Designing for youth engagement across formal and informal learning networks

Patricia Thibaut

Institute of History and Social Sciences, Universidad Austral de Chile, patricia.thibaut@uach.cl

Lucila Carvalho

Institute of Education, Massey University, New Zealand, l.carvalho@massey.ac.nz

Abstract

Growing up as part of a networked society is demanding youth's active engagement in digital literacy practices – where their ability to find, evaluate, use, and create digital content is critical, as well as their ability to successfully participate in networks. Those with restrict access or those unable to effectively use technologies are unlikely to meaningfully contribute to a globalized world, with potential negative impact on individuals' lives and on community prosperity. Understanding how to best design and encourage youth involvement in networked learning is therefore crucial. Drawing on the ACAD framework, this study examines the structural components of two learning networks geared at youth, within two learning scenarios: 'in' and 'out' of schools. By exploring the relationship between youth, tools, and spaces, we attempt to contribute to connect literature on formal and informal learning, digital culture and literacies. We also attempt to contribute to the call for understanding networked learning beyond the boundaries of Higher Education. Our research employs a case study methodology, conducted over consecutive weeks of a semester in two research sites: a year 10 classroom and a multiplayer online game called Potterworldmc. The asynchronous conversations of students on a social network site with learning purposes used at a school, as well as observations, interviews, and artefacts of a player were collected. The paper identifies key design elements and the emergent learning activity young people are engaging in, with a particular focus on digital literacy. We analyse the influence of social structures, tasks, tools and resources on youth activity, and discuss how previous boundaries between in-school and out-of-school, physical and digital spaces, traditional and new literacies might be rather blurred in learning networks geared at youth. We conclude by highlighting some key design elements across formal and informal networks.

Keywords

Informal networked learning, Digital literacy, Design for networked learning, Connected Learning.

Introduction

Networked learning refers to learning activity where the use of technology encourages connections between people and resources (Goodyear et al., 2004). It also involves 'a different way of thinking about the relationships between digital and networked technologies and the processes of learning and education' (Jones, 2015, p.5). These processes of learning, however, do not only start as one enters adulthood or as people enrol in tertiary institutions. When students enter higher education, they do so as 'networked individuals' (Cronin, 2016). Technologies have 'profoundly changed how ideas and practices are communicated and what it means to be a knowledgeable or capable person' (Beetham & Sharpe, 2013, p.4). Indeed, key competencies for those who are growing up in a networked society include the ability to find, evaluate, use, and create digital content, as well as the ability to successfully participate in networks. Being 'digitally literate' is now critical for one's full participation in society (Warschauer & Ware, 2008) – with the inability to access or effectively use technologies, negatively impacting people's lives and/or community prosperity. Digital literacies are 'those capabilities which fit an individual for living, learning and working in a digital society', and are connected to one's 'digital behaviours, practices and identities' (JISC, 2014, n.p.). Understanding how to best design and how to encourage youth involvement in networked learning is therefore crucial. Competencies associated with digital literacies are being incorporated as part of schools' curriculum, but such skills, practices, behaviours and identities are not necessarily confined to formal education. Connected learning, for example, emerged as a recent field of study, focusing on young learners and informal situations, as well as emerging media production

and social practices. It describes learning that is '*socially embedded, interest-driven, and oriented toward educational, economic, or political opportunity*' (Ito et al, 2013, p.6), often involving the use of technology. Connected learning is complementary to networked learning (but with a focus on a younger age group), as essentially, both share core values and assumptions (Gogia, 2016; Jones, 2015).

Drawing on the Activity-Centred Analysis and Design (ACAD) framework (Goodyear & Carvalho, 2014; 2013), we examine the structural elements of two learning networks geared at youth, within two different learning scenarios: 'in' and 'out' of schools. The ACAD framework offers a common ground to identify and analyse existing relationships between key elements of these networks and the activity of young learners. We discuss the types of emergent networked learning activity youth are engaging in, with a particular focus on digital literacy, and how these in turn, are influenced by the types of social structures, tasks, tools and resources in each of these networks. In the next section, we offer an overview of how networked learning and digital literacies intersect.

