

THE ROLE OF SOCIAL NETWORKS IN ENROLLMENT STRATEGY OF UNIVERSITIES IN VIETNAM

Nguyen Thanh Binh⁽¹⁾, **Nguyen Dang Khoa**⁽²⁾, **Pham Tran Ngoc Anh**⁽³⁾

¹*Academic Affairs Office, National Economics University*

²*Faculty of Statistics, National Economics University*

³*School of Advanced Education Programs, National Economics University*

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Abstract: It is increasingly vital for universities to compete more and more to attract students with better input quality. Enrollment consultation has become an important part of the enrollment strategy of higher education institutions. In Vietnam, robust development of information technology infrastructure, declining prices of services and equipment and increasingly widespread applications of social networking have resulted in the growing role social media in communication and enrollment strategy of universities. This study compares the change in social media usage, specifically, videos on the social network facebook, as an important communication and enrollment promotion tool of 29 public universities in Hanoi in 2019 and 2020. The findings show that there is a strong growth in both quantity and quality of enrollment promotion videos over the past 2 years. The study also shows that fluctuations in the number of videos, video length, and enrolment quotas had an impact on the number of views of promotion videos on social networks. There are some implications that university managers might consider: enhancing reputation by taking various approaches, describing the program structure, explaining relevant skills and knowledge that learners may have, describing student life examples. University should also be aware of the benefits and importance of alumni and current students as well as university staff. University marketing managers can plan and execute effective marketing strategies at various levels to reach potential students, to engage with them through social networks and finally turn these interactions into applications.

Keywords: Social network; facebook; student; enrollment; universities.

1. Student enrollment and the role of social network

According to statistics of the Ministry of Education and Training, by the end of the school year 2018 - 2019, the higher education system had 237 universities and academies (excluding universities and academies belonging to the security-defense sector). In 2013, the Government issued Decision No. 37 on adjusting the network planning for universities and colleges in the period of 2016 - 2020. Accordingly, by the end of 2020, there were 224 universities and 236 colleges in Vietnam. This shows that by 2020, Vietnam had not established and upgraded any universities. It will still exceed the target of Decision No. 37. During the conference in 2019, Deputy Director of Higher Education Department - Ministry of Education and Training, Pham Nhu Nghe mentioned that in Vietnam, the number of people at university age (from 18-29) attending university was very low, about 28.3%. That has created many challenges for universities in student recruitment. The change in the market as the supply side increases due to the massively

Email: nguyenthanhbinh2102@neu.edu.vn (N. T. Binh)

universities establishment, whereas the demand side decreases because students have more diversified options outside of attending university such as studying abroad, apprenticeship, employment... It makes high competition not only for candidates but for the universities themselves. Therefore, universities are more and more focusing on effective ways to attract students. Universities not only set goals in quantity, but also aim to recruit qualified and high-quality students or enroll international students to meet the requirements of beginning quality... To overcome challenges and set goals, universities need to focus on resources as well as research and launch traditional campaigns, deploy enrollment consultants in the right direction and achieve high efficiency in student recruitment.

The contents which are usually presented by the universities to potential candidates consist of: facilities, curriculum, enrolment process, student activities... Besides, information about career orientation is also focused because universities always want to attract students with a clear understanding of future career. Universities use a variety of methods to reach potential students (Demetris, Sam & S. M. Riad, 2018). There are some traditional channels that have been used so far (Kim, David, Yongqiang & Kim, 2009): printed materials (leaflets, brochures), sponsorship, direct visits / consultation at universities or high schools through events such as education fairs - career guidance, mass media (newspaper, radio, television), word-of-mouth marketing (friends, upperclassmen, parents, teachers at high school...), or third party's website, universities website and email... In recent years, a new method of communication which be used more and more by universities is social network, with the most popular one - Facebook.

In recent years, Vietnam's information technology and telecommunications infrastructure has been increasingly invested and developed strongly. Since the end of 2016, the Ministry of Information and Communications has allowed major telecommunications service providers to deploy 4G networks. By the end of 2019, there were reportedly about 15 million 4G subscribers. Since 2019, several providers have been approved to test out 5G services. The BTS stations have been built to serve the developed systems of the suppliers to better meet the needs of consumers. The saturation of the market has also led to a sharp drop in telecommunications service prices due to the fact that operators offer competitive prices to dominate the market. Consumers are easily accessing new, higher quality telecommunications services at lower costs. Consumers also have easy access to new mobile devices at cheaper prices as manufacturers continually release new, technologically modern devices in various product segments. According to the Vietnam Digital 2020 report, of 96.9 million Vietnamese people, there were 145.8 million mobile subscribers, 68.17 million internet users and 65 million social media users.

