Chapter 1
Celebrating the Tenth Networked Learning Conference: Looking Back and Moving Forward

Maarten de Laat and Thomas Ryberg

Abstract The chapters in this book are based on a selection of papers from the Networked Learning Conference 2016 which was the 10th anniversary conference in the series. In acknowledgement of the anniversary, the authors of this Introduction look back and reflect on past networked learning conferences with the aim to describe some general trends and developments in networked learning research as they emerge and fade out over the years. In order to do so the authors use the proceedings of each networked learning conference (from 1998 till 2016) as a compiled dataset. This dataset forms a text corpus that has been analysed with Voyant tools (Sinclair and Rockwell 2016) specifically designed for analysing digital texts. Voyant tools are used to generate a set of word clouds (Cirrus) in order to visualise networked learning research-related terms that feature most frequently in each set of proceedings and conduct a trends analysis of these terms to generate a visual representation of the frequencies of these terms across the proceedings over the years. The outcomes have been thematically organised around the following topics: learning theory (e.g. cognitivism, constructivism, social learning, actor network theory), learning environments and social media (e.g. LMS, MOOC, Virtual Worlds, Twitter, Facebook), technologies (e.g. phone, laptop, tablet), methodology (e.g. quantitative, qualitative) and related research in the domain of e-learning (e-learning, CSCL, TEL). The findings are placed in their historical context to understand how research presented in the domain of networked learning has developed over the years and influenced our work. Towards the end of the Introduction, the two main sections of the book are presented. The overview discussion of individual chapters is deferred to the Conclusion chapter.

M. de Laat (✉)
Learning, Teaching & Curriculum, University of Wollongong, Wollongong, NSW, Australia
e-mail: mdelaat@uow.edu.au

T. Ryberg
Department of Communication and Psychology, Aalborg University, Aalborg, Denmark
e-mail: ryberg@hum.aau.dk

N. Bonderup Dohn et al. (eds.), *Networked Learning*, Research in Networked Learning, https://doi.org/10.1007/978-3-319-74857-3_1

Fig. 1.1 Tag cloud of 10 year Networked Learning

To celebrate the tenth anniversary of the biennial Networked Learning Conference, the conference chairs Maarten de Laat and Thomas Ryberg presented an overview of emerging and trending themes that have been featured at the conference series over the years. The selection of topics and trends was based on semantic analysis drawing on a dataset that comprised the full conference proceedings published from 1998 to 2016, see Fig. 1.1. The statistical material underpinning the presented graphs was created using the text- and data-mining tool Voyant Tools.[1] Voyant Tools is an open-source web-based text reading and analysis environment where all PDF versions of the conference proceedings were uploaded and processed. Voyant Tools can – amongst other things – be used to count, for example, how many times particular words or phrases occur in a body of text. In the analysis presented in this chapter, each conference proceeding featured as a data point creating a timeline presentation showing the development or decline of networked learning research trends over the years.

In this introduction, we have expanded the trend analysis initially presented at the Networked Learning Conference held in 2016 in Lancaster and discuss the findings we see from analysing the textual material. We will reflect on the limitations of

[1] https://voyant-tools.org/

our approach, the value and biases of statistical treatment of word occurrences, and what we can meaningfully draw from such analyses. For example, our analysis suffers from an inability to meaningfully explore the concept of 'networked learning' itself as it occurs so often in the proceedings (e.g. in headers and footers) that it is rendered meaningless. Similarly, it proved difficult to generate sociographs to map social interaction or author networks based on paper publications around the identified topics.

In this chapter we present our findings grouped into a number of themes, representing the areas in which networked learning has had most traction. We start with theoretical perspectives that have been used to understand and frame networked learning practices. We then reflect on the dominant research methods that have been used, followed by various modes of delivery or designing for networked learning, and we wrap it up with a presentation of the technological devices that have dominated networked learning research over the years. Within each of these themes, we discuss in more depth how we have approached the analysis and our rationale for the words chosen after we provide an analysis and reflection and ponder what the findings might suggest in terms of moving forward.

As an initial caveat, we should say that we do not ourselves consider our analysis an authoritarian analysis or solid, sturdy anchoring point from which we can say that we have attained a 'god's eye' overview of the past and future of networked learning. We see the analysis as a first attempt to provide a preliminary analysis of trends in a manner that we do not think has previously been attempted within networked learning. In the spirit of recognising the limitations and preliminary nature of this analysis and approach, we lay our material open for others to explore as open datasets, so that other researchers – within or outside the networked learning community – can consult and work with the data to debate, dismiss, or enrich the findings of our analysis. Thus, we see the analysis as a first preliminary attempt to understand the field of networked learning through the lenses and techniques of data-mining and textual analysis of corpora.

The Field of Networked Learning

> Networked learning is learning in which information and communications technology (ICT) is used to promote connections: between one learner and other learners, between learners and tutors; between a learning community and its learning resources. (Goodyear et al. 2004, p. 1)

The quote above is the often-used definition for networked learning as proposed initially by Goodyear et al. (2004). It stresses the importance of both human and digitally mediated interactions through the notion of 'connections' and underlines that interactions with technologies and resources in isolation are not sufficient to constitute networked learning.

