


# Digital academic platforms in CEE: Case studies from Hungary and Slovakia - insights, typology, metrics, and data on presence-related findings for universities with religious affiliation

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**Present study evaluates the prevalence and academic usage of digital academic platforms (DAPs) exemplified by certain Universities across Hungary and Slovakia, assessing how these platforms are integrated into academic practices and highlighting certain variations in technological adoption within the CEE region. After the setting up of the relevant typology and by utilizing a dual-methodological approach, the regional e-visibility of the leadership of certain faculties is examined, while specific user motivations are also explored in a narrower sense through domestic questionnaire-based studies within Hungary. Firstly, by analyzing the use of certain academic social networking sites (ASNSs); author profiles linked to publishers; and databases without social functions at given universities and juxtaposing these with the experiences of Slovak institutions, the research highlights how these platforms are utilized to enhance research visibility and academic networking. Secondly, findings are meant to indicate that while digital academic platforms are widely valued for facilitating scholarly communication in Hungary, localized academic cultures and individual motivations significantly shape their application.**  
*online, academic social networking, university, Hungary, Slovakia, CEE*

## 1. Introduction, typology and a general theoretical overview

### 1.1. Current prevalence of DAPs

Digital Academic Platforms (DAPs) have emerged as pivotal elements in the dissemination and visibility of academic work, reshaping the landscape of scholarly communication globally. Over the past decade, these platforms have become central to academic discourse, significantly influencing scholarly outreach and the accessibility of research across different regions, including Central and Eastern Europe (CEE) (Marres 2017; Meishar-Tal and Pieterse 2017; Crawford 2011; Dringó-Horváth et al. 2020).

The significance of these platforms lies in their ability to enhance the visibility of scholarly work, thus facilitating higher citation rates and expanding the reach of academic discourse to a global audience (Jordan 2019; Adhikari et al. 2020). Particularly, in the CEE region, including countries like Hungary and Slovakia, the adoption of DAPs is noted for its dynamic integration into academic practices, reflecting broader global trends while presenting unique regional specificities (Rębisz and Lungova 2022).

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The chapter below provides a comprehensive review of the literature on the use of DAPs, with a dual focus on their general application and specific implications within Hungary and Slovakia. It outlines a typology of DAPs, distinguishing between social networking sites, publisher-linked profiles, and databases without social functions, and discusses the respective advantages and disadvantages of these categories.

While comparative analyses of the higher education sector in Central and Eastern Europe have recently expanded in a promising manner, institutions with a religious affiliation or influence have remained largely underrepresented in these studies. Consequently, the data collection efforts in Hungary and Slovakia hold particular relevance as they examine the unique characteristics of such latter institutions. Additionally, the targeted questioning of the focus group, supplementing the analyses of DAPs, offers further scientific added value by enabling a richer and more nuanced analysis of both quantitative and qualitative data.

## 1.2. Typology and comparative analysis of digital academic platforms

### 1.2.1. Academic social networking sites (ASNS)

Platforms such as Academia.edu<sup>1</sup> and ResearchGate<sup>2</sup> dominate this Type, serving as vital tools for academic networking and visibility. These platforms allow academics to share research outputs, track engagement metrics, and enhance their professional visibility (Carrigan2019). Academia.edu, for instance, is recognized for its role in academic branding and networking, offering features that support the dissemination of preliminary research findings and fostering scholarly interactions (Duffy and Pooley 2017; Lumivero 2023). ResearchGate adds a layer of metric analysis, providing tools like the RG Score which assesses the impact of researchers based on interaction and publication metrics within the platform (Jordan 2019).

### 1.2.2. Author profiles (APs) linked to publishers and scientific databases

This Type includes platforms like Scopus<sup>3</sup> and Mendeley<sup>4</sup>, which are instrumental in aggregating and indexing scholarly publications. Scopus is renowned for its robust citation tracking and analytical tools, aiding in the assessment of academic performance and journal impact (Adhikari et al. 2020; Martín-Martín 2021). Mendeley extends beyond citation management to facilitate academic collaboration and networking through its social features.

### 1.2.3. Databases (Ds) without social functions

Google Scholar<sup>5</sup> and the Hungarian Scientific Works Repository (MTMT)<sup>6</sup> represent databases primarily focused on the indexing and free access of scholarly works. Google Scholar offers a broad indexing of academic materials, allowing for extensive search capabilities and citation analysis (Fagan 2017; Martín-Martín et al. 2021). MTMT provides a centralized platform for the bibliographic registration of Hungarian scientific publications, supporting national academic evaluation processes. The Central Registry of Publication Activity (CREPČ) in Slovakia similarly catalogs academic publications, adhering to national bibliographic standards and serving as a crucial resource for the academic community in Slovakia.<sup>7</sup>

<sup>1</sup> <https://www.academia.edu/>

<sup>2</sup> <https://www.researchgate.net/>

<sup>3</sup> <https://www.elsevier.com/products/scopus>

<sup>4</sup> <https://www.mendeley.com/>

<sup>5</sup> <https://scholar.google.com/>

<sup>6</sup> <https://www.mtmt.hu/>

<sup>7</sup> <http://www.crep.sk/>

### 1.3. Regional focus: Hungary and Slovakia

Studies focusing on Hungary and Slovakia reveal a significant variation in the adoption and impact of DAPs within academic communities in these countries. Research indicates a lower engagement with DAPs among Hungarian and Polish academics compared to their regional (Slovak) counterparts, highlighting the need for increased awareness and integration of these platforms in the former countries (Rębisz and Lungova 2022). Another striking lesson to be drawn on the basis of the same study was the variability of productivity of papers indexed in the WoS (Type III) in the case of Slovakia vis-a-vis Hungary.

The nuanced use of these platforms across different academic disciplines and institutions in CEE underscores the diverse applications and impacts of digital technologies in academia. This regional focus not only enriches the understanding of digital academic practices but also contributes to identifying strategies for optimizing the use of DAPs in enhancing scholarly communication and visibility in specific academic and cultural contexts.

All in all, the exploration of DAPs in the context of Hungary and Slovakia provides valuable insights into the transformative role of technology in academia. By analyzing the typology and functionality of various digital platforms, this study highlights the critical importance of digital strategies in enhancing scholarly visibility and impact. As academia continues to evolve, the strategic use of DAPs will remain a key factor in shaping the future of scholarly communication and academic collaboration in the CEE region and beyond.

## 2. Empirical research, visibility of randomly selected top Hungarian ecclesiastical universities and "mixed"-type Slovak universities on academic digital platforms

### 2.1. Methodology

Given the entire theoretical spectrum and the knowledge of the usage characteristics in the current literature, a quantitative survey was conducted, inspired by the academic online platform representation of two ecclesiastical higher education institutions in Hungary that have recently received international recognition (Uni-Eszterházy 2023), namely, the Budapest-based Pázmány Péter Catholic University and the countryside-based Eszterházy Károly Catholic University. The survey was, as a second step, expanded to the public University János Selye<sup>8</sup>(UJS)<sup>9</sup> and the Catholic University of Ružomberok (ÚR)<sup>10</sup> from Slovakia, located in Révkomárom-Komárno and Rózsahegy-Ružomberok respectively, in order to perceive regional variations. The study examined the visibility of the senior leadership of each faculty and the corresponding data according to the academic online platforms.

Unlike in the case of US and Western universities, where the people in leadership of a department are educational managers and not (necessarily) academics, arguably, in the CEE region the leadership to varying extents, is also involved in scientific work and publish. This offers to discover the scientific output posted on digital scientific platforms also at the dean level. Deans are pivotal leaders within universities, often shaping the policies, academic standards, and the cultural tone of their faculties. Their visibility online can influence the perception of their respective departments and, by extension, the entire university. Studying this can provide insights into how leadership affects university branding and communication strategies.

The empirical research was conducted between 20-22 December 2023 and mid-April 2024 focusing on the representation at the faculty level, which is made

<sup>8</sup> Note that Selye János Egyetem – Univerzita J. Selyeho (hereinafter, occasionally: UJS) is although a private, but not an ecclesiastical university. The reason why it was included is its containment of a Reformed Theology Faculty (UJS-RTK).