Insights from networked learning, digital literacies, and in-school and out-of-school learning

Networked learning has evolved over the past decades, partly due to the changing nature of technology, and the types of artefacts and tools involved in networked activity (Goodyear & Carvalho, 2014). Whilst early notions of learning networks tended to emphasize the relationship between nodes and situate its focus on higher education activity, current perspectives encompass a much wider spectrum (Goodyear, 2014; Jones, 2015). They include a more holistic view with an emphasis on 'openness and flux', and blurred lines between digital/physical and formal/informal. Similarly to networked learning, the notion of literacy has also markedly evolved. New technologies have expanded the means for meaning making, giving rise to new social practices and shaping the notion of new literacies through multiple and multi-layered modes of communication and production. Changes in the nature of literacies present challenges to the skills that young learners need to develop in an increasingly participatory culture (Jenkins et al., 2009). Such changes are linked not just to computer technologies and the Internet, but also to practices mediated by social media tools and Web 2.0 applications, such as blogs, games and social network sites (SNSs). SNSs emerged as out-of-school tools, with the purpose of allowing connection, communication, and processes of sharing and media production (Boyd & Ellison, 2007). Currently, however, SNSs are also becoming popular on educational spaces, having developed specific features to fit these contexts (Thibaut, 2015).

The richness in the affordances of social media tools triggered the interest of researchers not only in cultural studies or technological design, but also recently in the educational field (Greenhow, 2011; Kilinc et al., 2012). Along with the disruption of social media tools in education, blurred boundaries between formal and informal networked learning are also noted (Carvalho & Garduno Freeman, 2016; Cronin, 2016). A few decades ago, formal institutions such as schools and universities were the most obvious places one would associate with knowledge acquisition of relevant skills for life. In contrast, research now shows that contemporary career pathways are often associated with individual self-training, network building, and it is related to activity on online platforms and out-of-school spaces (Black, 2009; Ito et al., 2013; Jenkins et al., 2009). As Jenkins et al. (2009) argue, those who are able to learn key skills for participating in a digital landscape (in and/or outside school) will have more chances to succeed in the future. Such scenario challenges traditional notions of what it means to be literate in the 21st Century, and it is crucial that we understand how young learners are engaging with digital literacy practices. Prompted by this need, a body of research emerged, focusing on the study of literacy learning in settings that traditionally have not been associated with literacy acquisition (Black, 2009; Squire, 2006; Steinkuehler et al. , 2010). For instance, Ito and colleagues (2008) research focuses on out-of school practices, and suggests that there are changes in 'the dynamics of youth-adult negotiations over literacy, learning, and authoritative knowledge' (Ito et al., 2008, p.5). The authors argue that online activity both interest driven and friendship driven, enable self-directed and peer based learning and often facilitate that teens acquire relevant social and technological skills for their future. Similarly, Halverson (2012) shows that new media-based informal learning environments are powerful tools for learning art and new literacy representations. Furthermore, research on adolescent literacies suggests that fan culture and online games are successfully engaging young learners in literacy development (Lammers et al., 2012; Padgett & Curwood, 2016). Teens use of technology is driven by social interactions, which have the potential to impact their development of relevant skills, such as synthesizing information, leveraging complex problem solving skills, and text production (Black, 2009; Nilson, 2010; Bers 2012). They also often offer students opportunities to experience a sense of ownership, authoring and identity formation (Magnifico, 2010; Steinkuehler et al., 2010).

Proceedings of the 11th International Conference on Networked Learning 2018, Edited by: Bajić, M, Dohn, NB, de Laat, M, Jandrić, P & Ryberg, T

