What Online Networks Offer:

Online Network Compositions and Online

Learning Experiences of Three Ethnic Groups

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Abstract

This exploratory study examines ethno-cultural diversity in youth´s narratives regarding their *online* learning experiences while also investigating how these narratives can be understood from the analysis of their online network structure and composition. Based on ego-network data of 79 respondents this study compared the characteristics of the online social networks of native Dutch, Moroccan-Dutch, and Turkish-Dutch youth. Subsequently, thirty interviews were analyzed to compare youth's narratives regarding two aspects typically associated with 21th century online learning: '*individual online exploration'*, and '*participation, collaboration and exchange of information in online communities'*. The results show that the three ethnic groups significantly differ regarding their online network composition. Youth's narratives also reveal that their online learning experiences are ethno-specific. Youth differ regarding the nature of online communities in which they search for information, make new contacts and distribute their own media creations. For example, Turkish-Dutch youth primarily engage in their own ethnic transnational networks to find information and to share media content, whereas Moroccan-Dutch youth seem more open to develop new contacts and to search for information outside of their familiar network. It is suggested that these ethno-specific narratives can be understood as resonating specific network configurations.

Keywords: Ethno-cultural diversity, Online learning, Ego-network analysis, Online network composition, Twenty-first century learning

1. Introduction

Current methods of teaching and learning in schools no longer suffice to prepare students for their lives in today's interconnected and complex twenty-first century (Brown, 2005; Brown & Adler, 2008; Diepstraten, du Bois-Reymond, & Vinken, 2006; Drotner, 2008; Kumpulainen & Sefton-Green, 2014). Attention for informal, out-of-school learning is recently vastly growing (Erstad, 2012; Ito et al., 2013; Ünlüsoy, de Haan, & Leander, 2010), and youth's digital world is becoming one of the key areas for learning (Erstad, 2012; Drotner, 2008). According to Kumpulainen and Sefton-Green (2014) the traditional definitions of learning and practices of education need to be adapted to fit how youth of today grow, change, and bring together different experiences, including life-wide and life-long learning. In order to understand and study learning, we need to step out of the classroom and 'follow' learners across and between physical (at home, in school, with peers) or virtual (in gaming, in social networks) sites (Kumpulainen & Sefton-Green, 2014).

While there has been much attention for ethno-cultural diversity in formal school-based learning, it is remarkable that knowledge on ethno-cultural diversity in youth's digital practices is lacking. Information about the actual online learning experiences of different ethnic groups might be of special interest for schools that desire to make use of ICT and employ youth's informal learning processes in school activities to support ways of learning that tune into the needs of our contemporary knowledge society (Erstad, 2012; Kumpulainen & Sefton-Green, 2014; Sørensen, Danielsen, & Nielsen, 2007; Van den Beemt, Akkerman, & Simons, 2011). This exploratory study aims to give insight in possible ethno-cultural differences in the online learning experiences of youth in the Netherlands by studying these experiences from a social network perspective.

1.1 Online learning opportunities in the twenty-first century

Twenty-first century learning is often contrasted with more traditional, formal learning, in particular with respect to the role of learners as active participants and co-producers rather than passive consumers of content (McLoughlin & Lee, 2007). Descriptions of online learning are not completely univocal, but two general characteristics are mentioned repeatedly to describe online learning (1) the opportunity for '*individual online exploration'* and (2) the opportunity to '*participate, collaborate and exchange information in online communities'* (e.g., Ito et al., 2008; Lankshaer & Knobel, 2006; Brown, 2009).

In the first place the online world offers youth the opportunity for extensive individual exploration as it opens up new and easy ways to communicate and find information. As Chua, Madej and Wellman (2011) put it: "The power of knowledge is no longer the monopoly of professionals" (p. 112) since everyone can do their own research online. Lanskhaer & Knobel (2006) explain that expertise and authority are distributed and collectively produced and consumed. Youth can freely and autonomously access knowledge, build collective intelligence (e.g., with websites like Wikipedia), and find information to which they often do not have access at school or in their local community (Ito et al., 2008; Hung, Lee, & Lim, 2012). As Ito et al. (2008) put it: "by its immediacy and breadth of information, the digital world lowers barriers to self-directed learning" (p. 2). As a result youth become active producers of their own knowledge (Brown, 2009; Diepstraten et al., 2006; Ito, 2010; Ito et al., 2013).

Secondly Internet provides youth with new opportunities to participate in diverse (online) communities to construct their knowledge in coalition with others. From a socio-cultural perspective on learning (Vygotsky, 1978) a person's social context channels the growth of his or her mind: what is learned and how it is learned depends on the interactions with social others (Claxton, 2002). In the same line of thought, others have argued that people's social networks structure the (im)possibilities of their learning (Diepstraten et al., 2006). Network relations help a person to test his or her ideas, to reflect on choices, and to exchange information and support (Diepstraten et al., 2006). Learning can be considered a networked phenomenon that covers the total of relationships and resources individuals have at their reach (de Haan, Leander, Ünlüsoy, & Prinsen, 2014). In our current era, the internet offers youth the possibility to participate and collaborate in a broad and diverse set of *online* relational networks, and enables youth to access a wide and diverse range of new knowledge and resources (Gee, as cited by Lam, 2009; Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006; Van den Boomen, 2000; Ünlüsoy, de Haan, Leander, & Völker, 2013).

