Differences in the use of social media between youngsters with different levels of education in the Netherlands

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Marinda Plas, M. H. (3643018)

Supervisor: Asli Ünlüsoy, MSc

Second supervisor: Caroline Poleij, drs.

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Preface

Before you, there is a thesis which gives an answer to the question what the differences are between youngsters of different levels of education in the Netherlands, with which I will end my study '*Orthopedagogiek´* at the University of Utrecht.

During my study my interest in the care of students grew. Therefore, I chose to finish my study in the work field of student care. I wanted my thesis to be about students. Since social media is rapidly expanding and takes forms that were unthinkable a few years ago, I figured this topic deserved attention. The combination of student care and social media made this thesis very interesting to me. On the other hand, it is also interesting for those working at schools or studying youngsters using social media. The purpose of the thesis is to identify differences in social media use based on educational level so that these findings can lead the implementation of social media in class contexts.

I have worked on the thesis on my own after my project partner has stopped early in the first semester. I have written this thesis with a lot of curiosity. Since there is almost no literature regarding the specific subject of educational level differences, my hypotheses were exploratory in nature. After writing this thesis, my curiosity has grown more. Some questions have been answered, but new questions have been raised as well.

I want to thank Asli Ünlüsoy for all her help while writing this thesis. She brought me new ideas and feedback, especially when I did not exactly know what I wanted with my thesis. Also, my thanks goes out to the second reader Caroline Poleij, for her feedback. Finally, I want to thank the *Wired Up* team for the survey I used.

I wish you, as a reader, a lot of enjoyment while reading this research. I hope your questions will be answered. I also hope that is raises more questions, as it did to me. And I hope I can find answers to the questions in researches done by you.

Rijssen, the Netherlands, June 2014

Abstract

Social media have a great impact on people. Youngsters use social media in various ways, including learning. However, it is neither known whether the use of social media correlates with the level of education nor in what ways youngsters with different levels of education use the internet differently. Because an aspect of good education is student-centered education, information about the use of social media in learning is needed for a consistent implementation of social media in classrooms. Since the topic is relatively new, this research is explorative. The focus is the difference in the use of social media while learning between youngsters from VMBO (n = 976) and HAVO-VWO (n = 408) in the Netherlands. The age ranges from 10 to 19 and 53.1% is female (n = 735). Data is retrieved from the *Wired Up* research project. Because of the interest of the *Wired Up* team in immigrants, a stratified sampling strategy was applied for various ethnic groups. The survey is administered digitally at schools. No difference was found in time spent using social media ($p > .05$). Youngsters from VMBO use social media more in learning than youngsters from HAVO-VWO ($p < .05$). Youngsters from HAVO-VWO use social media more to find information and reach organizations ($p < .05$). There is a difference in the use of social media between youngsters from VMBO and HAVO-VWO. While implicating social media in classroom contexts, the level of education is critical. Directions for further research are provided.
Keywords: Social media; youngsters; educational level; learning

Samenvatting

Sociale media hebben een grote invloed op het leven van mensen. Jongeren gebruiken sociale media op verschillende manieren, waaronder leren. Echter, het is onbekend of het gebruik van sociale media correleert met het onderwijsniveau. Daarnaast is het onbekend op welke manieren jongeren van verschillende onderwijsniveaus het internet verschillend gebruiken. Een onderdeel van goed onderwijs is leerlinggericht onderwijs. Daarom is informatie over het gebruik van sociale media bij leren nodig om een consistente implementatie van sociale media in de klas te bevorderen. Omdat dit onderwerp relatief nieuw is, is dit onderzoek exploratief. Het is gericht op verschillen in het gebruik van sociale media bij leren tussen jongeren van VMBO (n = 976) en HAVO-VWO (n = 735). De leeftijd varieert van 10 tot 19 jaar, en 53,1% van de respondenten is vrouwelijk (n = 735). De data is verkregen van het *Wired Up* onderzoeksproject, wat is gericht op immigranten. Daarom is de onderzoeksgroep niet generaliseerbaar wat betreft etniciteit. De vragenlijst is digitaal

afgenomen op scholen. Er zijn geen verschillen gevonden in tijd die gespendeerd wordt aan sociale media ($p > .05$). Jongeren van VMBO gebruiken sociale media meer in leren dan jongeren van HAVO-VWO ($p < .05$). Jongeren van HAVO-VWO gebruiken sociale media meer om informatie te vinden en organisaties te bereiken ($p < .05$). Er is een verschil in het gebruik van sociale media tussen jongeren van VMBO en jongeren van HAVO-VWO. Wanneer sociale media geïmplementeerd worden in de klas, is het onderwijsniveau belangrijk. Aanbevelingen voor vervolgonderzoek worden gegeven.
Trefwoorden: Sociale media; jongeren; onderwijsniveau; leren

