.
- Golding, B., Carragher, L., & Foley, A. (2021). The Women's Shed movement: Scoping the field internationally. *Australian Journal of Adult Learning*, 61(2), [150]-174. Retrieved from <https://search.informit-org.ezproxy.usq>.

edu.au/doi/10.3316/informit.074377153699052

- Gurstein, M. (2001). *Community informatics: Enabling communities with information communication technologies*. Ideas Group.
- Hager, P., & Halliday, J. (2006). *Recovering informal learning: Wisdom, judgement and community*. Springer.
- Illeris, K. (2007). *How we learn: Learning and non-learning in school and beyond*. Routledge.
- Kavanaugh, A., Zin, T., Schmitz, J., Rosson, M., Kim, B., & Carroll, J. (2009). Local groups online: Political learning and participation. In J. Carroll (Ed.), *Learning in communities: Interdisciplinary perspectives on human centered information technology*. (pp. 55-73). Springer-Verlag.
- Kilpatrick, S., Stirling, C., & Orpin, P. (2010). Skill development for volunteering in rural communities. *Journal of Vocational Education and Training*, 62(2), 195-207. <https://doi.org/10.1080/13636820.2010.486929>
- Livingstone, D. (2010). *Learning in paid and unpaid work: Survey and case study findings*. Routledge.
- Marton, F. (1988). Phenomenography: Exploring different conceptions of reality. In D. Fetterman (Ed.), *Qualitative approaches to evaluation in education: The silent revolution*. (pp. 176-205). Praeger.
- Marton, F., & Booth, S. (1997). *Learning and awareness*. Routledge.
- McLachlan, K., & Arden, C. H. (2009). Community learning projects: Transforming post-compulsory education provision in rural communities. In R. E. Harreveld, G. R. Danaher, & P. Danaher (Eds.), *Theme issue Rural Society. Sea changes and bush lessons: Post compulsory education and rural renewal*, 19(2), 146-162. DOI:10.5172/rsj.19.2.146
- Merkel, C., Clitherow, M., Farooq, U., Xiao, L., Ganoë, C., Carroll, J., & Rosson, M. (2005). Sustaining computer use and learning in community computing contexts: Making technology part of "who they are and what they do". *The Journal of Community Informatics*, 1(2), 158-174
- Plant, H. (2014). *Community learning and volunteering*. Community Learning Innovation Fund. NIACE. Retrieved from [http://shop.niace.org.uk/media/catalog/product/c/l/clif\\_volunteering\\_-\\_web\\_final.pdf](http://shop.niace.org.uk/media/catalog/product/c/l/clif_volunteering_-_web_final.pdf)
- Resnick, P. (2002). Beyond bowling together: Sociotechnical capital. In J. Carroll (Ed.), *Human-computer interaction in the new millennium* (pp. 647-672). Addison-Wesley
- Schugurensky, D., & Mundel, K. (2005). Volunteer work and learning: Hidden dimensions of labour force training. In N. Bascia, A. Cumming, A. Datnow, K. Leithwood, & D. Livingstone, (Eds.), *International Handbook of Educational Policy*, 13, (pp. 997-1022).
- Schugurensky, D., Duguid, F., & Mundel, K. (2010). Volunteer work and

informal learning: Exploring the connections. In D. Livingstone (Ed.), *Learning in paid and unpaid work: Survey and case study findings*. (pp. 79-98). Routledge

Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher*, 27(2), 4-13. <https://doi.org/10.3102/0013189X027002004>

Usher, R., & Bryant, I. (1989). *Adult education as theory, practice and research: The captive triangle*. Routledge.

Wenger, E. (2009). A social theory of learning. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists in their own words*. (209-218). Routledge.

Wenger, E., White, N., & Smith, J. (2009). *Digital habitats: Stewarding technology for communities*. CP Square.

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