

Article

# Academic Online Platforms and the Hungarian “Netizen” Youth: Theoretical Framework and Empirical Research on General Usage Patterns

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**Abstract:** In parallel with their counterparts in neighboring countries, specifically Slovakia, the Czech Republic, and Poland, Hungarian university students also exhibit a high level of involvement in internet activities, particularly within the realm of online social networking. Our quantitative data analysis, in line with our primary hypothesis, reveals a substantial proportion of university students displaying additional awareness also of academic online platforms (hereinafter: AOPs) specifically. These platforms, as per our typology, encompass the following categories: (1) academic online social networking sites; (2) databases lacking social features; and (3) author profiles linked to publishers. Notably, student awareness is most prominently affiliated with academic social networking sites offering comprehensive access to full-paper views. The data gathered in the framework of qualitative research was based on a contingent of 100 university respondents’ (mostly female residents of the capital Budapest) answers to seven demographic and thematic questions. The corresponding findings further indicate that, with the exception of a notable segment actively engaging with these AOPs, the majority of students exhibit sporadic usage patterns concentrated during specific seasonal peaks. At the same time, author profiles linked to publishers currently remain beyond the immediate reach of the broader student population.

**Keywords:** youth; online academic networking; social media; sociology; university; tertiary studies



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## 1. Introduction

Over the past decade, social networking and, a fortiori, academic online platforms (referred to as AOPs) have undergone significant development, emerging as noteworthy social phenomena [1]. It is evident that there has been a growing proliferation of online electronic resources that store and showcase scholarly research. It is widely assumed that AOPs provide a unique virtual space where communication and collaboration unfold [2–5]. As such, digital technologies such as academic social networks, among other functions, have the power to impact and redefine the functions of tertiary institutions [6] (p. 298), [7] depending on the students’ attitudes.

Surveys targeting both young people and academic sites are becoming increasingly prevalent [8–10]. Consequently, it is intriguing to investigate the intersection of these research frames, i.e., specifically gauging the awareness and usage of academic online platforms among young university students in particular in Hungary, which has not yet attracted significant scholarly research. Therefore, it becomes highly probable that the usage of academic online platforms, such as (1) academic social networking sites, (2) databases without social features, and (3) author profiles linked to publishers and scientific databases (relevant typology introduced below), mirrors global trends [11,12] within Hungarian academic life.

Our hypothesis, validated through quantitative research within the target group (i.e., university students residing in the capital, Budapest), suggests that, unlike certain prevalence tendencies among academic staff, Hungarian tertiary students, despite being

heavy users of regular social media platforms, may not dominantly engage with these academic online sites yet, except for specific types. To assess the overall validity of these assumptions, we categorize AOPs into three types: academic social networking sites, databases without social features, and author profiles. Primarily, the first group appears to be the most directly relevant for students. The findings are crucially contextualized within broader Hungarian and regional internet usage patterns.

All in all, our three key points are the following: (1) Academic online platforms (with relevant typology outlined in Section 2.1), as well as social networking sites in general (outlined in Sections 3.3–3.5), according to (supra)national surveys [8–10], have become increasingly popular (attested by our own data described in Section 5) among Hungarian students.

(2) One segment of our hypothesis is that university students, as well as the Hungarian academic community in general (see Section 3.5), are well acquainted (cf. own data in Section 5) with these sites. Here, it has also seemed relevant to juxtapose findings with broader Hungarian and regional internet usage patterns.

(3) The other part of our hypothesis is that we encounter substantial nuances in terms of usage patterns, motivations, and frequency, as, tout court, tertiary students tend to prefer those AOP types that presumably predominantly support their seasonal compulsory university engagements (e.g., by allowing downloading material) rather than academic promotion.

In order to evaluate the overall validity of such assumptions, it is also relevant to discover the AOPs and differentiate between them into a three-category typology, with a brief overview of their metric peculiarities. Accordingly, the academic online platforms fall into three categories, namely academic social networking sites, various databases without social features, and different author profiles, of which prima facie the first group seems to be the most directly relevant for students.