How youth make use of the possibility to participate in online networks influences their access to information and shapes their online learning. Youth can have different motivations for the participation in online networks (Van den Beemt, Akkerman, & Simons, 2010). Most youth use internet to participate in familiar networks and to extend existing friendships (friendship-driven participation), but youth can also choose to participate in new networks outside their local community (Ito et al., 2008). Persons might for example form an online community in which they articulate or strengthen a common identity (e.g., Moroccans living in the Netherlands), or they form a community to discuss shared interests, like motorcycling or an online videogame (interest-driven participation) (Ito et al., 2008; Van den Boomen, 2000). The possibility to enter new networks and to access information regardless of one's physical location makes that socialization and learning are no longer restricted to a person's residence (Chua et al., 2011; de Haan, 2011; Hung et al., 2012).

Besides the possibility to retrieve information in online networks, youth can exchange information and distribute their own media creations. According to Jenkins et al. (2006) the participatory new media context supports the production and distribution of media. Through trial and error youth develop new media skills such as creating videos, blogs or webpages. These creations can easily be publicized and distributed within the wide range of available online communities (Ito et al., 2008). While doing this, youth develop important skills in the new media culture (Jenkins et al., 2006).

1.2 Forms of participation in online communities

Based on their studies Ito et al. (2008) distinguished three 'genres of participation' to describe different forms of commitment to media engagement that correspond to different learning dynamics: 'hanging out', 'messing around' and 'geeking out.' Ito et al. (2008) explicitly state that these forms of participation do not necessarily attach categorically to individuals. Individuals often engage in multiple genres of participation.

With 'hanging out' Ito et al. (2008) refer to the activity of hanging out with peers and friends online, mainly to maintain social connections to those friends. Often, hanging out is not perceived as supporting learning. However, according to Ito et al. (2008) "while hanging out with their friends, youth can develop and discuss their taste in music, their knowledge of television and movies, and their expertise in gaming or other new media practices"(p. 14). Youth

that are 'messing around' have an explicit interest in the workings and content of technology and media themselves; they are tinkering, exploring, and extending their understanding. Messing around with new media generally involves social exchanges with family or local friends centered on new media and technology. Youth that mess around do not have a set, predefined goal. The learning-outcomes emerge through exploration. Finally 'geeking out' refers to self-directed learning driven by a passionate interest. It requires access to specialized communities of expertise that are often found outside of given friendship-driven networks.

Like in Ito's (2008) study, we are looking for forms of online participation, next to forms of individual exploration. Different from Ito's (2008) study, but while keeping the variation found in this study in mind, we base ourselves on the network characteristics of each of the groups, while also taking into account the learning and interaction possibilities these provide.

1.3 A social network perspective: Ethno-cultural diversity in online learning

We expect to find ethno-cultural diversity in youth´s online learning experiences that result from their participation in different online networks. As mentioned above, most youth hang out in online networks consisting of family and friends (Ito et al., 2008). Ethno-cultural diversity in these familiar networks might thus directly relate to diversity in youth's online learning experiences. Dunbar, Arnaboldi, Conti, and Passarella (2015) recently confirmed that online communities (on Facebook and Twitter) have very similar structural characteristics to offline networks. One could argue that migrant youth make more use of the possibility to engage in transnational online networks since it enables them to stay in touch with and learn from their network of family and friends living abroad and to maintain a transnational life style (de Haan, 2011; Lam, 2009; Vertovec, 2004). Through active involvement in transnational online learning contexts migrant youth most likely have learning experiences that differ from the learning experiences of non-migrant youth, not only because of differences in language, but also because of the origin of information (Vertovec, 2004). Lam (2014) confirms that online literacy practices in transnational contexts allow immigrant youth to produce specific forms of social and cultural capital. In her study Lam (2014) shows how Chinese immigrant youths' online practices lead to forms of cultural maintenance with the homeland.

However, youth might also search for resources and contact outside of their familiar networks, for instance around a particular interest or identity. Lam (2009) shows for example how immigrant youth can make active use of their transnational networks to enhance learning in a specialized knowledge domain. Since people have a strong tendency to choose to interact with persons of similar race and ethnicity (Lam, 2009; McPherson Smith-Lovin, & Cook, 2001) youth might tend to engage with online contacts, sites and communities that share the same ethno-cultural background to exchange information. Panagakos and Host (2006) also explain how migrant youth might participate in online communities, like forums or chat rooms, which are driven by common identities and localized interests to create extra outlets for social interaction and identity formation. On the other hand, one could also argue that youth could search for information to which they have less access in their offline lives and reach out to new persons from different backgrounds.