ISBN 978-1-86220-337-2

150

Overall, such practices require that young people understand how to connect to others, how to find the resources they need to produce their knowledge creations, and how to successfully engage in an informal or formal networked learning community. Current trends point to studies that examine (i) how teens are connecting and producing new forms of knowledge creation in *out of schools* environments, as well as (ii) digital literacies *in schools*, where it is noted an increased use of mobile technologies such as laptops, tablets or smartphones, and initiatives such as Bring Your Own Device (Thibaut et al., 2015; Yeoman, 2015). Recent research on literacy practices and technology in schools reports positive outcomes of students' interactions online. For instance, Kilinc et al. (2012) analysed the impact on Facebook and Twitter in the context of social media studies, documenting that the use of social networking in the classroom promotes global interactions along with students' independent knowledge practices. Thibaut (2015) suggests that the use of a SNS, facilitates students engagement in complex multimodal literacy practices, and in so doing, help their develop awareness of authorship. Similarly, Hayes and colleagues (2009) offer evidence that students' interactions mediated via Edmodo, encourage content-knowledge acquisition while developing 21st Century skills. As technologies mimicking social media features break into school contexts, it seems clear that networked activity has trespassed borders between formal-informal, also for young learners. Whilst there are differences in the way digital literacies may take place 'in' and 'out' of school environments, the activity centred approach developed by Carvalho & Goodyear (2014) helps us move beyond the discussion of online or offline, digital or physical, informal or formal, screen or print. It offers a language to bridge the divide between school and out-of-school spaces, and to start a conversation towards a more ecological approach to the understanding of the relationships between things and people, structure and activity, in youth engagements as lifelong networked learners.

Framing the analysis and design of networked learning activity

The Activity-Centred Analysis and Design (ACAD) framework (Goodyear & Carvalho, 2014; 2013) framed our analysis of the two case studies described in this paper: Potterworldmc and Edmodo. ACAD suggests a relational approach to understand complex learning situations, proposing four main structural elements. The emergent activity of learners is influenced (but not entirely determined) by three 'designable' components. One component is set design, which relates to material and/or digital elements – for example the tools, platforms, resources, and other artefacts related to 'structures of places'. Epistemic design relates to what learners do, what sort of tasks people engage with, and how information is communicated to learners – it relates to 'structures of tasks'. Social design is about people's social organisation, specific roles, and the types of divisions of labour or scripts learners may be asked to follow. Set, epistemic and social are 'designable' components, but the fourth element - co-creation and co-configuration activity - is not 'designable'. This relates to the emergent activity of learners, and acknowledges people's agency to re-arrange and reconfigure the proposed learning situation. As Gourlay and Oliver (2016) point out, social-materialist perspectives that focus on things and people are more likely to reveal the situated complexity of digital literacy practices.

Data collection

The research employed a case study methodology in two different research sites. The first case follows the networked learning experiences of Maxwell (pseudonym), an 11 year-old boy, who plays and interacts with others in Potterworldmc. We observed Maxwell activity on three one hour sessions during consecutive weeks, taking field notes, speaking to Maxwell about his activity and collecting artefacts he produced as part of his participation in the game. In the second case, we explore participants' interactions across physical and online spaces, examining the activity of a group of 25 Year 10 students on Edmodo, ages ranging between 15 and 16 years old. The school was located in an urban area and served economically disadvantaged students. Students' practices on Edmodo, and their face-to-face interactions during class activities, were followed for a semester. By analysing the structural components of Potterworldmc and Edmodo as well as the emergent activity of participants, we were able to analyse youth engagement in networked practices 'in' and 'out' of school contexts. In addition, artefacts created in Potterworldmc such as essay writings, news articles, email communication as well as Edmodo's online discussion forum and videos made as part of learning activities, were gathered to build a thick description (Geertz, 1973) for the analysis of emergent activity of learners in these spaces.

Overview of two learning network spaces

1) Potterworldmc

Potterworldmc is a multiplayer online game, which runs on a Minecraft server platform. The game brings together a community of networked learners who share their enthusiasm around the Harry Potter theme. Potterworldmc was created by fans in 2015 and since then has grown into a community of more than 22,000 members. Participants have opportunities to experience creative aspects of Minecraft, at the same time that they

Proceedings of the 11th International Conference on
Networked Learning 2018, Edited by: Bajić, M,   151
Dohn, NB, de Laat, M, Jandrić, P & Ryberg, T

ISBN 978-1-86220-337-2

role-play the magical world originally created by J.K. Rowling. The community relies heavily on the contributions of its members, who run different aspects of the game. The Potterworldmc platform is accompanied by a website, which also houses announcements, explains aspects of the game, contains communication tools and other features that complement the main platform.