Together with infrastructure, devices thrive with decreasing costs, another important factor driving consumers to use the internet more is the strong development of mobile applications (apps). With mobile devices, consumers can now deploy a variety of tasks through applications developed for diverse needs: health monitoring, personal financial management, cloud storage, word processing, online shopping, news tracking,

and especially connecting with other individuals and organizations through social networks (SNSs - social networking sites). The Vietnam Digital 2020 report pointed out: The average time per day that internet users aged 16 - 64 use the internet is 6 hours 30 minutes, using social networks is 2 hours 22 minutes. The five most visited websites up to January 2020, according to Alexa's statistics, are Google.com, Youtube.com, Facebook.com, Google.com.vn and Vnexpress.net.

The ability to connect users of social network Facebook is not limited by geographical barriers. Multimedia interaction is gradually becoming an important media channel used by organizations (Costas, Ioanis, Oliver & Dragana, 2017). Vietnamese universities are also not out of this trend. More and more universities are using Facebook as an important channel in the process of media and enrolment consultation. Students can approach limitless information which was inaccessible before (Phoebe, Daisy & Peggy, 2017). Media methods used by universities on Facebook are posting with pictures and links to their official websites, events, videos, livestreams to introduce information related to school activities.

2. Methodology

In this study, with the aim of clarifying the role of social networks, namely facebook, in student recruitment of universities in Vietnam, the authors conducted statistics of the number of enrollment consultation videos, the total length of videos and the number of video views collected from facebook social networking sites (fanpages) of 29 public universities in Hanoi in 2019 and 2020. Several control variables are included in the model: Enrolment quota (2019 and 2020), the average of the lowest scores to enter university in 3 recent years and the years of operation of the universities. The statistical method is deployed as follows: The authors searched and synthesized pages of public universities in Hanoi, the total number of listed universities is 33. Because most universities have not registered their official facebook page yet, in the process of searching, there are many pages with quite similar names that publish information about the same school. The authors agree on the criteria for selecting pages with more followers and the latest updated articles. The posted videos also show many different contents: general introduction about the school, news of school activities ... The authors agree to count only videos with content directly related to recruitment such as: introduction to the university, curriculum, videos / livestream on enrolment information. Videos with other content are not the subject of this study. Statistical criteria for 2 years include number of videos posted, total views of videos and total duration (in minutes). Total duration of the videos can be seen as a measure of university investment in videos because long video requires a large investment of scripting, content, engineering, and organizational costs, manufacturing. There are 04 universities (Trade Union University, Vietnam - Hungary Industrial University, Hanoi Procuratorate University, University of Labour and Social Affairs) that did not have videos related to recruitment information in both 2019 and 2020, so the authors did not include them in the following statistics.

3. Result and discussion

To analyze the social media efficiency, the authors use array data regression models to examine whether the change in video total number of views is affected by factors: quantity of videos, total video duration. The regression model takes the form:

$$Y_{it} = \beta_0 + \beta_1 \text{Quan}_{it} + \beta_2 \text{Time}_{it} + \lambda_i + \epsilon_{it} \quad (1)$$

with:

Y_{it} : number of views of university i in year t

Quan_{it} : quantity of videos of university i in year t

Time_{it} : Total duration of videos of university i in year t

λ_i : the characteristics of each university (not observable, not changing over time)

ϵ_{it} : random error term

The problem with model (1) is that the component λ_i is the unobserved component. It is easy to see that the unobserved fixed-time-constant characteristics of universities can account for the differences in communication ability and communication efficiency. These characteristics that do not change over time such as distance, reputation... can affect the communication effectiveness of each university. For example, in the case of universities with established reputation, the number of contestants and network users interested in and watching video may be higher than universities with lower reputation. If such effects are not controlled, it may lead to bias estimates of the β_k coefficient. This leads to inaccurate inferences about the impact of the media performance on university contestant attraction. The important problem with estimation (1) is to control λ_i because if the null hypothesis $\text{Cov}(X_i, \lambda_i)$ is rejected then the estimate (1) is biased. To solve these problems, the authors use the Difference in Difference (DID) method to remove component λ_i . The advantage of this method is that it is possible to eliminate the time-varying effects of these observations. Applying DD to equation (1), the equation (2) is formed as follows:

$$\Delta Y_i = \beta_1 \Delta \text{Quan}_i + \beta_2 \Delta \text{Time}_i + \Delta \epsilon_i \quad (2)$$

