**Abstract**

New infrastructures that dramatically change our possibilities for knowledge
production and learning have also brought forward ideals on 'new' connectivity. Two
important ideals of connectivity are that of the individual who tailors his or her
knowledge among expansively dispersed resources, and the ideal of access to
multiple, diverse resources that provide individuals rich learning opportunities. In
order to better understand what cultural norms are implied in our ideals of
connectivity, we argue, they must be tested in the crucible of empirical data through
the analysis of the actual socio-technical practices of different social and cultural
groups. Through a combination of ego-network analysis and a qualitative, in-depth
discursive approach, we analyze the networked learning practices of three ethnically
different groups in the Netherlands from an extensive research study called 'Wired
Up'. We comparatively describe Dutch youth as 'unrooted' learners, Moroccan-Dutch
youth as 'routed' learners, and Turkish-Dutch youth as 'rooted' learners. We propose
the idea of the Networked Configuration for Learning as a means to contrast the
learning opportunities individuals and groups have in relation to particular offline and
online connections, their historical geographies, the development of learning 'places',
and particular learning affinities.

## 1. Idealized notions of connectivity and learning for the 21st century

It is commonly acknowledged that information and communication technologies have created new infrastructures that dramatically change our possibilities for knowledge production and learning. Along with these new possibilities for learning and connectedness, we have also generated new ideals that create vision for the new information society and yet also, at times, become confused from with the lived reality of this society in everyday practice. For instance, in the ideal information society, people are optimally networked so that resources are equally available, shared and voiced, and participation possibilities are maximized. However, we have only limited knowledge of how these ideals match with every day social practices of connectivity. At the same time, these notions of optimal connectedness and participation are marshalled by new paradigms of learning. These paradigms provide an alternative to traditional proprietary models of knowledge production, and are based on open knowledge production models in which knowledge production and sharing happens through decentralized and distributed networks. These networks are available independent from time and space barriers, and owned by many, rather than revealing information through linear systems from one central point, (Peters, Besley, & Araya, 2014). Along with this open knowledge production it is argued that a wider variety of resources over greater distance is available for learners. In line with this many have pointed out that learners in the digital age have or need to have global orientations and need to learn to juggle the contradictory frameworks that come with this wider variety.

However, until relatively recently, we have only begun to look for an empirical base of the social practices that sustain these ideals, and develop alternate claims that counter-pose to the ideal. Just as the ideal of civic participation has stumbled upon older issues of race, class and ability in realizing full community participation in the information society (Baker, Hanson, & Hunsinger, 2013), we might ask if we can find empirical grounds for these idealized digital connectivities for learning. Are these ideals perhaps based on too simplistic notions of unbounded and unproblematic access to communities and knowledge networks? Do they sufficiently account for how particular social formations in which knowledge and information is shared are formed, for instance, taking into account issues of identification, of geography, and of diverse histories? Are these ideals perhaps more realistic for some and not for others?

In this paper we begin by reviewing some of the ideals that have been brought forward on 'new' networks, networked configurations for learning and knowledge building, focusing especially on scholarship from the learning sciences. We analyze the presumptions on which these ideals are build and also present a selection of studies that can provide us with, partly empirical, knowledge of digitally networked configurations and how these work for learning.

We move into an empirical analysis of knowledge networks among immigrant and non-immigrant youth from our research, to provide insight into the variety of digitally mediated networked configuration as well as socio-cultural nature of these configurations.

Our aim is to contribute to a critical appraisal of the ideals of new forms of networked learning through an empirical examination of the digital practices of ethnically different groups of young people in the Netherlands. This comparative perspective is not used to make an argument around ethnically specific connectivity's. Rather, our goal is to point out the diversity that exist in networked configurations for learning while seeing these configurations as socially, culturally and historically formed in which ethic factors play a role next to, for instance, gender, age or specific youth or media cultures.

## 2. A review of the literature
### 2.1 Ideals of connectivity

Two important sets of ideals of connectivity that have developed over time are, in the first instance, the ideal of the individual who tailors his or her knowledge among expansively dispersed resources for learning, and in the second instance, the ideal of the availability of a wider variety of resources over greater distance that provide individuals rich learning terrains for their traversals. Following, we briefly sketch these ideals as configured sets of ideas and vision, as assembled discourses.

*Globally dispersed, highly individualized networks to pursue tailored knowledge*
What distinguishes contemporary social knowledge arrangements from those of the past, is that knowledge production happens more at geographically and temporarily dispersed sites. In the knowledge society, individuals are still working, living, gathering knowledge and making decisions as part of densely knit, homogeneous locally based communities, but, at the same time, find themselves in highly individualized, locally and globally dispersed networks, which provide them with unique knowledge opportunities to solve particular problems (Farrell, 2006).

The same can be argued for the processes by which this knowledge is acquired. Whereas earlier learning happened in clearly identified, closed, geographically bounded and specialized communities, in which learning meant to observe and practice in close supervision of a master, learning possibilities in the knowledge society are far more individualized, happen in accordance with personalized network structures which are spread out over different geographical scales and a variety of relationships that might be rather different from each other and include, for instance, online tutoring with people at the other side of the globe or the possibility to set up a knowledge base together with people that have as many nationalities or ethnic affiliations as you can imagine.

The notion of 'connected learning' Ito and colleges have introduced as an alternative for traditional, standardized, place based education tunes into this idea of connectivity. Learners have more agency than ever before to connect to the world, share ideas and experiences, develop and show expertise in their respective fields of interests (Ito, Gutiérrez, Livingstone, Penuel, Rhodes, et al. 2013). Likewise, Ito states that connected learning can be an alternative for pushing scarce and static knowledge from center to periphery. Learning processes start from individuals that pursue knowledge and expertise they care deeply about, supported by a network of friends and institutions creating a 'dynamic, distributed, participatory, networked knowledge universe' (Ito, 2012). The idea of connectivity that is implied is one in which information is maximally available and the of process knowledge sharing implied is one in which knowledge does not move from authorized hubs or centers to individuals, but instead, is pulled from a variety of places and individually resourced. The profile of the learner that is implied here is highly agentic, driven by individual needs and interests, and pursues his or her learning in individualized and tailored-to-the-need networks.

*Multiplication of available and diverse resources for learning in new networks*
The idea of optimalized networking has lead scholars of education to assume that diversity and cross-disciplinarity will move up in the agenda of education in the 21st century. Globalization has led to an explosion in the variety of sources of information available, to greater community heterogeneity and to participation in multiple, overlapping communities, although these effects vary considerably depending on local conditions (Weisner & Lowe, 2005). Whereas this diversity earlier has been typically associated with the socialization of immigrant youth, today all youth have the possibility to be exposed to a multitude of different resources, and a network of relationships that connect them to multiple different others that can be meaningful for their formation. For instance, Cousin (2005) argues that what is typical for learning in cyberspace, is the endless navigating possibilities, the unexpected turns and directions, and the potential for heterogeneity in learning experiences.