The world is going mobile, which has an influence on the way people work, learn and entertain themselves (Sherimon & Krishnan, 2011; Gikas & Grant, 2013). With the new digital media and technologies, people can now create, work, share, socialize, collaborate, communicate, and learn everywhere (Meyers, Erickson, & Small, 2013). This has a great impact on the lives of individuals (Lantz-Andersson, Vigmo, & Bowen, 2013). Also, the use of social media has become common among youngsters (Ahn & Shin, 2013). It is known that the time spent using social media among youngsters is increasing (Lantz-Andersson et al., 2013; Dabbagh & Kitsantas, 2012). However, it is unknown whether this increase is the same for different groups of youngsters and if there are differences between groups of youngsters in the use of social media.

This research will study whether youngsters from different levels of education differ in their use of social media. The difference between youngsters, based on their level of education, in using social media has not been researched extensively before (Lantz-Andersson et al., 2013). However, there is a growing literature regarding how social media is integrated in young people's lives and the uses thereof. Social media is a 21st century term used to broadly define a variety of networking tools or technologies that emphasize the social aspects of the internet as a channel for communication, collaboration, and creative expression, which can be used for individual, professional or entertainment purposes (Dabbagh & Kitsantas, 2012; Gikas & Grant, 2013). It is clear from research that youngsters are integrating social media in their academic experience both formally and informally (Dabbagh & Kitsantas, 2012). Students use social media to find, identify, manipulate and evaluate existing knowledge (Gikas & Grant, 2013). Other studies find that youngsters use the internet to find others with similar tastes, interests and backgrounds, in order to share and collaborate with them in learning (Bargh & McKenna, 2004; Gikas & Grant, 2013).

An aspect of good education is student-centered education (Ozdamli & Cavus, 2011; Woolfolk, Hughes, & Walkup, 2013). As described, the literature indicates that students use social media in learning. However, it is unknown if there are differences in the use of social media when learning. Therefore, it is valuable to know more about how youngsters at different levels of education learn a particular skill, since this information can be used in classroom contexts (Jolles & Crone, 2012; Greenhow, 2011). To do this in a consistent and precise manner, information about the use of social media among youngsters in the Netherlands is necessary. Therefore, this research will formulate an answer on some of the pressing questions, thus contributing to the existing literature. To accomplish this, a review of the literature will be given, in which known information will be compared and contrasted.

Advantages of the use of social media in learning imply accessing information quickly, communicate and collaborate and access to a variety of methods used for learning (Gikas & Grant, 2013; Shen, Cho, Tsai, & Marra, 2013). It appears that students use social media to exchange information regarding school with other students (Margaryan, Littlejohn, & Vojt, 2011; Kirkwood & Price, 2005). Teachers increasingly implement social media in their lessons (Kaufer, Gunawardena, Tan, & Cheek, 2011). Also, students prefer using social media when studying (Gikas & Grant, 2013). However, it seems that the perception of the youngster regarding the use of social media in learning is determining for the actual use of social media in learning (Kirkwood & Price, 2005). No literature is found regarding the question if the use of social media in learning correlates with the educational level of a youngster.

In this research, youngsters will be divided in two groups; youngsters that follow the Dutch VMBO (Voorbereidend Middelbaar Beroepsonderwijs), a preparatory school for secondary vocational training and a combined group of youngsters that follow the Dutch HAVO (Hoger Algemeen Voortgezet Onderwijs), a preparatory school for vocational university, together with the youngsters that follow the Dutch VWO (Voorbereidend Wetenschappelijk Onderwijs), a preparatory school for academic learning. Hereafter, the different levels of education are described further.