Where the variables $[\Delta Y]_{it}$, $[\Delta \text{Quan}]_{it}$, $[\Delta \text{Time}]_{it}$ are the first order deviations of the original variables (they are created by taking the difference in value of a variable in 2020 compared to 2019). With equation (2), the λ_i component has been removed. Here, the authors use linear regression to analyze the impact of the number and duration of social media ads of universities on ad views. Some control variables such as enrolment quota (Cap), 3-year average minimum score for enrolment (Min_score), years of operation up to 2020 (Age) are added to the model to increase the accuracy of the estimate. After adding control variables to the model, we have model (3) as follows:

$$\Delta Y_i = \beta_1 \Delta \text{Quan}_i + \beta_2 \Delta \text{Time}_i + \beta_3 \Delta \text{Cap}_i + \beta_3 \Delta \text{Min_score}_i + \beta_3 \text{Age}_i + \Delta \epsilon_i \quad (3)$$

Estimation (3) allows to determine the impact of changes in the number and duration of advertising via social networks on the fluctuation of advertising views between the two years.

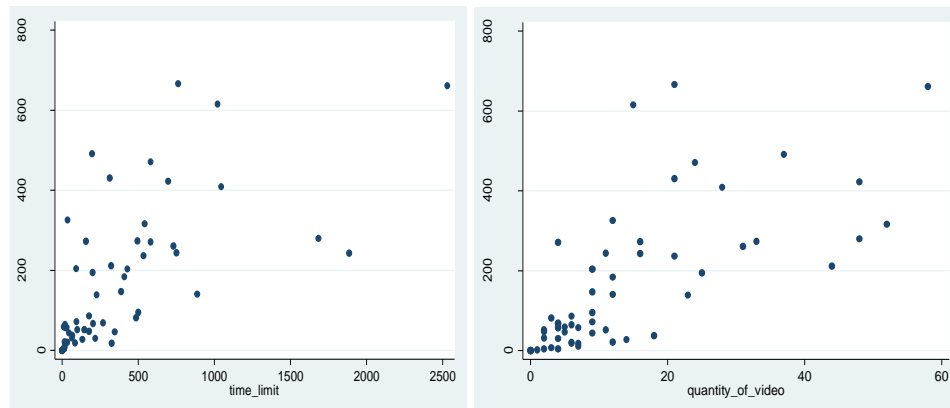
Table 1: Descriptive statistics of the variables in the model

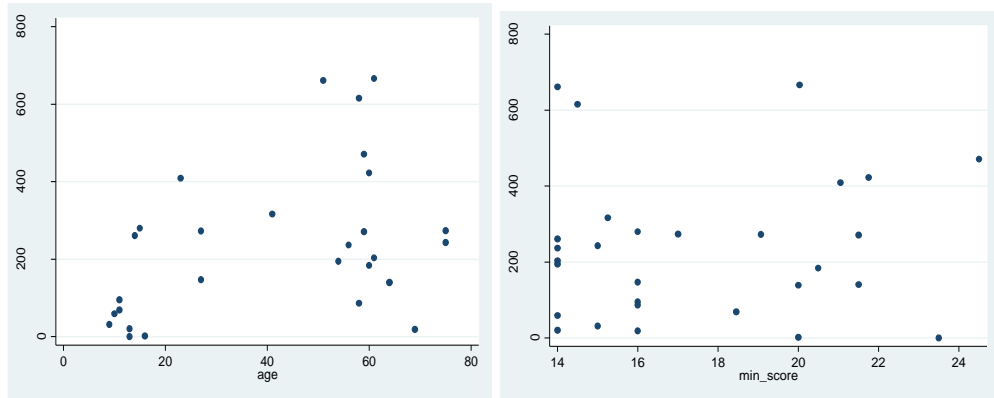
	Variable	Obs	Mean	Std. Dev	Min	Max
2019	Quan	29	9.206897	10.14671	0	44
	Time	29	144.569	174.6095	0	750.3
	Y	29	93.20345	129.342	0	491.1
	Cap	29	2777.379	1619.37	500	6900
2020	Quan	29	18.75862	16.2077	0	58
	Time	29	583.7828	595.1033	0	2530.1
	Y	29	233.8534	191.0731	0	665.8
	Cap	29	2919.759	1708.966	520	7000
	Age	29	41.86207	23.50794	9	75
2019 & 2020	Quan	58	13.98276	14.24164	0	58
	Time	58	364.1759	487.8704	0	2530.1
	Y	58	163.5284	176.5914	0	665.8
	Cap	58	2848.569	1651.665	500	7000
	Age	29	41.86207	23.50794	9	75
	Min_score	29	17.46897	3.288062	14	24.5