2) Edmodo

Edmodo is a technology that mimics popular social media features from social network sites. Social network sites emerged in 2004 along with the arrival of the Web 2.0 and can be defined as tools that encourage people's interactions and identity construction through profile formation, media sharing and networking (Ellison & Boyd, 2013). Edmodo 'offers teachers a collegial classroom management toolkit to use across their class periods' (Evans & Klilincm, 2013). As public data retrieved from the Edmodo website state, over 75 million teachers and students are currently connecting in this form of online classroom. Edmodo presents specific features that differ from mainstream SNSs, connected with its aim of enhancing learning. These features allow teachers to record grades, post announcements on the wall (e.g. notify students' of homework), or keep calendars throughout the learning period.

What follows is an examination of both case studies through the lenses of the ACAD framework. Aspects of Maxwell participation on Potterworldmc, the interests he developed as part of the game and the networked learning practices he enacted, as member of this community, are then described. Similarly, we then examine how these aspects unfold for the participants in Edmodo, discussing its implications for networked learning.

Analysis and discussion

Set Design: Potterworldmc and Edmodo

In Potterworldmc, the Minecraft server is the 'place' where the game activity is enacted, but this environment is supported by others, such as a website where the community discusses different aspects of the game. The website houses discussion forums, chat spaces, announcements, specific rules, explanation of processes and displays schedules where participants find out when and where 'synchronous events' in the game take place. Other collaborative platforms may be used to support the activity enacted in Potterworldmc. For example, 'journalists' compose their 'news' in Google Docs, and share their productions with editors for feedback and approval. Game participants enter the game, accessing a Minecraft server, and participate via an avatar character.

Figure 1: Edmodo

Edmodo mixes features from social networking sites with learning management systems. It presents spaces for engaging in discussion along with more specific teaching tools such as Notes, Alerts, Assignments, Quiz and Poll (Figure 1). The layout of Edmodo resembles Facebook, not only through the blue theme in icons and features, but also in the distribution of the space and the layout of the interface. Three main sections are visible on the Edmodo screen, with a central part allocated to the wall (for threaded discussions) and two columns: displaying users' profile on the left, and additional information about class activities on the right (Figure 1). The Edmodo network relies on the interactions between students-students, students-teachers (and allow also connections between teachers) (see social design). These interactions could involve a range of semiotic resources. Consequently, the set design offers tools that expand the repertoires of meaning making practices

Proceedings of the 11th International Conference on Networked Learning 2018, Edited by: Bajić, M, Dohn, NB, de Laat, M, Jandrić, P & Ryberg, T

ISBN 978-1-86220-337-2

152

from writing and reading comments, towards digitally mediated communication, such as videos, images, audio and figures. During data collection, we noticed that participants also accessed and used other platforms, in combination with Edmodo, such as Google drive, One drive and a customised library. Teachers may also add links that offer access to various other resources such as games, podcasts and videos on a wide array of subjects.

Epistemic Design: Potterworldmc and Edmodo

Potterworld offers a degree of flexibilty, for example one may 'wonder' around the environment visiting different sites and appreciating its architecture, but mostly participants are invited to follow a similar storyline as in the film, which in a way guides the types of (learning) tasks proposed. Participants first enter the game through the same address of Harry Potter – 4 Privet Drive.They then receive a letter, inviting them to Hogwarts, and a similar storyline unfolds as participants get sorted into houses. Once a participant is assigned a house, they can then start attending classes – potion classes, flying classes, etc. The participation revolves around attending these classes, successfully completing proposed tasks and assignments, and in so doing, moving to higher Years. Participants choose the classes they want to engage in, by consulting a schedule displayed in the affinity space that accompanies the game. Most classes will involve undertaking assignments, which are 'marked' and 'graded' by 'teachers', and for which participants receive ACs (Academic Credits are 'badges' stored in participants' inventories). They need a certain number of ACs to progress in the game and higher grades may grant up two ACs – which help with faster progression. Lessons are run by more experienced members of the game (see social design).

The epistemic design on Edmodo allowed the teacher to customise specific learning tasks, however, knowledge construction had a degree of fluidity, through the generation of streams of content that were built upon and traversed by students' flows in different ways. The teacher, however, had a key role in setting the tasks which specify the 'rules of the game'. Thus, unlike the Potterworld or other network platforms where students engaged in self-driven knowledge formation – by choosing the general topic area of the game they want to engage with – here the teacher led the topic and content to be covered. For instance, in a typical interaction, the teacher would set up a question, problem or task and then scaffold students to interact and share ideas on the topic. To encourage active participation, the teacher would sometimes discuss – in the physical space – some of the threads and comments by students, allowing and guiding a deeper reflection on certain topics. Participation was also encouraged through the formation of smaller groups. As in the physical space of the classroom, some students were more prone to share ideas and participate on the digital space than others. Furthermore, some students would engage in more text-based communication, while others would combine text with multimodal expressions.

