

# NEW SOCIO-ACADEMIC PLATFORM BASED ON THE RESULTS REVEALED FROM COMPARATIVE ANALYSIS OF THE EXISTING PLATFORMS

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## Abstract

Undoubtedly social network platforms today play a very important role in creating bridges for communication for every profession. The success that Facebook has achieved as a generic platform, has led to the launch of other social network platforms that aimed to provide services to the academic community. Platforms like Academia.edu and ResearchGate today are very popular and widely used by the academic community and professionals. These platforms known as ASNS (Academic social networking sites) provide opportunities for this community to connect and make the results of their work easier to be accessed. Based on the impact that ASNS have, and after reviewing comparative analysis from the survey with end-users, the academic community and professionals, which attempted to highlight the strengths and weaknesses of actual most used platforms, we have published a new socio-academic platform, AcademicGate, so we made sure to include proposals revealed by surveys.

The purpose of this paper is to present the data collected from the comparison analysis taken from the surveys available on the web with two most used ASNS, Academia.edu and ResearchGate, and the users of the new-built platform AcademicGate, which is currently in use in Northern Macedonia. The survey was conducted with students, academic staff and other professionals.

*Keywords:* AcademicGate, ResearchGate, Academia.edu, socio-academic networks, academic.

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## 1. Introduction

Internet is changing the way we search, communicate, share information and connect. No more will for spending time in libraries. Most of the needed information can be found on our own desk. Information technology has accelerated publication times, enabling near real-time access to papers and research produced around the world. In addition, the transition from printed to electronic formats has increased the number of scientific publications due to reduced printing and distribution costs. Alongside the traditional publishers, the number of universities with their own "university presses" has increased today. An important phenomenon is the global open access movement that aims to make everything freely available online. Moreover, the Internet has facilitated publishing and archiving, boosting 'self-publishing practice' in which authors themselves make a copy of their works and ideas directly online; phenomenon that is boosted by the advent of social networks.

Social networks such as Facebook, Twitter, YouTube and Instagram have grown rapidly in the academic community, but their impact on education is not so clear. In recent years, alongside social networks, socio-academic networks have been used, which enable communication with users for professional purposes.

Academic Social Networks (ASNs) are similar to social networking sites, but designed for the academic community. These online platforms allow you to develop a profile and connect with other researchers, while also allowing you to share academic related content. These networks are typically free to use. The most interesting feature of these networks is a user-friendly way to present research articles and other scholarly outputs to colleagues and scholarly communities worldwide. Academic Social Networks that have evolved in recent years are Academia.edu and ResearchGate.

Even though we live in a world that offers many opportunities to publish works in socio-academic networks

(pages of official journals, personal pages and blogs and general social networks such as Facebook and LinkedIn), the question is what advantages these platforms offer to academic world? And do these networks fit the definition of a "social network"? (Meishar-Tal and Pieterse 2017)(Jordan 2019).

## **2. Related work**

The literature research has highlighted many scientific papers related to socio-academic platforms. We present some of them related to our project.

The study, conducted by Hagit Meishar-Tal and Efrat Pieterse, describes the results of the questionnaire on the use of ASNS mainly for information consumption, a little less for information sharing and very little for interaction with others. They are not focused on the use of ASNS but on the nature of the use and perceived usefulness of the sites for academics. The study employs the Uses and Gratifications theory to analyze the use of ASNS. The results found that 65% of respondents use ASNS; more than 50% use these networks once a month or less (Meishar-Tal and Pieterse 2017).

G. Bonaiuti presented a study on exploring the phenomenon of social media platforms and their impact on academic practices. From their research in the field of science 11/D2, they concluded that there is a wide use of academic SNS by the scientific community, although it is not easy to identify in detail the reasons why some researchers are more active than others. The result showed a realistic picture of the situation of Italian academics, but it is clear that it represents a phenomenon with a rapid transformation (Bonaiuti 2015).

The study, conducted by Steven Ovadia, describes the concepts of social networking and socio-academic networking. During his study, he compared the socio-academic networks Academia.edu, ResearchGate, Mendeley, Zotero and CiteULike. The results showed that ResearchGate and Academia.edu are the two most used platforms because of the easier way to use and publish their work (Ovadia 2014).