<sup>9</sup> <https://www.ujs.sk/hu/?jji=1726242296409>

<sup>10</sup> <https://www.ku.sk/en/>



available anonymously, free from any intent for qualitative or quantitative comparisons. In accordance with the above, publicly accessible data on the relevant pages were grouped according to the seven examined pages in the three main Types of the platforms for this research.

## 2.2. Empirics of Hungary- and Slovakia-based universities

### 2.2.1. Methodology

After the manual selection of certain universities with religious backgrounds in line with recent recognitions (Uni-Eszterházy 2023; Universityguru 2023) in terms of forming the tertiary elite in the corresponding Type in Hungary and Slovakia, we decided to examine how and in what terms and methods do academic platforms enhance visibility of Hungarian and Slovak institutions. As out of the sites falling under the three Types differentiated in the typology described in the theoretical framework, only RG, MTMT<sup>11</sup> and CEPRČ provide the possibility to carry out searches by a given institute, we decided to run manual searches by the senior (dean-level) leadership of each faculty of the universities<sup>12</sup> in question (2 Hungarian ecclesiastical universities with 10 faculties, 5 each, and 2 Slovak universities with 7 faculties, JSU and ÚR, JSU with 4 and 3 faculties, respectively).

The "quantitative survey" in question was conducted by searches carried out on academic online platforms to find the information necessary information between December 2023 and April 2024. This corresponding, broader interval made it possible to expand the enquiries onto WoS, which was dealt with thoroughly by regionally focused literature (Rębisz and Lungova2022) allowing a contribution to Central Europe-related academic studies. At this point, it is important to note that remarkable time had passed before the inclusion of searches aimed specifically at WoS and CEPRČ, which both became relevant after the 2024 Q1 expansion of literature processed in the meantime (Rębisz and Lungova 2022). This latter feature gave opportunity of a horizontally (including Type III) and vertically (including SVK) oriented approach.

Findings in order to avoid any shadows of interinstitutional or -personal competition, are presented consistently anonymously throughout the text, with an emphasis on the metrics and methodological characteristics of each academic digital platforms.

It is also important to emphasize that corresponding manual data collection conducted at the dean-level does not equate to a comprehensive assessment of the academic performance of individual faculties. Furthermore, the data provided by online platforms should not be regarded as equivalent to manual searches conducted by senior-level managers within higher education institutions, as such manual evaluations often allow for more nuanced and context-specific insights that are not necessarily captured by automated systems.

### 2.2.2. Quantitative survey regarding the senior (dean-level) leadership of the Eger (countryside)-based Eszterházy Károly Catholic University (EKE)

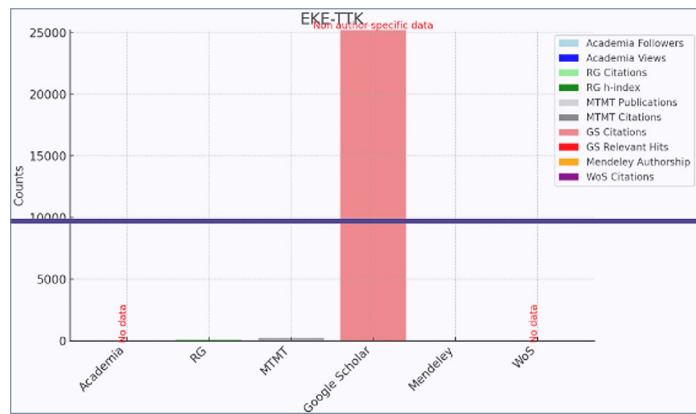
#### EKE (Eszterházy Károly University) faculty summaries

##### EKE-TTK (Faculty of Natural Sciences)

This faculty shows high visibility on Google Scholar, with 25,200 results, though only 8 relevant hits are identified. The faculty also has 90 publications and 117 citations on MTMT, but no relevant data on Academia.edu, ResearchGate (RG), Mendeley, or WoS.

<sup>11</sup> MTMT can be applied in the context of Hungarian-language facilities.

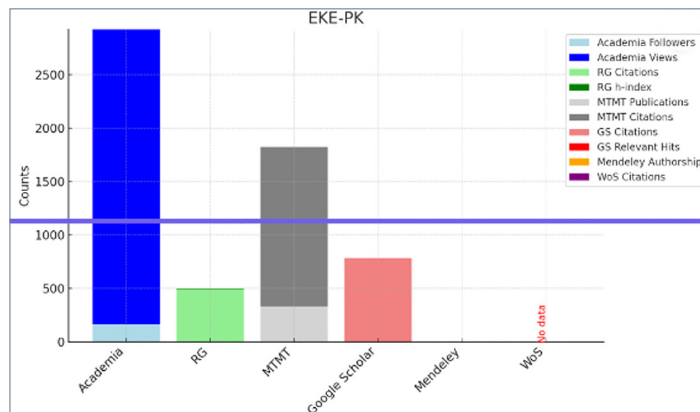
<sup>12</sup> The results presented by the AOPs are much more complex than this, but are not presented here for other reasons.



**Fig. 1:** EKE-TTK's visibility on certain DAPs

### EKE-PK (Faculty of Pedagogy)

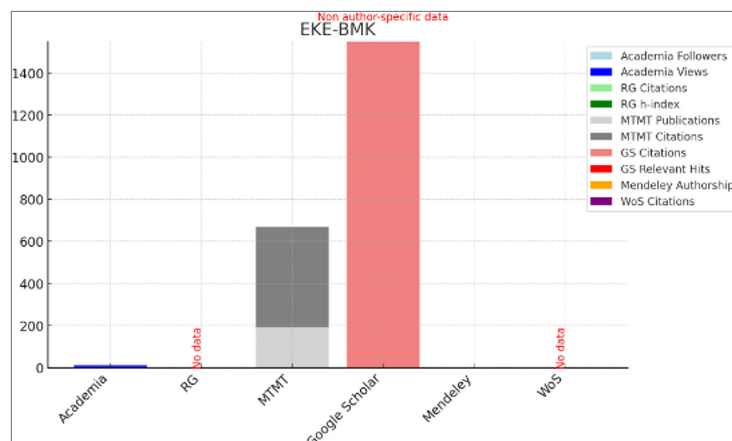
This faculty demonstrates significant activity across multiple platforms, including 2761 views and 165 followers on Academia.edu. It has 492 citations and an h-index of 9 on RG and 330 publications with 1493 citations on MTMT. Google Scholar reflects 784 citations and an h-index of 13. On Mendeley, it has 32 results, but no relevant data on WoS.



**Fig. 2:** EKE-PK's visibility on certain DAPs

### EKE-BMK (Faculty of Arts and Humanities)

Visibility comprises 4 followers and 7 views on Academia.edu. The faculty has 191 publications and 477 citations on MTMT, while Google Scholar returns 1550 – although again – non-author-specific results. It has 6 results on Mendeley, and no data on RG or WoS.



**Fig. 3:** EKE-BMK's visibility on certain DAPs



### EKE-IK (Faculty of Information Technology)

This faculty shows balanced activity across platforms. Academia.edu shows limited visibility with just 4 views and 1 follower, following and co-author (1 each). However, RG records 815 citations with an h-index of 18. MTMT reports 139 publications and 689 citations. Google Scholar has 1092 citations with an h-index of 18, an i10-index of 28 and Mendeley shows 65 results, with no relevant data for WoS.

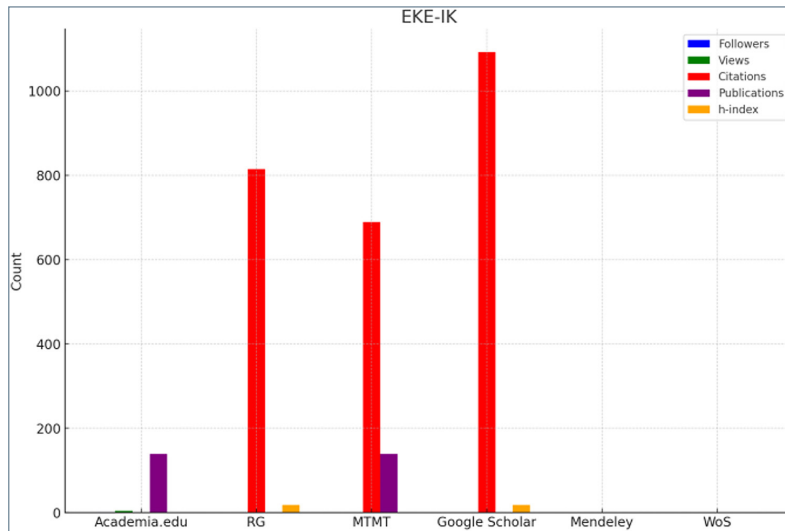


Fig 4: EKE-IK's visibility on certain DAPs

### EKE-GTK (Faculty of Economics and Social Sciences)

The faculty's presence on Academia.edu includes 21 views and no followers. It has 87 citations on RG and 133 publications with 182 citations on MTMT. Mendeley shows 20 results, but no relevant (i.e. author-specific) data is available on Google Scholar or WoS.