The Dutch VMBO consists of four years of study. In the first two years, all students follow the same courses. After these years, every student chooses his own work field, for example healthcare or construction. A student also chooses his or her way of learning; theoretical or practical. In the third and fourth year, students have different internships to see the work field. Within the Dutch VMBO there are six levels, ascending in difficulty. It is possible for students from the VMBO to receive more support during his education by

receiving Leerwegondersteunend onderwijs (LWOO), which contains extra lessons, homework support and trainings. After the VMBO, students can sign in for the Dutch MBO (middelbaar beroepsonderwijs). In short, students at the MBO learn skills for practical jobs, like nursing and plumbing. Students can also choose to follow the last two years of the Dutch HAVO after they have completed the Dutch VMBO (Rijksoverheid, 2014).

The Dutch HAVO consists of five years of study. In the first three years the students follow broad courses. After these three years, students must choose a profile for the next two years. The four profiles are: *nature & technique*, *nature & health*, *economy & society*, and *culture & society*. A profile consists of six obligated courses. Students must also follow the courses *gymnastics* and *cultural and artistic education*. Students have the option to follow extra courses. After the HAVO, students can sign in for the Dutch HBO (hoger beroepsonderwijs). In short, students at the HBO learn knowledge and skills to work in the professional practice, for example social worker or salesman. Students can also choose to follow the last two years of the Dutch VWO after they have completed the Dutch HAVO (Rijksoverheid, 2014).

The Dutch VWO consists of six years of study. In the first three years the students follow broad courses. After these three years, students must choose a profile for the next three years. The four profiles are, once again, *nature & technique*, *nature & health*, *economy & society*, and *culture & society*. A profile consists of seven obligated courses. Students must also follow the courses *mathematics, gymnastics* and *cultural and artistic education*. Students are able to choose following extra courses. The Dutch VWO comes in two forms; atheneum (without Latin and/or Greek) and gymnasium (with Latin and/or Greek). After the VWO, students can sign in for university. In short, students at the university receive theoretical information regarding a profession, for example doctor or analyst (Rijksoverheid, 2014).

To summarize it can be said that studying young people's access and use of additional learning resources, such as social media, while growing up in a system with different educational tracks is valuable. It is clear that different youngsters use social media in different ways in learning. However, it is neither known whether the use of social media correlates with the level of education nor in what ways youngsters with different levels of education use the internet differently.

In order to address the gap in the literature, the following questions have been posed. This study is explorative; since there is not enough literature about this specific issue there is not enough information to create solid hypotheses. The overarching question is how

youngsters from different levels of education differ in their use of social media. This question has been divided in three questions as follows:

1. Is there a difference in time spent using social media between youngsters of higher levels of education (HAVO and VWO) compared to youngsters of a lower level of education (VMBO)?
2. Is there a difference in the use of social media in learning between youngsters of higher levels of education (HAVO and VWO) compared to youngsters of a lower level of education (VMBO)?
3. Is there a difference in the purpose for the use of social media between youngsters of higher levels of education (HAVO and VWO) compared to youngsters of a lower level of education (VMBO)?

Methods

The data that is used in this research comes from the Wired Up research project. Wired Up is a multi-method and multi-disciplinary research project that focuses on how young people in the Netherlands and the United States with a migrant background use new media (Hirzalla, de Haan, & Ünlüsoy, 2011). The primary aim of this project is to develop new conceptual tools and an innovative methodological approach that will allow researchers to monitor, evaluate and assess the sociocultural specificities of the interaction between youngsters and digital media in a comparative perspective. Therefore, a survey was carried out in 2010 among 1408 students in the Netherlands. Below, this population will be described thoroughly.