## 2. Theoretical Background to and Typology of AOPs

### 2.1. Categorization of AOPs

These platforms can generally be categorized into the following groups in terms of their main functional horizons and user patterns:

Category 1: Academic social networking sites (henceforth ASNSs), (such as Academia.edu and ResearchGate) [3].

Category 2: Databases without social features (including Google Scholar and, in the Hungarian case, also the Magyar Tudományok Művek Tára, abbreviated as MTMT, or Catalogue of Hungarian Scientific Works in English).

Category 3: Author profiles linked to publishers and scientific databases (such as Scopus and Mendeley).

### 2.2. Functions According to AOP Categories in Terms of User Possibilities and Preliminary Expectations vis-à-vis Tertiary Students

Category 1: A variety of academic social networking (ASN) platforms, including ResearchGate and Academia.edu, have gained popularity over the past few decades. A common capability of many of these academic social networking websites is to provide an online repository in which users can upload and share research papers [12]. ResearchGate and Academia.edu not only allow the sharing of opinions and experiences but also allow the sharing of preprints (non-peer-reviewed publications) or preliminary research data. One advantage of this is that it is much faster than the traditional peer-reviewed publication process of a journal [13]. As confirmed by our own analysis, in the case of ResearchGate, searches are possible by research, journals, people, questions, jobs, institutes. All in all, what seems important in view of our hypothesis here is that ASNS searches may be directed toward not only people, videos, and courses, but also paper titles and papers with full text, offering a broad view. Such characteristics seem relevant when keeping in mind that

tertiary students seasonally or occasionally rely on downloadable accessible online for papers and preparations during exam periods.

Category 2: The MTMT system, based on a broad expert base, can be used for institutional accreditations, doctoral procedures, proposal preparation, evaluation, and statistical compilation. Additionally, through bibliographic parameters of certain publications, MTMT provides a transition to a full-text repository, the so-called repository. This publicly accessible, free-of-charge database also accommodates voluntarily published works [14].

Google Scholar follows a comprehensive and automated approach. It indexes seemingly scholarly documents that its web crawlers find and access on the internet, including those behind paywalls due to agreements with publishers. Google Scholar is also freely accessible, allowing users to access a comprehensive and multidisciplinary citation index for free [15]. It includes recent publications [16,17]. Among its advantages is that it provides free access to abstracts [16,17] and increasingly includes full-text content [16]. Again, these attributes appear significant when considering that tertiary students periodically depend on downloadable online resources for research papers and exam preparations during the academic semester.

Category 3: Mendeley is primarily a reference management program, but it also offers a social networking aspect for collaboration. Mendeley analyzes publications shared in networks and uses this analysis for recommendations [13]. Scopus is an interdisciplinary publication database managed by the global publisher Elsevier. It relies on the citation data from its own publications in various scientific disciplines, encompassing peer-reviewed journals, book series, and conference proceedings. Furthermore, it offers access to articles published in journals that are part of Elsevier's listings, which can be considered a limitation in terms of accessibility to papers [18].

### 3. The World of Social Networking

#### 3.1. General Social Media Use Habits of University Students in Globo

Social media is a popular way for university students to communicate with peers, join student groups and clubs, and network with professors and professionals in their field. University students tend to be active on social media and may check their accounts multiple times a day. They often use social media for both personal and academic purposes, such as staying connected with their peer group and relatives, as well as accessing educational resources and announcements. Typically, a variety of social media platforms can be used on the tertiary scene. Common ones include Facebook, Instagram, Snapchat, and TikTok. The popularity of specific platforms may vary based on the age group. In terms of the content shared, university students often use social media to share photos, videos, and updates about their daily lives, achievements, and experiences. This includes sharing academic achievements, travel experiences, and personal hobbies. Students may also use platforms like LinkedIn for professional networking and may join academic groups on Facebook or Twitter to discuss coursework, assignments, and research. They may also follow educational and research-focused accounts or pages. Social media platforms are frequently used to stay updated on current events, news, and trends. Students may follow news organizations and blogs for this purpose [11,19–22].