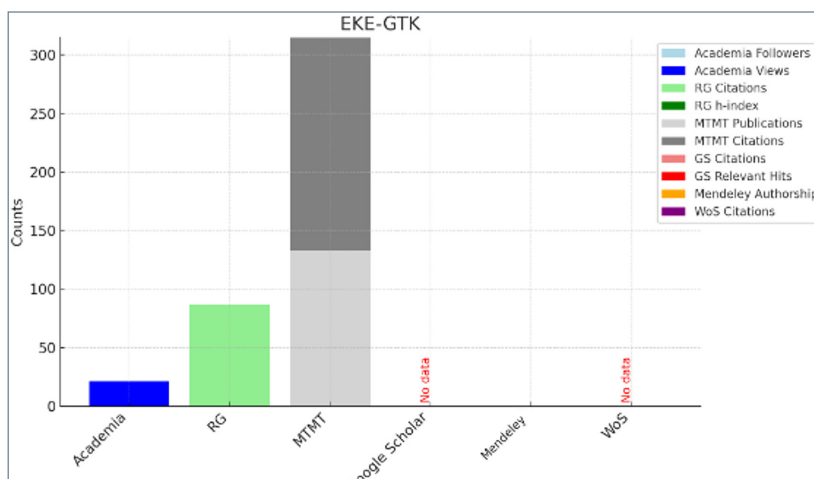


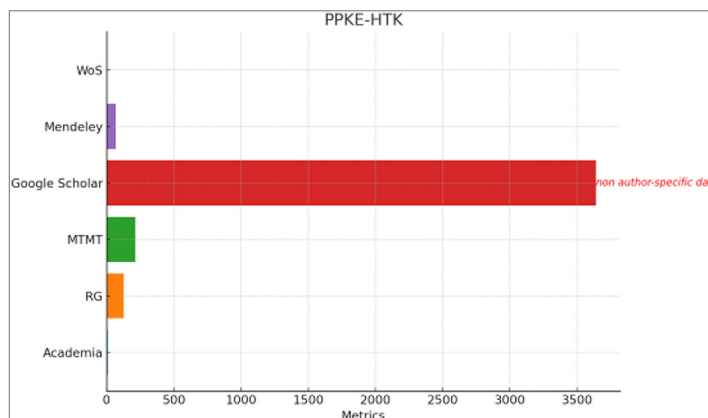
Fig 5: EKE-GTK's visibility on certain DAPs

## 2.2.3. Quantitative research on PPKE senior (dean-level) faculty leadership of Budapest-based Pázmány Péter Catholic University

### PPKE (Pázmány Péter Catholic University) faculty summaries

#### PPKE-HTK (Faculty of Theology)

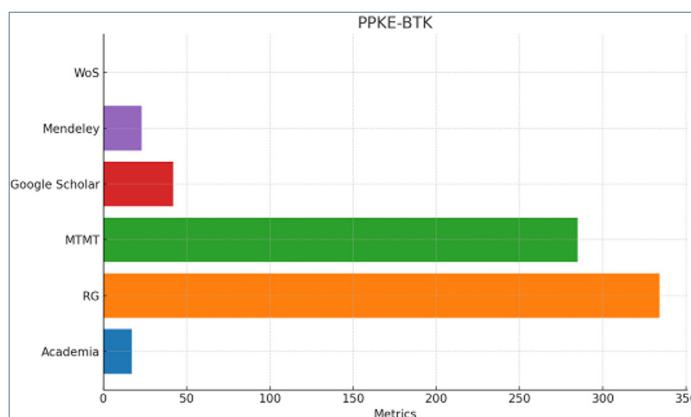
The faculty shows moderate visibility on Academia.edu with 69 public mentions but has no data on RG or Google Scholar. On MTMT, it has 215 publications and 127 citations, however, there is no relevant data available on Mendeley or WoS.



**Fig 6:** PPKE-HTK visibility on DAPs

### PPKE-BTK (Faculty of Humanities and Social Sciences)

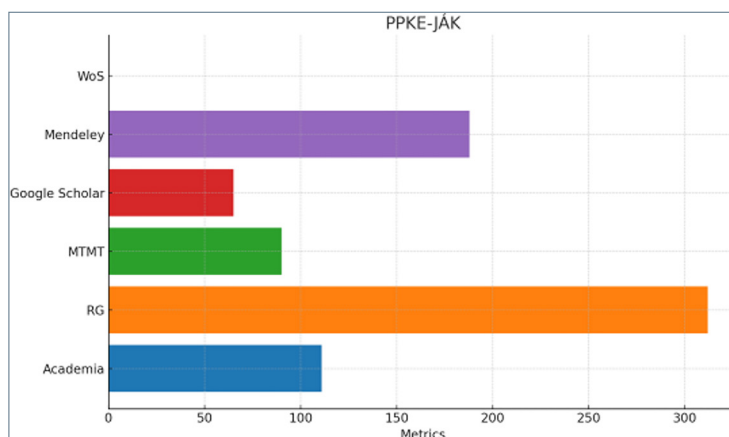
On Academia.edu, the faculty is active, counting 447 views, 23 public mentions and 17 followers. On RG, a Research Interest Score (RIS) of 171.8 is given. It has 285 publications and 334 citations on MTMT, while Google Scholar returns 42 results. Mendeley shows 7, and there is no data on WoS.



**Fig 7:** PPKE-BTK's visibility on certain DAPs

### PPKE-JÁK (Faculty of Law and Political Sciences)

This faculty has relatively high visibility on Academia.edu, with 3400 views and 111 followers. RG reflects modest engagement, with 6 citations and an h-index of 2, but at the same time, significant RIS, while MTMT reports 90 publications and 312 citations. Google Scholar reports 65 citations, h- and i-index scores 1 and 5 respectively, and Mendeley shows 13 results. No data is available on WoS.



**Fig 8:** PPKE-JÁK's visibility on certain DAPs

### PPKE-ITK (Faculty of Information Technology and Bionics)

With a balanced profile, this faculty has 139 views on Academia.edu and a strong presence on RG, with 1366 citations and an h-index of 14 and an RIS of 569. MTMT records 85 publications and 911 citations. Google Scholar reports 1571 citations and an h-index of 17, i-index of 27, while Mendeley shows 47 results, but no data is available on WoS.

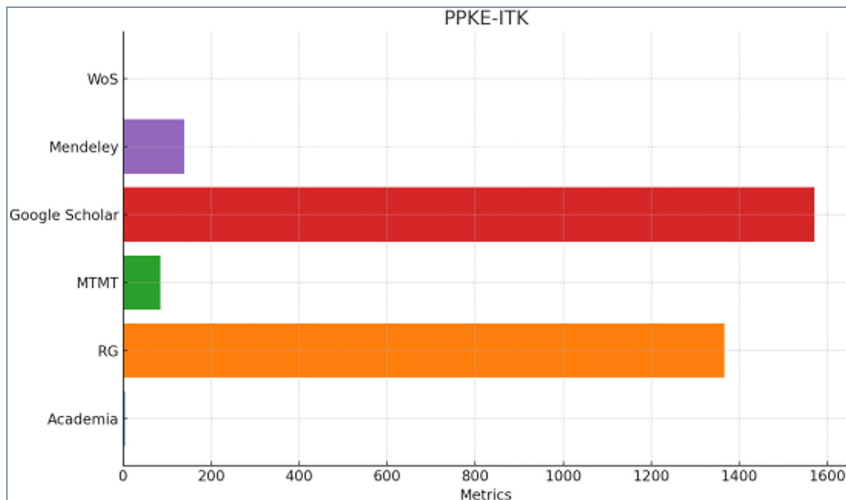


Fig. 9: PPKE-ITK's visibility on certain DAPs

### PPKE-KJPI (Postgraduate Institute of Canon Law)

This faculty has 2555 views on Academia.edu but no definite data on RG or Google Scholar. On MTMT, it has 186 publications and 697 citations, but there is no data available on Mendeley or WoS.