Many have stated that living with the heritages or simultaneous presence of multiple, diverse communities creates particular challenges. For instance, the learning that takes place in culturally heterogeneous settings becomes more centered around the comparison, confrontation, and translation of traditions, as well as on the ability to move through multiple socio-cultural worlds and build multiple repertoires (e.g., De Haan 2011). However, although the idea of optimized networking and heterogeneity seems to inspire many scholars of education, this relationship has not been explored in detail, and empirical work in this area is only beginning.

Both set of ideals have in common that they are based on notions of connectivity that are relatively abstract and removed from actual social networked configurations. In addition, so

far, in formulating these ideals, there has been little attention for the variety in digital connectivity that might have important consequences for learning opportunities.

While we do not as yet have many empirical studies to examine or test ideals of connectivity in practice, there is initial work that can inform us about the specific form online connectivity's can take in practice. Equally importantly, from a range of scholarship, conceptional work has been done from which insights can be generated on specific networked social configurations and their supports for learning, including work that considers learning from the perspective of participation in communities.

Below, we review and synthesize insights from a range of studies that analyze such networked structures with the goal in mind of understanding how these structures impact learning opportunities in the digital era. The networked perspective on learning that we take contrasts with a perspective on learning as individual information processing. From a socio-cultural take on learning which sees learning as part of whole activity systems that include culture, community, tools, and symbols (Vygotsky, 1978) learning can be considered a networked phenomenon that covers the totally of relationships and resources individuals have at their reach (Jones & Steeples, 2002; Ünlüsoy, et al., 2013). Cognitive individual processes are intertwined with the structures of the social relationships and available artefacts that support that individual or group of individuals. In this vision on learning, social configurations for learning, as well as the nature of resources these provide, are an inherent part of 'learning', next to the individual information processing side which is not the explicit focus of this paper.

### 2.2 What do we know of digitally formed social configurations for learning?

In socio-cultural theory the learning of individuals has been often conceptualized as related to the qualities, forms, and extent of community participation of the individual, arguing that learning is a matter of growing into the intellectual lives of others and becoming member of a (knowledge) community (Rogoff, 1990). Brown and Campione (1994) developed the idea of a community of learners as a didactical concept in which classrooms function as communities in which advantage is taken from the expertise of all of its members, as an alternative for a teacher-centre approach in which knowledge is one-sidedly transferred. Others have developed notions of informal learning that are explicitly linked to becoming a member of a community, such as the idea of a community of practice (Lave & Wenger, 1991) or the idea of Intent Community Participation (Mejía-Arauz, Rogoff, Dexter, & Najafi, 2007). Gee's (2005) idea of 'affinity space' makes perhaps the clearest contrast with the idea of a community of learners within this tradition, building up his argument around the rise of digitally mediated spaces for learning. Affinity spaces can be seen as a form of social

affiliation in the digital era in which a kind of learning happens that is contrasted to school learning. In affinity spaces people relate to each other primarily in terms of common interests, endeavors, goals, or practices. Typically, these spaces are temporal, and highly unstable in terms of who participates, since interests and goals may well change and develop. Experts and novices share the same space although they might have different roles and responsibilities at different moments in time. Individual learning as well as learning to use and contribute to distributed knowledge are both active. Innovation, and transformation, rather than passing on established knowledge seems to drive learning processes. Typically, these affinity spaces encourage and enable people to use dispersed knowledge, that is, knowledge that is not actually at the site itself, but at other sites or in other spaces. The concept of affinity space, in contrast to the idea of connected learning, for instance, points to the social configurations where learning is enabled. Gee points to the fact that although learners come together in these new social configurations based on their interests, new forms of belonging and community formation develop. Learners are described both as travelers who are occasional visitors, as well as community members who invest in the newly established communities.

Yet from another angle, scholars have raised the contrast between the advantages of densely knit communities, that enable a common infrastructure for learning and the sharing of common knowledge base, versus the benefits of more individualized and geographically dispersed networks, in which the availability of many diverse relationships is stressed. Generally, social network studies have argued that more individualized and geographically dispersed networks, mark the growth of the availability of many diverse relationships that provides people with the possibility to extend their knowledge manifold beyond their local communities, to make bridges to other communities. However, as a study by Benner on 21st century knowledge guilds shows, such long distance and dispersed relationships are not enough to realize knowledge innovation and to function as creative and productive knowledge centers. One of the problems the new 21st century knowledge guilds in Benner's study faced, was their isolation and a concern for finding a social world in which they can share their knowledge needs and problems (Benner 2003, as cited in Farrell 2006). Benner is making an argument for the importance of common knowledge, or a common learning infrastructure for the development of new knowledge. Densely knit communities in which we develop close relationships with similar others, or gather around a common purpose provide us with the sustained interaction, mutual engagement, coordination and the convergence in terms of shared values and focus, which is needed for collective and focused growth and learning according to a 'community of practice' idea as described by Wenger (1998). It seems thus that both types of ties or networked relationships, which in terms of social network theory are referred to as strong and weak ties, have different functions for

knowledge production and learning, also in digitally supported social configurations (see also Ünlüsoy, De Haan, Leander & Volker, 2013; Haythornthwaite, 2011). But it is important to note that, as Gee's notion of affinity space also shows, that some of the notions that have come up as important characteristics of socio-cultural learning, have certainly not disappeared in these new digital configurations for learning.

Haythornthwaite (2011) does not explicitly refer to the notion of community or affinity spaces, but makes the argument that online social configurations for knowledge production can be very different when it comes to how much people invest in the formation of online communities. Some configurations, or knowledge projects are more impersonal and the personal contribution of the individual is less visible. Not all networked based configurations are affinity spaces, or in her terminology, they do not all have 'community weight'. While paying particular attention to the interpersonal connections involved in online productions or projects, she distinguishes two different forms of online collaborations that have a different 'weight' in terms of the involvement and affiliations of people. 1) Crowd sourced collaborations such as Wikipedia, which involve tasks such as the proofreading of texts (e.g., http://www.pgdp.net) are called 'light' because they do not require knowing other collaborators or working closely together, are often anonymous, and depend on more 'institutionalized' structures that allow a relatively anonymous participation. Engagement can be partial, temporarily, and the barriers to 'get in' are minimal. 2) Community sourced online collaborations, such as those that develop in special interest communities online, in contrast, are 'heavy weight'. These involve community formation in terms of the building of status positions, rules and conventions. They can be considered more 'personal' as they are based on mutual visibility, require knowing and working more directly with others, and ask commitment to the goal of the project. With this typology Haythornthwaite adds the dimension of more institutionalized social configurations in which, as is the case in general in social institutions, knowledge production is massive, impersonal, and happens according to certain institutionalized rules. In the digital age, like affinity spaces, these institutionalized configurations have become more temporal, and unstable and allow the participation of many, changing contributors.