1.4 Present study

This study explores the question whether there is ethno-cultural diversity in youth´s online learning and whether this relates to youth´s participation in ethno-specific online networks. We hypothesize that the compositional characteristics of youth's online networks differ. Furthermore we expect that these compositional characteristics influence youth's online learning experiences. We examine the online 'ego networks' and narratives about online learning of native Dutch, Moroccan-Dutch and Turkish-Dutch youth living in the Netherlands. Moroccan and Turkish migrants form two of the largest migrant groups in the Netherlands (Centraal Bureau voor de Statistiek, 2012).

The following research questions were asked:

- o   What are the differences between the compositional characteristics (e.g., kind of relationships, geographical spread) of native Dutch, Moroccan-Dutch and Turkish-Dutch youths' online social networks?

- o   Do native Dutch, Moroccan-Dutch and Turkish-Dutch youth differ in their narratives regarding their engagement in the two characteristics ascribed to online learning?

- o   Can these differences be understood in light of youth's online network compositions?

2. Methods

This study's data were collected with the Social Network Interview (SNI) as part of the Wired Up research project (www.uu.nl/wiredup).

2.1 Respondents

The SNI respondents were recruited from a sample of youth (aged 12-18) that had participated in a large-scale survey on the use of new media (Hirzalla, de Haan, & Ünlüsoy, 2011). From the 1408 participants a stratified sample of 79 youth was drawn from two participating inner-city schools in the Netherlands. A condition for selection was that students had reported a minimal level of online media use (i.e., at least several times a month). In the SNI sample girls were slightly overrepresented, but regarding other aspects we did not deviate from the survey sample's demographic distribution.

The respondents were aged 13-17 (*M* = 14.6). In total, a number of 25 native Dutch, 29 Moroccan-Dutch and 25 Turkish-Dutch youth participated. From all respondents, 30 were boys (38%) and 49 were girls (62%). In total 40 students (50.6%) followed preparatory mid-level applied education (VMBO-track) and 39 students (49.9%) followed preparatory higher and/preparatory scientific education (HAVO/VWO track) which is by and large representative for the national population. All 79 cases generated information about their social networks. The size of these social networks varied between 11-35 people (*M* = 22.3).

For the analyses of youth's discourses on learning we drew a subset of 30 students from the total sample. We randomly selected 10 students per ethnic group (5 boys and 5 girls). From these 30 students (aged 13 to 17, *M* = 14.5), 14 (46.7%) students followed the VMBO track of education and 16 (53.3%) students followed the HAVO/VWO track.

2.2 Instrument

The SNI was designed within the Wired Up project. It was prepared in line with standard ego-network methods (Wellman, 2007). The interview was semi-structured and consisted of two parts. During the first part the interviewer mapped the respondents' ´ego-network´. Ego-networks consist of an *ego* (i.e. the individual), his/her *alters* (i.e., contacts), and the *ties* representing the relationships within the network (Wellman, 2007). With the help of a name generator, the interviewer identified the people in the lives of the respondents that could potentially be important for their learning. The respondents were prompted by asking for people they trust, people who help them, people with whom they engage in many activities, or people with whom they exchange information. Furthermore, respondents were supported to think of both offline and online contacts and were asked to name between 10 and 35 persons. As a next step the interviewer collected demographic and descriptive information about each network relationship. The descriptive data on the network relationships were entered in VennMaker software (Schönhuth, Gamper, Stark, & Kronenwett, 2009). Youth also indicated which contacts knew each other in order to be able to calculate the density of their networks. The gathered information was used to make a visualization of youth's social networks with the help of NodeXL software (Social Media Research Foundation, n.d.). The social network picture was input material for the interview's qualitative part.

The qualitative part of the Social Network Interview broadly covered two topics: identity formation and learning within and across respondents' social network. This study focuses exclusively on the data gathered on respondents' learning. The semi-structured, open character of the interviews allowed the respondents to talk freely about their (online) learning experiences. Examples of relevant interview questions were: "Can you give an example of something you learned, when did you start and how did you learn it?", "Are there persons in this network with whom, or from whom you learned something, a particular topic or skill?", "What is specific about the fact that you are learning these things online?"

2.2.1 Validity and reliability

In literature, different researchers have emphasized the accuracy of social network questions and data collection. Also, there have been several studies acknowledging the reliability and validity of measured networks and data collection methods used (Coromina & Coenders, 2006). Nevertheless, the stability of social networks and the issue of missing data are sometimes mentioned as threatening the reliability of this kind of data. In this study we tried to minimize reliability-issues in the first place by preparing our interview in line with standard SNI methods. Furthermore, we repeatedly checked on missing ties during the interview and we took a substantive amount of time for the first, name-generating, part of the interview. We only continued to the open questions if we were confident the networks were complete.

2.3 Procedure and strategy of analysis

All SNIs were conducted between September and December of 2010. The interviews took place during school hours in a quiet room at the respondents' schools. The interviews were conducted by two researchers and three project assistants. All interviews took about 90 minutes; they were audio-recorded and transcribed verbatim.

The data analysis consisted of two parts. First, the data on the *online* networks (i.e., all contacts with whom the respondents interacted *only online* or *both online and offline)* of all 79 SNI respondents were analyzed to see whether the three groups differed regarding the compositional characteristics of their online network (research question one). The online networks were described on the basis of the categorical variables: relation (i.e., family, friend, acquaintance), age-group (i.e., younger, same age, older), gender (i.e., same or different), ethnicity (i.e., same or different), and location (i.e., at home, same neighborhood, same city, same country, abroad) of all network relationships ('alters'). We used Chi^2 tests to compare the groups on the proportions of online alters per categorical variable.

