Higher Education Marketing: A Study on the Impact of Social Media on Study Selection and University Choice

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ABSTRACT

The importance of the internet as commercial platform is by now universally

recognized and increasingly businesses adopt online marketing channels at the cost of

traditional ones. The social media, being second generation (Web 2.0) internet

applications, allow interaction, one-to-one communication, customer engagement, and user generated content. The interest of higher education institutions in social media as part of the marketing toolkit is increasing, but little is known about the potential of these channels in higher education marketing strategies. Even less is known about the role of social media as influencers of future students in the choice of study and university. This article presents the results of a study aiming to identify the role and importance of the social media on the choice of future students for a study and university in comparison with the traditional university marketing channels in the Netherlands. Next to this the study identifies and describes three market segments among future students based on their use of the social media.

Keywords: higher education marketing; social media; Web 2.0; student recruitment; market segmentation; customer behavior

INTRODUCTION

Social media, a term describing a wide range of a new generation internet applications, has been the issue of intense debate and commercial interest. Central themes in this debate are the effects of the social media on human behavior (Barker, 2009; Kolbitsch & Maurer, 2006), their aptitude as educational environments (Augustsson, 2010; Kabilan, Ahmad, & Abidin, 2010), and their potential as marketing instruments (Constantinides & Fountain, 2008; Ghauri, Lutz, & Tesfom, 2003; Kim, Jeong, & Lee, 2010; Mangold & Faulds, 2009; Spaulding, 2010). Press articles, research papers and special journal issues around the subject are increasing, yet little attention has so far been paid to the areas of behavioral analysis and classification of the social media users. While the social media movement is a relatively recent phenomenon the rate of adoption by both the public and businesses is staggering.

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According to a recent Pew Research Center report (Zickuhr, 2010) 83% of Americans between 18 and 33 years old are already users of Social Networking Sites (SNS). A study done by Statistics Netherlands (2011) showed that 91% of Dutch youths between 16 and 25 years old were active on SNS in 2010. Forrester Research (Young et al., 2007) predicted a fast growth of global commercial spending on social media technologies (43% increase per year) reaching $ 4.6 billion in 2013. A study by JungleMinds (Koster & Van Gaalen, 2010) showed that 83% of Dutch businesses engaged in social media marketing and eMarketer (2010) estimated that 80% of the U.S. businesses with more than 100 employees will use social media tools for marketing purposes in 2011. This percentage will increase to 88% in 2012 in America, whilst in many countries in Europe and elsewhere the penetration of social media follows similar trends. It is obvious that the social media has attracted the interest of business strategists and is increasingly considered as part of the business marketing strategy.

Research in university recruitment has shown the potential of marketing when used by higher education institutions as a student recruitment tool (Gibbs, 2002; Helgesen, 2008; Hemsley-Brown & Oplatka, 2006). A key theme of research in this field is the marketing communication, where gaps between the information that potential students want and the information provided by universities in their traditional forms of communications have been identified (Hemsley-Brown & Oplatka, 2006). These gaps indicate room for improvement in the field of marketing communication for higher education. Engaging with social media as a higher education marketing tool is an attractive proposition, because of the positive business experience on the effects of social media marketing and the high adoption rate of the social media by the younger generation (Boyd, 2008). Improved communications, customer engagement and increasing brand loyalty have been identified as outcomes of this form of marketing. It is reasonable to assume that engagement of social media applications as part of university marketing could contribute to increased enrolment numbers and help prospective

students make better-informed decisions regarding their study choice and university selection. However, little is known about how future university students use the social media and what impact the social media have on the decision making process of future students regarding their choice for a study and university. In the Netherlands in particular, there are some initiatives by higher education institutions on social media. Nevertheless, there is little published research so far on this specific issue.

This study aims to provide information about the future university student market regarding their use of the social media. Such knowledge is important for the development or improvement of social media based marketing strategies complementing traditional recruitment strategies, in order to address the existing communication issues and improve student recruitment effectiveness. Three objectives will guide the study:

(1) describe the future student population in the Netherlands by identifying market segments based on their social media use,

(2) explore the influence of the social media on the choice of study and university in relation to traditional communication tools, and

(3) explore the relation between factors influencing the choice of university and social media use.

This exploratory study based on a national survey attempts to develop a research methodology that can be easily duplicated in other national markets.

BACKGROUND AND RESEARCH ISSUES

Social media and marketing

The social media is a relatively new but fast-growing category of online interactive applications. These applications are based on user-generated content rather than supplier-

generated allowing peer-to-peer communication and user-participation (Nambisan & Nambisan, 2008; Shankar & Malthouse, 2009). Constantinides and Fountain (2008) identified the *social media applications* (blogs, online communities, social networks, online bulletin boards and content aggregators) as one of the three components of Web 2.0 (O'Reilly, 2005) next to the *social effects* and the *enabling technologies*. Web 2.0 is widely seen as the current stage of the internet evolution. Social media has been widely adopted by the public and has become an important factor of influence in buying behavior. User-generated content and peer-to-peer communication have empowered the contemporary consumers and reduced their trust in push marketing and traditional forms of marketing communication (Eikelmann, Hajj, & Peterson, 2008; Grönroos, 1994; Karin & Eiferman, 2006; Peppers & Rogers, 1993; Thomas, 2007), a trend that begun emerging already during the 90's (Grönroos, 1994; Peppers & Rogers, 1993). Trust in experts as purchasing influencers is also diminishing and people increasingly base their purchasing choices on peer opinion. According to a study of Opinion Research Corporation (2009) 84% of Americans are influenced by online product reviews written by other customers in their shopping decisions.