As these contributions make clear, digital connectivity comes in plural, and is highly specific. The learning potential or conditions for knowledge production it generates, depends on specific configurations of the networks such as density and dispersion, but also on the so called community weight of digital collaborations. Interestingly, in many of these studies issues of affiliation and belongingness play a crucial role, which demonstrates the importance of the community aspects of online learning relationships.

However, if (digital) connectivity is highly particular, and if communities matter in this respect, the question must be raised what learning communities are available for specific

individuals or group of individuals. In other words, this raises the issue of how we need to think of diversity in the connectivity's of people and the potential differences in their learning potential that follow from these. In order to shed some light on how specific connectivity's might work out differently for what learning opportunities are created, we adopt a comparative approach. While studying the online ego networks of three different ethnic groups of youngsters in the Netherland, we are interested in analyzing the specific shape of their networks, as well as how these might form unique profiles for their learning.

**3. A study of the online learning networks of different social and cultural groups**

*3. 1 Research questions and methodology*
In order to shed more light on the issue if and how the specific connectivity's youth develop online provide them with specific learning opportunities, we are interested in how youth of a different ethnic origin might develop specific connectivity's, and how then these relationships are exploited for their learning. Drawing on a perspective of learning as a networked phenomenon, we have combined a quantitative approach in which we are mapping the structures and composition of these online networks (as well as their 'whole' networks) (our question 1) with a discourse analytic approach in which we asked youth to interpret how these network structures, and the relationships and communities they provide function for their learning (our questions 2 and 3).
*1. Structure and composition of their online networks as related to their offline networks.* How can the (possible differences between) online networks of immigrant (Turkish-Dutch and Moroccan-Dutch) and native Dutch youth be described, as related to their offline networks in terms of: the kind of relationships they contact (friends, family, acquaintances), the homogeneity of their networks (in terms of age, gender, ethnicity), the geographical spread, size and density of their networks.
*2. Networked online communities for learning.*
2a.What (variety of) relationships and sub communities are indicated by youth in their networks that are relevant for their learning? What goals they pursue with these relationships and communities? (How) do issues of identification and belonging play a role here?
2b.Offline/online dynamics: And how do they see these communities or relationships positioned in relation to what their offline communities can offer them?
2c. What learning opportunities are perceived by these youth especially through their online connectivity?
*3. The experience of the internet as a ((un)bounded) place for learning.* How do they perceive their online networked practice 'as a whole'? (How) do they perceive the internet as a space to explore? What possible boundaries do they experience when exploring the internet as a means for their learning, and how do they deal with them?

### 3.2 Sampling and procedure

A total of 79 Social (Ego) Network Interviews were conducted with youth from Native Dutch (25), Moroccan-Dutch (29) and Turkish-Dutch (25) backgrounds in the Netherlands. Participants for the Interviews were recruited from a representative sample of migrant youth in the Netherlands between 12 and 18 years that had participated in a large-scale survey on the use of new media (Hirzalla, de Haan & Ünlüsoy, 2011). From this larger sample a stratified sample was drawn from two participating inner-city schools (Rotterdam and Den Bosch) (for further details on this procedure, see Prinsen, de Haan & Leander, in press). The interviews took, on average 1,5 hour and the students received a voucher for their participation.

### 3.3 The social network interview: mapping learning relationships

In order to map the social networks of these youths that are considered by them as relevant for their learning, we are drawing on Ego Network Analyses. Social Network Analyses is a perspective and a method that focuses on relational properties of social phenomena rather than focusing on aggregating behavior (Haythornthwaite, 2011). These relations are the result of the interaction of any kind between different actors in a network. Within this tradition, ego-network analysis focuses on (a group of) individuals and the mapping of her/his relationships, in contrast to whole network analysis that involves the mapping the relationships in one particular network (e.g. of a classroom).

The Social Network Interview we designed consisted of two parts. Part one was a name generator, in which the names and background information (type of relationship, age, gender, location of residence) of important relationships were evoked and processed with help of VennMaker software (Schönhuth, Gamper, Stark, & Kronenwett, 2009). We asked "Can you name a minimum of 20 and a maximum of 30 people that are important to you?" We made sure that youth included people that they considered important for their learning with prompts as, 'people that provide you with advice', 'people that provide you with important information' or 'people with whom you exchange a lot of information'. We asked youth if these people were contacted both offline and online, only offline or only online. In order to calculate the density of their networks, youth indicated who among their contacts knew each other.

This information from the ego network interviews was then imported into NodeXL software so that a visual representation of the network could be generated including the clustered position of alters, as related to each other and the respondent, see for an example the network part of figure 1 to 3 (see for further details, Prinsen, et al., in press). These visualizations supported the further questioning in part two, that was directed at in depth questioning

focused on how they identified the different parts of their networks and what role these play for their learning with questions as 'Are there people or groups of people in this network with whom you undertake activities in which you want to become better?' 'Can you tell me about these activities and how you learned them? 'What role did these contact or communities play in your learning, also given the other options you have, in particular offline options?' and 'how do you deal with the fact that you have multiple online communities? The instrument was piloted first with 4 youth to check for their understanding of the questions and was redesigned where necessary. The interviews were taken in Dutch, as all youth were fluent in Dutch by two of the authors and trained research assistants.

*3.4 Analyses*

In order to both map out the composition and structural characteristics of these networks (question 1), and to investigate whether there were significant differences between the three groups in this respect, we used Chi-square tests for goodness of fit to compare the groups on the proportions of alters per compositional characteristic that we considered relevant: relation (i.e., family, friend, acquaintance), age-group (i.e., younger, same age, older), gender, ethnicity, location (i.e., at home, same neighborhood, same city, different city, abroad). For age group, gender and ethnicity we calculated the proportion of 'people who are the same in this respect'. We did this both for their online and offline network, while also comparing their online networks with their offline and combined (total) networks. This allowed us to see how particular their online connectivity was in relation to their overall connectivity. With respect to the structural characteristics (the size and density of the networks), a one-way between-groups analysis of variance was used to compare the scores between the three different groups.

For the qualitative discursive analysis (question 2 and 3) the following procedure was followed. The voice files collected were all transcribed verbatim. An explorative pilot was done with the material of 10 cases of each of the groups and reported in Lecluijze (2012). Based on the outcomes of this pilot, a more focused analysis was done including all the respondents. Research questions 2 and 3 guided this part of the analyses.