The discursive data of thirty respondents were used to compare youth's narratives about online learning (research question two). Each interview was analyzed according to the two characteristics ascribed to online learning. A piece of text was coded as *'individual online exploration'* when respondents mentioned that they wanted to learn more about a certain topic and they individually searched the internet for this purpose (e.g., with the help of search engines like Google). We specifically looked at youth's topics of interest to see if youth's exploration purposes differed.

All descriptions of situations in which respondents interacted with others online were coded under *'participation, collaboration, and exchange of information in online communities.'* These were not only situations in which respondents explicitly mentioned that they collaborated with- and learned from others, since youth rarely define their own online (leisure) activities in terms of learning (Drotner, 2008). All forms of online interaction were included. Also, we coded all situations in which respondents gave examples of production and distribution of media content. We distinguished between 'basic' productions that did not take a lot of effort and mainly served a social purpose (e.g., uploading photographs) and more 'advanced' productions that cost more effort and had more than a social purpose (e.g., making websites, writing down opinions or questions). Finally, we checked in which communities youth participated: we distinguished between participation in familiar networks and participation in new, unknown networks, to see if groups differed in the extent to which they crossed the boundaries of their familiar network and used internet to find information across different networks. For this reason we also coded instances in which youth made new contacts while participating in online networks.

NVivo10 software was used to facilitate our content analysis. Analysis-results were checked randomly by two colleague researchers. Besides coding, case summaries were made in which we extensively described the ways in which each respondent engaged in the two characteristic aspects ascribed to online learning (including illustrative quotes). Writing these summaries helped to constantly compare our preliminary interpretations with theory and with the answers of other respondents. Based on the case summaries, we constructed a data matrix to get an overview of the ways in which respondents of each group described to engage in online learning. This matrix facilitated our comparative analysis; it helped us see if particular regularities or patterns were visible in the answers of the three ethnic groups.

As a last step we brought both types of analyses together, and used one as a context for understanding the other, and vice versa. This resulted in a combined perspective of both types of data analyses, while paying attention to possible differences between the three different ethnic groups we distinguished.

3. Results

3.1 Ethno-cultural diversity in youth's online network composition

The data on youth's complete ego network showed that the three ethnic groups had roughly the same proportion of contacts with whom they interacted online (i.e., ± 65% of their total number of network relationships). As presented in Table 1, the comparative analyses on youths online networks showed that the three ethnic groups differed significantly (p <.05) on four out of five characteristics. Only the proportion of online alters with either the same or a different gender was comparable across the groups.

We will present a short characterization of the online network compositions of each ethnic group. Thereafter we give an overview of the narratives of the three groups regarding their online learning experiences. When describing youth's narratives regarding their engagement in the 'social' aspect of online learning (i.e., participation, collaboration and exchange of information in online communities), we take these network characterizations as a starting point.

Table 1. Online networks' characteristics as a percentage of the total number of online alters per ethnic group, and group differences per network characteristic

Network characteristics	Native Dutch networks ($n = 356$)	Moroccan-Dutch networks ($n = 447$)	Turkish-Dutch networks ($n = 362$)	Group differences Chi Square (χ^2) results	
	% alters	% alters	% alters	χ^2	p
Relation					
Family	30.1_a	43.8_b	52.8_c	51.17	**<.01**
Friend	63.8_a	55.0_b	44.8_c		
Acquaintance	6.2_a	1.1_b	2.5_b		
Age					
Younger	1.1_a	$2.5_{a,b}$	4.4_b	29.40	**<.01**
Peers (11-20 years)	78.4_a	80.5_a	65.7_b		
Older	20.5_a	17.0_a	29.8_b		
Gender					
Same gender	68.0	69.4	75.1	5.11	.08
Different gender	32.0	30.6	24.9		
Ethnicity					
Same ethnicity	$81.2_{a,b}$	78.1_a	86.2_b	8.79	**.01**
Different ethnicity	$18.8_{a,b}$	21.9_a	13.8_b		
Location					
At home	7.0	6.9	5.5		
In the neighborhood	27.2_a	41.8_b	45.6_b		
In the city	34.0_a	29.5_a	15.7_b	218.97	**<.01**
In the Netherlands	30.1_a	11.6_b	5.5_c		
Abroad	1.4_a	9.8_b	27.1_c		
Don't know	0.3	0.2	0.6		

Note. Each subscript letter denotes the ethnic groups whose column proportions do not differs significantly from each other at the .05 level.

3.1.1 Native Dutch online network composition

A characteristic aspect of our native Dutch respondents' online networks was that they consisted of the most friends and acquaintances, and the least family members in comparison to the other two ethnic groups (see Table 1). Most of our native Dutch respondents' online contacts were of the same age and had the same ethnical background. In comparison to the other two groups, the native Dutch respondents had the least online alters living in their neighborhood and significantly more alters living in a different city in the Netherlands. Native Dutch respondents had the least online contacts living abroad.