#### 3.2. General Characteristics of Hungarian Broader Population's Internet Usage

We are witnessing not only the widespread availability of the internet nowadays but also the way the World Wide Web has become an indispensable part of people's lives. This trend is clearly illustrated by the fact that the vast majority of adults who use the internet connect to the web in some form every day. The widespread adoption of mobile phones and the increased availability of mobile internet have significantly contributed to this phenomenon, making internet access possible for the masses. It is evident that a significantly larger number of people now use the internet through mobile phones (71%) than through laptops or PCs. Most people still use the internet for emailing, news and information searches, and maintaining connections. However, the expansion of the online

world makes the internet indispensable in various other areas. Today, every second internet user shops, banks, or handles other administrative matters online. The consumption of audio or video content is also increasingly shifting to the digital space. The prevalence of mobile phones is almost universal in the 16–75 age group, and in most cases, a mobile phone also means a smartphone. Consequently, the use of mobile internet is highly prevalent, and it no longer poses a problem for those under fifty. However, among those over sixty, far fewer people take advantage of the opportunities offered by smartphones [10].

### 3.3. Highlighted Areas of Hungarian Internet Usage vis-à-vis the Broader Population

Facebook's dominance remains clear today when we think of social media platforms. However, Instagram is gaining an ever-growing audience. TikTok is an emerging new star, primarily popular among the youth, but it has already established a visible (8%) user base within the entire adult population. Social media platforms or directly related messaging services hold a prominent place among online communication applications. This shows that communication, chatting, and messaging on social media are essential for people. Following this, more "traditional" functions, such as following posts and images of friends, are popular as well [10].

### 3.4. Hungarian and Regional Particularities in the Context of the Broader Online Engagement of Youth

#### 3.4.1. Statistics Concerning Hungarian Youth vis-à-vis Online Engagement According to Recent Data

To understand the evolving online user behaviors, it is valuable to recall the results of a previous study conducted in 2020 [8]. According to this study, young individuals aged 15–29 in Hungary can be categorized as daily internet users, with nearly 40% of them being online almost constantly. By 2020, almost all 15–29-year-olds in Hungary had adopted "smartphones" (97%). Around four-fifths (81%) of this age group are active on some form of social networking site (SNS), with Facebook being the most popular in 2020. This is evident in the fact that 84% of registered social networking site users access Facebook daily, surpassing the second-highest daily user rate of 50% for YouTube. On average, survey participants had 575 friends on their most frequently used social networking site. Young people primarily employ social networking sites for information and amusement. About 31% of young individuals (31%) visit online social networking sites daily to access information, nearly the same number using them for entertainment (29%). Additionally, 21% use these platforms daily to stay informed about local news. Other daily applications on online social networking sites are not as common, but a substantial segment utilizes them for event planning and shopping, albeit less frequently [8] (pp. 46–49).

#### 3.4.2. User Tendencies from a Regional (So-Called Visegrad Countries-Focused) Perspective

Considering that Hungarian university students constitute a relatively uniform group in comparison to their counterparts from Poland, the Czech Republic, and Slovakia (referred to as the Visegrad Countries) [9] (p. 75), it becomes intriguing to juxtapose our discoveries with those from prior surveys conducted within the Visegrad Countries, including Hungary. At the regional level, the prevailing social media platforms among college students are Facebook and Instagram. Roughly 30% of Facebook users fall within the 25–34 age group, while the majority of Instagram users are aged between 18 and 29. Corresponding to the general consensus, Visegrad Countries students view social networking sites (SNSs) as user-friendly tools facilitating swift updates, analyses, comments, and information sharing with friends and peers. The primary function of SNSs in the region is to foster and strengthen relationships through efficient online communication. Few students employ social media solely for information retrieval, arguing that SNSs were designed to bring people together in communities. Using SNSs for leisure is often linked with managing free time, such as during public transport journeys. Some students seek jokes, curiosities, humorous content, funny videos, etc., and frequently favor YouTube channels over traditional television. The