## 4. Results: Networked configurations of Moroccan-Dutch, Turkish-Dutch and Native Dutch youth

Before we present qualitative information in which we show how youth perceive and strategically use their online networks, we focus on the differences and similarities in the composition, size and structure of their online networks as related to their offline networks (our question 1). By "composition" we intend type of relationships, ethnic homo- or heterogeneity, and gender, age, and location of contacts. In Table 1, 2 and 3 an overview of

the results of this analysis is presented. In interpreting these data, it should be noted that technical access was not an issue as all three groups had full internet access at home. While focusing on the statistically significant differences between the three groups, the results (Table 1) show that in immigrant youth's online networks family members play an important role as compared to native Dutch youth. Family members are more present in immigrant youth's only online networks, whereas for Dutch youth, this category consists typically of friends.

While looking at where their online contacts are located *geographically* (Table 2), it is evident that all three groups connect online with people who live relatively close by (in their neighborhoods and in their cities). However, the results also show a difference in how they use technology to build networks across space. Immigrant groups show both a more local (neighbor and city) and a more transnational online connectivity, as compared to the Dutch youth whose online networks are more 'national'. Within the immigrant group, Turkish youth's networks are divided between local and transnational levels, while Moroccan youth's network reach a middle level (city and nation).

We also specifically analyzed to what extent their online networks were homogeneous in terms of age, ethnicity and gender. Even if the overall image is that all youth's online network contacts are homogeneous, there were also some striking differences in this respect (Table 1). The networks of Turkish youth were somewhat more ethnically homogeneous and more gendered. This ethnic homogeneity rises for all three groups in their only online contacts. Further, what is typical of the online connectivity of both migrant groups, is that they have fewer same age contacts, as compared to the Dutch group. Among the only online contacts Dutch youth have more peers while immigrant youth have more older contacts (mostly family members who live abroad). As can be seen from Table 3, migrant youth's networks are bigger in size, while also being relatively dense, as compared to native Dutch youth's networks (as can also be seen in the examples of a typical Turkish-Dutch network picture in figure 2 and of a typical Moroccan network picture in figure 3). These differences between the 3 ethnic groups were significant based on ANOVA's, $F(2, 1761) = 55.60$, $p < .001$ (size) and $F(2, 1761) = 68.80$, $p < .01$ (density). As a next step, we will now combine the network data presented with our analyses of the discourses of these youth, as they interpreted their own network data in the second part of the interview.

### Dutch youth: 'unrooted' learners?

-   Figure 1 here-

*Online connectivity as related to offline: the creation of alternate spaces with old and new friends:* The most significant way in which Dutch youth uses the internet to enhance their learning opportunities with others is through creating alternative learning spaces with their emotionally close friends that are based close to them around specific *themes and interests* (76% of our Dutch respondents did this). These online spaces function for them to create more specialized or focused spaces with a selected group of friends with whom they share the same interest or affinity. An example of such an online hub of friends is the 'Volkswagen-club' a Dutch boy Rens mentioned, a fan club of friends that has both an offline and online presence as can be seen in Figure 1, which represents a typical network of the Dutch youth given the relatively open network structure in which peers play a dominant role. Rens learned to know the five 'Volkwagen-club' friends in his network when he started to help out with the club's website.

*Online learning opportunities: 'unrooted' learning as a side effect of sharing interests:* Almost half of the native Dutch youth (48%) also became a member of new online communities that stand relatively apart from their offline connections to search out specific interests or based on an explicit desire to learn something. As these connections are not linked to any histories or geographies of identity, these contacts might geographically be spread out widely. In these online spaces, specialized knowledge is created and participation and membership evolves around this knowledge. Nevertheless, these online spaces can form important communities in which bonds are created around specific knowledge and codes of behavior. For instance, the same Dutch youth Rens identified a 'community' of two online friends whom he met online and with whom he shared an interest in web design (Figure 1). Their common interest in web design and ICT in general makes this small community more meaningful to him, than his 'regular' offline friends. Even if one of them lives in Belgium, they form a long-term community with whom he experiences a close bond partly based on their common techno-linguistic competence " They (the other friends) *also do all sort of things with web design, we use more programming language and expressions that other persons might not know."*

Most Dutch youth don't see the sharing of interests with these contacts primarily as a learning experience. Learning is perceived as a side-effect as is demonstrated in the example of a Dutch youth Willy who interacts with people from all over the world around a YouTube channel focused on Harry Potter. He creates or assembles specific content such as movies,

text messages, or reacts on content or messages of others. He explains that he learns from this participation, but not purposefully: *' I just play with people from all around the world, mostly just around three o'clock or something when American people can play, then I play with them, talk a little [...]. "I play the game, I talk a little with other people, then you learn automatically."* Some youth also reported to learn specific language skills from this kind of online participation as a side effect of their collaboration with kids from different parts of the world.

The participation in these communities makes their learning 'unrooted', that is, more independent from specific places. This also was the case for the learning that goes on with their emotionally close friends who live nearby but travel elsewhere as the following example of a Dutch youth shows, who explains that he can help his friends to install software in their computers using remote desktop access software independently from where they are:

> Martijn (13 year-old boy): "*I do that for my friends, so I let them install a new program on their computers and then I can 'log in' on their computers via my computer and if they don't know how to do something I help them. So even when I'm at home and they are for example in America, I could help them*".

*The experience of total connectivity and boundaries: the internet as an open space for learning:* Dutch youth experience the internet mostly as a space that is relatively open, and that allows them both to stay in touch with known others or to meet new friends irrespective of the boundaries of time and space, mostly within the Netherlands, but also across national boundaries, such as with youth in Europe (Germany, England, Greece) or in the USA. They don't report any specific boundary issues or 'crossing' problems. As the quantitative analyses also showed: their learning happens in a mostly peer based space that is relatively 'loosely' networked. This network structure with its many different 'hubs' matches with their more individual connectivity, in which many different interests and hobbies are enabled, for instance around specific technologies, video games or fandom. For Dutch youth, the internet offers a space to 'unroot' from primary socialization spaces and to reorganize their learning according to their individual needs, specific preferences and affinities.