Research provides evidence that an increasing number of organizations are already engaging with social media as part of their marketing strategy (Barnes, 2010; Barnes & Mattson, 2009). Organizations eager to integrate a social media program into their marketing strategy must realize that the social media is changing the decision-making process in the purchasing behavior of customers by adding a new factor that is beyond their control in the customers' decision-making process (Constantinides & Fountain, 2008). Marketers also become increasingly aware that the adoption of social media has increased market transparency and reduced their traditional market power and control over both the media and the communication process. They are forced to find new ways to reach potential customers

and communicate with them (Parise & Guinan, 2008). Yet social media marketing is not likely to render other forms of marketing obsolete and must be viewed for the time being as an extension of the online marketing. This form of marketing is successful only if it is based on solid foundations: innovative and high quality products, market oriented organizations, and well-designed websites (Constantinides, 2010).

Higher education and marketing

"Marketing had once been a term that could be spoken only in the most hushed tones in academia" (Edmiston-Strasser, 2009, p. 146) and ideas about the marketization of educational institutions have often raised serious concerns and objections. According to Anderson (2008), an important objection against marketing practices by higher education institutions was that it would undermine academic standards of quality and excellence. This opinion is shared by Molesworth, Nixon, and Scullion (2009, p. 278), who also warn "that parts of British higher education (BHE) are pedagogically constrained by the marketization that has accompanied its expansion." Despite the red flags raised about the impact of marketization on higher education, the fact of the matter is that government deregulation and increasing competition (Hemsley-Brown & Oplatka, 2006; Jongbloed, 2003; Maringe, 2006) are forcing higher education institutions to acknowledge the fact that they must market themselves to successfully compete in the national and global markets. However, higher education institutions should not just adapt their traditional approaches, but rather develop comprehensive marketing strategies, and an understanding of their customers' behavior and related theories (Vrontis, Thrassou, & Melanthiou, 2007). Hemsley-Brown and Oplatka (2006) concluded that "the literature on higher education marketing is incoherent, even inchoate, and lacks theoretical models that reflect upon the particular context of higher education and the nature of their services." This can be a barrier to higher education

marketing efforts since the traditional business marketing fundamentals do not fully address the needs of higher education institutions as they are mostly based on consumptive models (Gibbs, 2002). Gibbs (2002) suggests that higher education marketing has to be viewed from a model of *collaborative relationships*. Other researchers have argued that a relationship marketing approach best fits institutions of higher education (Helgesen, 2008; Klassen, 2002) particularly when regarded from an ethical point of view (Gibbs & Murphy, 2009). For the higher education institutions relationship marketing means building and maintaining a relationship of value exchanges between the institution and the three main customer groups: alumni, current students and future students. The quality of these relationships is positively related to the customers' long-term loyalty (McAlexander & Koenig, 2001).

Higher education marketing and social media

University websites can provide a basis for an engaging user environment (Weiss, 2008) and the social media is an ideal extension for relational marketing activities due to their collaborative and interactive nature. Literature on strategic issues, case studies or best practices specific to social media as a higher education marketing tools is limited. Nevertheless, U.S. universities are increasingly using the social media as part of their marketing programs (Barnes & Mattson, 2009). Hayes, Ruschman & Walker (2009) describe the use of a social networking system as a marketing tool by a university in their case study; they found a significant relationship between those who logged onto the social network and the likelihood of applying them to the university. Waters et al. (2009) found that non-profit organizations in general are adopting social networking site profiles, but are not using them to their full potential for relationship cultivation. In the Netherlands, like in many more European countries, there are a few pioneering efforts by higher education institutions to introduce social media as part of their student recruitment programs. University web sites can

display links to *Twitter* or *Facebook* pages or allow visitors to share information by bookmarking pages as favorites by 'liking it' or 're-tweeting it' (e.g. Universiteit Twente, n.d.-b). Several Dutch universities have their own *Twitter* feeds (e.g. Rechtenfaculteit Leiden, n.d.-b; TU Delft, n.d.-b), *Facebook* pages (e.g. University of Groningen, n.d.; Utrecht University, n.d.), and often *YouTube* Channels (e.g. Rechtenfaculteit Leiden, n.d.-a; TU Delft, n.d.-a). There are also some examples of blogs (e.g.Universiteit van Amsterdam, n.d.) but in general blogging is not part of the social media mix of the majority of Dutch universities. In many of the above examples these applications are not used as recruitment tools, but rather as educational tools that are simply meant to improve internal communication. In some cases social media applications used have a clear commercial purpose. Tilburg University (2011) introduced an online forum aiming at recruiting international students for its bachelor programs, and a similar live chat forum was introduced by the University of Twente (n.d.-a) targeting potential students. The Saxion University of Applied Sciences launched a new platform for potential students, allowing them to receive study information from enrolling students in an interactive way (Saxion Hogeschool, 2011).

Social media based tactics are so far of experimental nature, usually fragmented and relatively recent. In general, comprehensive social media strategies cannot be found in the higher education marketing domain. However, looking at experiences from the business practices (Constantinides, 2010), one could argue that such strategies can provide higher university institutions with new communication possibilities allowing direct engagement with potential students. Such engagement can involve interaction with university recruiters or interactions with other students during the process of searching for a suitable study and university. Engaging potential students in the social media domain is in principle an inexpensive way for universities to attract and persuade potential students. Social networks or online communities created by schools as part of their online presence can bring together

potential student with students who already enrolled (i.e. 'University Ambassadors'), or with peers looking for similar information and help. Such engagements seem to be very effective ways of persuading the contemporary consumer. Recommendations of peers in blogs, social networks, forums, and other forms of social media are playing an increasingly important role in the decision making process, mainly among young persons. A recent study by Bazaarvoice (2012) indicates that 51% of the so-called 'Millennials' – people born from the late 80s to year 2000 – are very much influenced in their decisions by recommendations of strangers through user-generated content on social media. Little is known about the efficacy and effects of the social media as recruitment tools for higher education institutions. This study is a first effort to measure the actual influence of the social media as marketing channel on the choice of potential students.