significance of Instagram has been on the rise in this context. This generation typically practices multitasking, engaging in various entertainment activities. Students commonly switch between several popular social media (SM) platforms. Self-presentation through SNSs also holds significance, though it varies individually. Some assert that they refrain from sharing their private lives on social media. The older the respondents, the less emphasis they place on self-presentation. Conversely, many post pictures on Instagram. A subset of students uses SNSs for job hunting and is aware that potential future employers scrutinize their SNS profiles. Students also recognize that social media can serve as tools for personal branding. Overall, it appears that university students, for the most part, are prudent and thoughtful about their social media image [9] (pp. 75, 83–84).

### 3.5. AOP User Tendencies among Academics

Recent studies [23] (pp. 18–19) within the Hungarian arena highlight some aspects of the relevance of these AOPs in terms of scientific visibility and engagement, which obviously presupposes awareness and usage. Accordingly, it is suggested that the evaluation of academics and researchers within universities arguably heavily relies on various bibliometric measures for rewards, career advancement, and accreditation. Consequently, these networks are supposed to serve as crucial platforms amplifying academic work, facilitating broader outreach, and contributing to the assessment and acknowledgment of academic accomplishments. A major lesson to be drawn here is the general awareness of the sites among academics.

In addition, Ref. [12] revealed explicit preference statistics concerning five academic social networking Sites (RG, Academia, GS, Mendeley, Microsoft Academic), which may also be taken a fortiori as an indication of general educational awareness of and, partially, also engagement in them (at least, among library and information science (hereinafter: LIS) professionals). Accordingly, the majority of respondents (89.9%) preferred Google Scholar. Academia.edu was preferred by 83%, and ResearchGate was preferred by 68.5%, with LIS professionals predominantly accounting for their usage. Less than 50% of respondents ranked both Mendeley and Microsoft Academic as their preferred academic social networking sites.

An earlier 2023 summer quantitative research study has confirmed that the senior leadership members of all the faculties of the three most competitive private, church-owned (ecclesiastical) Hungarian (two Budapest- and one countryside-based) universities, namely the Károli Gáspár Református Egyetem (Eng.: Károli Gáspár Reformed University, Budapest, Hungary), Esterházy Károly Katolikus Egyetem (Esterházy Károly Catholic University, Eger, Hungary) and Pázmány Péter Katolikus Egyetem (Pázmány Péter Catholic University, Budapest, Hungary) are well aware and active users of some or all the three academic platforms.

All in all, corresponding findings demonstrate that the metric peculiarities of these platforms generally offer various possibilities of visibility in numerous ways, including h-index, academic work, citations, and followers. Our findings also indicated that the Hungarian MTMT is probably the most adequate in the monitoring of scholars due to problems arising from duplications of certain academics whose Hungarian names are frequent. As already revealed in the introduction, the question arose whether data among the tertiary studies themselves reflect such tendencies or whether such tendencies cannot necessarily be attributed to our target group.

## 4. Materials and Methods

The Hungarian tertiary arena has been chosen both with a hindsight to the earlier described regional level (see Section 3.4) and a premise that the overall relevance of single-country case studies is very well-known in the academic sphere, especially in disciplines such as IPE and political science. In the context of the former, for instance, Prof. Emer. Odell (2001:161) concludes that „designed case studies can make several types of contribution to” collective research. In line therewith, a publication of ref. [12], also referred to in Section 2.2

of this paper, explicitly draws conclusions in the intersection of AOPs and a given tertiary institution even on the sub-national level, i.e., the Northern Eastern Region of India.