Social Design: Potterworldmc and Edmodo

Social organisation in Potterworldmc is structured through different roles that mix function and fiction. Every player enters the game as a 'muggle'. The first level of support or assistance for those new to the game is given by a DMA (or a member of the Department of Muggle Affairs). A participant may apply to become a DMA after having completed activities at the level of 'Year 3', and after being familiar with the introductory processes in the game. Attributes needed to perform this role required a 'willingness to help muggles'. DMAs orient novices from the time they arrive in the game until members are 'sorted' in one of the houses, and help in answering questions, giving tours, and general housekeeping tasks. Through participation members may evolve to different and more elaborated hierarchical roles, which are dependent on the types of contribution they may engage with, for example, as a prefect, as an architect, as a developer. A 'prefect' enacts an academic interest, and these participants move from learners to different levels of teaching. Roles associated with 'architects' and 'developers' tap into the creativity of building spaces for the enactment of the game (see Table 1). There are also different supporting roles, as for example, 'journalists' for the three publications in the game (e.g. at the time we observed Maxwell, these were named as 'Daily Prophet', 'Witch Weekly', 'The Quibbler' – since our data collection some aspects of the game were re-named, due to copyright issues).

Table 1: Potterworldmc: Examples of Roles and Hierarchy

Prefect	DMA, Prefect, Head Boy/Girl, Junior Professor, Mid-Professor, Senior Professor, Assistant to Head, Head of House
Architect	DMA, Prefect, Junior Architect, Mid-Architect, Senior Architect, Head of Architects
Developer	DMA, Prefect, Head Boy/Girl, Junior Developer, Mid-Developer, Senior Developer, Head Developer
Other roles	Journalist, Editor

Proceedings of the 11th International Conference on Networked Learning 2018, Edited by: Bajić, M, Dohn, NB, de Laat, M, Jandrić, P & Ryberg, T

ISBN 978-1-86220-337-2

153

Edmodo allows students to interact online during specific class activities, but also outside school hours. The social design of Edmodo allows community participation and asynchronous dialogue. Teachers may set up different spaces for different groups of students. Once a group is created, two types of roles are present – the 'teacher' and the 'students'. However, these specific roles are not rigid, as students are encouraged to engage in conversations with their peers – suggesting, advising, commenting on knowledge productions – and in doing so, shifting to a teaching-like role. Edmodo requires that teacher and students create a profile, which they can customise through the addition of a photo and information. Our case study suggests that this feature of the social design on Edmodo plays a role on identity construction. Unlike other networks were the participants remain anonymous or hidden, here any contribution by students will be linked to their profile, and be part of their online identity building. In fact, our observations noted the relevance of this element for students, through their dedication into developing their profile. Many students, invested significant time in creating their own avatars (a feature of Edmodo) checking with their peers to ensure that their image was just 'right'.