Participants

In total there are 1408 participants, of who 747 girls (53.1%). The age ranges from 10 to 21 years of age, with a mean of M = 14.5 years, SD = 1.7 years. The participants came from seven schools in five big cities in the Netherlands (Utrecht, Rotterdam, Den Bosch, Amsterdam, and Gouda). Based on distance from Utrecht, 25 schools were asked to participate in the research. After negotiation, seven schools were willing to participate (whereas the other 18 schools felt overloaded by other ongoing research already). Because of the main aim of the Wired Up research project, immigrants are overrepresented in the final sample. The ethnicities among the research group are as follows: Dutch (448 students, 31.8%), Turkish-Dutch (168 students, 11.9%), Moroccan-Turkish (344 students, 24.4%), Surinam-Antillean (101 students, 7.2%) and others (347 students, 24.7%). Due to the interest of the Wired Up research program in immigrants, the sample is stratified. Therefore, the participants are not representative for youngsters in big cities in the Netherlands regarding

ethnicity. A total of 986 students (70.1%) followed the Dutch VMBO. Next, 236 students (16.8%) followed the Dutch HAVO. Finally, 185 students (13.1%) followed the Dutch VWO. This distribution matches the distribution of school tracks in the Netherlands. Since this research is describing in nature, a total amount of 1408 participants is enough to answer the leading questions.

Instruments

The research is descriptive and comparative in nature, with the purpose of gathering information to fill the gap in the literature. Differences between groups are the focus of the questions. In this research, data is retrieved from a questionnaire that is filled out by students. The questionnaire was designed to gather information about media use of migrant youngsters as related to non-migrant youngsters, internet use as practices of learning and identity, how online practices relate to offline practices, global versus local orientations and networked learning ecologies. The questionnaire was filled out digitally. The questionnaire is created by the Wired Up team as a product of a combination of interests. Every question has been discussed by 15 youngsters individually, to administer if the questions and answer categories were clear and complete. After their feedback was used to improve the questionnaire, the reliability and face validity of the questionnaire was tested among the target age group (N = 20) in the development phase.

The most important variables in this research are time spent in social media, learning of youngsters, and the purpose of the use of social media. Social media has been broadly defined as a variety of networked tools or technologies that emphasize the social aspects of the internet as a channel for communication, collaboration, and creative expression, which can be used for individual, professional or entertainment purposes (Dabbagh & Kitsantas, 2012; Gikas & Grant, 2013). The time spent using social media is determined by the question regarding used time doing different online activities (Hoe vaak doe je de dingen die hieronder genoemd zijn? For example, using Messenger; chatting; e-mailing; using twitter; participating in weblogs and forums). Further, what youngsters learn has been defined as the production of social media regarding youngsters. This will be determined by the question regarding production in the questionnaire (Hoe heb je onderstaande dingen geleerd? Youngsters must rate different internet related activities, for example downloading, playing games, texting, making a personal page, etcetera). Youngsters had to rate different ways of learning for the different activities. For this research, only the ratings for the answer category '*friends, family and teachers on the internet'* are used. Finally, the purpose of using social media is defined as

the reason social media is used by youngsters. This will be determined by question 7 of the questionnaire (Waarvoor vind jij het internet vooral geschikt?).

Procedure

Schools were selected on base of the amount of immigrant students in the five chosen big cities and distance from Utrecht. In some cases, whole classes were asked to fill out the questionnaire. In other cases, students got to choose if they wanted to skip class to fill out the questionnaire. Students got information about the purpose of the research, and were allowed to refuse participation. Parents either received a letter about the study, or received information about the study through the school newsletter. Parents could choose to refuse participation of their son or daughter. The students filled out the questionnaire in their classrooms or a computer room in their school by means of a template that was facilitated online. Before the survey sessions, instructors of the Wired Up team explained the general aims of the survey. During the surveys, the instructors remained in the room to supervise and monitor the process and answer questions the students had. Most survey rounds took 30 to 40 minutes. Answers were given digitally.

Data analysis

The data was automatically put in SPSS when filling out the questionnaires. When analyzing the data, it appeared that some students have not taken the questionnaire seriously. As an example, some students filled out having more than 50 brothers and sisters, or being 21 years of age. Therefore, data of 24 students has been taken out of the dataset. With this, the new dataset consists of 1384 students, of which 735 girls (53.1%). The age ranges from 10 to 19 years of age (M = 14.5, SD = 1.6). The new dataset does not differ significantly from the old dataset regarding ethnicity and city of origin. The analyzing techniques that will be used for the different sub-questions are determined below. All research questions are descriptive in nature. The dependent variables are nominal, the independent variable ordinal. The independent variable is the school type, which is divided in two categories; VMBO (which implies all six sublevels of the VMBO) and HAVO-VWO (which implies HAVO, VWO-atheneum and VWO-gymnasium).