Market segmentation and social media

Segmenting a market aims at describing the different types of homogeneous groups that are present in a heterogeneous market to help design and target marketing strategies (Wedel & Kamakura, 2000). Previous research in segmenting online markets was primarily focused on taxonomies of different types of online shoppers (Brengman, Geuens, Weijters, Smith, & Swinyard, 2005; Ganesh, Reynolds, Luckett, & Pomirleanu, 2010; Jayawardhena, Wright, & Dennis, 2007). The level of participation in social media has been found to be an effective basis for describing the different types of social media users (Li & Bernoff, 2008). Constantinides, Alarcón del Amo, and Lorenzo Romero (2010) segmented the users of social networking sites of the ages 16 to 74 in the Netherlands identifying four different segments on the basis of the participation level of social media and the use of these applications as information, interaction and socializations platforms. Segmenting the market of higher education institutions is important to understand the market and target the right customers

(Vrontis, et al., 2007). Segmentation studies of future students based on social media use are rare in the literature. However, given the increasing interest of higher education institutions in digital education (Harris & Rea, 2009; Parker, 2011) and higher education marketers in online marketing, the research in this field is expected to expand in the immediate future (e.g. Constantinides & Zinck Stagno, 2011).

METHODOLOGY

Research design

The study objectives are met by analyzing empirical data collected through a survey among future university students in the Netherlands. The first study objective aims at identifying market segments based on its social media use. The survey therefore included variables explaining the future students' use of social media. These variables will be used as input for a post-hoc descriptive segmentation method, which are "the most powerful algorithms for market segmentation" (Foedermayr & Diamantopoulos, 2008, p. 252). Additionally, to explore the relation between social media use and the choice of study and university (i.e. second study objective) and the factors influencing the choice of university (i.e. third study objective), variables explaining these two factors were also included in the survey. The rest of this section will further elaborate on the methodology used to gather and analyze the data.

Population and sample

Data were collected by means of a national survey among future university students in the Netherlands. The target population was defined as the students in the last two years of high school following the four curriculum profiles that allow access to higher education in the Dutch education system. Each curriculum profile includes a collection of courses centered on

a core subject. At the time of the survey, the available curriculum profiles were *science and technology*, *culture and society*, *science and health*, and *economics and society*. Preliminary outcomes from the sample show that at the moment of surveying 13% of the high school students in their penultimate year had chosen higher education study and 19% had chosen a higher education institution, while the majority of students make a decision in their last year of high school. This shows that the last-two-year high school student population is a valid target for higher education marketing efforts.

A sample was selected from an access panel with over 120,000 members (Intomart GfK Panel) using the probability method of stratified sampling. This panel is carefully composed to be representative of the Dutch population, and complies with the ISO-26362 international quality standard for access panels. The Netherlands' twelve provinces were defined as strata to avoid risk of oversampling the densely populated areas in the west. Ensuring the presence of cases from less populated strata will provide a more representative sample in the case that these strata differ from the densely populated ones. Within the strata simple random sampling was used. The target sample size was established at N=400, and the target strata sizes were proportionate to the high school student population distribution over the twelve provinces.

Survey and data collection

The survey questions were structured in three groups corresponding to the following three main areas.

(1) *Socio-demographics*, including multiple choice questions regarding gender, age and curriculum profiles. Information about the geographical location of the respondents was known in advance because of the sampling procedure.

(2) *Information sources used for the selection of higher education studies and university,* including questions using a 5-point Likert scale in order to rate the importance of the

following information sources: taster days and/or campus visits, university internet site, university brochures, family, friends and/or acquaintances, high school related sources, weblogs, online communities, forums, and social networks (adapted from Simões & Soares, 2010).

(3) *Decision factors influencing the selection of a higher education institution*, including questions using a 5-point Likert scale in order to rate the importance of the following decision factors in the selection of higher education institution: the institution's offer of social activities, the city's social and cultural facilities, variety of studies, good ratings, good word of mouth on the internet, good and affordable housing, the institution's offer of cultural activities, the institution's offer of sporting activities, proximity to parents, friend's choice for the institution, family's choice for the institution (adapted from Briggs, 2006; Simões & Soares, 2010; Soutar & Turner, 2002).

(4) *The use of the social media*, including multiple choice and open-ended questions, along with questions using a 5-point Likert scale. These questions were meant to identify the presence of social media site profiles, login frequency, and frequency of activities performed on the social media. The activities, based on the social computing activities according to Li and Bernoff (2008), were divided into three categories, i.e. social engagement, information seeking, and content contribution (Table 1).

The Likert scales were treated as interval scales because these were needed for the variables to serve as input for the cluster and factor analysis. This is common practice, although there is controversy on the issue of the scale being either interval or merely ordinal (Knapp, 1990).

[table 1 near here]

The data collection was carried out during spring 2010. Invitation emails were sent out to 3226 people and the 1200 respondents who accepted the invitation were able to access the

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online questionnaire. A sample size of N=403 was achieved, after excluding 563 cases that did not belong to the defined population, 126 cases that were incomplete or faulty and 108 cases because the strata target was met. The data analysis was carried out with the statistical program PASW (formerly SPSS) version 18.

Segmentation procedure

The data regarding the frequency of activities performed on the social media (see Table 1 for the activities included) were used as input to a factor analysis based segmentation, a technique commonly used to identify market segments (Hoek, Gendall, & Esslemont, 1996). The frequency of activities performed better describes the actual social media participation than measures of the number of social media site profiles or log-on frequency. Factor analysis allows finding underlying factors that explain most of the variability in a set of parameters for the purpose of identifying structure or obtaining data reduction. When used for identifying structure, the resulting factors can be used to define market segments (e.g. Minhas & Jacobs, 1996). Grouping together variables that have the same answer patterns produces a segmentation based on the participation in certain social media activities.

A cluster analysis was also used to investigate possible market segmentation, as it is one of the most used techniques in segmentation studies (Hoek, et al., 1996). The two-stage clustering approach proposed by Punj and Stewart (1983) was selected for the cluster analysis, as it uses both a hierarchical and a non-hierarchical clustering and therefore minimizes some of the disadvantages of each method. The cluster analysis yielded results similar to those of the factor analysis based segmentation. However, the latter generated segments with slightly more differentiation, and therefore the factor analysis segmentation is used for the further analysis.