Apart from such a focus in mind, my other starting point is that employing online surveys may constitute a scientifically demanding choice as evidence suggests they perform relatively well, offering a legitimate alternative to other channels (e.g., in person, paper-based, with a cohort (i.e., sample size) of at least 100 respondents in the context of published research, for instance, in the field of medical studies [24,25]. However, regardless of a general usefulness postulated as such, again in order to cast a direct glance on social science disciplines themselves for analogies, I considered the findings of author John T. Roscoe (1975:163) [26], who suggested decades ago that a sample size greater than 30 and less than 500 is suitable for most behavioral studies.

We may draw the conclusion that relatively small-scale surveys arguably allow for an in-depth examination of a particular population subgroup or niche, offering detailed insights that larger surveys might overlook. This specificity can be crucial in understanding unique behaviors, preferences, or issues within that specific group. Small population surveys, in addition, offer a more accessible way to gather data from certain groups. In research, especially in fields like sociology, anthropology, or healthcare, studying small populations can lead to innovative discoveries or insights that can later be applied to larger contexts. Small surveys can supplement larger-scale studies, providing validation or additional information that enhances the overall understanding of a particular issue or topic.

In accordance with our hypothesis that (i) even if Hungarian university students have already started to engage in the use of AOPs, it is still far from the academics' peculiarities, and (ii) there might be some differences in terms of preferences and motivations, our study employed a qualitative method based on a sample of 100 students, also accessible as a Supplementary Materials of this paper, from the Budapesti Egyetemisták (University students of Budapest) FB group to explore the following:

- (1) What main demographic characteristics do the responding AOP user university students have (Questions 1–3)?
- (2) What is the overall awareness of the target groups vis-à-vis the AOPs (Question 4)?
- (3) What platform preferences can be detected, if any (Question 6)?
- (4) What kind of user patterns may be identified both in terms of motivations (Question 5) and frequency (Question 7)?

**Participants:** The study population consisted of higher education students actively engaged in online activities in globo without age constraints. Participants came from a priori undefined locations since the unique experience of participating in online engagement (i.e., online social networking site FB) obviously leaves no constraints as to physical geography.

Potential interviewee candidates were provided a survey asking for demographic and academic online platform usage-related information. The survey was conducted anonymously between late October and early November of 2023.

**Data analysis:** All the answers of the first hundred respondents were considered, bona fide, when identifying the final study sample regardless of university affiliation or demographic data such as age or gender.

Categories such as the typology of relevant platforms used by the target group or frequency captured main horizontal trends without a particular need for additional description or comments [6].

## 5. Results

Quantitative research, i.e., an anonymous survey conducted among the target group's members (among university students) based on three demographic (i.e., age, residence, gender) and four thematic questions conducted in several stages between 15 October and 8 November 2023 with 100 Hungarian participants, almost all of them users of SNSs, was employed in order to test the hypothesis described earlier.

Corresponding demographic (Q1, Q2, Q3) and thematic questions (Q4, Q5, Q6, Q7) have been formulated, originally in the Hungarian language, as follows:

- Question 1 (henceforth Q1) was about age (100 responses given).

Q1 Analysis: The data suggest that a slight majority of respondents are above age 23. In Hungary, one can be enrolled in tertiary education after the matriculation examination, which means the most common age at which people go to university in Hungary is at least 18 years. Thus, the MA level can be reached approximately at 23.

- Question 2 (henceforth Q2) was about residence (99 responses given).

Q2 Analysis: A slight majority of those responding came from the capital city, Budapest, which is not interesting per se, taking into consideration that the relevant Facebook group, which provided the frame for the survey, itself is supposed to include explicitly the university students of Budapest.

- Question 3 (henceforth Q3) was about gender (100 responses given).

Q3 Analysis: Based on our data, the respondents out of those who have taken the questionnaire, 54% are female.