Activity Potterworldmc and Edmodo

Maxwell enjoyed the experience of being in a world where he could 'make potions', 'talk about' having special powers, while role-playing living in a magical story – through his participation and imagination, he enacted being a wizard. Maxwell enjoyed opportunities to play the game both on his own and with a friend. Often he would arrange to spend time with his friend Ann 'in' the game. Maxwell and Ann had been friends for 7 years, before Ann and her family moved interstate. Through the game platform, Maxwell and Ann had opportunities to 'meet' (about twice a week). They would enter the game at the same time, and talk via Skype while playing, agreeing on specific sites of Potterworldmc to visit, classes to attend, as they progressed through the game. Their time in Potterworldmc was also a time 'to catch up' and 'be together', and created opportunities for both of them to learn from each other's experiences in the game. Maxwell was also very keen to take on responsibilities and so at the age of 11, he applied for a 'job' – he wanted to be a 'journalist'. The game offered him opportunities to experience different aspects of his identity, taking on responsibilities and working towards his goals. He 'met' others, discussed similar interests, shared aspects of the story and in the process, learned how to navigate the social aspects of this world – attending classes, helping others find their way around the game, collecting items, participating in class discussions. He applied for jobs and when unsuccessful he emailed the contact person requesting feedback. Through all these interactions, Maxwell learned valuable lessons about how to be a member of this community, how to connect to others and how to use multiple pratforms (Skype, Google Docs, and Minecraft Server) and the resources at hand to achieve his goals. The game offered many opportunities for Maxwell to develop his digital literacy skills – which he would certainly be able to extend in his real life. He wrote assignments, and eventually got a 'position' as a journalist, creating news articles for The Quibbler, sharing his productions with his 'editor boss', using a collaborative online platform – Google Docs. Maxwell successfully navigated the collaboration aspects, and at the time of data collection was producing one article per week. Not all submitted articles were published, as the editor would filter submissions, but Maxwell was successfully getting his productions into the game. In so doing, he contributed to the Potterworldmc, using his skills as a creative writer, researching and producing information about Harry Potter or events in the game, and his writings were transformed into artefacts – his knowledge creations – that were incorporated into the game, modifying the environment, and impacting on other members' participation.

On Edmodo, students reported great motivation to connect during lessons, using both written and multimodal representations. Their interactions went beyond the proposed tasks, to include informal conversations. The teacher was key in maintaining an educational tone to these conversations as students, especially at the beginning of the semester, tended to engage in colloquial interactions, perhaps mimicking their behaviours in Facebook. As with in the physical space of the classroom, some students were more prone to share ideas and participate on the digital space than others. Participation was also encouraged through the formation of smaller online groups. Some students engaged in more text-based communication, while others combined text with videos or images. We also observed that over the semester, some students who were absent during lessons, were able to connect from home and work with their groups online. This was an emergent practice, not really anticipated by the teacher, but students would often search for ways of connecting and staying updated when unable to attend classes. Edmodo serves well this purpose as it can fulfil different needs: a repository of content uploaded by the teacher and students; a way of interacting in asynchronously with peers; a platform to upload and submit assignments; a calendar; and a space to keep records, such as grades and progress over the semester. On occasions, students would continuously interact beyond the classroom time. However, these interactions were less often than expected, considering previous studies on this matter (Thibaut, 2015). Perhaps, the fact that this research was one of the first attempts to incorporate technology in this classroom, shows a need to design a more explicit guidance to students towards online interactions, out of the formal space of the classroom. Over

Proceedings of the 11th International Conference on
Networked Learning 2018, Edited by: Bajić, M,
Dohn, NB, de Laat, M, Jandrić, P & Ryberg, T

ISBN 978-1-86220-337-2

154

time, all the interactions between students and the teacher were archived on the wall and consulted, if needed. This is relevant, as unlike the physical space of the classroom, participants were able to retrieve prior interactions and use it for knowledge building. For instance, when students were asked to give feedback to their peers, they would go back to the discussion happening on a specific day, to then offer feedback.

We noticed how some of the elements in both networks – through its social arrangements, tasks proposed and the resources and tools linked to the platforms – allowed young people to connect to each other, to a range of resources, and to a learning community, where all participants learn and experience being part of a 'magical world' – in the case of Potterworldmc – and build and contribute to each other's experiences and knowledge – on Edmodo. Both cases offer evidence, that teens are learning how to collaborate, create and engage in digital literacy practices, and enacting behaviours that could be associated with networked learning practices.