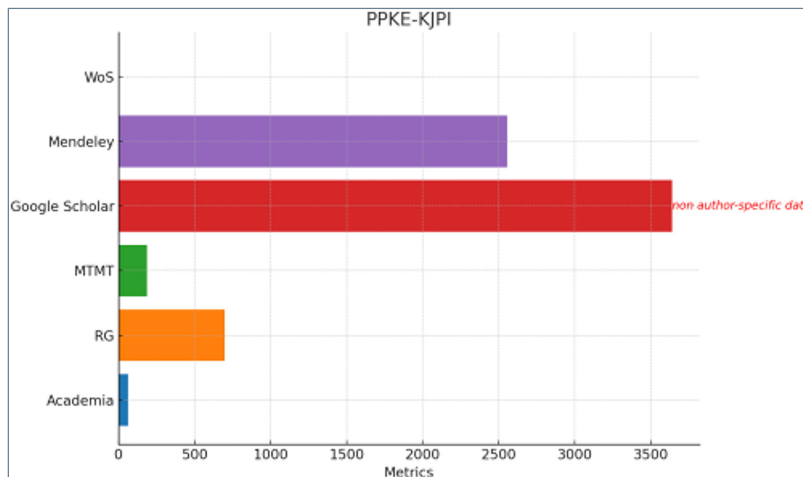


Fig. 10: PPKE-KJPI's visibility on certain DAPs

### 3 Universities of Slovakia with religious affiliation

Two Universities were selected manually for our survey, namely, the University of Ružomberok (ÚR), No. 17th in the Slovak Top Universities list, and the Univerzita J. Selyeho. The latter is although a public, non-Ecclesiastical institution, however, with a denominational faculty, included (No. 18th) in the Slovak Top Universities list (Universityguru 2023).



### 3.1. Faculties of the Catholic University in Ružomberok (ÚR), No. 17th in the Slovak Top Universities list

#### 3.1.1. ÚR (University of ÚR) faculty summaries

##### ÚR-PF (Faculty of Education)

This faculty shows activity on most academic platforms. Academia.edu shows 22 total views and 4 followers. On ResearchGate, there are 15 citations with an h-index of 3 and an RIS of 72.1. Google Scholar records 27 citations, and a h-index of 4, while CREPČ indicates 83 authorships, 48 reviews and 9 editions. Mendeley shows 6 results, but there is no relevant data from WoS due to name repetition.

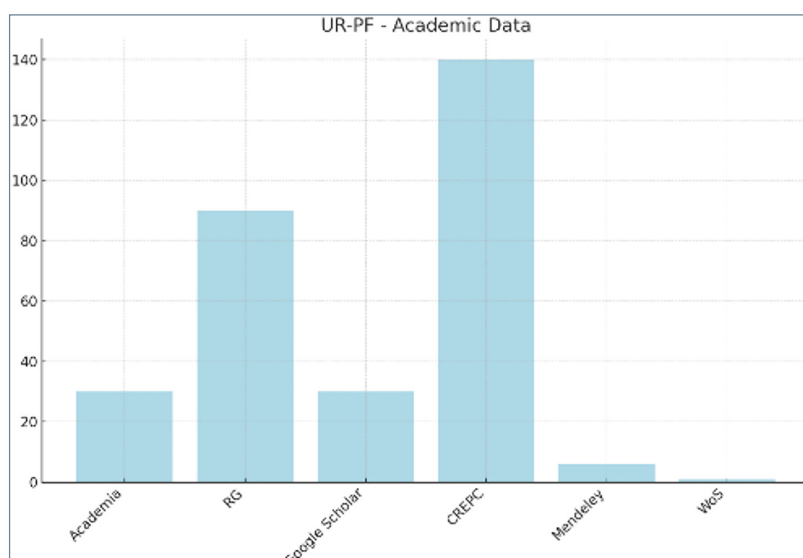


Fig. 11: ÚR-PF's visibility on certain DAPs

##### ÚR-FZ (Faculty of Health)

Engagement is noted on Academia.edu and ResearchGate, with Google Scholar showing non-author-specific results (1450). CREPČ indicates some scholarly contributions with 170 authorships, 11 reviews and 11 editions. Mendeley has 8 non-author-specific results, and there's no data from WoS.

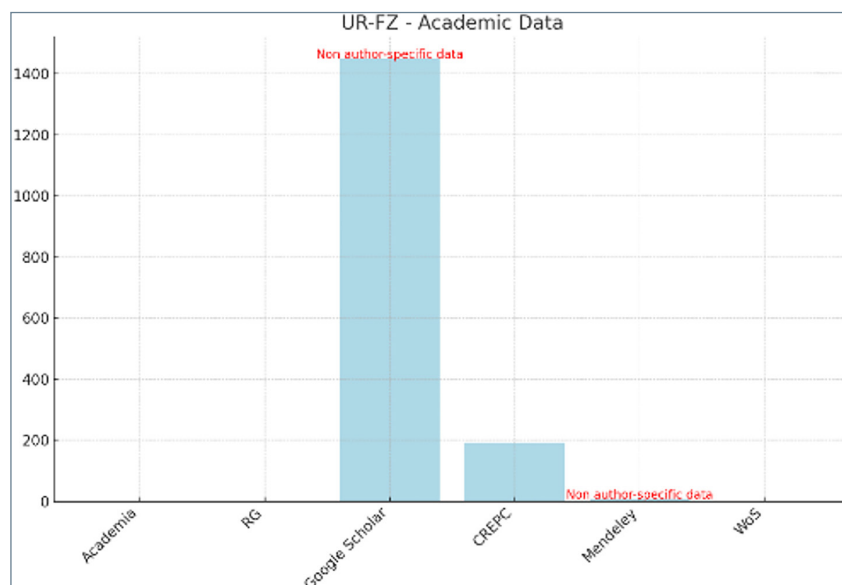


Fig. 12: ÚR-FZ activities on certain DAPs



### ÚR-FF (Faculty of Arts and Letters)

Academia.edu lists 7 followers and 38 views. Google Scholar lists 307 non-specific results, while CREPČ shows 1 authorship. Mendeley stands out with 3469 non-specific results, but no relevant data from WoS.

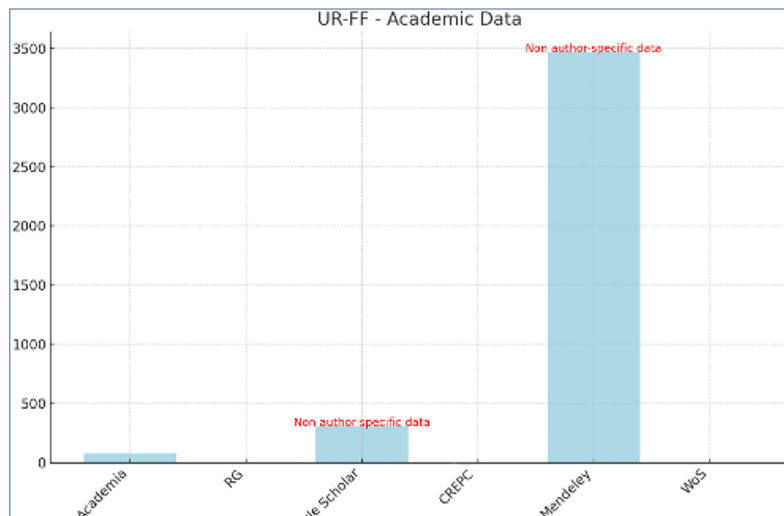


Fig. 13: ÚR-FF's visibility on certain DAPs

### ÚR-TF (Faculty of Theology)

This faculty is presence with 5 followers and 64 views on Academia.edu. ResearchGate records 8 citations a RIS of 31.5 and an h-index of 2. Google Scholar lists 47 non-author-specific results, CREPČ registers 112 authorships and 28 reviews, while Mendeley shows 4 relevant entries. WoS reports 5 total documents.