Is there a difference in time spent using social media between youngsters of higher levels of education (HAVO and VWO) compared to youngsters of a lower level of education (VMBO)?

To answer this question, a Chi-square test will be executed because the data does not meet parametric test assumptions. When it appears that there is a significant difference, Spearman-rang correlation will be used. This test is chosen because it does not require both variables to

be continuous, which is an assumption with the test to determine Pearson´s *r*. Also, the assumption for the minimum measure level as well as the assumption for a monotonic relationship are both not violated (Field, 2009). The dependent variable is the time spent using social media (Hoe vaak doe je de dingen die hieronder genoemd zijn? Youngsters can choose from answer categories like using Messenger, calling using the internet, sending an e-mail, watching video's, playing games, visiting and using blogs, etcetera). The independent variable is the school type.

Is there a difference in the use of social media in learning between youngsters of higher levels of education (HAVO and VWO) compared to youngsters of a lower level of education (VMBO)?

To answer this question, a Chi-square test will be executed for reasons explained above. When it appears that there is a significant difference, Spearman-rang correlation will be used, for reasons explained above. The dependent variable is what is learned by using social media (Hoe heb je onderstaande dingen geleerd? Youngsters must rate different internet related activities, for example downloading, playing games, texting, making a personal page, etcetera). The independent variable is the school type.

Is there a difference in the purpose for the use of social media between youngsters of higher levels of education (HAVO and VWO) compared to youngsters of a lower level of education (VMBO)?

To answer this question, a Chi-square test will be executed for reasons explained above. When it appears that there is a significant difference, Spearman-rang correlation will be used, for reasons explained above. The dependent variable is the purpose of using social media (Waarvoor vind jij het internet het meest geschikt? Youngsters may choose from answers as seeking information, buying objects, finding people or organizations, etcetera). The independent variable is the school type.

Results

To test the results, a Chi-square test is executed. For every sub-question a critical point of $p < .05$ was determined.

Time spent using social media

Tables 1 and 2 show the descriptive statistics and the results from the Chi-square test. Only for the activity '*calling using the internet*', a significant difference was observed. In the other activities, '*using the webcam*', '*chatting in chat-rooms*', '*using messenger'*, '*sending an e-mail'*, '*view and edit profile-pages'*, '*sending tweets'*, *'online games played with others*', '*visiting and participating in forums'* , and '*visiting and participating in weblogs'*, no

significant differences are found. There is no difference in time spent using social media between youngsters from the VMBO compared to youngsters from HAVO-VWO. A Spearman Rank Order correlation was run to determine the relationship between the activity *'calling using the internet'* and level of education. No correlation is found between level of education and the activity *'calling using the internet'* ($r_s(1382) = .026$, $p = .35$).

Table 1

Descriptive statistics for time spent using social media for youngsters from VMBO and youngsters from HAVO-VWO

Activity time is spent on	VMBO (*n* = 976) Mean (*SD*)	HAVO-VWO (*n* = 408) Mean (*SD*)
Calling using the internet	2.9 (.88)	2.9 (.72)
Using the webcam	2.1 (1.6)	2.2 (1.63)
Chatting in chatrooms	1.6 (1.3)	1.7 (1.40)
Using messenger	4.8 (1.5)	4.8 (1.49)
Sending an e-mail	3.4 (1.7)	3.3 (1.73)
View and edit profile-pages	4 (1.9)	4 (1.9)
Sending tweets	1.4 (1.1)	1.3 (1)
Online games played with others	2.2 (1.8)	2.1 (1.74)
Visiting and participating in forums	1.8 (1.4)	1.8 (1.46)
Visiting and participating in weblogs	1.4 (1)	1.5 (1.17)

Note: 1 = never, 2 = once a week or less, 3 = two to three days a week, 4 = four to five days a week, 5 = on a daily basis, 6 = more than once a day

Table 2

Level of significance for the difference in time spent using social media between youngsters from VMBO and youngsters from HAVO-VWO