At the first Networked Learning Conference in 1998, the aim was to bring networked learning research and praxis together, and there was a strong focus on

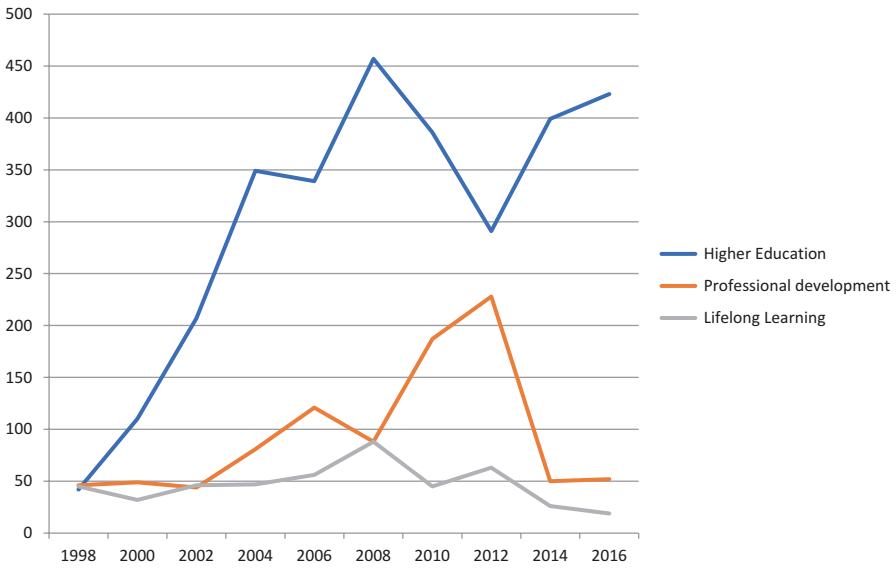

Fig. 1.2 Focus of networked learning research

lifelong learning, professional development and implications for educational theory and the current paradigm shift from traditional learning to distributed and distance learning (Banks et al. 1998) – in fact the proceedings were titled 'Networked Lifelong Learning'. This early broad orientation of networked learning is visible in Fig. 1.2, but over the years, it has become clear that a lot of the research has been driven by exploring particularly the potential of networked learning for higher education.

In Fig. 1.2, one can see how frequently the words 'higher education', 'professional development' and 'lifelong learning' have been used in the networked learning conference papers over the years. From this, it becomes quite clear that the predominant focus has developed to become the area of higher education. The attention to lifelong learning and professional development has always been present with a pronounced peak in 2012 for 'professional development' when the conference was hosted in Maastricht in the Netherlands. The interest in lifelong learning seems to be gradually fading, which perhaps is part of a wider trend, as the same pattern holds true if one looks up 'lifelong learning' in Google Trends (from 2004 to 2017, there is a decline in interest from index 100 to approximately 30).

From the beginning of the conference series, there was a very broad understanding of networked learning, and the *space of possibilities for networked learning was seen as vast*[2] (Jones et al. 2001). This is still true today, as illustrated in Goodyear et al. (2016a) where a number of cases from different domains are presented. But it is also clear that the conference series bends strongly towards higher education and professional development, over, for example, primary or secondary education or

[2] http://csalt.lancs.ac.uk/jisc/definition.htm

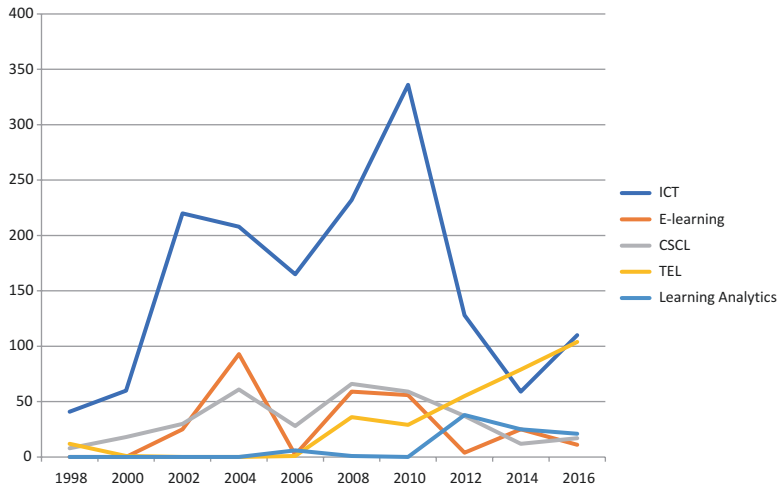

Fig. 1.3 Related areas of research

informal learning (these were all terms we searched for, but they returned only a few results). This, of course, is hardly surprising as the conference has always been understood and promoted as a conference addressing higher education, professional development and lifelong learning (but has always been open to incorporating papers lying outside of this scope). While we were not surprised that higher education features prominently over the years, we were a bit surprised to see the comparatively smaller uptake in 'professional development'. This, as we believe it, will increasingly become an area of political interest and one where the field of networked learning has a lot to contribute to in terms of critical, dialogical and collaborative perspectives over a more individualised trajectory of microdegrees.

With the domain of inquiry being firmly settled within higher education and to some extent professional development, we were also interested in looking further into what constitutes the field of networked learning more broadly. We have therefore made searches into particular neighbouring research fields such as technology-enhanced learning (TEL), computer-supported collaborative learning (CSCL), learning analytics and knowledge (LAK) and more broadly information and communication technology (ICT) and e-learning. The results can be seen in Fig. 1.3.

What is immediately notable from Fig. 1.3 is the gradual rise of interest in the term ICT with a steep decline in 2012 and 2014. This, most likely, does not suggest that the interest in ICTs has waned, but probably that the term ICT is gradually and more broadly being replaced by other terms, e.g. digital technologies. Again a Google Trends search for ICT does seem to confirm that this term is losing traction over the years from 2004 till now.

Quite interestingly, the term 'e-learning' seems to live a bumpy life, peaking at some conferences (2004, 2008 and 2010) and being almost non-existing at other times (2000, 2006, 2012). There is no immediate good explanation for this, other

than the term ‘e-learning’ in general is a broader (and less precise) term than networked learning, which would therefore often be the term chosen at NL conferences over e-learning.