The case study, conducted by Gemma Nández and Ángel Borrego, analyzed the demographic profile of users of an academic social network, their reasons for using it and the use of other social media. The results show that users are mainly pedagogues and doctoral students. Users mostly use social media to connect with other academics, share their research results, and follow the activities of other researchers (Nández and Borrego 2013).

This study compares four popular academic social networking platforms namely ResearchGate, Academia.edu, Mendeley and Zotero. R. K. Bhardwaj used the evaluation method to help compare the four known ASNSs, which included 198 dichotomous questions divided into 12 broad categories. The study found that the performance of ASNS using the latest features and services is not at the right level and none of the networks was rated as "Excellent". The pages lack the incorporation of session filters; output features; privacy settings and text display; and search and browsing fields. The availability of bibliographic features and general features are poor on these networks. The study report found that ResearchGate scored the highest scores, 61.1%, and was ranked "above average", followed by Academia.edu with 48% and Mendeley with 43.9% ranked "average". However, Zotero (38.9%) was ranked "below average" (Kumar Bhardwaj 2017).

## **3. Overview of two popular socio-academic networking platforms**

*3.1. Academia.edu:* Academia.edu, was founded by Richard Price in September 2008. The platform's founder raised a considerable amount of money from Spark Ventures, Brent Hoberman and other corporate houses. About 40,000,000 academics have registered and about 14,000,000 papers have been uploaded in the platform and over 36 million unique visitors are reported to enter the platform each month. Academia.edu is not an open access repository to track open green access. However, it encourages users to use specific or general repositories in the field to access research publications. This platform allows users to create personal profiles, follow and exchange messages with other users, upload materials, request feedback (comments)(Kumar Bhardwaj 2017).

3.2. *ResearchGate*: The site was founded in 2008 by IjadMadisch along with SörenHofmayer and Horst Fickenscher. Initially, the company was founded by the Benchmark firm, and investors like Joachim Schoss (founder of the German platform 24Scout portal). ResearchGate has the largest number of active users compared to other ASNS according to a study by Nature. The platform claims to have had 10 million users as of May 2016. ResearchGate limits accounts of users in well-known institutions and of published researchers. He also has the RG score to measure the impact of researchers. However, the RG score, on the other hand, has been chastised because of its calculation methods (Kumar Bhardwaj 2017).

#### 4. Comparison between existing socio-academic platforms

The application of modern technology has influenced the development of socio-academic platforms that are proving successful. The use of these socio-academic networks has grown by leaps and bounds and has found application in almost every aspect. Although there are many of these platforms, but the main question is:

- Do these platforms fulfill user requirements?

Below in *Table 1*, we have compared the two platforms (*Academia.edu* and *ResearchGate*), their disadvantages and respective advantages.

**Table 1.** Comparison between socio-academic platforms (*AcademicGate*, *ResearchGate* and *Academia.edu*)

	<b>ResearchGate</b>	<b>Academia.edu</b>
<i>Allow all users to register/login</i>	NO	YES (Some users are limited)
<i>Posting (Text, Article Books,...)</i>	YES (Except Monograph)	YES
<i>Remove the document from Timeline</i>	YES	YES
<i>See your following/followers</i>	YES	YES
<i>See your publishes and download them</i>	YES	YES
<i>Download full text</i>	YES (Except some text that needs request)	YES (Except some text that needs request)
<i>Search for users</i>	YES	YES
<i>Following users</i>	YES	YES
<i>Allows you to view publications only by the users you follow</i>	NO	NO
<i>Search publications (by title and authors) and download</i>	YES (Except some text that needs request)	YES (Except some text that needs request)
<i>Discussion forums (text, links, files)</i>	NO	NO
<i>Find Jobs</i>	YES	NO
<i>Add new job</i>	NO	NO
<i>Sorter by latest to oldest (articles, books, forums,...)</i>	YES	NO
<i>Send Messages</i>	YES	YES
<i>Edit Profile</i>	YES	YES
<i>Change Password</i>	YES	YES

## 5. System Requirements

All systems require presence of some hardware components or other software resources in order to function properly. These requirements are called system requirements, and they are often used as a guide rather than an absolute rule. A second definition of the term "system requirements" is an extension of the first, describing the criteria that must be met in designing a system or subsystem. Functional and non-functional requirements are the two main types of system requirements.

*5.1. Functional requirements:* The specifications of a product's functionalities are known as functional requirements. Simply said, functional requirements define what precisely a software must do and how the system must respond to inputs. The software's goals are defined by functional requirements, which means that if these criteria are not fulfilled and the software will not work.