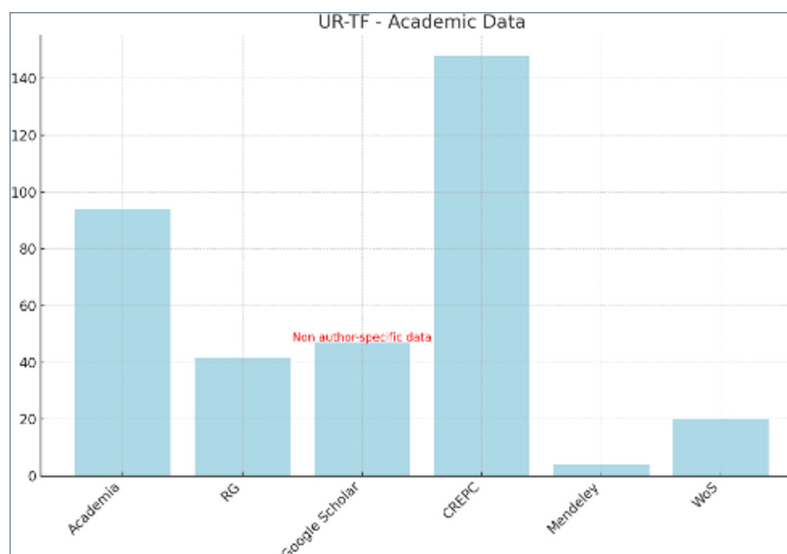


Fig. 14: ÚR-TF's visibility on certain DAPs

## 3.2. Faculties of the Univerzita J. Selyeho – Selye János Egyetem (JSU)

### 3.2.1. JSU (Selye János University) Faculty Summaries

#### JSU-FRT (referred to as JSU-RFT on the diagram below, i.e. Reformed Theological Faculty)

The faculty shows an activity on Academia.edu consisting 1 follower and 6 views. MTMT lists 65 publications with 4 citations. Google Scholar has 3640 non-au-

thor-specific results, and CREPČ displays significant activity with 82 authorships, 10 reviews and 21 editions. Mendeley records 4 entries, but no relevant data is available from WoS.

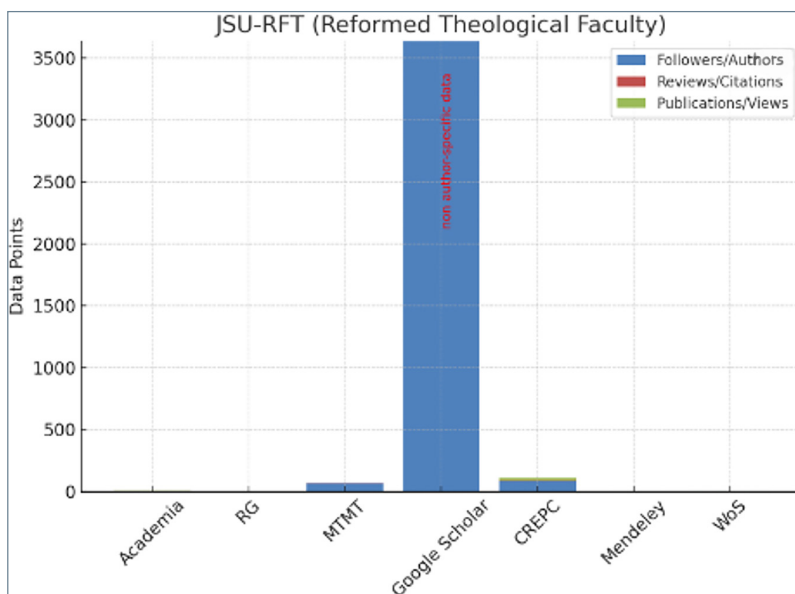


Fig. 15: JSU-RFT's visibility on certain DAPs

### JSU-FEI (Faculty of Economics and Informatics)

This faculty has 1 follower and 2 views on Academia.edu. MTMT reports 52 publications with 65 citations. Google Scholar highlights 252 citations with an h-index of 8 and an i-index of 10. CREPČ lists 37 authorships, 7 reviews and 8 editions. Mendeley shows 79 non-author specific results. WoS reports h-index of 6 with 19 total documents and 87 citations.

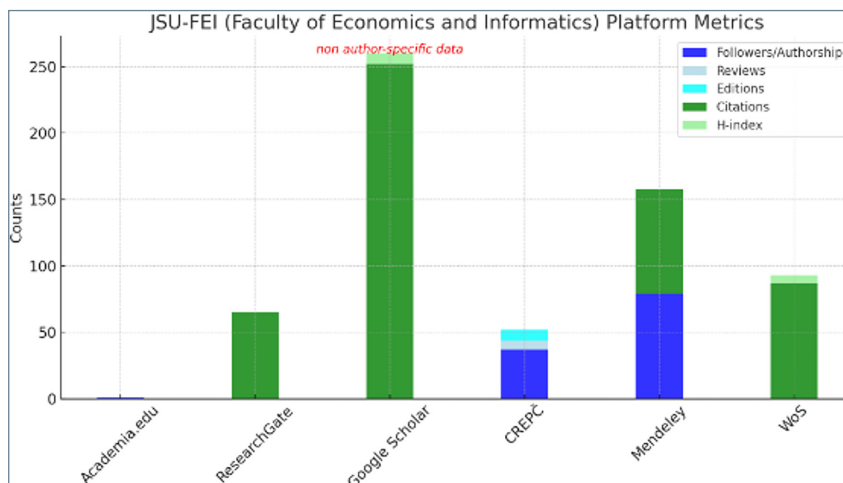


Fig. 16: JSU-FEI activities on the examined academic platforms

### JSU-PF (Faculty of Education)

Engagement of the faculty on Academia.edu involves 2 followers and 1 view. ResearchGate records 15 citations with an h-index of 3 and a RIS of 42, while MTMT lists 6 publications with 9 citations. Google Scholar attributes to this faculty 4970 non-specific results, and CREPČ indicates an activity that comprises 124 authorships, 1 interview, 448 reviews and 10 editions. Mendeley records 122 non author-specific results, and no relevant data is reported from WoS.

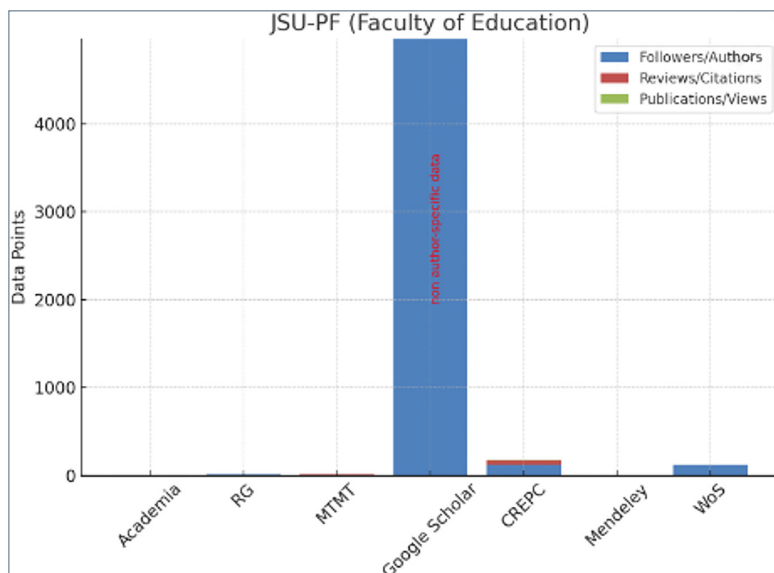


Fig. 17: JSU-PF's visibility on certain DAPs

## 4. Findings

### 4.1. Overview of our general methodological lessons according to platforms

Academic social networking sites like Academia.edu and ResearchGate facilitate connectivity and publication sharing among researchers, displaying unique features such as citation indexes and the Hirsch index. However, Academia.edu struggles with accurately distinguishing between authors with common names, unlike the Hungarian MTMT database, which effectively filters duplicate profiles, enhancing clarity and reliability. MTMT stands out for its comprehensive coverage, confirming that all deans from all faculties across universities are recorded, reflecting its deep integration within the domestic academic framework. Google Scholar offers the broadest search capabilities but with less specialized results and a notable English language bias. Mendeley, while providing detailed publication sorting, shares similar issues with author differentiation. Overall, the research conclusively shows that domestic databases like MTMT are more robustly embedded within the local academic landscape, offering more precise and relevant data management.