**Turkish-Dutch youth: 'rooted learners'**

-Figure 2 here-

*Online connectivity as related to offline: collective interests embedded in the Turkish community*

Although for Turkish youth, as was the case for the Dutch youth, the internet is integrated in their daily practice, rather than forming online communities to search for specific interests, they used the internet to support their offline interests or activities, such as sport, school or music preferences. What is striking comparatively is the collective, though gendered, nature of the interests they pursue. They did not identity often with specific, individual interests. For instance, most Turkish boys were engaged in fight sports such as karate, taekwondo and boxing. Most of these boys also visited YouTube to watch fragments of fight choreography (e.g., Bruce Lee movies), fighting tournaments or street fight videos. Girls similarly overall reported similar interests, of which online window shopping and online fashion design was the most prominent. However, these affinities were not used to form online communities in which the sharing of this information, or learning relationships developed. Furthermore, the online places they search for information would often be hosted in Turkey or have content related to Turkey. For instance, boys who are interested in football would search out Turkish websites about football, such as Fanatik (a Turkish sports newspaper) or they would visit web-sites that stream Turkish TV-shows and Turkish soap-operas. In line with this, many Turkish-Dutch youths' learning experiences were related to family values, or to Turkish traditions. An example of this is Ersin's account on how he is inspired by his cousin in Bursa (in Turkey) to follow traditional family values such as loyalty to his parents, hard work and investing in family property:

> *Ersin* (15 years-old boy): *"[My cousin] is actually someone who does not look like me, but who inspires me. He has a good life although he did not have a lot of money. He has, how should I say that, he has worked a lot, worked a lot, gave it to his parents to pay for the house […] Therefore, later when I have a job, I will also give a part to my mother, I also want to take care of my parents. He also inspires me since he is not such a boy who hangs around outside and who goes out, he often helps his parents, he planted trees for example.*

*Online learning opportunities: learning as a by-product from being engaged in family based (transnational) networks*

When our Turkish respondents reported about their learning experiences, the prominent role they gave to learning from the older and more experienced people from their own ethnic community was striking, both in their offline and online learning. As in the example above, they reported about family members as models, as sources for identification, both in the Netherlands and elsewhere. Furthermore, in contrast to the Dutch youth who formed specific online "places" that are thematized around particular interests, knowledges or affinities, the learning of these Turkish-Dutch youth seemed to primarily evolve around a densely connected ethnic network, that, as the quantitative analyses already showed, extends to Turkey and other immigrant countries in Europe in which family is relatively heavy represented.

Even if Turkish youth did not seem to have a learning goal when interacting with these contacts, keeping in touch with these connections provided them with learning opportunities related to life in Turkey and to Turkish culture. An example of this was Ihsan, a Turkish-Dutch boy who learned to play 'tavla' (backgammon) online from his niece who was living in Turkey. Even given the widespread use of this game, 'Tavla' is seen as a typical Turkish family pastime, and as such learning Tavla was part of being socialized into Turkish family life at distance. As the following example shows, social networking sites enable socialization in family traditions and transnational cross-generational learning. The example shows how Ihsan has learned Tavla from his niece Handan, who lives in Turkey, also visible in his network picture in figure 2.

> *Ihsan* (15 years-old boy)*: "I used to play a lot of tavla [...] Interviewer: And how did your cousin help you? Did it happen over MSN? How did she explain to you? I: It was on the website on Facebook when we started to play. There you can talk to each other. [There she thought me] the tactic of the game, how you should set your tiles and so".*

In addition, the contact with family members, and friends of family members who live in other migration countries provided important learning experiences that brought them in contact with other life worlds (though not other ethnic worlds). These transnational networks often provide important language learning opportunities, or serve to create a comparative perspective on life between Netherlands and other countries of the Turkish diaspora in terms of economic chances, school experiences, teenage life, youth cultures, and gender roles.

*The experience of total connectivity and boundaries: the Turkish community and Turkey as a place of reference for online connectivity*

The connectivity of Turkish-Dutch youth appears to be 'rooted' in and seamlessly fitting with the shapes and boundaries of their own ethnic community. Their online connectivity centered around already formed offline communities and tend to follow already established social configurations, which partly point 'back' to their Turkish roots. In line with this, Turkish youth reported to be cautious with engaging in new online contacts, although this did occasionally happen, but rarely outside their own ethnic community. Thus, Turkish online learners do not typically match with the image of the 'connected learner' who searches out his/her individual interests online. Their online learning seems more collectively inspired than individually, and 'rooted' in a particular community, associated with Turkey and the Turkish diaspora.

**Moroccan-Dutch youth: routed learners?**

-Figure 3 here-

*Online connectivity as related to offline: alternate socialization on migrant platforms*

In contrast to the more consumerist attitude of the Turkish-Dutch youth vis-à-vis media content, Moroccan-Dutch youth in our study were more active producers of media content, for instance through uploading videos, commenting on and writing stories on webfora or writing sport reports for sport club websites. For Moroccan-Dutch youth the internet seems to serve as a welcome alternate socialization space to ask the questions they cannot ask offline, to learn about topics that are 'taboo' in many of their offline worlds and to search out the people they are not allowed to meet offline. Connecting up with others online is particularly relevant for Moroccan-Dutch girls who often connect with Moroccan-Dutch boys online, something that is against the norms of their traditional community. Their online learning takes place in a peer-dominated world, which they sometimes consciously, cut off from older family members' control by for instance having several different accounts (one accessible for family, and one private), or using the accounts of friends. Social networking platforms, especially, function as an alternate space to escape the norms from their traditional offline community as the following example of a Moroccan-Dutch-Dutch girl illustrates. She

explains how the social networking technology (in particular, the platform 'Hyves') enables her and her friends to create a world for themselves, outside of the vigilance of their parents.

> Mumina (15 years-old, girl):*"They (parents) do not really know with whom I talk, that uhm, they would not approve on that[…]They, in our religion, in our culture we are very modest[…] I can talk to boys but not much more, interacting with them, outside or, especially when he (father) does not know them… Interviewer:Is it hard that you cannot tell your parents everything? M:"Uhm no actually not, no because I know how they would react so I rather keep it to myself, that's actually normal for every Moroccan-Dutch girl" […] I:Do you have the feeling that this [opportunity to meet boys] is something Moroccan-Dutch girls did not have before, something they can do now because of internet? M:"Yes I think so actually[…]I think that if this possibility was not there, there would be another way, meeting persons outside or something, but that would not have been as easy as Hyves".*

The content they search for is *not* typically hosted by websites based in Morocco, or by websites that give information on Morocco. Instead, they are more interested in information that informs their lives as second generation migrants, and are active users of 'ethnic' websites such as www.marokko.nl, a forum for Moroccan-Dutch immigrants, or www.chaima.nl, a website tailored for Moroccan-Dutch migrant girls or young women in the Netherlands.

These "ethnic platforms", which are massively visited by Moroccan-Dutch youth and are typically 'always on' media can best be described as massive online market places, where people can hang out, and in which many different corners exist in which specific topics including, for instance, Islam, (ethnic) pop art, news, fashion, makeup and hairstyle issues, and topics related to their school homework are discussed.