Table 2: Correlation coefficient matrix between variables

	Y	Quan	Time	Cap	Age	Min_score
Y	1					
Quan	0.5157	1				
Time	0.6348	0.6528	1			
Cap	0.6213	0.0796	0.1673	1		
Age	0.1707	-0.0972	-0.166	0.3811	1	
Min_score	0.1021	-0.1774	-0.0352	-0.1377	0.0093	1

Figure 1: Correlation graphs of each variable with the dependent variable





In 2020, most universities increased both the number and duration of videos compared to 2019. Specifically, in 29 universities, only 08 universities did not increase the number of videos (accounting for 27.6%). Out of these eight universities, only 03 universities decreased in duration, the rest increased in duration (Bach Khoa University did not increase the number of videos, but the total duration increased by 8.5 times). Twenty-one universities (72.4%) increase the number of videos. Notably, Hanoi University of Architecture has an increase from 0 videos in 2019 to 52 videos, a total length of 541,800 minutes in 2020; University of Economics - Industrial Technology increased from 0 videos in 2019 to 21 videos in year 2020, total duration 762,400 minutes.

Table 3: Regression model results

Y	Model 1	Model 2	Model 3	Model 4
d_Quantity	5.067** [-2.15]	4.221* [-1.76]	5.155** [-2.19]	2.284 [-0.86]
d_Time	0.117* [-2.03]	0.116* [-2.06]	0.124** [-2.14]	0.236** [-2.72]
d_Cap	0.124** [-2.29]	0.147** [-2.64]	0.122** [-2.23]	0.128** [-2.56]
Age		1.611 [-1.39]		2.366** [-2.15]
Min_score			7.929 [-1.00]	9.954 [-1.26]
Constant	23.22 [-0.71]	[-39.15 [-0.71]	-118.9 [-0.82]	-234.4 [-1.55]
N	29	29	29	23
R-Square	0.557	0.604	0.589	0.676
RMSE	134.79	132.36	134.78	117.48

(***, **, *: significance at 0.01, 0.05 and 0.1 level respectively)

In 2020, the University of Transport Technology leads in both quantity and duration of videos. Statistics also show the diversity in the way of implementing social media. Some universities increased in number of videos, but the total duration did not increase proportionally as others because mainly videos posted were short videos. Average length of a video in 2020 is 36.9 minutes while in 2019 it is 27 minutes. Programs lasting more than 30 minutes are usually live programs (livestream) introducing curriculums, enrolment procedure or career counseling... Shorter videos can be summaries of admission information, about a particular major.