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The following three steps were followed for the factor analysis segmentation based on the frequency of activities performed on the social media.

(1) Principal Factors Analysis was used for the factor extraction and Varimax as the rotation method (increasing the difference between high and low values of the factor loadings). Factor loadings below 0.4 were not considered because they correspond to less than 20% of the explained factor variance, a cut-off value that is often used by researchers (Raubenheimer, 2004). The rotated factor matrix of Table 2 presents the factor loadings. Three factors were identified and none of the variables loaded on more than one factor. The reliability of the factor loadings was assessed by a split sample analysis. No significant differences were found between the split sample and the original factor loadings. The input-variables were grouped as follows: entertaining and social activity variables in factor 1, information seeking variables in factor 2 and content contribution variables in factor 3. The variable *share pictures and videos* loaded together with the entertaining and social activities although it is a content contributing activity. This variable contains also entertaining and social elements and this explains the correlation. The variable *subscribe to RSS feeds* loaded together with content contribution although this is an information seeking activity. In fact, subscribing to RSS feeds is a more active form of information seeking (i.e. collecting and combining information). This could explain the correlation with the more active content contribution variables.

[table 2 near here]

(2) The factor analysis from step (1) revealed a structure in the data, but is in itself not a segmentation (Stewart, 1981). This step uses the found structure to segment the cases. Three factor-scores are calculated for each case. They consist of the mean of the scores of the factor variables and represent the case's average participation in the

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activities belonging to the respective factor. Cases with an average participation of 'more than sometimes' on the factor variables were assigned to the respective factor. Table 3 shows the percentage of cases assigned to each factor. Three main groups of cases were found: cases not assigned to any of the factors (29.5%), cases assigned to factor 1 but not to the other two factors (39.7%), and cases assigned to factors 1 and 2 but not to factor 3 (21.8%). The three main groups of cases form the three segments in the social media market that for the purpose of this study were named *basic users*, *social users* and *informational users*. Smaller groups present in the sample were discarded as segments but included in the three main segments in order to keep the segment size large enough to be useful. The segments found are characterized by participation in distinct social media activities.

[table 3 near here]

(3) Behavioral and demographic differences between the identified segments were analyzed. The significance of the differences was assessed using Pearson's chi-square test of independence, a test that is commonly used for this purpose (Slakter, 1965). The null hypothesis of the test (stating that a variable is independent of the segments) is rejected for test values with significance lower or equal to 0.05, corresponding to the usually accepted 95% confidence level. It should be noted that this test does not imply any direction of causality, but, as is the purpose for this study, indicate a relation between segment and variable.

RESULTS

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Segmentation of the Dutch student market

The typology of the three segments can be inferred from the levels of activities carried out regularly by the clusters as described below and illustrated in Figure 1.

(1) *Basic users:* This segment is composed of cases that are not assigned to any of the factors and represents 29.5% of the market. It is characterized by the low levels of social media use, limited to low levels of entertaining and social activities.

(2) *Social users:* This segment includes cases belonging to factor 1 but not to factor 2 and represents 40.7% of the total population. Entertaining and social activities are the main reasons of this segment to use social media; social users can be characterized as passive users. Interestingly, the majority of the segment is actively engaged in only two information exchanging activities namely the sharing of pictures and videos.

(3) *Informational users:* This segment includes users that are engaged in the type of activities described by factor 2 and represents 29.8% of the market. Informational users resemble the social users in terms of their entertaining and social activities, but unlike the social users they are much more engaged in information-seeking activities.

An interesting finding is that future university students make limited use of the social media when it comes to more active forms of use like sharing content of different forms or actively contributing content like product reviews and writing comments on blogs and forums.

[figure 1 near here]

The gender and curriculum profiles followed in the secondary education differ significantly between the segments as showed in Figure 2. Most males are basic users, while most of the females are social users. Furthermore, a larger proportion of females are informational users, characterizing the females as more "socially engaged" users than the males. Moreover, students following the *science and technology* curriculum profile are

mostly basic users, while students following the *culture and society* curriculum profile are mostly social users.

[figure 2 near here]

Figure 3 shows the social media applications where respondents maintain at least one profile. Considering the full sample the Dutch Social Networking Site (SNS) *Hyves* is the most popular among future students in the Netherlands (88.4%), followed by the video content community *YouTube* (60.1%) and the SNS *Facebook* (40.3%). Significant differences were found between the basic users and the other two segments. As expected, larger portions of the social users and informational users maintain multiple social media website profiles. Also, these two segments log in more frequently into their profile than the basic users. Almost all of the social users (95.2%) and a large majority of the informational users (89.2%) log in at least once per day, compared to about half of the basic users (49.5%). The informational users have the highest number of social networking profiles in all popular social media applications except one (*Hyves*). Interestingly, a rather small percentage of users from all three segments have a *Twitter* profile.

[figure 3 near here]

Social media as information and orientation sources for future study

The survey participants were asked to rate the impact of different information channels (both traditional and social ones) on their final choice of a university study and institution. Figure 4 shows the perceived impact expressed in percentages of the segment population per information channel and the ranking of the information channels in descending order according the responses of the sample as a whole. The three most useful information channels were traditional ones: taster days and campus visits, official university websites, and university brochures. The four social media application types mentioned in the survey as

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information channels – weblogs, communities, forums, and social networks – rate lower than the traditional channels. Although informational users, likewise the other user types, rank the social media lower than the traditional information channels, they find them more attractive as study information sources than the other segments do. These findings require further investigation since future students are heavy users of social media applications (Figure 3). Possible explanations for these facts and implications for higher education marketing are discussed in the conclusions section.