3.1.2 Moroccan-Dutch online network composition

Moroccan-Dutch respondents had less friends and more family members in their online network compared to the native Dutch, but they had more friends and less family compared to the Turkish-Dutch. The Moroccan-Dutch respondents were comparable to the native Dutch with regard to the age and ethnicity of their online contacts. As compared to the Turkish-Dutch respondents, Moroccan-Dutch youth had more peers and more persons with a different ethnicity within their online network. Again, Moroccan-Dutch respondents positioned themselves between

the native Dutch and the Turkish-Dutch regarding the proportion of online contacts living in a different city in the Netherlands and the contacts living abroad (see Table 1).

3.1.3 Turkish-Dutch online network composition

The online networks of the Turkish-Dutch youth differed on almost each characteristic from the other two groups. Turkish-Dutch youth had significantly more family members and fewer friends in their online network. They interacted with less peers and older online contacts. In comparison to the Moroccan-Dutch respondents, they had more contacts with the same ethnicity. Finally Turkish-Dutch youth had the least online contacts living in the same city or in a different city in the Netherlands, and they had significantly more contacts living abroad.

3.2 Ethno-cultural diversity in online learning

We will present the results of our discursive data analyses for each ethnic group according to the two characteristics ascribed to online learning.

3.2.1 Individual online exploration

3.2.1.1 Native Dutch respondents

Nine out of ten native Dutch respondents gave examples of situations in which they individually and actively learned about a topic through online exploration; i.e. they searched for information of interest via search engines like Google, Wikipedia and YouTube. A boy explained that he explored the web after watching documentaries on TV:

> *"I like to watch documentaries, for example on Discovery Channel; how they put things together and do all sorts of tests, and then you can search more about that topic using the Internet, so then you learn a little bit about what some substances can do"*

The four native Dutch boys who talked about online exploration gave examples of exploration to learn about their own interests, like photography or web-design, whereas all five girls only explored the internet for school purposes (e.g., searching for information for school assignments) or for fun (e.g., searching for music on YouTube).

3.2.1.2 Moroccan-Dutch respondents

All Moroccan-Dutch respondents engaged in online exploration to search for information. In contrast to the native Dutch respondents, there were also three girls who explored the internet based on their own interests (instead of only searching for school based interests). A girl explained that internet functioned as her main resource to learn more about politics:

> *"The debates around the elections, I often watch them online. And also, yes uhm I often visit the websites of PVDA and D66 (two Dutch political parties), then I take a look and see what their opinions are, their points of view" […] "I don't really learn from other persons about politics actually. I'm interested in it myself and I also search by myself what I want to know. There are no other people involved".*

Other Moroccan-Dutch respondents searched for YouTube videos about their favorite sports (two boys mentioned this), for historical information, for information about the Islam and for school-related topics.

3.2.1.3 Turkish-Dutch respondents

Like the native Dutch and Moroccan-Dutch respondents, there were several Turkish-Dutch respondents (eight respondents) who talked about online exploration to learn about a particular interest. There were two Turkish-Dutch respondents who searched for information about soccer in Turkey. Three other Turkish-Dutch respondents searched for information related to their future jobs, one of them explained:

> *"I want to become a car engineer" […] "I sat down behind the computer just to see how it works" […] "how do you make an engine or how do you make a car, just research about everything, research on how things are made, on internet, I just used Google" […] "I learned more from internet than face-to-face".*

Another boy searched for a YouTube video to see how a PlayStation is built. Three respondents only searched for information for school purposes.

In short, native Dutch, Moroccan-Dutch and Turkish-Dutch youth seem comparable when it comes to individual online exploration of the internet. The majority of all three groups engage in forms of online exploration, and there appear to be no differences in the way they do so. Only the topics of interest differed within and between the three groups.

3.2.2 Participation, collaboration and exchange of information in online communities

3.2.2.1 Native Dutch respondents

The large proportion of friends and the number of online contacts living in other cities in the Netherlands were characteristic for native Dutch respondents' online network compositions. These characteristics seem reflected in native Dutch respondents' narratives regarding their participation in online communities. It seemed typical for our native Dutch respondents to participate and collaborate with(in) online networks consisting of their offline friends (living nearby and further away in other cities). Native Dutch youth did not only chat with these friends, three out of ten respondents explicitly mentioned that friends benefitted from each other's knowledge when they wanted to develop computer-related skills such as installing computers. One boy explained:

> "*Well on internet almost everyone learns something from me, and I learn things from them, but these are just small things*" "[I: Can you give an example?]   *(Anonym) learned from me how to use a webcam*".

Another native Dutch boy talked about sharing of expertise with friends in a videogame. Whereas this collaboration within videogames was also mentioned by two Moroccan-Dutch and two Turkish-Dutch respondents, only one Moroccan-Dutch respondent mentioned to deliberately collaborate with friends to develop computer-related knowledge.