We further queried into specific fields of research, such as TEL, CSCL and learning analytics. In general, as we shall return to in the concluding chapter, the area of learning analytics seems little explored within the networked learning community, which does not seem to reflect a wider trend within educational technology. The term had a small surge in 2012 and has been explored further – though to a lesser degree – in 2014 and 2016. Comparing to Google Trends, this is markedly different from the broader interest, as since 2012 the interest in learning analytics has risen (from index 11 in 2012 to nearing a 100 in 2017). In contrast the use of the term TEL has risen since 2008 in the NL conferences, and it seems that this is generally a term that has become increasingly popular amongst national governments, the EU and other funders (which has also provoked criticism of the term (e.g. Bayne 2015; Hayes 2016)). Finally, we queried into the term CSCL, which has gathered a relatively stable amount of interest within networked learning over time, though with a slight decline in the recent years. As argued by Jones et al. (2015), there are strong overlaps between CSCL and networked learning, as well as some areas where they follow different paths:

> Networked learning has a close relationship with computer-supported collaborative learning (CSCL), in that both fields have a keen interest in collaborative orchestrations of learning. However, CSCL tends to focus on smaller groups, including dyads, whereas networked learning extends to medium- to large-scale groupings. Also CSCL has a strong connection with formal learning in education, whereas networked learning has been picked up in a wider context, for example, lifelong learning, professional development, and organizational learning. (Jones et al. 2015, p. 2)

CSCL when compared to networked learning has a stronger anchorage in education more generally including a strong presence in primary and secondary schools, whereas networked learning, as illustrated in Fig. 1.2, extends further into professional development and lifelong learning, although this to a lesser degree than we had actually expected (see Fig. 1.2).

Theoretical Perspectives: Theory and Focus of NL Research

Within the area of networked learning, it seems particularly worthwhile to understand what theoretical perspectives are underpinning ideas of networked learning. As several authors have explored, networked learning is not a unison theoretical perspective but rather is a theoretical perspective that is composed by or underpinned by a range of other theoretical outlooks (Hodgson et al. 2014; Jones 2015; Jones et al. 2015; Ryberg et al. 2016).

In analysing these trends, it is important to understand that the mention in a paper of a theoretical perspective does not necessarily translate to a positive stance towards or preference for that theory. Just as much as citation counts in isolation do not show

that an author or perspective is agreed upon, popular, or found worthwhile. For example, one might find – within the networked learning literature – quite a few references to Prensky (2001), but the majority of those might be critical to or debate the notions of 'digital natives' proposed initially by Prensky (e.g. Bennett et al. 2008; Kennedy et al. 2008). Likewise, people might mention activity theory, but disagree with or dismiss it. Therefore, what follows from the trends analysis cannot, in isolation, be taken to mean that authors subscribe to the theory. Establishing just an approximation of positivity or negativity towards the theory mentioned would require a substantially more complex and detailed data-mining technique looking, for example, for adjacent words in sentences that could unearth positive or negative stances. This goes far beyond our capabilities and intentions, so we should remind the reader that the trend mapping merely signals attention/awareness. However, that a theory merits attention and is on the radar of the community is also an important measure of its impact on a community; whether for good or bad, it does show that it is or has been a topic of interest.

We should also mention that different words may often be used for the same theory. For example, some differ between social constructivism and constructivism, whereas others take it for the same. Likewise, the term social constructionism is a term that has also featured in the conference over the years and one that should not be confused with constructionism. Another term that is frequently used in this context is social constructivism. Both terms follow a similar curve over the years (see Fig. 1.4). Although these terms have a slight different meaning, they have also been used in substitution of one another.

Actor-network theory might be spelled in a number of ways, with or without hyphens, and might more recently be phrased as a sociomaterial perspective (or perhaps socio-material or social material), and, for example, activity theory could also be referred to as socio-cultural, sociocultural, or cultural historical perspective. These ambiguities or even little differences in spellings (dash or no dash) make it difficult to assess the occurrence of a theoretical perspective.

In the following, we discuss the selection of the overall concepts we have chosen to include. The main concepts we have explored are cognitivism, constructivism, communities of practice, social learning, actor-network theory and activity theory.

While, from an experiential point of view, we did not expect there would be strong mentions of 'cognitivism', we included this perspective nevertheless, as it is often positioned as an overarching learning theoretical perspective together with behaviourism and constructivism (Jones 2015). As networked learning is more often associated with relational, social and non-dualists views of learning, we expected that cognitivism, understood as particularly associated with cognitive science/psychology, or cognitive theory would be a more fringe perspective within networked learning. This is not to say that a cognitive perspective is strange to networked learning; indeed Peter Goodyear (e.g. 2002) has explored this topic extensively, and in Chap. 2 by Gale Parchoma in this volume, she explores the notion of distributed cognition. However, the work grounded in cognitive science/cognitive psychology seems less pronounced in networked learning as Jones puts it:

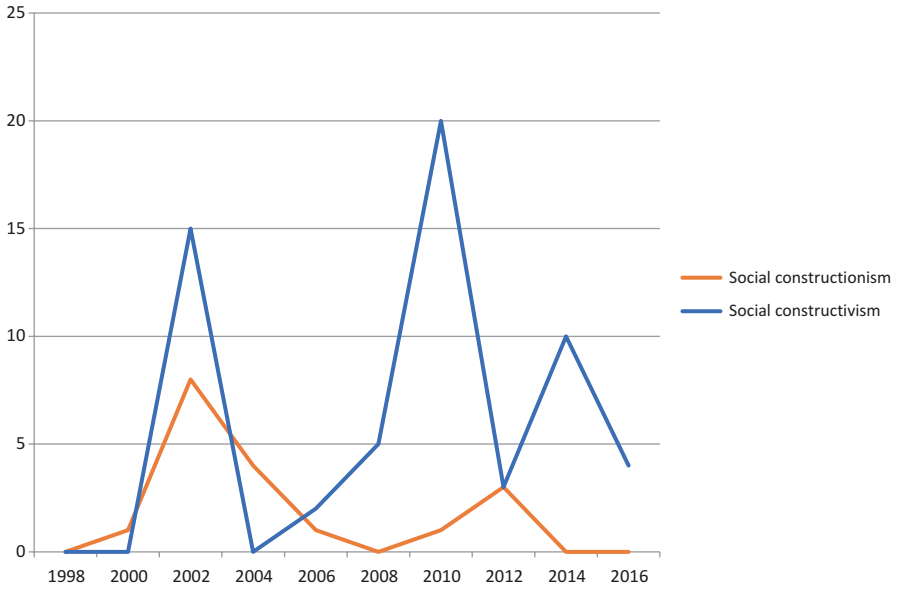

Fig. 1.4 Social constructivism and social constructionism

> For networked learning the influence of cognitivism has been limited but there are some elements that have a continuing relevance. Firstly there is a concern with the thinking and intentions of learners. Networked learning still has an interest in what happens in the brain and an interest in what can be called the mind (Carvalho and Goodyear 2014; Goodyear and Ellis 2010). (Jones 2015, p. 52)

The notion of constructivism was included as it is often positioned as an overarching learning theoretical perspective along with, for example, behaviourism and cognitivism. It is a term that has broad meanings, but usually refers to the idea that knowledge is constructed by the learners, rather than being transmitted to the learner by, for example, a teacher:

> The central ideas of constructivism are that knowledge is created by people, either as individuals or as part of groups, through experiencing the world and reflecting upon those experiences. In this view knowledge is constructed by the knower and as a consequence it does not exist externally and independently of the knower(s) and knowledge cannot simply be transmitted and received. (Jones 2015, p. 52–53)

Under the hood of constructivism, however, a number of different theories are often subsumed, for example, Piaget and Vygotsky, as well as ideas such as radical constructivism and constructionism. So, constructivism is a rather broad term that can cover quite a spectrum of different meanings. Finally, we have added three theoretical frameworks that we know/assumed from experience might be widely adopted (activity theory, actor-network theory and community of practice), as well as the broader term ‘social learning’.

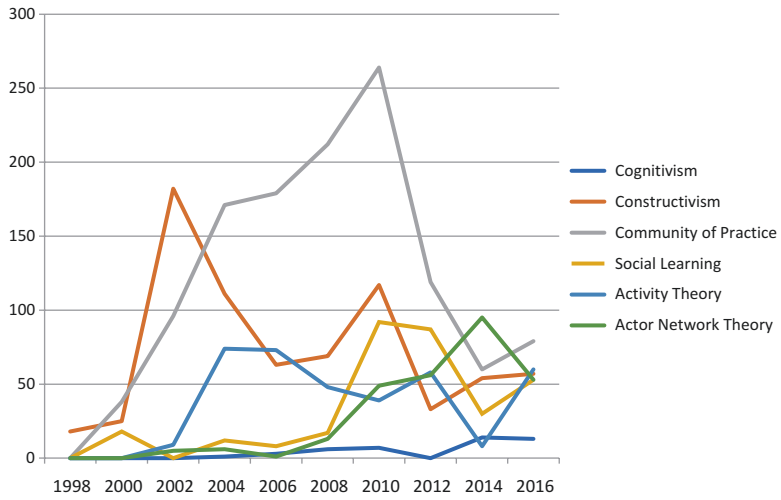

Fig. 1.5 Theoretical perspectives within networked learning

Looking at the graph (Fig. 1.5), we see that the broad label of 'constructivism' has generally featured quite extensively throughout the years, with a steep rise around 2002, but seems to have gradually lost popularity in the recent years (from 2010 until now). Similarly, the notion of community of practice has been extensively popular and rising for every conference peaking at 2010, where after the term seems to decrease in popularity quite significantly from 2010 and onwards. Similarly, it seems that the notion of social learning follows a similar pattern to that of 'communities of practice'. This could be explained by the fact that since 2004 Wenger began more intensively to refer to communities of practice (CoPs) as a 'social theory of learning'. This term was mentioned in Wenger (1998), but became more widespread with the publication of the research agenda 'learning for a small planet' (Wenger 2004). The decline in the number of mentions of CoPs from 2010 and onwards could indicate that the popularity of the theory maybe has started to 'wear out', but it is also interesting, as there have been a number of discussions (and critiques) of the notion of community. For one thing, the notion of 'community' (not necessarily community of practice) has been critiqued to ignore the darker sides of hierarchy, oppression or 'the tyranny of participation' (Fox 2005; Roberts 2006; Ferreday and Hodgson, 2008), and also there have been discussions of communities versus networks and what the ideas of community might overlook (e.g. the strength of weak ties (Granovetter 1973)) (Wenger et al. 2011; De Laat et al. 2014; Vrieling et al. 2016). Thus, the notion of community has always played the role of both an ideal and a contentious, problematic notion within networked learning, and this double role might also be an explanation of why it has held such a strong role as a topic of discussion. It is also well worth noting that the interest in 'communities' within networked learning preceded the popularity of communities of practice as a distinct concept. The interest in community-oriented and community-collaborative

forms of learning has always been strong within networked learning; in fact it is probably because the notion of communities of practice resonates well with the foundational ideas of networked learning that is has become so pervasive.

For the other theories, we have highlighted that the trends are less pronounced. This might have to do with the semantic difficulties of capturing those frameworks, whereas 'Communities of Practice' is a more easily encapsulated concept, activity theory and actor-network-theory could equally be referred to by many other names as stated earlier. However, from the graphs, it seems that activity theory was more popular from 2004 to 2006 and then has gradually diminished to have a bit of a renaissance in 2016. In relation to this, it is interesting to see the interest in actor-network theory gradually gaining traction from particular 2008 to peak in 2014. In 2014 it seems to have displaced activity theory – experiencing a surge in 2014 – where actor-network theory is peaking and an inverse relationship in 2016 where there is an almost equal amount of interest. We should, however, as previously written be careful in granting too much explanatory power to the graphs or deduce larger trends.