- Question 4 (henceforth Q4) was as follows:

“Have you ever heard of academic online platforms, i.e., social networks, and databases (e.g., Academia.edu, ResearchGate, Google Scholar, Mendeley, Magyar Tudományos Művek Tára—henceforth MTMT—Eng.: Catalogue of Hungarian Scientific Works) etc.?” (100 responses given).

Q4 Analysis: Based on the data, 92% of the respondents have heard of scientific online platforms, social networks, and databases as listed in the question. This indicates that the vast majority are aware of these resources and are likely using them for accessing and sharing scientific information. The popularity and usage of these platforms are evident in the high positive response rate.

However, as 8% responded that they had not heard of these platforms, the analysis demonstrates that there is still a smaller group with no knowledge or experience of these tools.

- Question 5 (henceforth Q5) was as follows:

“Do you use academic online platforms for any of the following purposes?” (98 responses given).

Q5 Analysis: According to the responses, the data can be broken down as follows:

Of the respondents, 63.3% use scientific online platforms to view or download manuscripts or other materials, but they do not have their own registration. Note that this is relevant predominantly in the context of Category 1 and 2 AOPs, in view of their capacities to provide full-text papers regardless of the place of publication. This respondent group in question values the content provided by these platforms at this point but has not taken the step to create a personal account or profile.

Of the respondents, 20.4% use these platforms for scholarly networking or other purposes in the context of academic engagements. They actively rely on these platforms, possibly for collaboration, communication, or sharing their work with others in the scientific community.

Of the respondents, 7.1% do not currently use these platforms, but they are open to the idea and express an intention to use them actively over time by creating their own profiles. This group may represent individuals who are considering the benefits of such platforms for their academic or research needs in the long run.

Of the respondents, 9.2% do not use these platforms, stating they find them unnecessary for their university studies. This group may believe that their academic requirements are met without using any of these platforms or they currently do not see the immediate relevance of these platforms to their educational pursuits.

- Question 6 (henceforth Q6) was as follows:

“If you actively use them, which ones do you use? (Multiple choices allowed)”.

Seventy-seven responses were given (note the difference compared to what could be anticipated from Q5, still offering valuable information).

Q6 Analysis: The respondents actively use multiple types of scientific online platforms, predominantly Category I and Category II sites, as indicated by the following proportions:

Of the respondents, 93.5% actively use academic social platforms such as Academia.edu and ResearchGate. This shows a high level of interest in access to academic content juxtaposed with data of Q5 (above). Whether or not this also means that respondents engage in academic social networks where they can connect with other researchers and share their work, too, remains open for further investigations.

Of the respondents, 20.8% actively use author profiles tied to publishers or scientific databases, including platforms like Scopus and Mendeley. This suggests that only a minority is particularly interested in maintaining profiles associated with their publications and research output within these databases.

Of the respondents, 64.9% actively use databases without social features, such as Google Scholar and MTMT. These responses suggest that almost two-thirds of university students rely on these platforms primarily for access to academic content and research papers but may not be as focused on networking or social interactions using them.

- Question 7 (henceforth Q7) was as follows:

“If you use these platforms, how often do you do so?”

Q7 Analysis: According to our data, respondents’ engagement with these platforms varies in terms of the time spent and frequency:

A confident majority, 59.8%, use these platforms seasonally, particularly during exam periods or when conducting research related to assignments. This group’s usage is more focused on academic needs during specific periods, such as exam preparation or project submissions.

Of the respondents, 15.5% use these platforms occasionally, implying that they access them when needed for specific tasks or interests, but not on a regular schedule (in the original Hungarian language, occasionally means “relatively long intervals; quite rarely”, which is a more expanded time horizon than exam periods, occurring on a bi-annual basis).

Of the respondents, 9.3% use these platforms on a weekly basis. This group has a consistent presence on these platforms, arguably for staying updated with academic content and connections. However, only 1% of respondents spend time on these platforms daily, indicating an extremely low level of daily engagement. These two latter groups are likely to be actively involved in academic networking and research on a regular basis.