Two native Dutch respondents used the internet to cross the boundaries of their familiar offline network to interact with, and learn from new contacts in online interest-based communities. One boy participated in a YouTube community for *Harry Potter* fans to share his interests with persons from other countries. Another boy participated in two online forums about web design and old Volkswagen cars. Via these forums he made new friends. He collaborated with these friends and learned from them about his interests:

> "[I: When you are online, to whom do you pay attention?] *"Persons with the same interests, to see like 'yes this is also fun to do'" […] "to get new ideas" […] "(Anonym), I pay attention to his interests and to what he discovers" […] "he lives in another city, I only know him from the computer, but he was on a forum and he responded that he could help me and since then he has helped me with all my questions"*

According to this boy his offline friends could not provide help because of different interests. This respondent's online friend became part of his social network. Such inclusion of online friends could partly explain the geographical spread of native Dutch respondents' online network.

The majority of the native Dutch respondents who talked about online media creation (six respondents), engaged in 'basic' forms of online production and distribution: they posted pictures and distributed existing music and video clips among their familiar network of friends and family. Nevertheless, the two boys who actively participated in new online communities showed more 'advanced' forms of production that reached persons outside their familiar networks. The boy who was active in a Harry Potter community adapted and posted videos and messages about Harry Potter. The boy explained that persons who do not know each other react on each other's videos and interact about Harry Potter. The other boy, who was active on forums about web-design, made his own website and managed a website for a Volkswagen (VW) car club:

> "*I started small, just with one website that was almost ready, and then I did more and more myself. At a certain moment I bought my own space for a website" […] "We became members of a magazine (about VW) and it turned out that their website was not working so well, all old, so I asked those persons if I could help, so now I help there and I get to know many new people.*"

These two respondents seemed to learn from their online media creations: they produced something new and received feedback from persons outside their familiar network.

3.2.2.2 Moroccan-Dutch respondents

It seemed characteristic for our Moroccan-Dutch respondents' online networks that they existed of more peers and more contacts with a different ethnicity as compared to their Turkish-Dutch counterparts. Furthermore, Moroccan-Dutch respondents had less online contacts living abroad and more contacts living in the same city or a different city in the Netherlands than the Turkish-Dutch respondents. These characteristics were reflected in Moroccan-Dutch respondents' online experiences.

It seemed typical for our Moroccan-Dutch respondents to actively participate in online communities independent of their local network and to get in touch with new persons online. Whereas native Dutch respondents mentioned to participate in new communities to share, and learn about specific interests, Moroccan-Dutch respondents participated

in online communities with a social purpose. Half of the Moroccan-Dutch respondents participated in an online forum for Moroccan-descent people living in the Netherlands (www.marokko.nl). One girl explained:

> *"Sometimes it (content of conversations) is just rubbish, and sometimes it is interesting about religion or, it is about all sort of things" […] "Practically all Moroccan girls do that".*

Two respondents also participated in forums with diverse participants from different backgrounds. Although our Moroccan-Dutch respondents did not seem to have a specific learning goal, they did appear to use the online communities to retrieve information. Most respondents read stories, some actively discussed with others, and one boy explicitly mentioned to search for information:

> "*When I have questions, ehm about the Islam or something, then I can, then they give answers to your question" […] "It was about if you can have a girlfriend before marriage, yes or no" […] "*[I: Didn't you know anyone you could ask that?] *"Yes but then I mostly receive multiple different answers, but there [on forum] you really get one answer" […] "for example a scholar from the Islam answers".*

One girl explained that she learned *because of* her participation in a forum with participants who differed from her local community:

> *"I learned to think before I say something, because you can hurt many people" […] "I told there [on forum] that in my opinion gays are also just people and I think they are allowed to live" […] "I said that from another point of view than when I would say it from a Muslim point of view, because in Islam homosexuality is a taboo" […] "I gave my opinion because I knew that there were no Muslims on that forum, so I adjusted myself"*

While participating in online communities, Moroccan-Dutch youth appeared to be open for meeting new persons. Two respondents included friends they made on forums in their social network. This might partly explain the geographical spread (within the Netherlands) and the ethnic heterogeneity within Moroccan-Dutch respondents' online networks. A girl explains that she became friends with a native Dutch girl she met on a forum:

> "*[Anonym] is a girl who also comes there (forum) very often" […] "She has a clear opinion and she shows that when we are discussing. We talk a lot on MSN, about school and other things" […] *[I: But you never saw each other?] *"No, no, only on pictures"* [I: Does she live far away?] *"Mm she lives in (same city), but I don't know where".*

There were also six Moroccan-Dutch respondents who got to know new persons via *Hyves* (a Dutch social networking site) or *MSN Messenger*. One girl explains how internet offered her the possibility to make male friends:

> "*They (parents) do not really know with whom I talk online, that uhm, they would not approve 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…"* [I: Is it hard for you that you cannot tell your parents everything?] *"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 girl" […]* [I: Do you have the feeling that this (opportunity to meet boys) is something Moroccan girls did not have before, something they can do now because of internet?] *"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".*

Three of the six respondents who met new persons via Hyves or MSN included those contacts in their social network. Most of those new friends lived in the same city or neighborhood as the respondent. Moroccan-Dutch respondents also used internet to stay in touch with their familiar network; besides online contact with friends and family in the Netherlands, there were three respondents who interacted with family members living in Morocco. Through these transnational contacts, Moroccan-Dutch youth could find information outside of their direct location.