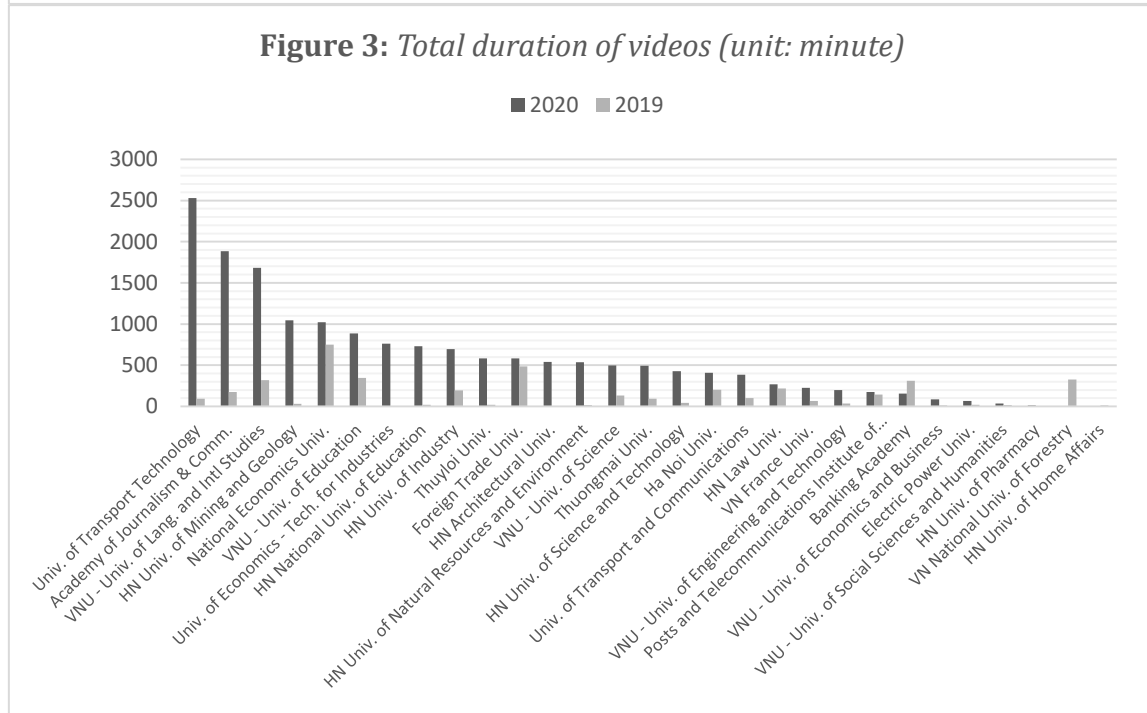
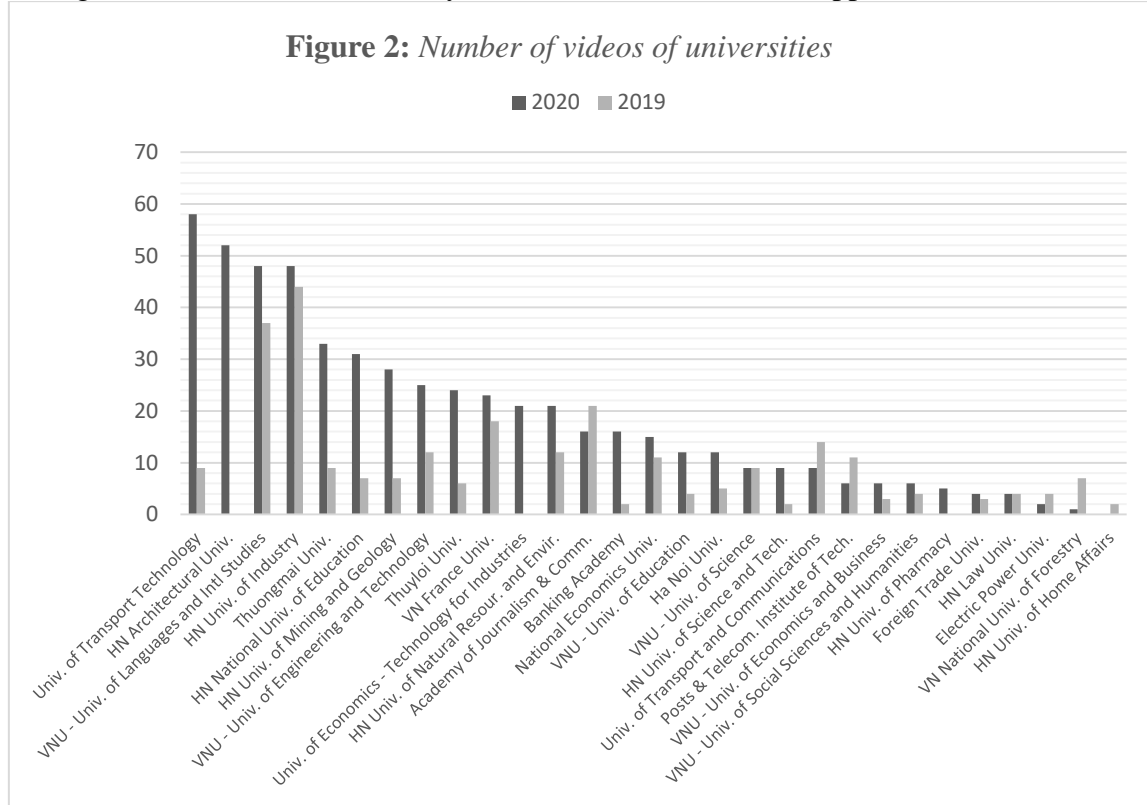
Regression results of models with different combinations of control variables all show that the number of videos and video duration have a positive impact on views. Specifically, when change in the number of videos in the following year, compared with the previous year, increases by 1 video, the average change of views increases by about 4 to 5 thousand views. Change in video duration increased by one minute, average view volatility increased by about 116 - 117 views. The admission quota of universities also affects the number of video views. Specifically, if the fluctuation of the admission quotas of the universities increased by 100, the fluctuation of the average video views increased by about 12 to 15 thousand views. Admission quota can be a variable representing the assurance of facilities and personnel for training of each school. It can be said that the universities with better capacity of securing facilities and personnel attracting more interest of candidates via social networks. The regression results also show that the university's years of operation and the lowest score for enrolment have no effect on video views.