This platform offers the following functional requirements:

- Login/Registration interface: to access the portal
- Discussion interface: to communicate between users
- User profile: for managing the personal profile
- Broadcast interface: to broadcast a message to all your followers and receive broadcasts from the people you follow
- Search interface: to find relevant information on the portal (job search, books, various publications).

*5.2. Non-functional requirements:* Functional requirements establish the system's essential behavior, whereas non-functional requirements define how the system will carry out this function. Nonfunctional requirements, on the other hand, are not related to the system's functionality but rather outline how the system should function.

The non-functional requirements of our system are as follows:

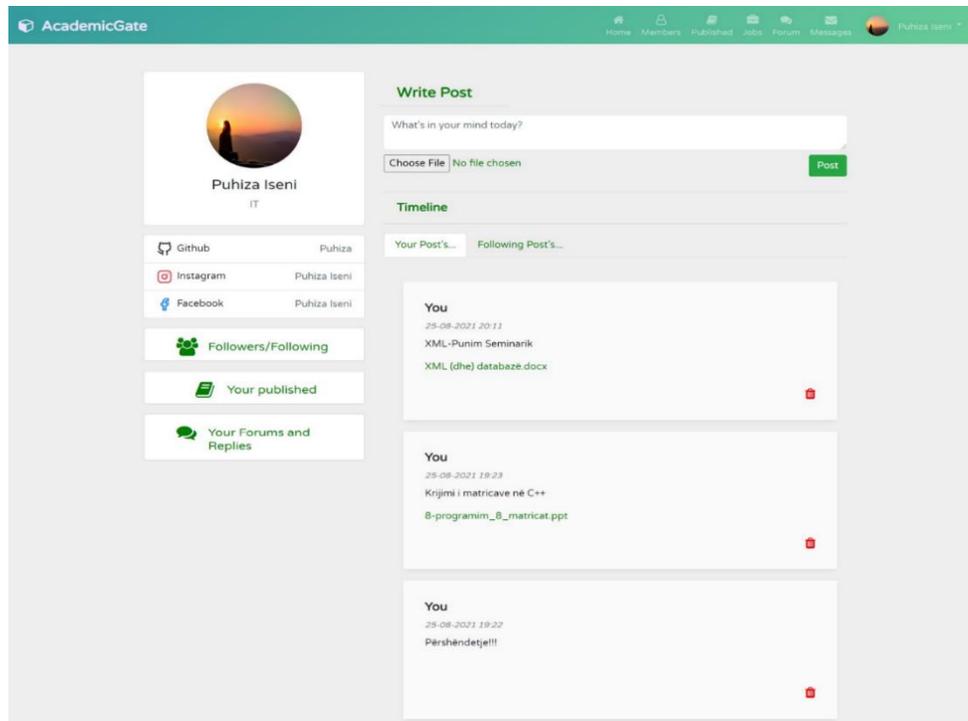
- Availability - the system is available anytime and anywhere. Every user has access and can post works, handle problems, comment and update personal data.
- Usability - the system is very simple to use.
- Performance - the system fulfills all user requirements.
- Security - the whole system is secure, as users' access to their profiles depends on their password.

## 6. User interface in the new platform - AcademicGate

For every user, a friendly and simple interface is important, so when we design a new interface, we must take into account the user's requests, needs and limitations to have a usable system.

Therefore, from the requests of the users (questionnaire) and *Table 1*, we concluded that we need completely a new system for both, the interface and functionality. The platform was named AcademicGate, as it is a synthesis of the two most used platforms Academia.edu and ResearchGate.

The aim of the system is to make it look easy to use at first glance. There are very simple functions and actions that can be executed with just one click, as in *Fig 1*. below.



**Fig 1.** Home Profile Page

## 7. Conclusions

Based on our analysis and comparisons between AcademicGate, ResearchGate and Academia.edu, we concluded that AcademicGate is more functional, secure, easy to use, accessible and more secure for all users. The system is flexible and can be modified and expanded in the future, depending on user's requirements. This paper explains the concept of socio-academic networks, the analysis and comparison of the ResearchGate and Academia.edu socio-academic networks with the AcademicGate platform, as well as the user requirements for a genuine socio-academic platform that will satisfy academic users.

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