It is also worthy of interest that according to our findings, 14.4% of respondents never use these platforms. This group does not engage with these platforms, suggesting that they rely on other sources for their academic work or do not find them necessary.

Our analysis demonstrates that respondents’ engagement with academic online platforms varies widely, from daily and weekly use to seasonal and occasional use, and even complete non-usage. The seasonal usage pattern, especially during exam periods or research-intensive periods, is common among the respondents, indicating that these platforms are seen as valuable tools for academic work during specific times of the year.

## 6. Discussion

One has to point out that research has not yet dealt with the intersection of youth and AOP usage as the bulk of current studies covers issues of youth’s online engagement in terms of internet and social media per se or the usage patterns and metric characteristics of AOPs. All in all, the findings from the analyses of different aspects related to the respondents’ interaction with academic online platforms and their demographics reveal several key points:

With regard to age distribution and education level (Q1), we found that a majority of respondents are above the age of 23, aligning with the typical age when individuals pursue higher education in Hungary. This suggests that most respondents are potentially at the MA level or beyond in their academic journey.

In respect of geographical distribution (Q2), a majority of respondents are from Budapest, which might not be surprising considering the survey's source in a Facebook group catering explicitly to university students in Budapest.

Relating to gender distribution (Q3), 54% of respondents identify as female, indicating a moderate skew in gender representation among those who participated in the questionnaire.

In terms of awareness and usage of academic online platforms (Q4), 92% of respondents are aware of and likely using scientific online platforms, highlighting their popularity and widespread use. However, 8% indicate no familiarity with these platforms, signaling a smaller subset with no knowledge or experience using these tools.

In the context of usage patterns and purposes of scientific online platforms (Q5), the breakdown of respondent usage reveals different categories. The majority (63.3%) use platforms to access content without creating personal profiles. A much smaller portion (20.4%) actively engage for scholarly networking or academic purposes. In addition, 7.1% intend to use these platforms actively in the future. However, 9.2% find these platforms unnecessary for their studies.

With reference to preferences for types of scientific online platforms (Q6), different platforms are utilized at varying rates. Academic social platforms (93.5%) like Academia.edu and ResearchGate are highly popular. Author profiles tied to databases (20.8%) have a smaller but notable user base. Databases without social features (64.9%) like Google Scholar are widely used for content access.

In connection with engagement levels with platforms (Q7), it has also been clarified that usage frequency varies widely, as a majority (59.8%) use platforms seasonally, especially during exam periods, and 15.5% use them occasionally, less frequently than seasonal usage. Only 1% engage with these platforms on a daily basis, while 9.3% use them weekly. In addition, 14.4% never use these platforms, relying on other sources for their academic work. In other words, as for usage patterns, seasonal usage during academic-intensive periods is prevalent, indicating that these platforms are considered valuable tools during specific times for academic purposes.

One of the objectives of this study aimed to evaluate the assumptions about the prevalence of AOP usage with the corresponding preferences among Hungarian students and compare findings with broader Hungarian and regional social media usage patterns. Accordingly, in Hungary, in the context of social media usage patterns, youth engagement reveals that young individuals primarily use social networking sites on a daily basis for accessing information, entertainment, and, to a lesser extent, event planning and shopping. The regional perspective, focusing on the Visegrad Countries, provided insights into social media usage patterns among college students. Facebook and Instagram are prevalent platforms, with students considering social networking sites (SNSs) as user-friendly tools for communication. Students commonly switch between multiple popular social media platforms.

The quantitative and qualitative analysis of the data gathered among the target group suggests, according to our hypothesis, that although an overwhelming majority of university students are fully aware of AOPs in general, this, arguably, correlates positively first and foremost with academic social network sites (Category 1) that offer full-paper views. Except for a significant proportion that is an active user of these AOPs, the bulk of students are characterized by sporadic usage which is anchored at seasonal peaks. Author profiles linked to publishers (Category 3) remain currently at the service of academics themselves.