It does seem fair, though, to state that networked learning seems overwhelmingly underpinned by theories that take a broader social, cultural and relational view of learning, rather than, for instance, a more specific cognitive or neural perspective. Again, this is not entirely surprising and is also well established in the networked learning literature – particularly this has also been argued in the book series that summarises general trends in the area of networked learning.

Methods

Apart from querying into the theoretical underpinnings, we found that it would be relevant and interesting to look further into methods and methodologies adopted within networked learning. We initially queried into the broad distinction between 'qualitative' and 'quantitative' and incorporated also the more recently popularised idea of 'mixed method' (see Fig. 1.6).

Figure 1.6 clearly illustrates that networked learning is a field leaning more towards qualitative methods than quantitative. From our experience with the conference and reading through many papers, this did not come as a surprise to us, though it is a bit surprising to see that between 2002 and 2008, there – apparently – was more quantitative work present, but that its volume seems to have diminished somewhat since then. Interestingly, mixed methods, which seems to have become a very popular approach within many areas of research, had in the past few years an early start in the networked learning community and seems to live a quiet, but stable live outside the spotlight of hundreds of mentions. However, we should again be careful attributing too much explanatory power to the graphs; even one paper discussing quantitative vs. qualitative and mentioning these concepts often could contribute heavily to a peak.

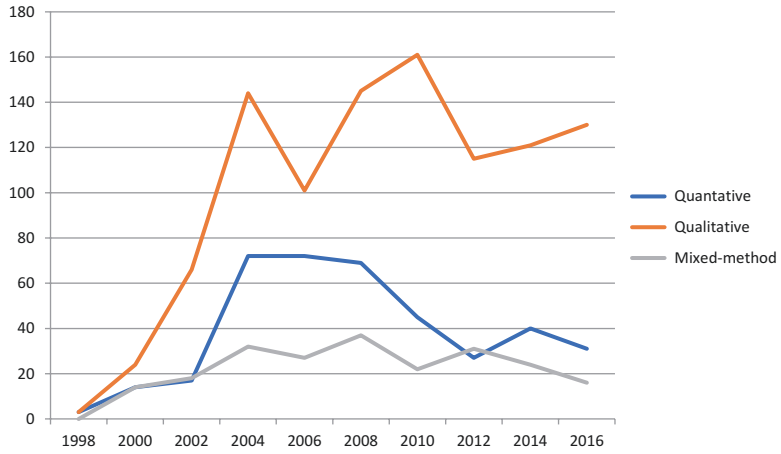

Fig. 1.6 Overarching research orientations within networked learning

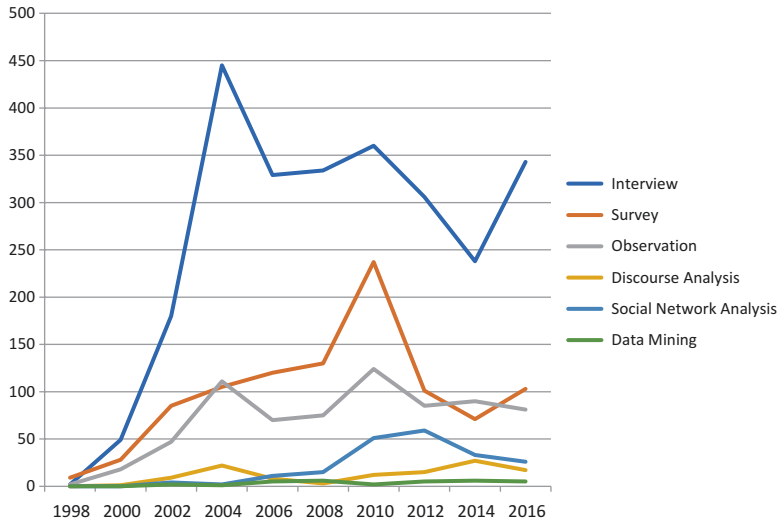

Fig. 1.7 Data collection methods used in networked learning

Adding more detail to the very broad query into methods, we decided to be more specific and query the terms such as interview, survey, observation, discourse analysis, social network analysis and data mining (Fig. 1.7) as well as phenomenography, ethnography, design-based research and grounded theory (Fig. 1.8).

Figure 1.7 more or less confirms the overall impression of networked learning leaning more towards the qualitative side. Interviews are by far the most mentioned method, followed by survey and observation (noting that observation could also occur as a regular word not affiliated with the method observation, just as one can

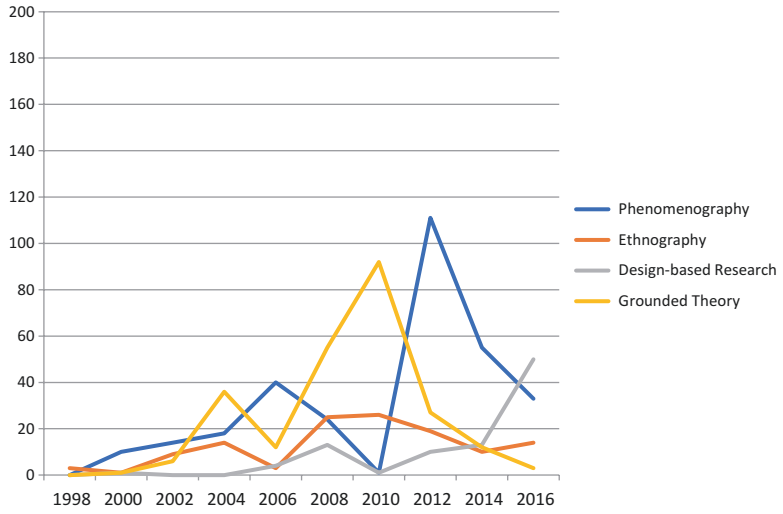

Fig. 1.8 Qualitative methodologies in networked learning

make a survey of the literature). Somewhat surprisingly discourse analysis is quite rare. We had expected this would be a more prominent method, as often authors have analysed forum interactions or policy texts from a critical perspective. In this vein, it could be interesting in a future analysis to identify the types of qualitative textual analysis networked learning researchers engage in.