*Online learning opportunities: finding things out about being a migrant in generation based platforms and networks*

Although our Moroccan-Dutch did not report to turn to these 'always on' platforms specifically for learning purposes, they did report many different learning experiences related to their participation on these platforms, for instance on issues of marriage, religion,

especially as related to how to behave as a young migrant who is connected to his tradition, but who needs to re-invent traditional norms and values in order to make them work in new contexts. Primarily, these online-only contacts are established with peers from the Moroccan-Dutch community based in the Netherlands, but a few of our Moroccan-Dutch respondents also reported on cross-ethnic learning experiences that followed from these online encounters, as was the case with Shayda, a Moroccan-Dutch girl, who became friends with a Dutch girl she met on a forum (Kijkdatnou.nl), a political discussion forum. The network of this Moroccan-Dutch girl, shows how Dionne is not connected to the other connections of Shayda, due to the fact that they met online without having any prior affiliation (Figure 3). She talked a lot with Dionne on the forum, and appreciated this contact because they have the same interests, and even if they have never met in person, she feels she is a close friend. These cross-ethnic contacts and their participation in multiple fora, both 'ethnic' fora and more inter-ethnic or 'Dutch' fora, provided these youth with important boundary crossing skills. In this example, Shayda explains how talking about homosexuality is a different thing on an Moroccan forum as compared to a 'Dutch' forum and how this has spurred her inter-ethnic awareness and competencies to maneuver between multiple different online worlds:

> Shayda (14 years-old girl): *"I learned to think before you say something, because you can hurt many people[…] S: I think, (what) I have said there (at Kijkditnou.nl, the 'interethnic' forum), (I have said) from a different position, (compared to) what I would do if I would talk from the position of a Moslim. As in Islam, it is the case that, yes, homosexuality is taboo. You cannot talk about that. [...] S: I have expressed my opinion, as I knew there are not that many Moslims at that forum, so I am adjusting myself for a while. So, I just do it (talk) from the Christian vision. […] S: Yes, you have to adjust to your environment. At a forum as Morokko.nl, as a Moslim you cannot state that homo's that is allowed and such. [...] S: I think you need to know when you can say something and when you cannot say something. And you need to know that, what are the consequences, of telling your opinion."*

*The experience of total connectivity and boundaries: 'routed' learning in and out of the immigrant community*

Typical of the Moroccan-Dutch youth was that they were actively using technology to create alternative spaces for their peer-based socialization, much in contrast to what we've seen

from the Dutch-Turkish youth. The internet is a place in which they can escape, but also discuss and reconsider, the traditional notions and norms passed on by the older generation. In this sense, they use the internet as 'routed learners', learners who seek new routes to weight and reform the traditional notions handed on from the first generation. Dutch-Moroccan seem to interact less with family in their homeland, as compared to the Turkish-Dutch youth, even if family members in Morocco and elsewhere were included in their networks as 'important people.' Moroccan-Dutch youth interact more heavily online with their own ethnic peer based community within the geographical boundaries of the Netherlands, as the quantitative analyses also showed. They are typical boundary explorers in their online activities, possibly also a result of their overall active use of the internet. In contrast with the Dutch youth, they were not so much using the internet to vent out individual interests, but rather to seek out common themes that tune into typical second-generation issues.

## 5. Discussion

### 5.1 Divergent practices of connection and their relationship to ideals of connected learning

In our introduction we considered how particular ideals of connectedness and learning have shaped visions for research and education, including but not limited to the ideal of the individual who tailors his or her knowledge among expansively dispersed resources, and the ideal of access to multiple, diverse resources that provide individuals rich learning opportunities. These ideals, we argued, must be tested in the crucible of empirical data through the analysis of the actual socio-technical practices of different social and cultural groups. We believe that positioning these new data in relation to ideals of connectivity we are better able to understand what cultural norms are implied in our ideals of connectivity, and also more clearly see underlying qualities and competencies of learners are implied by such ideals. The results of our study of the networked online connections of three different ethnic groups, that is, from our integrative accounts of both the quantitative and qualitative results, shows that at least in the communities of these groups as we have studied them, significant differences exist in how youth build their online connectivity and how they use this connectivity for their learning. Before we go into the details of how each of these groups match or not with these idealized connectivities, we want to make clear that we don't want to make an argument on the ethnic differences of connectivities per see. Apart from the fact that we consider these networked practices as potentially changeable and instable, and therefore

no direct and permanent relationship can be claimed between groups and practices of connectivity, our claim about diversity serves to make a higher order claim about normative connectivity. We see these networked configurations as socially and culturally formed over time, and we argue that variety we find is exemplary for many more possible variations that we expect to exist

The Native Dutch youth, who we have described as the "unrooted learner", is most in line with what in the literature is described as the ideal 'connected learner': a learner that is networked according to individually expressed interests, who uses technology to reorganize his social world with those around him face-to-face to address particular interests in different ways. For the unrooted learner, online learning happens in a more manifold and scattered, but individually tailored space which they experience as in principal open for exploration. However, the Turkish youth, which we identified as the "rooted learner", clearly deviates from the image of the independent, individualistic agentic learner. Instead of being primarily motivated by their individual interests, Turkish youths' learning seem be defined by more collectively formed interests, both in terms of their same generation peers, as well as in terms of their bond with and the function the older generation has with respect to how they conceive of their own learning desires and needs. Even if Turkish youth has become more individualistic in the migration context, learning goals for them are more embedded in being part of a family and ethnically based network, and in meeting the expectations of the collective. Their online networks seem to reflect this tendency, in particular the fact that their family based online contacts appear to represent key learning experiences for them, both locally and transnationally. For them, the internet is largely a bounded space, and is certainly not experienced as ethnically neutral as in the idealized expression of the connected learner that Dutch youth can more easily approximate.

Finally, Moroccan-Dutch youth, as our third analyzed group, neither matches the agentic and individualistic learner who is connected according to his or her learning needs and interests. These youth, whom we have termed "routed learners," typically form collective affinities and interests within same generation ethnically informed spaces. We used the metaphor of the marketplace to describe these spaces, and acknowledged that there are many different 'corners' or spots in which youth can find what interests them. What characterizes the online presence of this group in terms of their networks is their connection to a collective of second generation immigrants in the Netherlands who have common concerns, issues, and needs. Although it is beyond the scope of this paper to account extensively for the formation of these specific different connectivies, it seems apparent that the connectivities of the two migrant youth groups point back to more cohesive forms of social organization in which kinship ties play an important role, whereas connectivity patterns of the native Dutch youth reflect a more individualistic social organization in which autonomy of the individual is a key value. In addition, the differences between both immigrant groups might well be related to their

settlement strategies after migration and how these are reflected again in their online networking. While Turkish immigrants, including second generation youth, are known for their cohesive and dense social organization, as well as their cultural orientation towards Turkey, second generation Moroccan immigrants are known as culturally more confronting, looking outwards and less oriented towards their home country, and known for their need for autonomy from the older generation (Cammaert, 1985; Pels & de Haan, 2003; Crul & Doomernik, 2006).