#### 4.1.1. Type I: academic social networking sites (ASNSs)

Academia searches may be directed on paper titles, papers with full text, people, videos and courses, offering a broad view.

Academia allows numerous profiles including earlier affiliations of a given target, which may, however, constitute a methodological problem. In addition, the user is faced with selection difficulties, since in the context of papers-related scrutinies, the site does not necessarily group by authorship, but by mentions. Thus, again, differentiation does not always occur between those with the same name (a phenomenon that is very common in the Hungarian language area), unlike, for example, in the case of Hungarian language-oriented MTMT. This is also the reason for the use of the "non target specific, or no clear" data remarks in many places of our Table 1–3. The latter is by no means a specific feature of Academia.edu, a similar problem is encountered in other segments of the empirical spectrum, except for MTMT.

However, the definition of institutional affiliation and the corresponding fields of specialisation, as well as the indication of followers and follower numbers

(see footnote 4) are easily accessible on the site and informative (Adhikari, 2020). A kind of *differentia specifica* in the case of Academia is the breakdown by language of publication. In addition, Academia also presents data on co-authorship.

#### ResearchGate

Searches are possible by research, journals, people, questions, jobs, institutes. Also classified in Type I, has the great advantage of displaying the so-called Hirsch index, a novel feature is the definition of the RIS (hereinafter: RIS). It also has the advantage of a bivariate, two-dimensional (rectangular coordinate system) graphical display of the citations by author, broken down by year.

However, similar to the global reach of the sites surveyed, it stores even fewer Hungarian faculty members than Academia.edu.

### 4.1.2. Type II: Databases with no community function

#### MTMT (relevant in the Hungarian-language institutions: EKE, PPKE, UJS)

Thanks to its extensive and in-depth national database, MTMT is the only platform of all the platforms examined that allows the filtering of duplicates and parallel profiles of Hungarian authors. This means that it is much clearer to distinguish Hungarian authors from each other than for other sites.

Ethnic Hungarian senior academics from Hungarian-language university UJS are also present on MTMT.

MTMT offers search options not only by author, and subject, but also by institution, which is the most useful in terms of comparing institutional visibility per se (in parallel with RG).

"Data Sheet" offers graphs (number of publications by year of publication, by type, citations received by year of publication).

The "List" contains all relevant publications chronologically backwards.

The Summary Table provides multidimensional findings, offering a complex view of the target.

Among its advantages, contained in the "complex view" of the Data Sheet, are the organisation of data into clear summary and subject tables; the availability of complete and selected lists; the indication of affiliation and subject areas; the searchability of institution, author and subject; the grouping of publications by type (e.g. book, book excerpt, abstract, protected forms, works of fiction, etc.); citation tracking; indication of the Hirsch index; and free, public access, if there is a version of the publication that provides an accessible interface for cross-sectional research as described above.

However, in the "simple overview", there are no graphical time horizons to illustrate publication trends (Academia, which uses graphical elements to show the year of origin of the manuscripts of the authors under study, or Mendeley, which does the same in tabular form, or RG, which displays citation rates in a similar plotted, year-by-year manner as Academia.edu.) This function, however, appears at the data sheet.

Google Scholar, provides, in principle, the widest search possibilities, but with the least specialised results (for example, searches by institutes such as KRE or PPKE, may result only in indirectly relevant findings).

Among the advantages of GS are: the possibility to customize the time horizon of the search; the inclusion of Hungarian and international databases (e.g. Mataraka, PTE, MTA<sup>13</sup> or Bibliotekanauki.pl); the searchability of the patent (this is rather relevant for natural sciences (Neal 2012; Fagan 2017). Our investigations also con-

<sup>13</sup> Background material of the Hungarian Academy of Sciences (MTA), Available at: <https://mta.hu/hatteranyagok/magyar-tudomanyos-muvek-tara-mtmt-105337> (Accessed: 2024.09.18)

firmed the literature data in that GS also provides search results broken down by year and displays the so-called h- and i10-indexes (Fagan 2017), the latter of which is not available for most other sites.

Its drawbacks on a conceptual-principled level are a high bias towards English, which has also been confirmed by the findings of literature sources (Fagan 2017), and the fact that it does not store digital object identifiers (DOIs) (Martín-Martín et al. 2021).

#### 4.1.3. Type III: Author pages linked to publisher or scientific databases

Mendeley is more traceable by specifically and immediately naming the publishing journals and by the nature of the journals (e.g. open access or not generic) (Martín-Martín et al. 2021) than other sites.

An additional advantage is that it sorts publications by relevance, citation number and recentness.

However, it has the disadvantage that it does not differentiate by author, similar to Type I sites, which means that the same author can have several parallel profiles.

Mendeley: Similar to GS in terms of principally broad search possibilities, but (for example, searching KRE or PPKE may result only in indirectly relevant findings).

#### 4.2. Broader sense methodological lessons vis-a-vis the visibility within the Hungarian scholarly context

First and foremost, and in general, potential name duplications make exact explorations difficult in the English-speaking fora especially in the case of Academia, RG, GS and Mendeley, hence the above remarks such “no definite data due to numerous authors.”

Academia: instant results are given regarding the numbers of Followers, Following, Total views in the context of searches aimed at people.

RG: instant results are provided regarding the RIS and citations, if any, but in some cases, only the number of publications are given.

MTMT: dichotomy of “simple” and “complex” search mechanisms is useful in terms of offering the choice to the researcher regarding the depth of the analysis.

The latter, complex view offers the most complex database in the context of Hungarian scholars, highlighting the number of all publications, both independent and total citations. In addition, MTMT also features the composition, for example, differentiation between and quantification of scientific journal articles, books, book excerpts, conference paper (in journal or proceedings), abstracts, Hirsch index, patents educational works and those of public interest and other, according to each target.

GS indicates citations, h-index, and also, as a *differencia specifica*, in comparison with the entire spectrum, i10-index, while also specifying the results that are less than 5 years old. However, there is a detectable shortage concerning date regarding the exact target, which may be a result of earlier described duplications.

Mendeley makes the differentiation and quantification of publication types also possible, while also explicitly displaying publications shared on open access fora. However, when it comes to Hungarian scholars, duplications and an over-preference for English language publications is detectable.

At the same time, WoS virtually has not stored any outputs of any faculty leadership, which is only partly explained by a lack of definite data, as that has only been the case for one faculty (PPKE-KJPI) of one university.

### 4.3. Narrower sense lessons and evaluation of data gained vis-a-vis the University landscape in Hungary (EKE, PPKE)

In order to begin this subchapter, it is important to revisit the previous data collected within the relevant Universities' framework.

As it pertains to Eszterházy Károly University (EKE), it demonstrates substantial diversity in its scholarly output and visibility across platforms. Google Scholar and MTMT are the most prominent for most faculties, with particularly strong performance for EKE-TTK and EKE-PK. However, there is limited visibility on Academia.edu and Mendeley, especially for faculties like EKE-BMK and EKE-GTK, which exhibit lower levels of engagement. WoS is notably absent as a significant platform for the University.

Pázmány Péter Catholic University (PPKE) presents a varied academic presence across platforms, with Academia.edu being a strong point for several faculties, particularly PPKE-JÁK and PPKE-KJPI. MTMT and Google Scholar also show solid engagement across faculties, particularly for PPKE-ITK and PPKE-BTK. Mendeley is less significant across the board, except for PPKE-ITK and PPKE-JÁK. As in the case of EKE, WoS does not feature prominently for the University.

Both universities were searchable on the major English speaking sites of Types I,II,III and also Hungarian MTMT (Type II), however, not all faculties produced results on the English platforms (Types I,II,III), mainly due to earlier explained methodological reasons.

Type I: we encounter a more established presence on Academia (10/9; EKE: 5/4 and PPKE: 5/5 of targets with relevant data) than in the case of RG (10/7; EKE: 5/4 and PPKE: 5/3).