From Fig. 1.7, we can further see that from 2004 social network analysis is beginning to take a place as a method that is adopted within networked learning research, whereas data mining remains a method rarely adopted or mentioned (though it should be mentioned that some forms of social network analysis rely on data mining).

In Fig. 1.8, which can be seen as an extension of the previous Fig. 1.6, we can see how qualitatively oriented methodologies hold a central place in networked learning research (although many forms of phenomenography and early grounded theory also entail quantitative aspects). Ethnography, often associated with observation and interviews, holds a stable – yet modest – place, whereas both grounded theory and phenomenography are more common. This most probably has to do with the nature of networked learning, as much networked learning occurs online making it more amenable to textual analysis of interviews, forum transcripts and so forth than perhaps sustained observations in the 'field' (though online ethnography or multisited ethnography is a blooming field within online educational research more broadly speaking). From the graphs, one can see that both phenomenography and grounded theory have been gaining traction over the years (though mentions of grounded theory seem to be waning), and a peculiar observation is that there seems to be a strange inverted relationship between phenomenography and grounded theory. For example, in 2010 mentions of grounded theory peak, whereas phenomenography is absent and the inverse for 2012 where phenomenography peaks and the mentions of

grounded theory plummet (and a somewhat similar pattern on a smaller scale can be seen in 2004 and 2006). Finally, we can see how the concept of design-based research seems to be on the rise since 2004 – a methodology that also seems to be gaining more attention within educational research at large.

In summary, it is notable that networked learning research leans broadly towards qualitative research, yet also including surveys, social network analysis and phenomenography and grounded theory, which in some interpretations include aspects of quantitative methods. Equally it is worth noting that approaches such as data mining seem to be completely absent from networked learning research, which in many ways is not surprising but perhaps worth reflecting on whether there is a need to pay more attention to such fields and methods, as much attention now seems to be directed towards 'big data', 'analytics', 'algorithms' and so forth.

Networked Learning Delivery Modes

In this section on networked learning delivery modes, we look into three different dimensions moving from the more general modes of delivery (e.g. online, f2f) to more specific technological learning environments and social media infrastructures.

In Fig. 1.9, we have queried into different overarching modes of delivery, i.e. f2f, distance, online, blended, hybrid and open. It should be noted that several of these are difficult to assess, as words such as online, distance and open could equally refer to ordinary usage of the words, rather than delivery modes per se.

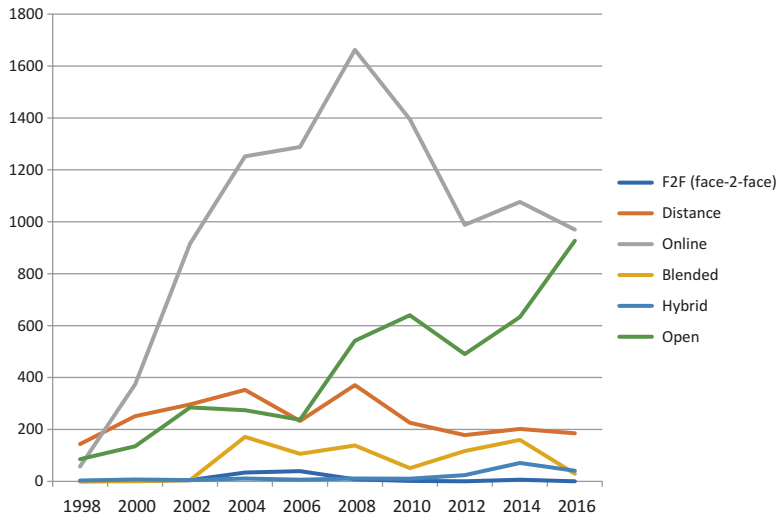

Fig. 1.9 Delivery modes for networked learning

From Fig. 1.9 it seems that there is little work referring to f2f (face-2-face) work, which is perhaps not surprising, considering that networked learning traditionally has been strongly associated with various forms of 'online' or 'distance' learning – two concepts that also feature more prominently in the graphs. However, a caveat here could be the potentially many ways of expressing face-to-face in terms of variations of spelling or expressing 'physical' formats in education. Having said that, it is noteworthy that there are quite a few occurrences of blended learning, which can entail a mixture of online and face-to-face, and the same for 'hybrid' (though both of these terms have many meanings).

In the past few conferences, it has become apparent that there is now a greater interest in delivery modes that are not only online, such as blended/hybrid or understanding how students and teachers use educational technologies as part of on-campus teaching. Here it is particularly worth noting how 'place' and 'mobility' have entered as particular fields of interest (Carvalho et al. 2016; Gourlay and Oliver 2017; Gallagheret al. 2016) in contrast to students sitting at home participating in online conferences via a desktop computer (Goodyear et al. 2016b):

> At the risk of over-simplifying, one might say that people involved in networked learning were generally assumed to be experiencing remote interaction with others: while sitting down, using a desktop computer or terminal; [...] Twenty years later, changes in technology, media habits and expectations mean that this sedentary, exotic, keyboard-tethered image of networked learning is no longer tenable. Mobile, personal, voice-enabled multifunctional devices such as laptops, tablets and smartphones have made it possible to participate in networked learning 24/7 from almost any location, including in workplaces, the home, the bus and the street. (Goodyear, Carvalho & Dohn, pp. 97–98)

We return to these issues in the final discussion in this book as these changes also have an impact on how we can understand the notions of 'network' in networked learning.