Obviously, these three groups as we have studied them are all "connected learners" of different types, with the first type matching a more frequently idealized notion of the connected learner, particularly as this is expressed in relation to values of individualism and learning traversals across multiple communities. In this study we do not intend to describe how youth with cultural practices that are other than the ideal are de-privileged in learning networks; rather, our argument more broadly posits that the current orthodoxy of networked learning misses the variation in how learning networks are structured and composed in practice, especially when we study nonmainstream populations. Missing this variation could have several important consequences for research and also for the development of resources for learning, in and out of school. To begin with, as learning networks from different cultural and social groups are more closely analyzed, an expansive cataloguing of how learning networks are comprised will serve to help researchers not be blind to acknowledging and analyzing networked learning in its rich variety. For instance, collective interests and commitments as they are formed historically in relation to family, community, and cultural identity, such as are evident among the Turkish youth and somewhat differently among the Moroccan-Dutch youth, may have high salience and be played out in rich variation for vast numbers of youth from different parts of the world.

Practices such as collective orientations are not deficits to the ideal, but rather socially, culturally, and historically saturated forms that that have their own meanings and effectivities for participants. Over time, it may well be that practices such as ethnic community and family-centric networks will shift and change as they come into contact and merge with other networks, but it may also be that these practices are held in individual and social "bodies" for longer than we may anticipate—may endure through the structuring structures of habitus (Bourdieu, XX). In any case, for researchers a present challenge will be to remain open to a great variation in networked practices for learning, and to not mistake concept pieces about learning networks (e.g., Ito et al.), written at the early edge of empirical work, as empirical descriptions of variation that may possibly be great.

Of course, the likely variation of learning networks across cultures, geographies, and social groups, as well as their dynamisms over time, have important implications for the design of networked learning environments. If such designs are to provide opportunities to learn for

diverse individuals and groups, then further understanding of the network practices and structures of these individuals and groups is warranted. We might think of these such practices and associated structures as generated in particular sociocultural traditions, which are recognized valued in one sociocultural context but may run into difficulties in moving to another. How to build networked learning environments that are socially, culturally relevant, and that also provide opportunities for learners to expand their repertoires of knowledge about networked learning as well as knowledge through networked learning is an open empirical question and emerging design challenge for educators.

**5.2 The critical importance of a broad scope: mapping learning networks across online and offline spaces**

In order to make sense of distinctions among the networks of the three groups we studied, it was paramount to look at how these online contacts are differently shaped in relation to their offline networks. We argue that a very different picture would have emerged in the study concerning our understanding of the variation in learning networks if we would not have done so while looking at how online networks are related to offline ones. Our results show that the offline connectivity and affiliations of our respondents is their main point of entrance into the digital world. Many of their online contacts with whom they exchange information, and find out new interests, are also those they are related with offline. In other words, their knowledge communities tend to be mostly in line with their offline mobility patterns. However, the youth in this study differ in the extent to which they escape from these offline networks, rearrange them, or manage to create online social worlds that are relatively independent from their offline worlds. While Dutch youth are most successful to rearrange their contacts or find new ones to address individual interests, Moroccan youth create relatively 'independent' life worlds, to escape the culturally defined limitations the of some of the culturally set first generation. Turkish youth's online and offline worlds are for the most part parallel, although they use technology most to keep in touch with family members that they only meet during holidays or seldom meet offline. In other words, digital connectivity is clearly embedded in its relationship with offline networks, and the specific relationship between both forms of networks. These specific relationships are what we must understand in order to conceive of practices of connected learning that are informed by the realities of the lives of youth who have developed through different social histories. To remain at the level of the ideals of connective visions privileges those groups who are most aligned with these visions and blinds us to the variety of networked realities that are based on other cultural and social notions of connectivity.

**5. 3 Affiliation, identity and the production of space and place in the formation of "Networked Configurations for Learning"**

Scholars of migration have pointed out how immigrants reconstruct their 'homelands' through diasporic online networks or transnational fields irrespective of their location of settlement (e.g. Georgiou, 2006; Levitt & Glick Schiller, 2004). Levitt & Glick Schiller, as other scholars of migration have made clear that in defining these online networked relationships, affinity and identity issues make up an important part of how social networks or communities become constructed. Drawing on Bourdieu's field concept, transnational fields are defined by Levitt and Glick Schiller as set of multiple interlocking networks of social relationships that are not tied to either the country of origin nor the receiving country but are formed through the 'in between' social networking practices of immigrants. Next to the 'actual' social relationships in terms of practices, the identities associated with these relationships form an important, though relatively independent from actual ties, formative element of these transnational fields. Important in this notion is not just the role affiliation plays in transnational networks, but that people within transnational social fields combine ways of being and ways of belonging differently (Levitt & Glick Schiller, 2004).

Drawing on this idea that relations between actual social ties and belonging can be multiple and particular but while focusing on the particulars of the online/offline relations in so far as they are connected to differing (affiliations to) geographies and social histories, it is apparent that we need to be careful of blanket and container concepts such as the online diaspora. It is only at the level of the social configuration that differences between these ethnic groups become most apparent. In our data, for instance, we trace the massive online platforms that provide a diasporic homeplace (cites) for the cultural and social identification for the Moroccan immigrants in The Netherlands, while the Turkish youth immigrants have little such regular practices and resources. This is not to argue that a Turkish diaspora does not exist for this youth group; but rather, that its existence is not supported by social practices that turn online spaces into cultural and social places, including places where identity contestations and cultural shifts and hybridity can be expanded and challenged. For the Turkish youth, transnational fields and the "in between" social practices described by Levitt and Glick Schiller (2004) produce forms of connection not mediated by newly developed marketplaces of cultural and social exchange (such as for instance Morroc.nl for the Moroccan-Dutch youth) but by more individual and familial forms of social networking that allow person-to-person connectivity, person-to-neighborhood connectivity, and person-to-ethnic homeland connectivity. Thus, this particular version of the (Turkish) diaspora for youth in The Netherlands appears even more anchored to offline social practices and structures in the sense that, while online social practices have developed, alternative (online) places of discourse and discord for this group are relatively undeveloped. Of course, this

observation, as with others in this study, is situated in a particular timeframe and context of research, and we see the co-production of new practices and places as potentially dynamic. The consideration of the particular manner in which immigrant diasporas are formed across online and offline social life suggests an important tension in this analysis that we need some means of understanding social structure as configuration and also the dynamisms of practice that can be applied to different ethnicities and social and cultural groups. The connections that can be employed for the learning of migrant and non-migrant youth tend to partly follow, or point back to earlier ethnically informed mobility patterns which varied along ethnic lines, and resonated earlier historical paths and connections, such as those of the first generation between the Netherlands and the country of 'origin', but also were defined by their affiliations with family that migrated to other 'receiving' countries in Europe. The "community of practice" notion, for us, does not capture the complexities of these mobility patterns, staying, as it were, too close to a notion of practice-on-the-ground of the local. Alternatively, the notion of "affinity space" does not capture either the sense of social practice (in its (re)production) or the complexities of culturally and socially shaped mobility patterns, although it makes conceptual space for the interest and investments of individuals and groups.