Conclusion

Ito et al. (2009) stress that 'the generational divide and the divide between in-school and out-of-school learning are part of a resilient set of questions about adult authority in the education and socialization of youth' (p.537). Acknowledging that these ideas are still a reality, the results of our study offer insight regarding the possibilities of convergence between youth *in-school* and *out-of-school* activity. The ACAD framework supported our understanding of the relationship between design elements and emergent activity in two learning scenarios, revealing how networked practices unfold both in 'the wild' but also in formal spaces for learning. In both cases, we observed students' agency for producing and participating in knowledge creations. Whether writing an essay, working on news articles (Potterworldmc), giving online peer feedback or posting a 'how to' video (Edmodo), these activities show young people contributing to their own and others' learning in active ways. While in the first case the activities were initiated by Maxwell and in the second prompted by the teacher, in both spaces youth engaged in distributed knowledge practices, through various forms of participation, using a collection of tools, resources and modes, such as synchronous, asynchronous, multimodal and text based. Set design elements in Potterworldmc and Edmodo included various platforms and tools that allowed archiving and multiple ways of communicating anytime anywhere, impacting the participation. However, the presence of the tools alone is not sufficient, but instead is the combination of tools, tasks and the social aspect, that is key for productive learning networks. The social seems particularly relevant to this age group as in the school context, the teacher was able to transfer her authority (at least partially) to the students, and in so doing, allowed them to play an active role through peer-teaching or as content creators. Similarly, the social structure of Potterworldmc was key in organising roles and hierarchies for participation.

Our analysis offers evidence on the array of digital literacies observed across the two sites, with findings that are in agreement with recent research which shows that digital literacies leverage youth agency, participation and student-centred learning (Lankshear et al, 2013). Teens contribute in different ways, often more creative, than those which heavily rely solely on the print mode. Given the incipient research focusing on the intersection between design for networked learning and youth, we hope that our analysis of the connections between designable elements and the emergent networked activity of young people, might shed light to research in this area.

References

Beetham, H. & Sharpe, R. (Eds.) (2013). Rethinking pedagogy for a digital age: Designing for 21st century learning (Second Ed.). New York: Routledge.

Black, R. W. (2009). English-language learners, fan communities, and 21st-centuries skills. Journal of Adolescent & Adult Literacy, 52(8), 688–697.

Boyd, D., & Ellison, N. (2007). Social network sites: Definition, history and scholarship. Journal of Computer-Mediated Communication, 13(1), 210–230.

Carvalho, L. & Garduno-Freeman, C. (2016). CmyView:Walking together apart. In Proceedings of the 10th International Conference on Networked Learning 2016, (Eds.) S. Cranmer. N. B. Dohn, M. de Laat, T. Ryberg & J. A. Sime, (pp. 313-320). Lancaster University

Carvalho, L., & Goodyear, P. (2014). The architecture of productive learning networks. New York: Routledge.

Cronin, C. (2016). Open, networked and connected learning: Bridging the formal/informal learning divide in higher education. In Proceedings of the 10th International Conference on Networked Learning, (Eds.) S. Cranmer. N. B. Dohn, M. de Laat, T. Ryberg & J. A. Sime, (pp. 76-84). Lancaster University.

Ellison, N. B., & Boyd, D. (2013). Sociality through social network sites. In W. H. Dutton (Ed.), The Oxford Handbook of Internet Studies (pp. 151–172). Oxford: Oxford University Press.

Proceedings of the 11th International Conference on Networked Learning 2018, Edited by: Bajić, M, Dohn, NB, de Laat, M, Jandrić, P & Ryberg, T

ISBN 978-1-86220-337-2

155

Evans, R. T., & Klilincm, E. (2013). Creating 21st century learners: Edmodo in the social studies classroom. In Society for Information Technology & Teacher Education International Conference (SITE) (pp. 4965–4970). Chesapeake, VA: AACE.

Geertz, C. (1973). The interpretation of cultures: Selected essays. New York: Basic Books.

Goodyear, P., Banks, S., Hodgson, V. & McConnell, D. (2004) Advances in Research in Networked Learning, Kluwer Academic Publishers, Dordrecht.

Goodyear, P. (2014). Productive learning networks: The evolution of research and practice. In L. Carvalho & P. Goodyear (Eds.), The architecture of productive learning networks (pp. 23–47). New York: Routledge.

Goodyear, P., & Carvalho, L. (2013).The analysis of complex learning environments. In H. Beetham & E. Sharpe (Eds.), Rethinking pedagogy for the digital age: Designing for 21st century learning (Second Ed.), (pp. 49-63). New York: Routledge.

Goodyear, P. & Carvalho, L. (2014). Framing the analysis of learning network architectures. In L. Carvalho & P. Goodyear (Eds.),The architecture of productive learning networks (pp. 48–70). New York: Routledge.