A final remark in relation to Fig. 1.9 is the increasing interest in the notion of 'open' which is now nearing occurrences of the even more generic term 'online'. This could for one thing be associated with massive open online courses (MOOCs), but more widely probably also reflects an interest in 'open' as 'open educational resources' and increasing interest in moving courses beyond the confines of a singular university module or course.

Learning Environments

In terms of learning environments (see Fig. 1.10), we have queried it into four quite broad categories: learning management system/virtual learning environment (LMS/VLE), MOOCs, Virtual Worlds and Clouds. Apart from LMS/VLE, there are few occurrences of any of these words prior to 2008, which might not be very surprising in terms of concepts as MOOCs and Cloud are terms that have only surfaced or become more widely popular around 2008–2010. Virtual Worlds (second life) seems to have been represented in the networked learning field only very marginally

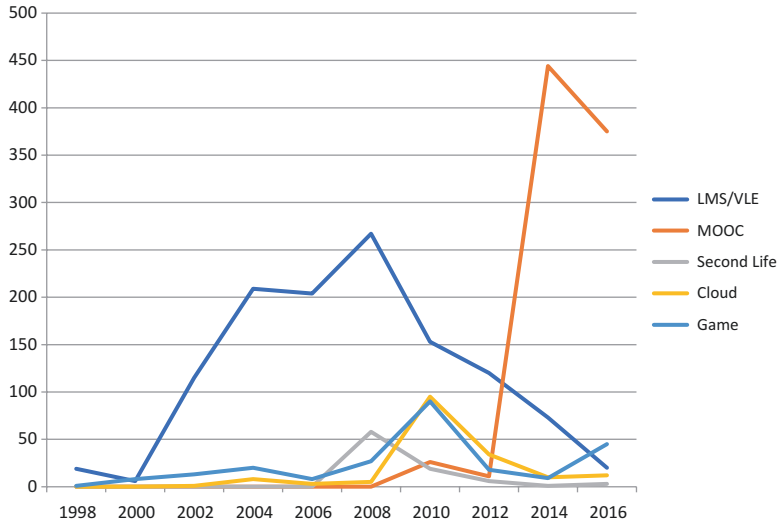

Fig. 1.10 Learning environments featuring networked learning research

and with few occurrences over the years – it really shows no clear trend that was taken up in this research community. To the contrary, the terms LMS/VLEs (i.e. Blackboard, Firstclass, WebCT, Moodle, Fronter) began an upwards trend after 2000, to peak around 2008, and then start to decline somewhat rapidly in the years following.

Most noticeably is obviously the appearance of MOOCs that seem to follow a wider cultural trend of becoming excessively popular after 2012 following the rise of platforms such as Coursera, EdX and the whole MOOC craze taking off at that time – but it should be noted that the earlier MOOCs (e.g. developed by Siemens and Downes) also received some attention in the Networked Learning Conference around 2010. It is, however, quite striking with this explosive interest in MOOCs happening between 2012 and 2014 showing a steep rise in mentions from around 25 to 450 (a graph that we could perhaps dub the 'Nessie graph' as it looks a bit like the 'Loch Ness Monster' rearing its head). Whether MOOCs become a 'Loch Ness Monster' lurking in the deep waters of higher education remains to be seen. On the one hand, MOOCs have been subject to criticism; on the other hand, MOOCs are globally seen as a pathway for higher education institutes to offer courses online to attract students in the global higher education marketplace. The interest in MOOCs reflects of course the wider cultural and political interest in the MOOC phenomenon. However, since the networked learning community often praises itself for its critical and distanced stance to 'boosterism' and technological determinism (Jones 2015), it would be interesting to dive deeper into an analysis of how the MOOC phenomenon was addressed in the papers from the 2014 to 2016 conferences.

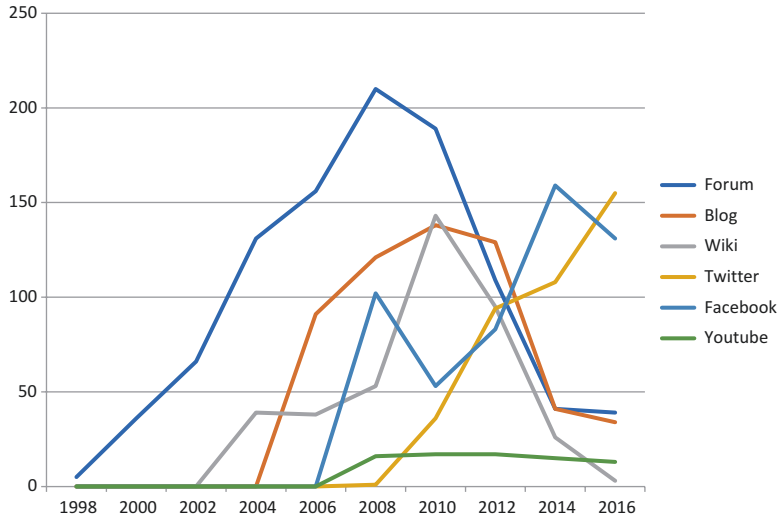

Fig. 1.11 Tools and social media use within networked learning

To understand what might be the more concrete technologies that are adopted for learning, we queried into some more generic types of tools (forum, blog, wiki), as well as particular services (Facebook, Twitter and YouTube).