As an alternative to these notions and others, for understanding social configurations for learning as we have described them here, we pose the notion of the "Networked Configuration for Learning" (NCL). As a concept, the NCL allows us to describe and include the particular online and offline connections of divergent sociocultural individuals and groups; the historical geographies of these individuals and groups and their histories of mobility; the development of culturally and socially informed places for learning, including digitally shaped places; and the affinities of individuals and groups in so far as these affinities are also articulated in relation to sociocultural and geographical histories. We express the idea of the NCLs as related to the notion of the transnational field, but extending field theory to include insights into opportunities to learn and learning practices. Bourdieu's inspiration on field also permits us to understand NCL's as not existing in isolation from one another. Like social fields, configurations for learning are formed in multiple, overlapping relations. While movements between them are possible, they are not guaranteed and depend on a number of issues, including translations and exchanges in forms of capital, but also, on new practices of learning and types of knowledge necessary to not only learn within one NCL, but create traversals among them.

**References**

Baker, P. M. A., Hanson, J., & Hunsinger, J. (2013). Introduction. In P. M. A. Baker, J. Hanson, & J. Hunsinger (Eds.) *The Unconnected* (pp. 1-5). New York: Peter Lang.

Bourdieu, P. (1980) Quelques propriétés des champs. In P. Bourdieu, *Questions de sociologie* (pp.113-120). Paris : Minuit.

Brown, A., & Campione, J. C. (1994). Guided discovery in a community of learners. In K. McGilly (Ed.), *Classroom lessons: Integrating cognitive theory and classroom practice* (pp. 229-270). Cambridge, US: The MIT Press.

Cousin, G. (2005). Learning from cyberspace. In R. Land, & S. Bayne (Eds.), *Education in Cyberspace* (pp. 117-129). London: Routledge.

Crul, M. & Doomernik, J. (2003). The Turkish and Moroccan Second Generation in the Netherlands: Divergent Trends between and Polarization within the Two Groups. International Migration Review, 37, 1039–1064. doi: 10.1111/j.1747-7379.2003.tb00169.x

Farrell, L. (2006). *Making knowledge work. literacy & knowledge at work*. New York: Peter Lang.

Gee, J. P. (2005). Semiotic social spaces and affinity spaces: From the age of mythology to today's schools. In D. Barton, & K. Tusting (Eds.), *Beyond communities of practice: Language, power and social context* (pp. 214--232). Cambridge: Cambridge University Press.

Georgiou, M. (2006). *Diaspora, identity and the media: diasporic transnationalism and mediated spatialities*. Cresskill, US: Hampton Press.

Haan, M. de & Leander, K. (2011) The construction of ethnic boundaries in classroom interaction through social space. Culture & Psychology, 17 (3), 319-338, DOI: 10.1177/1354067X11408136.

Haan, de, M. J. (2011).  Immigrant Learning. In K. Symms Gallagher, R. K.Goodyear, D. J.Brewer, & R. Rueda (Eds.), *Urban education: a model for leadership and policy* (pp.328-341). New York: Routledge.

Haythornthwaite, C. (2011). *Learning networks, crowds and communities*. Learning Analytics conference, Feb. 27-March 1, 2011, Banff, Alberta. doi:10.1145/2090116.2090119

Hirzalla, F., de Haan, M. J., & Ünlüsoy, A. (2011). *New media use among youth in migration: A survey-based account.* Utrecht University, the Netherlands. Retrieved from http://www.uu.nl/wiredup/pdf/Wired_Up_-_White_paper.pdf.

Ito, M. (2012).Connected learning. *Mimi Ito* [web log]. Retrieved, August, 2014, from http://www.itofisher.com/mito/weblog/2012/03/connected_learning.html

Ito, M., Gutiérrez, K., Livingstone, S., Penuel, B., Rhodes, J., Salen, K., Schor,J., Sefton-Green, J. Watkins, C. (2013). *Connected learning: an agenda for research and design.* Irvine, CA: Digital Media and Learning Research Hub.

Jones, C. & Steeples, C. (2002). Perspectives and Issues in Networked Learning. In C. Steeples, & C. Jones (Eds.) *Networked Learning: Perspectives and Issues* (pp. 1-14). London: Springer.

Lave, J., & Wenger, E. (1991). *Situated learning. legitimate peripherical participation.* Cambridge: Cambridge University Press.

Lecluijze, S. (2012). *Online network compositions and online learning experiences of three ethnic groups: What Online Networks Offer* (Unpublished dissertation). Utrecht University, the Netherlands.

Levitt, P. & Glick Schiller, N. (2004). Conceptualizing simultaneity: a transnational social field perspective on society. *International Migration Review, 38* (145): 595-629. doi:10.1111/j.1747-7379.2004.tb00227.x

Mejía-Arauz, R., Rogoff, B., Dexter, A., & Najafi, B. (2007). Cultural variation in children's social organization. *Child Development, 78*(3), 1001-1014. doi:10.1111/j.1467-8624.2007.01046.x

Peters, M. A., Besley, T., & Araya, D. (2014). Introduction. The New Development Paradigm: Education, Knowledge Economy, and digital Futures. In Peters, M. A., T. Besley, & D. Araya (Eds.) *The New Development Paradigm. Education Knowledge Economy and Digital Futures. Global Studies in Education, Vol. 20* (pp. 2-18). Peter Lang: New York.

Prinsen, F., de Haan, M., & Leander, K. (in press). Networked identity: how immigrant youth employ online identity resources. *Young: Nordic Journal of Youth Research*.

Rogoff, B. (1990). *Apprenticeship in thinking. cognitive development in social context.* New York: Oxford University Press.

Salomon, G. (1993). Distributed cognitions: Psychological and educational considerations. Cambridge, UK: Cambridge University Press.

Schönhuth, M., Gamper, M., Stark, M., & Kronenwett, M. (2009). *Manual VennMaker 0.9.5 VIP*, Universiteit Trier-Mainz.

Ünlüsoy, A., de Haan, M. J., Leander, K., & Völker, B.G.M. (2013). Learning potential in youth's online networks: A multilevel approach. *Computers & Education, 69*, 522-533. doi:10.1016/j.compedu.2013.06.007

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Weisner, T., & Lowe, E. (2005). Globalization and the Psychological Anthropology of Childhood and Adolescence. In C. Casey & R. Edgerton (Eds.), *A Companion to Psychological Anthropology: Modernity and Psychocultural Change* (pp. 315-336). Oxford: Blackwell Publishers.

Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge, UK: Cambridge University Press.