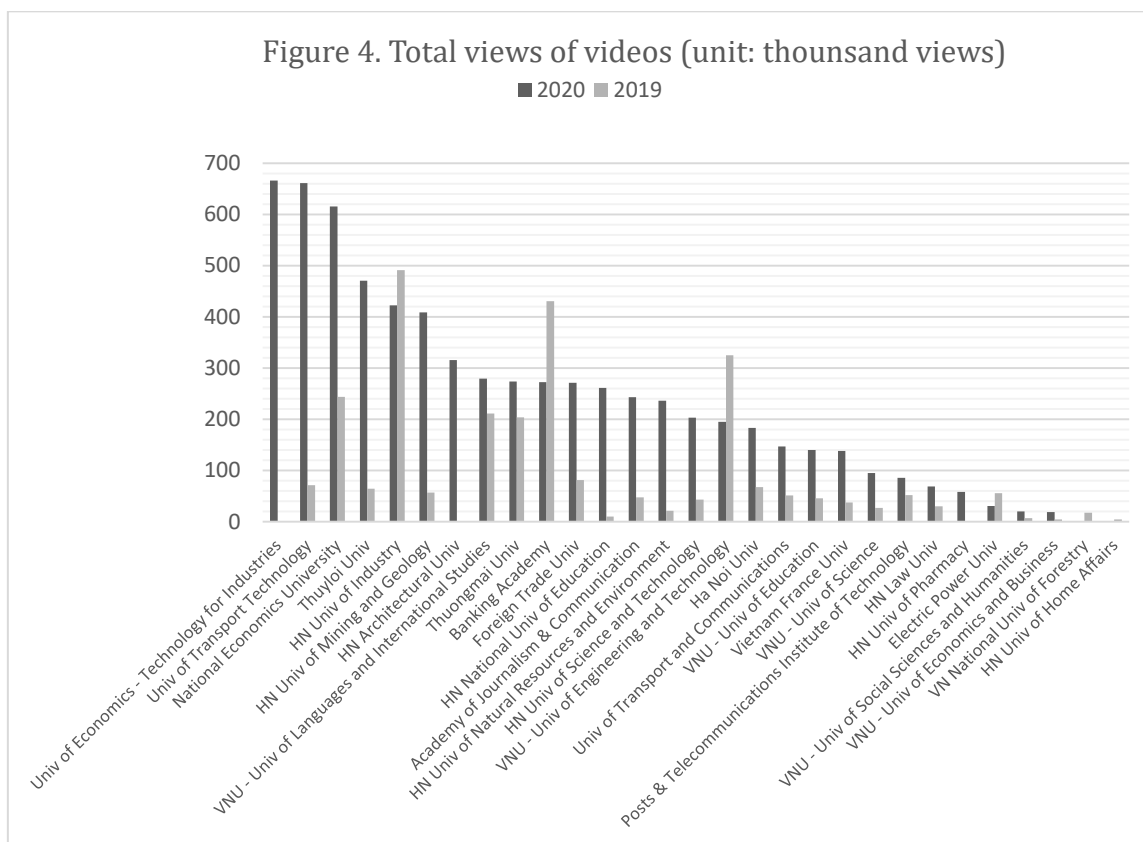
This study has some limitations that might be the subjects for further research. Due to the lack of time and resources, the sample is limited to 29 public universities in Ha Noi. This study is conducted during the time of the pandemic COVID-19. Social distancing may be one of the most important factors that contributed to the increase in using facebook as the main channel to approach potential students. The affect of social distancing on recruitment strategy of the universities is not mentioned in this study.