From this graph (Fig. 1.11), we can see that 'forums' were of increasing interest from 1998 until around 2008 where the use of the term 'forum' starts to decline. The interests in forums are hardly surprising for a field particularly interested in dialogue and collaboration as 'forums' were one of the dominant 'technologies' to support asynchronous dialogue at the time. This is also reflected in a steeply growing interest in blogs and wikis that were often portrayed as some of the paradigmatic 'web 2.0 technologies' (Dohn 2009) within education; and it also follows the general interest in web 2.0 that started to take off around 2004–2005. What is interesting to see is how these terms also seem to be wearing off and be replaced by an interest in social networking sites and services such as Twitter and Facebook and, to a much lesser degree, Youtube. In relation to YouTube, it is somewhat puzzling that a platform, which is so pervasive in the broader cultural landscape, seems to hold such a little space within networked learning.

Technological Infrastructure

Regarding the use of technological devices and infrastructure by learners, we were interested in querying into broad categories such as 'computer', 'mobile', 'laptop', 'phone' and 'tablet' to see if there were any trends that might be interesting (see Fig. 1.12). In relation to this and which is perhaps not surprising is that the term

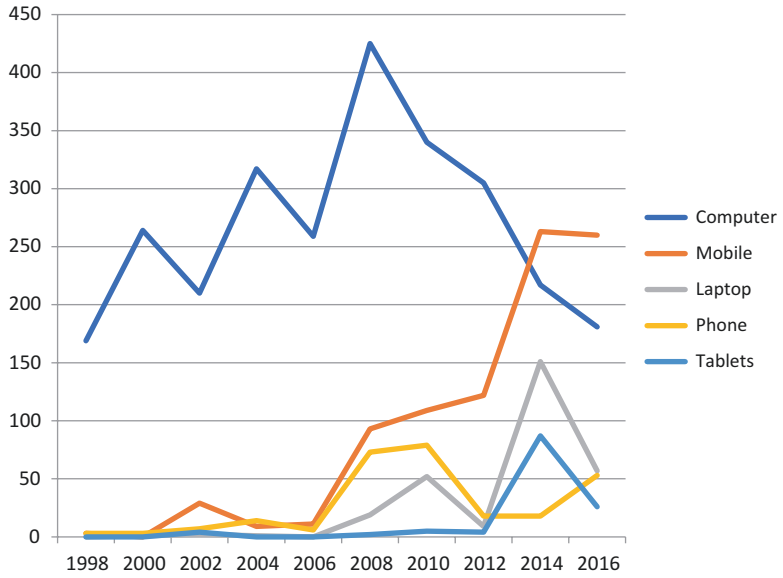

Fig. 1.12 Technological devices used for networked learning

'computer' is slowly declining, whereas terms such as phone, tablets and laptop were on the rise, but most noticeably the word 'mobile' shows a clear upward trend since 2006 and exceeding 'computer' around 2014. This change follows the more general trend where over time we have become more specific about the type of computer technologies we are using.

Rounding Off

Celebrating the tenth anniversary of networked learning conferences covering a period of almost 20 years of research in the area is a great opportunity to reflect and look back. Some clear patterns have emerged, and although not always that surprising it provides a good summary of what happened over the years and where the focus of attention has been. What seems evident is that the field of networked learning is strongly linked to research within higher education, but equally professional development and lifelong learning are areas of interest. However, it is worth mentioning that there have certainly been numerous papers addressing also other contexts, e.g. informal learning, upper secondary schools and museums. We believe that the field should always be open and inviting to papers and thoughts that do not necessarily emanate from studies in a higher education context provided they contribute to advancing and developing our understanding of networked learning.

From a theoretical perspective, it seems clear that networked learning is strongly associated with theories that emphasise social, relational and cultural aspects of

learning, be they ANT, activity theory, communities of practice, socio-material, social constructionist, or constructivist perspectives. It is a field interested in community-oriented and community-collaborative forms of learning, but equally social learning in more loosely tied, diverse, complex networks increasingly exploring movements across online and 'physical' places. Methodologically, it leans strongly towards qualitative methods, but with noticeable interest in quantitative methods as well or methodologies involving aspects of quantification (social network analysis, grounded theory). It is a field that – being interested in digital technologies – also reroutes its interest or object of study as the technological landscapes and trends change. For example, following the wider political and cultural interest in MOOCs, but also we see how there seems to be shift in focus from the LMS/VLE towards social media, such as Twitter and Facebook, or from institutional technologies to technologies and services that reside outside the technological infrastructures of higher education institutions.

In relation to this, it is also interesting to note that we might be experiencing a growing interest in forms of learning that are social in a different way than suggested by collaborative learning, communities, or communities of practice.

The next 'wave' in educational technology and networked learning research might involve a growing interest in the importance of being networked in the sense of personal, social networks in a global learning landscape, where the core is not necessarily learning communities and group learning, but rather a greater attention to the degrees of freedom and choice that social networks and learning relationships provide – as well as the challenges of such personalised, social networks to central networked learning values such as community and collaboration. In this light, social theories of learning, social network analysis and actor network theory may be used to understand the socio-material relationships that shape our learning and where (if it all still relevant) this learning takes place. Through their connectivity and use of mobile devices, learners become even more aware that they are learning all the time and that they through their contributions are not only consumers of knowledge but indeed creators of knowledge. Using Twitter, Facebook and other social media, a lot of our learning takes place in the 'wild' and therefore increasingly outside of traditional educational institutions. In this regard, phenomena such as MOOCs – or more importantly – being able to connect with learners on a global scale, can be seen as truly disruptive and something that will fuel future discussions within the networked learning research community. However, it is also clear that this 'global wild' is not necessarily a 'democratic' utopian realisation of the 'global village' but equally a 'wild' that is heavily guided by commercial platforms driven mainly by the desire for profit. In this 'wild', it will be increasingly important for the networked learning research community to critically ask what should be the role of dialogue, community and collaboration and how we can sustain and promote central values such as widening access to education and supporting democratic processes, diversity and inclusion. These are questions that were foundational in the establishment of the networked learning research community and are equally valid – if not more important – in the years to come.

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