## 7. Conclusions

Our paper discussed the emergence and categorization of academic online platforms (AOPs) generally and, in addition, in relation to Hungarian academic life, particularly among tertiary students, as well as the relevant usage tendencies and habits. A differentia specifica vis-à-vis literature is supposed to lay exactly here, as hardly any research article has ever been aimed at youth using AOPs.

Our hypothesis was that, despite being heavy users of regular social media platforms as attested by both Hungarian [8] and regional [9] studies, students may not necessarily use AOPs, except for certain types and within given time periods.

In the context of our theoretical framework, the AOPs were categorized into three groups: academic social networking sites (ASNSs), databases without social features, and author profiles linked to publishers and scientific databases. The functions and expectations associated with each category were explored, highlighting their relevance for tertiary students who often rely on downloadable online resources for research papers and exam preparations. With a view to this end, potential capabilities of social and technical (e.g., download) functions were highlighted.

Accordingly, tout court, Category 1 comprises academic social networking (ASN) sites, which serve as repositories for research papers and facilitate the sharing of preprints or preliminary research data. These platforms allow searches by research, journals, people, questions, jobs, and institutes, providing a comprehensive view for students relying on accessible online resources during exam preparations. Category 2 type AOPs offer a comprehensive and automated approach, indexing scholarly documents accessible for free and providing a multidisciplinary citation index, which is beneficial for students relying on downloadable online resources. Category 3 features primarily reference management programs with a social networking aspect for collaboration and publication analysis. Some others offer access to articles but may have limitations in terms of accessibility to papers due to their association with publishers' listings.

The data gained from the quantitative survey suggest that although tertiary students are almost completely aware of AOPs, they are much less engaged in registered use when compared to academics. However, the former do in fact use these platforms, especially seasonally in exam periods. Such findings can also be juxtaposed both with regional statistics concerning university students par excellence and the broader Hungarian population. The main difference in both perspectives is the relatively narrower scale usage of AOPs in terms of platform diversity and frequency compared to other online activities and a fortiori the use of other online social networking sites [8–10]. Accordingly, the primary function of SNSs among the youth in the region can continue to be seen as fostering and strengthening relationships through efficient online communication. While some students use social media for information retrieval, many engage in leisure activities, seeking humor and entertainment.

Obviously, although the findings are supposed to overcome a hiatus within literature that predominantly focuses on aspects of AOP-metric specificities, the presence–visibility objectives of the educational sphere or preferences [2–5,12] or general student user patterns [11,19–22] and not university students themselves, they might not necessarily cover all otherwise important specificities. Such are the reasons for preference for types of AOPs that offer online access, long-run dynamics related to possible alternations of user attitude (finding AOPs unnecessary may change over time as university years progress), regional horizontal statistics (AOP usage among neighboring countries' students'), or vertical studies in the Hungarian sphere itself (e.g., with focus group interview), which await future research.

Yet, in summa, these obtained data collectively portray a landscape where scientific online platforms are widely recognized and utilized by respondents, albeit with varying degrees of engagement, purposes, and frequency of usage. Thus, the hypothesis has been verified, and as a consequence, the research objectives have been achieved while

encouraging further scrutiny directly aimed at the intersection of various tertiary segments (e.g., students themselves) and AOPs.

**Supplementary Materials:** The supporting information can be downloaded at [https://docs.google.com/forms/d/e/1FAIpQLSfarAMhZsAcmZc7IPXawr7\\_k90lu495b9D7uLb4LS-YaElXSw/viewform?usp=sharing](https://docs.google.com/forms/d/e/1FAIpQLSfarAMhZsAcmZc7IPXawr7_k90lu495b9D7uLb4LS-YaElXSw/viewform?usp=sharing), <https://docs.google.com/spreadsheets/d/1ZzBqyESTVK-Yn6KOLteXQPwj6nKAGko6RGRxLMOwnqk/edit?usp=sharing>, accessed on 1 March 2024.

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