Activity time is spent on	Level of significance for the difference between VMBO and HAVO-VWO youngsters
Calling using the internet	$p = .01$
Using the webcam	$p = .69$
Chatting in chatrooms	$p = .33$
Using messenger	$p = .73$
Sending an e-mail	$p = .30$
View and edit profilepages	$p = .92$
Sending tweets	$p = .13$
Online games played with others	$p = .09$
Visiting and participating in forums	$p = .99$
Visiting and participating in weblogs	$p = .40$

Social media in learning

Tables 3, 4 and 5 display frequencies for how activities are learned and the descriptive statistics from the Chi-square test. There is a significant difference in learning for the activities '*downloading, editing, or putting music on the internet*', *'making or editing an own website or weblog', 'texting', 'making a profile page (e.g.,* Hyves*)', 'making, editing or uploading a picture on the internet (e.g.,* Hyves *or* Flickr*)',* and *'making, editing or uploading a video on the internet (e.g., on* Youtube*)'.* For the other activities, *'playing a computer-game'* and '*making or editing a person in a game or level'*, there is no difference in learning using social media between youngsters from VMBO and youngsters from HAVO-VWO. For the activities '*downloading, editing or putting music on the internet'* ($r_s(1382) = -.06$, $p = .03$), '*making or editing an own website or weblog'* ($r_s(1382) = -.06$, $p = .03$), '*texting'* ($r_s(1382) = .09$, $p < .01$), '*making a profilepage (for example* Hyves*)'* ($r_s(1382) = -.1$, $p = .00$), '*making, editing or uploading a picture on the internet (for example on* Hyves *or* Flickr*)'* ($r_s(1382) = -.08$, $p < .01$) and '*making, editing or uploading a video on the internet (for example on* Youtube*)*' ($r_s(1382) = -.06$, $p = .03$) negative correlations are found between the activity and level of education, all of them significant.

Table 3

Level of significance for the difference in learning using social media between youngsters from VMBO and youngsters from HAVO-VWO

Activity time is spent on	Level of significance for the difference between VMBO and HAVO-VWO youngsters
Downloading, editing or putting music on the internet	$p = .03$
Making or editing an own website or weblog	$p = .03$
Playing a computergame	$p = .27$
Making or editing a person in a game or level	$p = .15$
Texting	$p < .01$
Making a profilepage (for example *Hyves*)	$p = .00$
Making, editing or uploading a picture on the internet (for example on *Hyves* or *Flickr*)	$p < .01$
Making, editing or uploading a video on the internet (for example on Youtube)	$p = .03$

Table 4

Frequencies for how activities are learned for youngsters from VMBO (n = 976)

Activity that is learned	Never done	Paper manual	Help-function	Tried it myself	Friends, family or teacher offline	Friends, family or teacher online
Downloading, editing or putting music on the internet	153 (15.7%)	27 (2.7%)	41 (4.2%)	449 (46%)	244 (25%)	147 (15%)
Making or editing an own website or weblog	259 (26.4%)	35 (3.6%)	47 (4.8%)	434 (44.5%)	161 (16.5%)	101 (10.3%)
Playing a computer-game	141 (14.4%)	26 (2.7%)	45 (4.6%)	618 (63.3%)	110 (11.3%)	95 (9.7%)
Making or editing a person in a game or level	321 (32.9%)	28 (2.9%)	52 (5.3%)	438 (44.6%)	97 (9.9%)	82 (8.4%)
Texting	61 (6.25%)	23 (2.4%)	26 (2.7%)	721 (73.9%)	112 (11.5%)	89 (9.1%)
Making a profile page (e.g., *Hyves*)	99 (10.1%)	9 (0.9%)	52 (5.3%)	551 (56.5%)	212 (21.7%)	114 (11.7%)
Making, editing or uploading a picture on the internet (e.g., *Hyves* or *Flickr*)	126 (12.9%)	13 (1.3%)	38 (3.9%)	595 (61%)	165 (16.9%)	91 (9.3%)
Making, editing or uploading a video on the internet (e.g., *Youtube*)	237 (24.3%)	17 (1.7%)	37 (3.8%)	515 (52.8%)	128 (13.1%)	90 (9.2%)

Note: In this question multiple selection was possible, therefore the percentages do not add up to 100.