[figure 4 near here]

Choice factors and social media use

The survey participants were asked to rate the importance of several factors on their choice of an institution for higher education. Figure 5 shows the perceived importance expressed in percentages of the segment population per choice factor and the ranking of the choice factors in descending order according to the responses of the sample as a whole. The three most important choice factors were: the institution's offer of social activities, the city's social and cultural facilities, and the presence of a great variety of studies. The friends' and family's choice for the institution ranked last. There were some significant differences between the segments rating of the factors. The institution's offer of social and cultural activities was valued most by informational users. The city's social and cultural facilities were more important on the choice of institution for both social and informational users, compared to the basic user segment. Furthermore, social users valued the factor reputation through online word of mouth and hearsay more than basic users, and informational users valued this factor more than social users. The implications of these findings for higher education marketing are discussed in the conclusions section.

[figure 5 near here]

DISCUSSION

This study aims to provide an insight into the use of social media as a social networking platform, information source and communication tool by future higher education students in the Netherlands. Next to this the study examines the impact of social media on the choice of study and higher education institution. This information can become the basis of a recruitment strategy, making the social media an integral part of the marketing program.

Social media marketing is a relatively new terrain increasingly attracting the attention of field marketers and researchers. Higher education institutions are already experimenting with social media marketing. However, the number of studies on social media marketing and their effectiveness are still limited, and very little is known about the suitability of the social media as tools for higher education marketing. Despite efforts of higher education institutions in the Netherlands to engage the social media as part of their recruitment activities, in most cases it is not possible to talk about comprehensive social media marketing strategies. In most cases the efforts are exploratory and so far no research or evaluations of these activities has been published. This study aims at helping university marketers to understand the market structure and the future students' behavior as the basis for developing effective social media marketing strategies for higher education institutions.

The first study objective was to identify market segments of future university students in the Netherlands depending on their participation in social media related activities. The market segmentation was carried out using two different methods: a cluster analysis and a factor analysis. The segmentation based on the factor analysis proved to be more useful than the one based on cluster analysis, because the former resulted in more differentiated segments. The study identified three segments in the Dutch market of future university students, with distinct profiles and clear usage patterns of social media. These segments are:

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(1) *Basic users* (29.5%) have low level of participation in online informational and social activities.

(2) *Social users* (40.7%) have high level of participation in social activities and intermediate level in informational activities.

(3) *Informational users* (29.8%) have high levels of participation in social and informational activities.

The second study objective was to examine what impact the social media as communication and marketing channels have on the choice of university study and institution. The data analysis shows that future students rank the social media last in a list of information channels that influence their choice of a study and university. This finding is in contrast with what one would expect considering the high popularity of social media among young people: 95.1% of the future students maintain a profile on a social media website and 77.5% of them log in at least once per day into their profile. While this discrepancy requires a more thorough investigation, there are a number of possible explanations that can form the basis of a number of hypotheses for future research. One possible explanation for the low importance of social media as a source of influence for future students could be the lack of relevant content. This is due to the low engagement of such tools by universities as public relation and direct marketing tools. Most internet users expect to see links with corporate blogs, discussion forums or social networking applications like Facebook, Twitter, YouTube, Delicious, Flickr, Digg on the web pages they visit. A large majority of universities do not provide online visitors with such options on their home pages and some universities are limiting their attention on social networks like Facebook and Twitter. Lack of exciting and innovative applications, but also lack of other forms of social media like online communities, blogs, forums, and bulletin boards make it difficult to connect with future students. Creating attractive social media applications and connecting with potential students is therefore a

major challenge for university marketers. This requires the allocation of resources, a different approach to marketing (from one-to-many to one-to-one) but also a new organizational structure of the marketing departments and consistent social media-focused policies: monitoring the social media domain, keeping these applications up-to-date and utilizing the customer input.

Finally, the third study objective was to explore the dependence of factors influencing the choice of university on social media use. It is evident that several issues beyond the curriculum and the reputation of a university play important role in the choice of a higher education school. As Figure 5 indicates, the availability of cultural and social facilities also influences the pupils' choice. It also looks like there is a relation between these choice factors and social media use; the most advanced social media users among this target group are also significantly more interested in the aforementioned issues when making a decision for a university.

Regarding the general behavior of future students in social media environments, the study indicates that they are heavy users but the large majority uses social media applications for two of the three types of activities investigated, these being social interaction and information seeking. The low degree of content contribution (with the exception of sharing pictures and videos) in this population restricts the volume of user-generated information that could be useful for choosing a study. The lack of suitable higher education social media platforms, as mentioned earlier, can be a reason for the low availability of contributed content. This leads to the question as to how university marketers can energize present students and future students to contribute more content, preferably content that is also beneficial to their institution. The challenge for marketers and management is to find ways to stimulate influential individuals and brand advocates to provide comments and reviews in university-sponsored forums or online communities, and also publish in their own online social

networks, blogs, or other forms of social applications. This is a practice already implemented by many business marketers, with very positive results on brand awareness, acquisition, and customer loyalty. Considering the former, we can argue university marketers should approach the social media in a proactive way. The simple presence in the social media space is not enough for successful higher education marketing. Recruitment officers should actively and continuously engage the social media in their promotional mix, understand the online behavior of potential students, and accept that the customer is in fact a powerful party. Strong institutional commitment is very important and university marketers must be willing to allocate resources in this form of communication.

Marketing strategies utilizing the social media present a promising domain for higher education institutions, despite reservations as to the marketization of higher education. Higher education institutions are still in the infancy stage of this approach and have a lot to learn. Field experience suggests that the approach to social media channels as communication tools must be different from the traditional mass media. The focus of social media-based marketing should be on two-way communication, dialog and engagement rather than using the social media as broadcasting channels or advertising platforms. While cost reduction and increasing effectiveness can be serious arguments for higher education institutions to engage social media as part of their marketing strategies, such strategies require a redesign of marketing departments and changes in communication approaches: from one-way communication to listening to customer voice and customer engagement. While most higher education marketing departments are not familiar with this type of communication, university management must make a serious effort to restructure and acquire personnel with the right capabilities.