In comparison to the native Dutch and Turkish-Dutch respondents, it appeared that our Moroccan-Dutch respondents engaged most actively in advanced forms of online media creation. Different respondents really thought about the media content they produced and it served more than a social purpose. Four respondents, who were part of online discussions on forums, thought about the formulation of their opinions and their questions. There was also a boy who wrote match reports for the website of his Tae Kwando club and a boy who posted a YouTube video containing a political message on his *Hyves* profile:

> "*I uploaded a video clip on my profile about (Dutch right-wing politician), when she visited my city, they threw eggs at her, and then I got reactions from some people I did not know"* [I: What did you think about

that?] *"I thought it was pretty funny. I did not know them and they found that video clip" [...]"I like it that they have the same thoughts as me."*

All these examples of Moroccan-Dutch youths' media creations reached persons outside of their familiar context. This caused that youth could learn from the feedback they received from persons outside of their familiar context.

3.2.2.3 Turkish-Dutch respondents

The Turkish-Dutch online networks could be characterized by the relatively large proportion of family members and older contacts. In comparison to the Moroccan-Dutch respondents, Turkish-Dutch online networks consisted of more persons with the same ethnicity and more persons living abroad instead of living someplace in the Netherlands. These characteristics are reflected in Turkish-Dutch respondents' narratives regarding their participation and collaboration in online communities.

Turkish-Dutch youth mostly used internet to interact with persons they knew from their offline lives but whom they could not meet every day. Eight out of ten Turkish-Dutch respondents mentioned that they stayed in touch with family members and friends living in other cities in the Netherlands, in Turkey or in other European countries. These interactions mainly served a social purpose; it seemed that none of the Turkish-Dutch respondents deliberately searched for particular information. Nevertheless, it appeared that some Turkish-Dutch youth did learn from their transnational contacts who lived in different circumstances. One boy explained:

> *"(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 much, 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".*

Another boy mentioned that his cousin, who lived in Istanbul, inspired him to become an ICT administrator. Turkish-Dutch respondents did not only have transnational contacts with family members. Two respondents also exchanged information about their lives with friends living in Turkey. There were no respondents who used internet to deliberately step out of their familiar network and to find information beyond their existing contacts. There were only two boys who came across persons from other countries while playing a videogame.

Four Turkish-Dutch respondents mentioned that they got to know new contacts via games or social media. One boy made a native Dutch friend while playing a videogame. The other three respondents got to know new persons on Hyves and MSN *via* persons from their existing social network. Although these new contacts did not become close friends, they might offer Turkish-Dutch youth the possibility to find information outside their direct context. One girl explained that she got in touch with Turkish-Dutch peers from Germany via her niece:

> "Y*es that (getting to know new persons via-via) happens often, with friends of my niece"* "[I: Did you establish an online relationship with these persons?] *Yes"* "[I: What do you talk about?] *School, homework, those kind of things".*

All Turkish-Dutch respondents who talked about online media creation and exchange of media content (5 respondents), talked about 'basic' forms of media creation, such as the production of pictures, and distribution of existing music and video clips within their familiar network. None of the Turkish-Dutch respondents gave examples of more 'advanced' forms of online productions that served more than a social purpose and that reached persons outside of their familiar network.

4. Conclusion & Discussion

This study aimed to explore and compare the online networks and online learning experiences of native Dutch, Moroccan-Dutch and Turkish-Dutch youth and to investigate the relationship between online network compositions and online learning experiences. We assumed that there would be ethno-cultural diversity in youths' online network composition which would relate to diversity in youth's learning experiences. Our results confirm these assumptions. There are significant differences regarding the online network compositions of these three ethnic groups which are reflected in youth's narratives regarding their online learning experiences. Our results show that the three ethnic groups differ with respect to the online communities in which they search for information, make new contacts and distribute their own media creations.

We would like to address two issues while discussing the implications of these findings. The first issue is the question how we should or can characterize twenty-first century young learners. Can we label today's youth as a homogeneous group of online learners with certain characteristic ways of media engagement? And second, to what

extent is it possible to use particular forms of online participation and learning, such as those described by Ito et al. (2008) to describe ethno-cultural varieties in internet based learning practices?

Different authors wrote about typical characteristics of so-called twenty-first century learners, such as their active participation in (unknown) online communities to create and share knowledge. In accordance with Van den Beemt et al. (2011) we argue that it is not possible to talk about a homogeneous generation of online learners. Where Van den Beemt et al. (2010) studied general diversity in media use; we focused on ethno-cultural diversity. We took a social network perspective and questioned in which ways youth made use of the opportunity to learn in online networks; where do youth search for information, do youth connect with new contacts for their learning and (where) do they distribute their media creations for feedback?

Our results showed that native Dutch, Moroccan-Dutch and Turkish-Dutch youth were comparable when it comes to individual online exploration of the internet. Besides variation in the topics of interest, there were no clear differences in the way they explored the web, e.g. in terms of searching for information or downloading material, or in other words, in their consumptive internet use. This finding is in line with the study of Ito et al. (2013) who concluded that most youth are engaged in basic online activities such as checking Wikipedia and watching clips on YouTube.