Table 5

Frequencies for how activities are learned for youngsters from HAVO-VWO (n = 408)

Activity that is learned	Never done	Paper manual	Help-function	Tried it myself	Friends, family or teacher offline	Friends, family or teacher online
Downloading, editing or putting music on the internet	69 (16.9%)	3 (0.7%)	21 (5.1%)	198 (48.5%)	111 (27.2%)	43 (10.5%)
Making or editing an own website or weblog	137(33.6%)	8 (2%)	16 (3.9%)	161 (39.5%)	74 (18.1%)	27 (6.6%)
Playing a computer-game	39 (9.6%)	6 (1.5%)	19 (4.7%)	284 (69.6%)	44 (10.8%)	32 (7.8%)
Making or editing a person in a game or level	120 (29.4%)	6 (1.5%)	22 (5.4%)	213 (52.5%)	42 (10.3%)	25 (6.1%)
Texting	29 (7.1%)	6 (1.5%)	15 (3.7%)	408 (100%)	40 (9.8%)	16 (3.9%)
Making a profile page (e.g., *Hyves*)	79 (19.4%)	4 (1%)	16 (3.9%)	224 (54.9%)	84 (20.6%)	21 (5.1%)
Making, editing or uploading a picture on the internet (e.g., *Hyves* or *Flickr*)	80 (19.6%)	8 (2%)	23 (5.6%)	238 (58.3%)	56 (13.7%)	18 (4.4%)
Making, editing or uploading a video on the internet (e.g., *Youtube*)	114 (27.9%)	5 (1.2%)	27 (6.6%)	213 (52.2%)	44 (10.8%)	23 (5.6%)

Note: In this question multiple selection was possible, therefore the percentages do not add up to 100.

Purpose using social media

Tables 6, 7 and 8 show frequencies in purpose of using social media by youngsters and the descriptive statistics of the results from the Chi-square test. From the results follows that there is a significant difference for the activities '*to reach organizations'* and '*to find information that I need to know*'. For both the activity '*to reach organizations'* ($r_s(1382) = .12$, $p = .00$) and the activity *'to find information that I need to know'* ($r_s(1382) = .18$, $p = .00$) strong positive correlations are found. For the activity '*to find people who can help me with my problems*' there is no difference between youngsters from VMBO and youngsters from HAVO-VWO in time spent on this activity.

Table 6

Frequencies in the purposes from youngsters from VMBO (n = 976) to use the internet

Purpose	Completely disagree	Disagree	Neutral	Agree	Completely agree
To reach organizations	230 (23.6%)	161 (16.5%)	323 (33.1%)	171 (17.5%)	91 (9.3%)
To find people who can help me with my problems	379 (38.8%)	189 (19.4%)	219 (22.4%)	110 (11.3%)	79 (8.1%)
To find information that I need to know	51 (5.2%)	30 (3.1%)	137 (14%)	318 (32.6%)	440 (45.1%)

Table 7

Frequencies in the purposes from youngsters from HAVO-VWO (n = 408) to use the internet

Purpose	Completely disagree	Disagree	Neutral	Agree	Completely agree
To reach organizations	62 (15.2%)	51 (12.5%)	148 (36.3%)	103 (25.2%)	44 (10.8%)
To find people who can help me with my problems	155 (38%)	90 (22.1%)	86 (21.1%)	44 (10.8%)	33 (8.1%)
To find information that I need to know	17 (4.2%)	4 (1%)	20 (4.9%)	109 (26.7%)	258 (63.2%)

Table 8

Level of significance for the difference in purpose using social media between youngsters from VMBO and youngsters from HAVO-VWO

Activity time is spent on	Level of significance for the difference between youngsters from VMBO and youngsters from HAVO-VWO
To reach organizations	$p = .00$
To find people who can help me with my problems	$p = .85$
To find information that I need to know	$p = .00$

Conclusion and discussion

The purpose of this research was to determine the difference in the use of social media between youngsters of different levels of education. This information is valuable because it gives an indication how social media can be implemented in classroom contexts in a student-centered way. Since there is no literature to indicate a direction in the findings, this research is explorative, led by questions.