One less visible yet important problem with engaging social media strategies is the very essence of these channels, namely the user generated content. The deployment of such media

could expose serious internal problems to the public and disseminate complaints by incumbent students or even personnel to a large scale. Openness is a serious advantage, but also a disadvantage for organizations trying to keep things hidden from public scrutiny. The openness of the social media can therefore mean trouble for some higher education institutions and reputation management must become a part of the marketing agenda. Another weakness of engaging social media strategies can be the need for substantial organizational resources in order to monitor and utilize the online discussion created within such channels.

LIMITATIONS AND ISSUES FOR FURTHER RESEARCH

Regarding the limitations of the study we should emphasize that the sample was composed to present a reliable picture for the Netherlands, but one must be cautious when generalizing the results to countries with different cultures and different levels of information and communication technology maturity. Another limitation is that segmentation results depend on the method and the segmentation bases used. Additional research in this domain is very much welcome, including different segmentation methods and segmentation variables, but also longitudinal studies.

This study already provides some interesting insights into the online behavior of potential students and also provides the basis for developing further research propositions. An issue requiring further investigation is whether the social media play in fact a more important role as source of study information and advice than this survey indicates. A fact from the survey is that recommendations from family, friends and acquaintances play a major role in their choice of university and study (Figure 4). An interesting issue for further research is the role of social media and in particular of social networks in bringing future students in touch with these parties when searching for study information and advice. Considering the extend of use and importance of social networks for young people it is legitimate to assume that indeed

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some of the input from family, friends and acquaintances is provided through these channels. It is also known that social networks are excellent platforms for word of mouth and viral marketing. If this assumption is true then the real impact of social media on the choice of potential students might be much higher than the research outcomes shown in Figure 4.

Research regarding the use of social media for marketing purposes is still in its infancy. This media is a relatively new phenomenon, with a history of explosive growth in fast-changing environmental and technological contexts. It could be useful for higher education recruiting officers to closely monitor the behavioral developments of the student market regarding their social media use and the role the social media plays as an information source in their selection of a study and university. Lastly, it might be rewarding to attempt to segment future student markets using other segmentation criteria such as lifestyle, behavior, or perceived benefits, and contribute to the development of new higher education marketing models.

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Figures And Tables

Table 1. Social Media activities included in the survey [1]

Social engagement	Information seeking	Content contribution
Stay in touch with contacts	Search information for school	Share pictures and videos
View pictures and videos of contacts	Read product reviews before purchase	Review purchased products
Make appointments with contacts	Search information about study	Share opinions through forums
Search for new contacts	Search information about university	Share experiences through weblog
Entertaining activities	Subscribe to RSS feeds	Share information about sport or hobby
		Vote in polls

[1] Measured using a 5-point Likert scale: never – rarely – sometimes – often – always

Table 2. Rotated factor matrix

	factor 1	factor 2	factor 3
Stay in touch with contacts	0.871		
View pictures and videos	0.817		
Make appointments with contacts	0.805		
Share pictures and videos	0.726		
Entertainment	0.613		
Search for new contacts	0.501		
Search information about study		0.882	
Search information about university		0.849	
Search information for school		0.790	
Read product reviews before purchase		0.500	
Share opinions through forums			0.652
Review purchased products			0.652
Share experiences through weblog			0.613
Subscribe to RSS feeds			0.577
Vote in polls			0.544
Share information about sport or hobby			0.533

Table 3. Percentage of cases assigned to the three factors

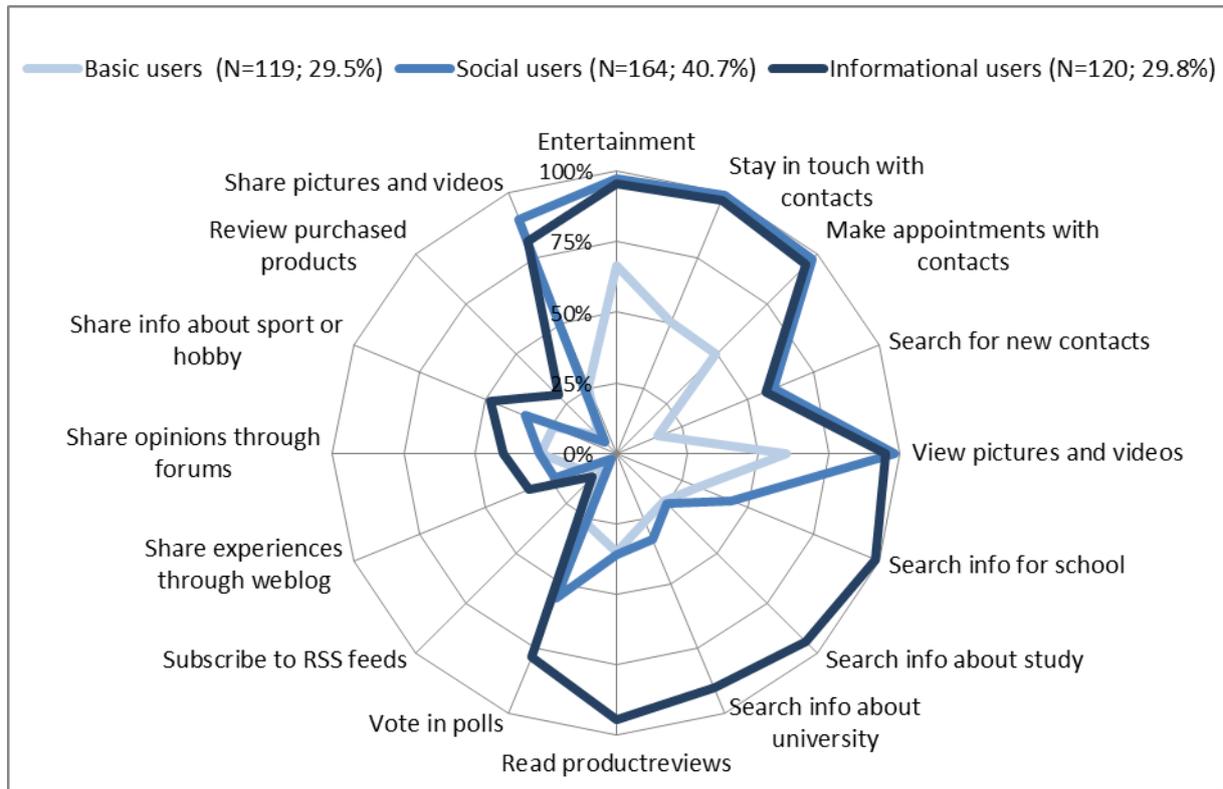|		Entertaining & social variables (factor1)			
		NO		YES	
		Information seeking variables (factor2)		Information seeking variables (factor2)	
		NO	YES	NO	YES
Content contributing variables (factor3)	NO	**29.5%** [1]	5.2% [3]	**39.7%** [2]	**21.8%** [3]
	YES	0.0%	0.0%	1.0% [2]	2.8% [3]