4. Conclusion

This study compares the change in social media usage, specifically, videos on the social network facebook, as an important communication and recruitment promotion tool of 29 public universities in Hanoi in 2019 and 2020. The research results show that there is a strong growth in both quantity and quality of recruitment promotion video over the past 2 years. The study also shows that fluctuations in the number of videos, video length, and enrolment quotas have an impact on the number of views of promotion videos on social networks. There are some implications that university managers might consider for their recruitment strategy. Universities can enhance reputation by taking an approach such as emphasizing the high proportion of students studying for a master's degree or highlighting the contributions to society of its scholars or sharing positive comments from business owners on the capacity of graduate students. Universities can persuade students to enroll in their programs by describing the program structure, explaining relevant skills and knowledge that learners may have, and describing student life examples. University should also be aware of the benefits and importance of alumni and current students sharing their learning experiences through social networks to promote facilities, student life and programs. University staff play an essential role in enhancing the prospective student's engagement and searching experience, influencing

the student’s final decision through the provision of answers and advices through social network interaction. University marketing managers can plan and execute effective marketing strategies at various levels to reach potential students, to engage with them through social networks and finally turn these interactions into applications.





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TÓM TẮT**VAI TRÒ CỦA MẠNG XÃ HỘI TRONG TUYỂN SINH
CỦA CÁC TRƯỜNG ĐẠI HỌC VIỆT NAM****Nguyễn Thanh Bình⁽¹⁾, Nguyễn Đăng Khoa⁽²⁾, Phạm Trần Ngọc Anh**¹ Phòng Quản lý đào tạo, Trường Đại học Kinh tế Quốc dân² Khoa Thống kê, Trường Đại học Kinh tế Quốc dân³ Viện Đào tạo Tiên tiến, Chất lượng cao và POHE, Trường Đại học Kinh tế Quốc dân

Ngày nhận bài 06/4/2021, ngày nhận đăng 23/6/2021

Các trường đại học ngày càng phải cạnh tranh nhiều hơn để thu hút được nhiều sinh viên với chất lượng đầu vào tốt hơn. Tư vấn tuyển sinh trở thành một công tác quan trọng trong chiến lược tuyển sinh của các trường. Tại Việt Nam, hạ tầng công nghệ thông tin phát triển nhanh, giá dịch vụ, giá thiết bị giảm và sự phát triển mạnh của ứng dụng mạng xã hội dẫn tới vai trò ngày càng lớn của mạng xã hội trong truyền thông, tư vấn tuyển sinh của các trường đại học. Nghiên cứu này so sánh sự thay đổi trong việc sử dụng mạng xã hội, cụ thể là các video trên mạng xã hội facebook, như là công cụ truyền thông, tư vấn tuyển sinh quan trọng của 29 trường đại học công lập trên địa bàn Hà Nội trong 2 năm 2019 và 2020. Kết quả nghiên cứu cho thấy có sự tăng trưởng mạnh cả về số lượng và chất lượng video tư vấn tuyển sinh qua 2 năm. Nghiên cứu cũng cho thấy biến động về số lượng video, thời lượng video, chỉ tiêu tuyển sinh có tác động lên số lượt xem video tư vấn tuyển sinh trên mạng xã hội của các trường đại học. Một số hàm ý mà các nhà quản lý trường đại học có thể xem xét: nâng cao danh tiếng của trường thông qua một số phương pháp, mô tả cấu trúc của chương trình đào tạo, giải thích rõ các kỹ năng và kiến thức có liên quan mà người học có thể tiếp nhận, mô tả các minh họa về đời sống sinh viên. Các trường đại học cũng cần nhận thức được tầm quan trọng của cựu sinh viên, sinh viên hiện tại cũng như cán bộ của trường. Các nhà quản trị marketing của các trường có thể lập kế hoạch và triển khai các chiến lược marketing hiệu quả ở nhiều cấp độ để tiếp cận các sinh viên tiềm năng, gắn kết với họ thông qua mạng xã hội và chuyển hóa các mối tương tác đó thành các đơn ứng tuyển.

Từ khóa: Mạng xã hội; facebook; sinh viên; tuyển sinh; đại học.