As for the average scores based on Type I: average Followers (attested by Academia) were under 50 in both cases 50 (EKE: 34 and PPKE: 40.4). In terms of RIS average (attested by ResearchGate), PPKE performed at 247.867 and EKE at 525.7.

Type II: We found that both universities (2/2) are present on Google Scholar, but only 10/6 faculties (EKE: 5/3 and PPKE: 5/3). In the case of MTMT, again, both universities (2/2) are established with all faculties (10/10), which reflects a registration inclination towards the domestic database.

Type III: Mendeley gives clear findings of both (2/2) PUs, but only 6 out of 10 faculties (EKE: 5/3 and PPKE: 5/3). Out of all those targets with available data, both PUs with relevant faculties produced quite diffuse results under 100 (EKE: 6, 32 and 65 and PPKE: 7, 13, 47).

Attested by GS, where h-index is differentiated in all cases where the target can be detected, hirsch-index increased slightly since 2018, with averages (attested by ResearchGate) between 8 (EKE) and 13.5 (PPKE).

Note that these latter features, in accordance with the scholars' intent, neither allow qualitative, nor qualitative comparison because they are based only on data that was available on certain types of AOPs, regardless of the complexity of real academic performance.

### 4.4. Narrower sense lessons and evaluation of data gained vis-a-vis the universities of Slovakia (ÚR, UJS)

As an introduction to this subsection, it is worth recalling our previous data gained under the auspices of the corresponding Universities.

In the context of ÚR, across the faculties, Academia.edu and Google Scholar show moderate engagement with varying results across the disciplines. ResearchGate and CREPČ reveal more detailed scholarly contributions. Mendeley



provides supplementary non-author-specific data, but WoS data is generally limited or non-existent due to name repetition issues.

Within the scope of JSU, the faculties at JSU show a more balanced presence across MTMT, Google Scholar, and CREPČ, with Mendeley and WoS contributing some insights, particularly in the Faculty of Economics and Informatics. Academia.edu shows limited engagement overall, but Google Scholar provides a larger number of non-specific results.

Type I prevails in both cases as both universities (2/2) are present at each AOPs. Both Academia (6 out of 7 faculties; UR: 3/4 and UJS 3/3) and RG usage (6 out of 7 faculties, UR: 3/4 and UJS 3/3) is attested by the relevant data.

Type II: Both universities are present on GS but with only a few faculties giving exact results (UR: 1/4 faculties and UJS: 1/3). The registration of each and every faculty (7/7) at CREPČ indicates a greater embeddedness into domestic databases, just like in the case of Hungarian institutions and MTMT.

Type III: Presence at Mendeley (UR: 2/4 faculties UJS: 1/3) can also be viewed but to a much less degree than in the cases of Type 1. Results remained under 10 in both cases (UR: 6, 0, 0, 4 and UJS: 4, 0, 0). At the same time, faculty leaders have been relatively "unknown" to WoS (except for definite data of one faculty of each university, UR-TF and JSU-FEI, respectively, incorporating a proportion of 2 out of 7 entities).

In the cases of both Universities, Faculty of Education's scores are the best within the University.

In the light of the available data, UR scores better than UJS both in terms of the average of h-index and RIS (51.8 and 42, respectively, indicated by RG) and also in the context of average number of followers based on results of faculties that found matches (indicated by Academia, UR: 5.33 and UJS 1.33) and concerning total views (UR: 41.33 and UJS: 3).

Attested by GS, where h-index is differentiated in all cases where the target can be detected, hirsch-index either increased slightly since 2018 or stagnated, with averages (attested by ResearchGate) between 2.5 (UR) and 8 (UJS).

Again, these figures above are not representative in terms of reflecting the complexity of overall academic performance, as it is based only on numbers where relevant data was available due to methodological difficulties. In addition, any comparison within the countries or the region could not have been intended, if only because the different timing of the surveys could have distorted the overall picture, to begin with, as the later inclusion of CEPRČ, may have somewhat distorted data due to an expanded time interval allowing more domestic scores.

## 5. Second part of the qualitative study: survey carried out in the Hungarian institutions

### 5.1. Reasons of a supplementary analysis concerning user habits

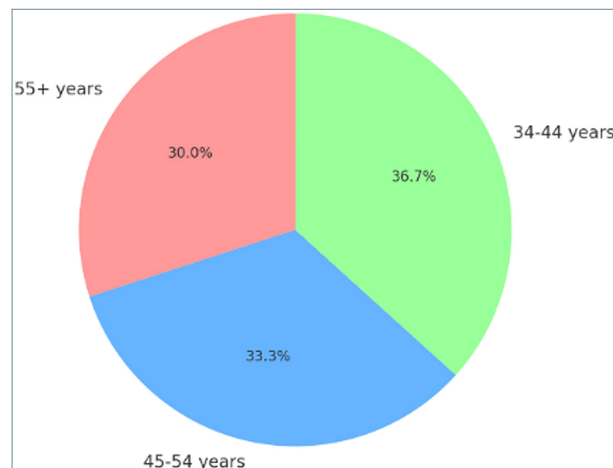
Any assumption on presence also highlights the relevance of the question what the trends among academics in the use of digital science platforms in the region are? In this spirit, the current study, in addition to the non-comparative presence data presented before, also intended to delve into quantitative explorations concerning user trends, motivation, preferences, frequency, and surrounding demographic data among instructors, involving i.a. three specific, social science-oriented organizational units (i.e. Institutes of Psychology; Social and Communication Sciences and Information and Communication Technologies with



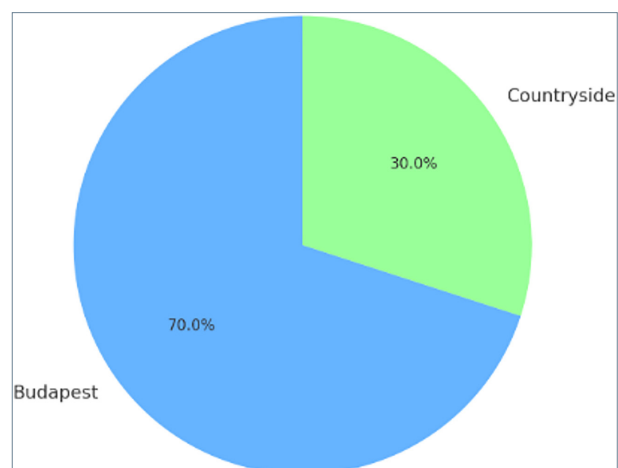
their subordinated Centers) of the Ecclesiastical University, the Károli Gáspár University of the Reformed Church. The quantitative survey, involving instructors from these entities, was conducted between January and April, 2024.

This second layer of the quantitative survey makes it possible to answer the research question posed earlier: i.e. how popular are these platforms among academics; are academics aware of the importance of sharing their scholarly work, using modern (increasingly popular and important) tools to promote scholarly work (platforms and social networks and recognized bibliographic databases), and do they consciously take advantage of this, i.e., do they undertake any activity in this regard, such as having their own e-profiles on RG, Academia.edu, GS and others? What is the trend in this sphere?

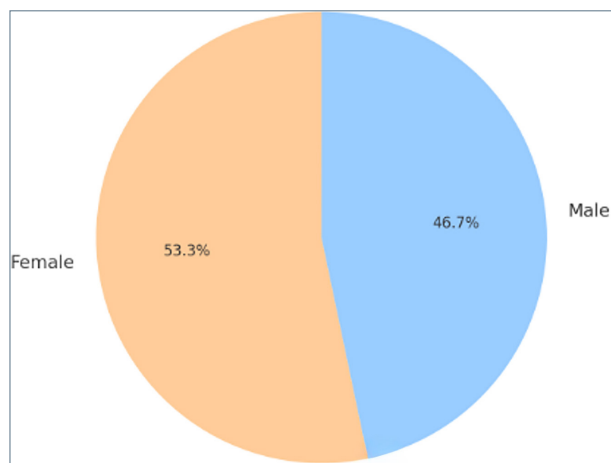
When choosing the questionnaire method that encompasses three demographic and six thematic areas of interest, I considered the findings of behaviorist psychologist Roscoe (1975), who decades ago suggested that a sample size larger than 30 but smaller than 500 is suitable for most behavioral research. Additionally, we deemed it prudent to consider the axiomatic truth that the completion rate is more significant than the size of the contingent itself. In addition, taking into account the considerations raised by Delice (2010) regarding the optimal quantitative sample size of relational surveys, we conducted our investigations with a contingent of thirty respondents. In 2024, the content and data analysis of the completed questionnaire will be summarized for the first three demographic clusters as follows:



**Fig. 18:** Age spectrum



**Fig. 19:** Place of residence



**Fig. 20:** Gender

Based on the demographic data by age, it is evident that the majority of respondents fall into the middle-aged category, particularly those between 34–44 years old (36.7%). This group is followed by those aged 45–55 (33.3%), and those over 55 years old (30%). The similar proportions in the older age groups suggest a relatively balanced demographic composition in terms of age.