Gogia, L. (2016). Collaborative Curiosity: Demonstrating relationships between open education, networked learning and connected learning. In Proceedings of the 10th International Conference on Networked Learning, (Eds.) S. Cranmer. N. B. Dohn, M. de Laat, T. Ryberg & J. A. Sime, (pp. 85-92). Lancaster University.

Gourlay, L, & Oliver, M. (2016). It's not all about the learner: Reframing students' dgital literacy as sociomaterial practices. In T. Ryberg, C. Sinclair, S. Bayne & M. de Laat (Eds.), Research Boundaries, and Policy in Networked Learning. Switzerland: Springer

Greenhow, C. (2011). Online social networks and learning. On the Horizon, 19(1), 4–12.

Halverson, E. R. (2012). Digital art making as a representational process. Journal of the Learning Sciences, 22(1), 1–42.

Hodgson, V., de Laat, M., McConnell, D., Ryberg, T. (Eds.) (2014). The design, experience and practice of networked learning. New York: Springer.

Ito, M., Gutierrez, K., Livingstone, S., Penuel, B., Rhodes, J., Salen, K., … Craig, W. (2013). Connected learning. Irvine, CA: Digital Media and Learning Research Hub.

Ito, M., Horst, H. A., Bittanti, M., Boyd, D., Herr-Stephenson, B., Lange, P. G., … Al., E. (2009). Living and learning with new media: Summary of findings from the digital youth project. MIT Press. http://books.google.com/books?id=1pxitUNb9pMC&pgis=1 [viewed 28 September 2017].

JISC (2014). Developing digital literacies https://www.jisc.ac.uk/guides/developing-digital-literacies [viewed 28 September 2017].

Jenkins, H., Purushotma, R., Clinton, K., Weigel, M., & Robison, A. (2009). Confronting the challenges of participatory culture: Media education for the 21st century. https://www.curriculum.org/secretariat/files/Sept30TLConfronting.pdf [viewed 28 September 2017].

Jones, C. (2015). Networked learning: An educational paradigm for the age of digital networks. Switzerland: Springer International Publishing.

Kilinc, E., Evans, R. T., & Korkmaz, U. (2012). Aligning Facebook and Twitter with social studies curriculum. In P. Resta (Ed.), Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 517–521). AACE: Chesapeake.

Lammers, J. C., Curwood, J. S., & Magnifico, A. M. (2012). Toward an affinity space methodology: Considerations for literacy research. English Teaching: Practice and Critique, 11(2), 44–58.

Lankshear, C., Knobel, M., & Curran, C. (2013). Conceptualizing and researching "new literacies." In C. Chapelle (Ed.), The Encyclopedia of Applied Linguistics (pp. 1–8). New Jersey: Blackwell Publishing.

Magnifico, A. M. (2010). Writing for Whom? Cognition, motivation, and a writer's audience. Eduactional Psychologist, 45(3), 167–184.

Padgett, E. R., & Curwood, J. S. (2016). A Figment of Their Imagination: Adolescent Poetic Literacy in an Online Affinity Space. Journal of Adolescent and Adult Literacy, 59(4), 397–407.

Squire, K. (2006). From content to context: Videogames as designed experience. Educational Researcher, 35(8), 19–29.

Steinkuehler, C., Compton-Lilly, C., & King, E. (2010). Reading in the context of online games. In K. Gomez, L. Lyons, & J. Radinsky (Eds.), Proceedings of the 9th International Conference of the Learning Sciences - Volume 1 (Vol. 1, pp. 222–229). International Society of the Learning Sciences.

Thibaut, P. (2015). Social network sites with learning purposes: Exploring new spaces for literacy and learning in the primary classroom. Australian Journal of Language and Literacy, 38(2), 83–94.

Thibaut, P., Curwood, J. S., Carvalho, L. & Simpson, A. (2015). Moving across physical and online spaces: A case study in a blended primary classroom. Learning, Media & Technology, 40(4), 458–479.

Yeoman, P. (2015). Habits and habitats: An ethnography of learning entanglement. PhD Thesis, The University of Sydney, Australia. http://hdl.handle.net/2123/13982 [viewed 28 September 2017].

Proceedings of the 11th International Conference on Networked Learning 2018, Edited by: Bajić, M, Dohn, NB, de Laat, M, Jandrić, P & Ryberg, T

ISBN 978-1-86220-337-2

156