As has been found in literature, throughout the results it is clear that practically all youngsters use social media in various ways (Ahn & Shin, 2013; Lantz-Andersson et al., 2013; Dabbagh & Kitsantas, 2012). Also, it is found that youngsters use social media while learning and they find and share information using social media (Gikas & Grant, 2013). From the results it is also clear that there are differences between youngsters of different levels of education in using social media. Below, conclusions to the results will be drawn.

First, there was no difference in time spent using social media between youngsters from VMBO and youngsters from HAVO-VWO. Only the activity '*calling using the internet*' is significantly different. However, it appeared that there is no correlation between level of education and '*calling using the internet*'. This can be a result of the skewed participant group. Calling using the internet, for example *Skype*, is often used by immigrants to contact family in their home country due to the lower costs. This may have influenced the results. The fact that there was no meaningful difference in using social media across different education levels means that access to these facilities is equal for all groups.

Second, there was a difference in learning using social media between youngsters from VMBO and youngsters from HAVO-VWO. Negative correlations were found, which means that youngsters from HAVO-VWO use social media less in learning than youngsters from VMBO. Only for activities '*playing a computer-game*' and '*making or editing a person*

in a game or level' there is no difference between youngsters from VMBO and youngsters from HAVO-VWO. Playing computer-games (and, with that, making or editing a person in a game or level) is more prevalent among boys than among girls (Willoughby, 2008). This may be a stronger predictor than level of education. It is possible that the difference in the use of social media while learning can be explained by a difference in attitude between the educational levels. Students from VMBO may be less prone to learn and would like to finish quickly by getting answers from their peers. On the other hand, students from HAVO-VWO may be more motivated to learn and probably see the importance of learning more.

Third, there was a difference in the purpose of using social media between youngsters from VMBO and youngsters from HAVO-VWO. For the activities '*reaching organizations*' and *'finding information that I need to know*', strong positive correlations are found. This means that youngsters from HAVO-VWO engage in these activities more than youngsters from VMBO. It is possible that youngsters from HAVO-VWO get more assignments with which they need to find information themselves. Also, it is possible that these youngsters are more motivated to find information compared to youngsters from VMBO. Further, no difference was found for the activity '*finding people who can help me with my problems'.* Clearly, this is an activity in which youngsters from VMBO as well as youngsters from HAVO-VWO engage in.

A possible explanation for the results is the broad age range from the research group (ages 10-19). It is possible that this age range captures a lot of differences among youngsters which can be ascribed to age differences, not level of education.

A strong point of this research was the large sample size, because this minimizes the chance that the found results can be ascribed to coincidence. Also, the division of levels of education in the research group resembles the division in the Netherlands which increases the generalizability. Further, the survey has been thoroughly checked before it was presented to respondents. Finally, students filled out the survey anonymously.

A relative weak point is the skewed sample regarding ethnicity. This decreases the generalizability since the division does not meet the division as found in the Netherlands. Also, the survey (which is administered in 2010 and 2011) does not capture the concept of social media as it is today. The velocity with what social media change, is striking. The pace in which youngsters change the way they use social media, is almost unthinkable. As an example, some questions in the survey captured the Dutch social media website '*Hyves'*. '*Hyves*' was lanced in 2004, and competed with more global social media websites as *'Facebook*' and '*MySpace*'. However, '*Hyves'* lost the battle with '*Facebook*', and in

December 2013 '*Hyves*' changed from a social media website into a gaming platform (De Volkskrant, 2013).

Directions for further research imply the use of a representative respondent group regarding ethnicity. Further, a smaller age range would make the results more comparable. Finally, making use of a survey which captures social media today would make the research stronger.

Concluding it can be said that there is a difference in the use of social media between youngsters from VMBO and youngsters from HAVO-VWO. It follows from the results that youngsters from VMBO use social media more in learning than youngsters from HAVO-VWO. Further, youngsters from HAVO-VWO use social media more to find information they need and to reach organizations than youngsters from VMBO. This means that, while implicating social media in classroom contexts, the level of education should be used as leading. Youngsters from HAVO-VWO are more primed to use social media as a tool to find information or reach organizations. On the other hand, youngsters from VMBO use social media more while learning. When assignments for students are designed, this difference should be accounted for.

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