Demographic data based on place of residence show that Budapest is overwhelmingly dominant, with 70% of respondents living there, while a lower proportion, 30%, live in the countryside. This suggests that most survey participants reside in the capital.

Gender-based demographic data indicate a higher proportion of women (53.3%) compared to men (46.7%). Although the difference is not significant, this distribution represents the majority gender composition of the survey participants, which may be relevant for further analysis.

These demographic foundations point to the "typical" instructor from three universities and five organizational units being a woman from Budapest, aged between 34 and 44 years.

However, the thematic questions specifically related to the AOP context are detailed below.

### 5.1.1. General statistics of usage (e.g., Academia.edu, ResearchGate, Google Scholar, Mendeley, Hungarian Scientific Works Repository "& Co.")

- Uses: 93.3%
- Does not use: 6.7%.

These responses suggest that a vast majority (93.3%) of respondents use scientific online sites, social networks, and databases, while only a small fraction (6.7%) do not use such platforms.

### 5.1.2. Purposes of usage of DAPs

- Viewing, downloading manuscripts, source research: 76.7%
- Communicating with peers and institutions: 30.0%
- Sharing scientific materials, making them "common property": 63.3%
- Visibility and prestige-related aspects of advancement: 40.0%
- No, I consider all unnecessary: 0%.

Thus, most respondents (76.7%) use online platforms for viewing, downloading manuscripts, and conducting source research, while a significant portion (63.3%) uses them for sharing scientific materials. A smaller proportion (40.0%) mentioned visibility and prestige-related aspects of career advancement. Interestingly, no responses indicated that the AOPs were unnecessary.

### 5.1.3. Platform preferences

- Type 1: Academic social sites (e.g., Academia.edu, ResearchGate): 82.8%
- Type 2: Author pages linked to publishers and scientific databases (e.g., Scopus, Mendeley): 34.5%
- Type 3: Databases without social functions (e.g., Google Scholar, MTMT): 89.7%.

Overall, it can be said that a large majority of respondents actively participate in academic and scientific platforms, whether they are community sites, author pages, or simply scientific databases. This demonstrates that researchers utilize a wide range of online resources to support their research activities.

According to the data, most respondents belong to multiple categories, meaning they actively use various types of platforms. Academic social networking sites, such as Academia.edu and ResearchGate, enjoy particularly high usage rates, indicating that a significant portion of respondents actively use these platforms often to build connections and share publications. The usage rate for author profiles linked to publishers and scientific databases is lower but still significant, showing that a substantial number of educators actively use these types of platforms, which often facilitate access to scientific articles.

Databases without social functions record the highest rates, meaning the vast majority of respondents actively use such databases that do not feature social functions but allow access to scientific information.

### 5.1.4. User attitudes towards DAPs

- From today's scientific life perspective, online platforms are indispensable 43.8%
- These are parallel online frameworks that can complement conventional scientific institutional life 37.5%
- Relatively significant online duplicates, with "live" scientific-academic life being the most important 9.4%
- Unnecessary (for the reasons mentioned above or otherwise) 6.3%
- Directly harmful (such reasons might include lowering quality standards, diluting the field, leading to political/economic concentrations, maintaining the global dominance of certain languages – except for the Hungarian MTMT) 0%
- Not applicable, because I'm not familiar with them 9.4%
- Not applicable, because I don't deal with them 0%.

Most respondents (43.8%) consider online platforms indispensable in today's scientific life, while a significant portion (37.5%) thinks these frameworks merely complement conventional scientific institutional life. Those who see them as relatively significant online duplicates or are uninformed make up a smaller portion of the respondents (9.4% each). It's thought-provoking that the surveyed Hungarian educators do not consider them harmful.

### 5.1.5. Usage intensity

- I am an active user (at any frequency) 90.0%
- I registered but do not use them 6.7%
- I neither registered nor use them 3.3%.

The overwhelming majority of respondents (90.0%), nearly nine out of ten teachers, are active users of online platforms, while a smaller portion (6.7%) registered but do not use them, and a tiny minority (3.3%) neither registered nor uses these platforms.

### 5.1.6. Usage frequency: How much time do you spend on these sites, and how often?

- Daily 13.3%
- Weekly 26.7%
- Occasionally (e.g., preparing for or following up on lectures, conferences) 56.7%
- Never 3.3%.

Respondents typically spend time on online platforms weekly (26.7%) or occasionally (56.7%), while only a few (13.3%) use them on a daily basis. Very few respondents (3.3%) never use these sites.

## 5.2. Assessment of data regarding user habits

These findings, prompted by the theoretical spectrum, reveal significant recognition, support, and active, occasional use of certain sites by instructors, primarily for manuscript viewing, downloading, and source research. The most popular platforms are Type 1 academic social sites and Type 3 non-social-function databases.

Data concerning user samples, motivations, and preferences are published anonymously, without any intent for qualitative or quantitative comparison.

Demographic data shows a balanced age distribution among respondents, with a majority residing in Budapest (70%) and a slight female majority (53.3%). The typical instructor profile emerging from the data is a Budapest-based woman aged 34–44.

In terms of platform usage, a vast majority (93.3%) use online academic sites, social networks, and databases. The primary uses are for manuscript access and source searching (76.7%), with significant engagement also in sharing scholarly materials and for visibility and prestige related to career advancement. No responses indicated these platforms as unnecessary.

Regarding platform types, there's high engagement with Type 1 academic social sites (82.8%) and Type 3 non-social databases (89.7%), reflecting widespread use of online resources for research support. Despite their substantial use, no respondents considered these platforms detrimental.

Frequency of use varies, with most instructors using these platforms weekly (26.7%) or occasionally (56.7%), while daily use is less common (13.3%). Overall, the survey highlights the indispensable role of online platforms in today's academic life, complementing traditional scientific institutional activities.

## 6. Conclusions

As we have seen, the utilization of online academic platforms, encompassing academic social networks, publisher- and scholarly database-linked author sites,

alongside certain databases devoid of community features, is experiencing a growing presence in both Hungary and Slovakia, mirroring global trends.

This paper initially introduced a theoretical framework by reviewing the pertinent typology and associated metrics of these platforms.

Subsequently, it conducted and assessed a quantitative study within specific segments of Hungarian and Slovak tertiary education. By having focused on two Hungarian universities affiliated with churches (Catholic and Reformed ones) located in Budapest and Eger, and two Slovak universities (a public one that integrated a theological faculty, and a private one operated by the Catholic Church) in Komárno (Hungary: Révkomárom) and Ružomberok (Rózsahegy), interesting data has been gained as we identified prevailing metric trends and potential distribution patterns of these digital academic platforms among Hungarian and Slovak academics.

Accordingly, academic social networking sites (termed Type I here) seem to prevail in both countries and in cases of institutions, while to a lesser extent, both author profiles linked to publishers and scientific databases and databases without social functions are established in institutions forming our target group. All in all, our research intended to provide empirical insights into the characteristics of these platforms concerning scholarly visibility in the CEE region.

Having in mind a possible intertwinement of questions related to presence with those that are concerned with user trends, the current study also intended to delve into quantitative explorations concerning user trends, motivation, preferences, frequency, and surrounding demographic data among instructors at three specific organizational units of another (ecclesiastical) University, the KRE. By presenting both non-comparative presence data and those about usage attitudes, a scholarly intention to contribute to current studies on DAPs and to address regional literature (Rebisz and Lungova 2022) that postulates relative Hungarian disadvantages, has also been enforced.

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