Ethnic differences did occur regarding youth's participation, collaboration and information exchange in online communities. In their study Ito et al. (2008) distinguished three forms of online participation; 'hanging out' (with friends and family, friendship-driven), 'messing around' (to learn about new media and technologies) and 'geeking out' (to learn about specific interests in specialized communities). Our study shows how these categories are sometimes blurred when we consider the motives, practices and opportunities for learning.

Our Moroccan-Dutch respondents' narratives showed that youth do not necessarily need a learning-purpose to engage in new online communities. They do not only hang out with their local friends, neither do they enter new communities to geek out; in most cases they enter new, unknown communities with a social purpose. However, they do report important learning experiences based on the participation in these new, initially unknown communities, when youth discuss with unknown others and search for answers to their questions. This finding supports the claim of Panagakos and Horst (2006) that migrants often participate in online communities driven by a common identity to create new outlets for social interaction. In terms of Ito's (2008) terminology, the difference between hanging out and geeking out was more gradual and diffuse as motives and participation forms shifted frequently.

The categories from Ito et al. (2008)' study worked well to characterize the online participation of our native Dutch and Turkish-Dutch respondents, as well as their differences. In comparison to the Moroccan-Dutch and native Dutch respondents, our Turkish-Dutch respondents most clearly used internet to hang around with their family and friends. Our Turkish-Dutch respondents had the strongest orientation towards their own Turkish network and did not make explicit use of the possibility to find information in new online networks or to establish new (learning) relationships online. This hanging around with friends and family did not have an explicit learning purpose, but our data showed how Turkish-Dutch youth's online networks could provide them with interesting new experiences and information due to its transnational character as their networks cross languages and geographical regions.

Our native Dutch respondents could be characterized by a strong orientation towards their own network of friends (living nearby and further away). Nevertheless, our native Dutch respondents did not only interact and 'hang around' with those friends, occasionally, native Dutch youth stepped out of their familiar network and searched for persons with the same interests online to 'geek out'. In line with the description of Ito et al. (2008) native Dutch youth participated in interest-based online communities to share their expertise and to learn from others with the same interests (see Ito et al., 2008).

Our results on ethno-cultural diversity in youth's participation in online networks and the subsequent differences in youth's online learning experiences showed how learning experiences can be shaped by social networks and vice versa (Diepstraten et al., 2006). While Turkish-Dutch youth's online learning stays strongly related to their own offline ethnic community, native Dutch and –especially- Moroccan-Dutch youth are more prone to engage in new online networks to exchange information and receive feedback. Following the 'ideals' of twenty-first century online learning, our native Dutch and Moroccan-Dutch respondents seem to be further up the ladder of 'online learning opportunities', since they undertake more complex, social, and creative online learning activities in coalition with unknown others (See Ito et al., 2013). However, it should not be forgotten that Turkish-Dutch youth also have the opportunity to have valuable and instructive experiences in their online interactions with friends and family members living abroad.

4.1 Practical implications

In her dissertation van Kruistum (2013) refers to *the epistemic function* of new media when she writes about online knowledge gathering and creative expression. Van Kruistum, Leseman, and de Haan (2014) explain that there is still much unknown about the epistemic potential of new media, but that there is evidence that new media help youth to develop the literacy skills required for formal schooling. In line with Ito et al. (2013)'s findings, they show that most youth use new media for social-entertainment purposes, and not for knowledge gathering or creative expression, although variation exist, depending on a variety of background variables. They conclude that youth need more guidance in order to use new media for these epistemic functions and that schools have an importance task to fulfil in this respect. If schools wish to establish educational renewal, and if they "are ready to invest in bridging the world of youth with that of the school, their most important task is to exploit and teach students the epistemic potential of new media and the personal relevance of appropriating this potential" (van Kruistum, Leseman, & de Haan (2014, p.39). Our study in particular shows that the extent to which youth already make use of new media's epistemic potential differs among ethnic groups. This is a relevant finding for schools as it points out that some ethnic groups might need more guidance to engage in and benefit from new media's epistemic potential than others. In other words, it should not be taken for granted that all ethnically diverse students make use of online learning opportunities to the same extent or in the same way.

When interpreting the results of this study, it should be taken into account that our data-collection took place in 2010. Because of the fast pace of changes in new media use and the continuing growth of this use among youth, readers should be aware that today's youth's online behavior might have changed. Although patterns of media use might have changed as new technologies have come up, we believe that the diversity in networked relationships we found in this study, will be more stable over time. Furthermore, our results should not be interpreted as attributing certain media characteristics to particular ethnic groups. The small sample size of especially the qualitative study makes that we should be careful in generalizing these results to differences between these three ethnic groups. However, this does not downplay the fact that ethnic variety is an important factor to take into account in studies on media use. The fact that we did find clear ethno-specific characteristics in this small sample makes it plausible that these differences continue to exist, and that we indeed cannot talk of a homogeneous generation of twenty-first century learners.

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