[1] Forms the segment *Basic users*

Figure 1. Percentage of segment performing certain activities regularly on the Social Media (N=403)
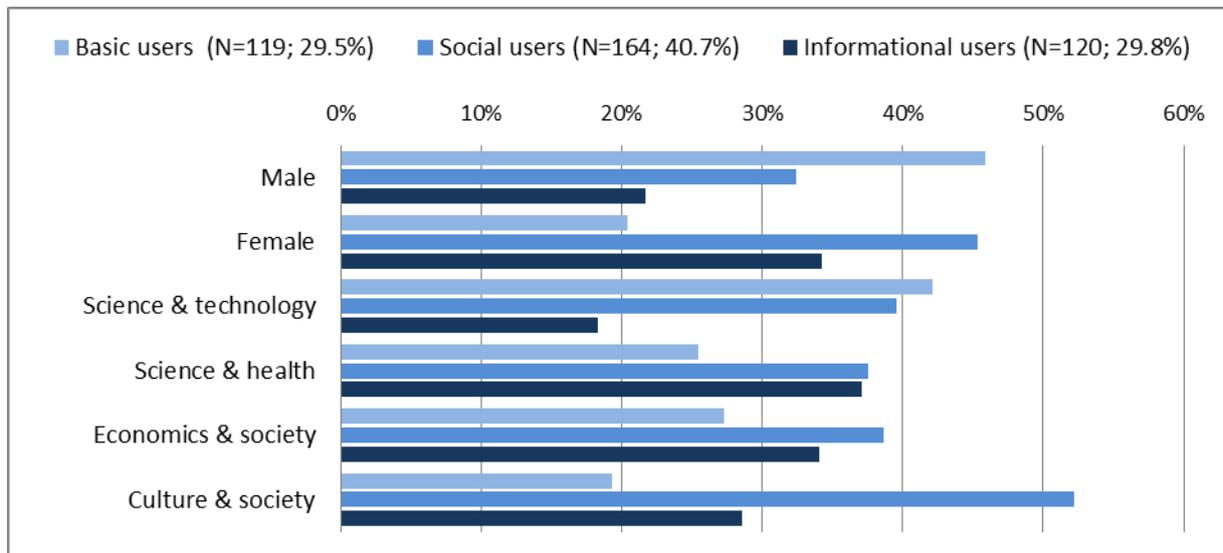

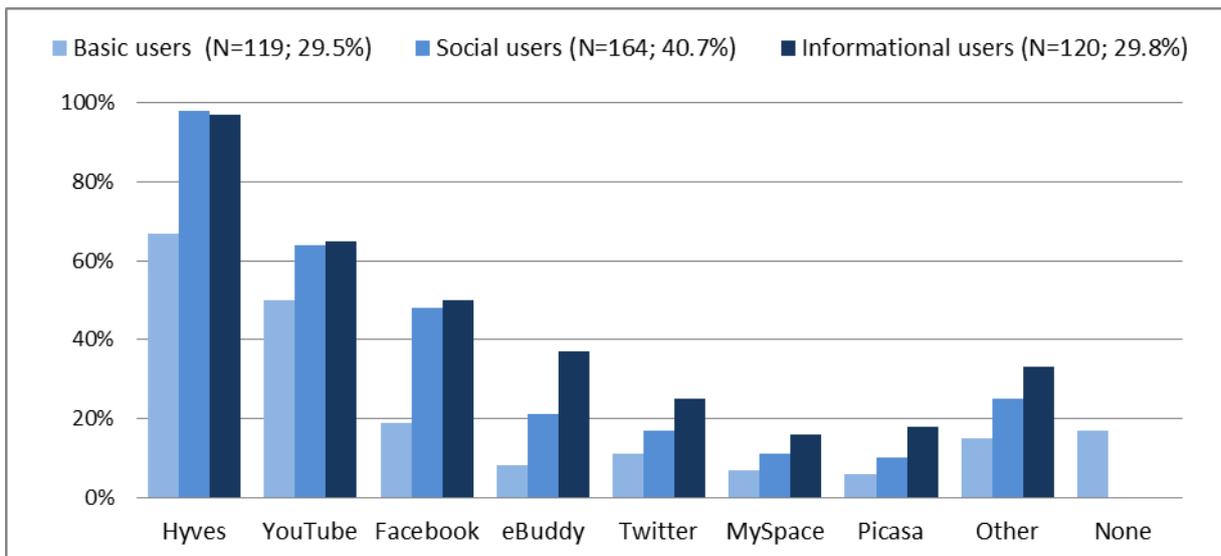*Figure 2. Gender and curriculum profile composition of the segments (N=403)*

Figure 3. Percentage of segments maintaining a profile on a given Social Media website (N=403)
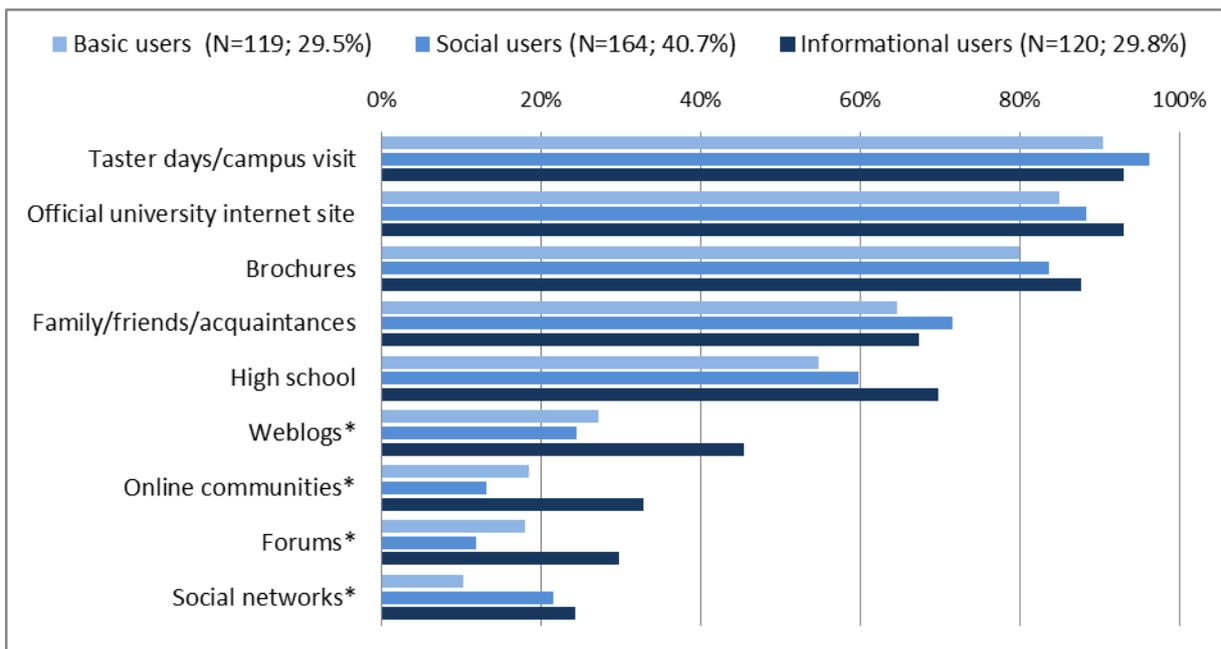

Figure 4. Percentage of segments that found given sources (very) useful in their choice for a study and university (N=403)

* distribution among segments differs significantly (p ≤ 0.05)
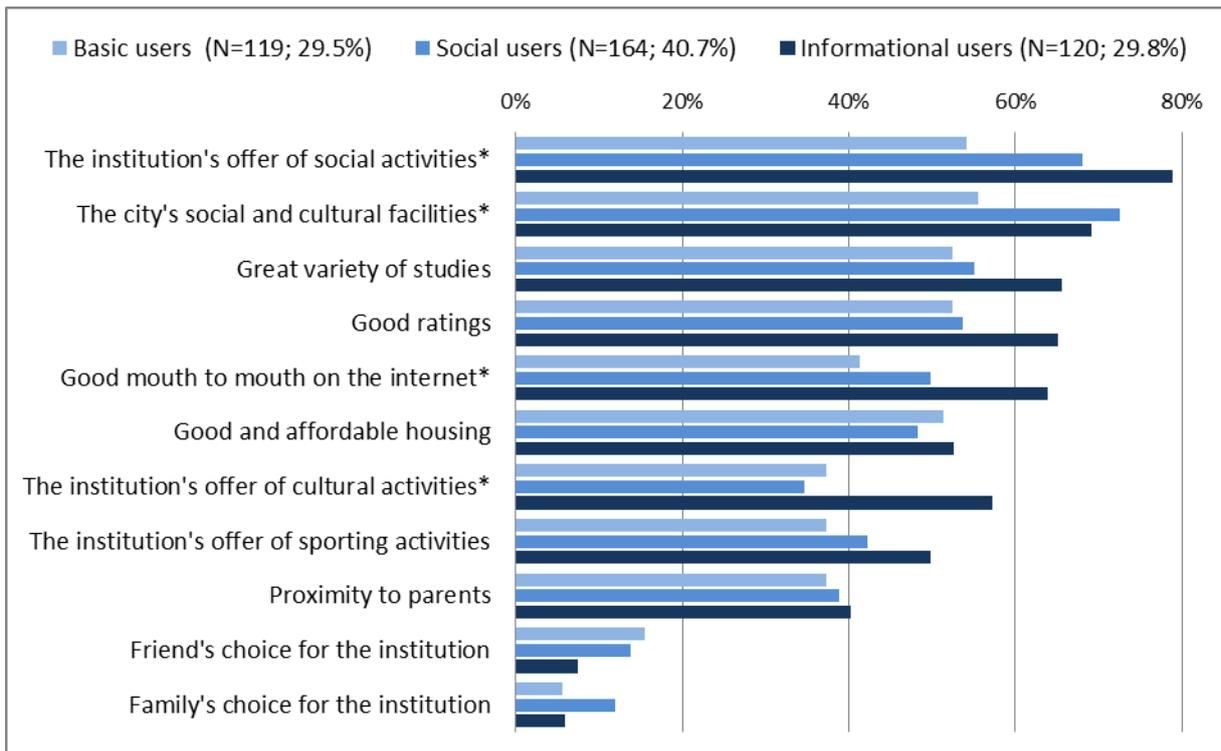
Figure 5. Percentage of segments that found given decision factors (very) important in their choice for a university (N=403)
* distribution among segments differs significantly (p ≤ 0.05)