

## A Study To Assess Initial Difficulties Encountered While Initiating Or Conducting Collaborative Research

Deepali Gour<sup>1\*</sup>, Kshitij Rana<sup>2</sup>

<sup>1\*</sup>Assistant Professor, UX, Jagran Lakecity University

<sup>2</sup>Assistant Professor, UX, Jagran Lakecity University

### ABSTRACT

Research has always been imperative to academics and scientific progress. Researchers document their rigorous work and circumstantial findings as a means to reach a wider and more substantial audience. There are various issues faced by researchers and young scholars, and research collaboration turns out to be one major concern when it comes to acclimatising multidisciplinary research and reaching out to domains different from their own. This approach of collaborating with fellow researchers from different disciplines has many upsides such as - visibility amongst peers, networking and access to resources. This study has worked around using qualitative and quantitative research methods, utilising surveys and interviews to gather and collate data from scholars and researchers who have either established themselves in the

virtue of or are stepping into Academic research, keeping an interdisciplinary approach in mind. Some initial themes that manifested after analysing the data produced were communication barriers, time management constraints, divergent research objectives, and challenges faced during hierarchical dynamics within collaborative teams. The purpose of this study was to

address the issues faced by researchers and find conclusive or potential solutions that can help

mitigate more effective and productive research collaboration within any system or organization. The insights that emerged from this study led us into the depth of complexities that are present in collaborative research and steered us in the direction of providing a system or a platform that can act as a valuable aid in fostering successful collaboration amongst researchers.

**Keywords** - collaborative research, interdisciplinary, research scholar, API score, academic resources

### INTRODUCTION

In an age of rapid information exchange and technological advancement, the imperative for research collaboration has emerged as a cornerstone of progress across diverse fields. The complex challenges and intricacies of modern society demand interdisciplinary and multifaceted approaches that transcend the boundaries of individual expertise. The subject of research collaboration has been discussed and explored extensively in the past few decades and the papers written around it have profoundly established the correlation between collaboration in research and the growth of all the stakeholders involved to bring dynamics to the area being worked upon. Research collaboration has been described in multiple ways where every author that talks about it has their own idea of what it is and how it is achieved. The textbook definition of collaboration states that it is achieved when a number of individuals work together in order to reach a common goal (Katz & Martin, 1995). For the sake of this research, the paper focuses on collaboration which involves researchers from similar or different academic backgrounds, different domains or different institutes/organizations converging on a common topic of interest and working together.

Unesco Science Report, 2021 shares the statistics of every country's top five foreign collaborations and India stands at the 17th position whereas countries like the USA and the UK top the charts.

While research collaboration is incredibly important, researchers often encounter numerous challenges when it comes to finding the right collaborator and effectively working together.

These challenges vary from being very foundational such as sharing of credits and responsibilities to being something very significant like finding a common purpose or disagreements on the area of interest (Bansal et al., 2019). Although these challenges have been addressed previously by many researchers, there is comparatively less amount of work done towards proposing solutions to resolve them (Meißner et al., 2022). When it comes to scholars who are just delving into the world of research, it becomes critical for their professional growth to work with senior researchers or with a cross-disciplinary approach (Shaikh, 2015). However, it becomes a challenge for them to reach out to others, find the right collaborators and take an interdisciplinary approach.

When it comes to interdisciplinary research, it not only involves researchers from varied backgrounds but also from different demographics and different expertise. It also varies from being academically oriented to being problem-oriented (Woollen, n.d.). This study focuses on highlighting themes in the challenges that evolve when scholars are looking to work collaboratively. The study keeps academic research at the centre and explores how researchers in different positions are tackling any such challenges that might have come to their pathway. From experienced researchers to recent scholars, the study takes into account the opinions and responses of everyone who is keen towards the approach of collaborative research. As collaboration and interdisciplinary practice in research become more and more significant, there is a dire need to address the difficulties scholars may come across while finding a collaborator whose interest aligns with theirs and this study attempts to explore possible answers to these difficulties.

### **Need for the Study**

The previous studies that have been conducted around the topic of research collaboration, while addressing the challenges in collaboration, show less orientation towards proposing any plausible ways to tackle them (Meißner et al., 2022). Addressing these challenges with a solution-oriented mindset becomes important for dynamic development. Large enterprises (consultancies, non-profits, civic institutions) embrace SDGs by doing CSR but face challenges in finding precedents. These organisations lack the combined theoretical and practical insight that research can provide for SDG implementation. (Banks et al, 2016). The existing platforms for publishing and collaborating on research lack user-friendly interfaces and intuitive design, often not aligning with user expectations. Navigating these platforms requires significant trial and error, which underscores the need for this research to address these usability challenges.

### **Scope of the Study**

The primary focus of this study lies in the exploration of challenges being faced by researchers while collaborating. The said collaboration is considered from multiple perspectives, intradisciplinary, interdisciplinary, cross-disciplinary and multidisciplinary. The study exclusively focuses on the difficulties encountered during the initial phases of collaborative research, from project conceptualisation to the formation of research teams. Along with that, the scope lies in the challenges within academic research environments only. The study will involve participants from diverse academic disciplines, ensuring a broad perspective on the difficulties encountered. The geographical scope of the study will be limited to a specific region or academic institution, avoiding a global perspective due to resource constraints.

### **Hypothesis**

**H1** - Collaborative research is negatively affected because of the communication gap and diverse modes of channels in between.

**H2** - The enhancement of research collaboration can be achieved through the establishment of an improved communication channel or the development of a platform characterized by user-centric experience and intuitive design.

## **REVIEW OF LITERATURE**

### **Research Collaboration**

A research initiative which involves the cooperation of more than one researcher, institution, organisation or community is said to be collaborative research, these kinds of collaborations help bring in diverse and multiple perspectives for the benefit of personal and societal growth.

The meaning of research collaboration cannot be justified by one statement and the deciding factor for it is what "Collaboration is to you?" If one wants to define research it would be people coming together with associations from different domains for the purpose of information sharing, and coordination of activities all working in synergy for a common goal (Melin, 2000).

### **Collaborative research in the modern era: Needs and Challenges**

When researchers collaborate on research projects, it promotes the development of effective partnership and communication while also focusing on making sure that every team member gets an equal and unbiased opportunity to showcase their skills and personal style of working out projects. It keeps in mind the various rules and regulations of the specific organization and paves a way to understand and align with the rules of the other organization. It has also been seen that research collaboration promotes ethical behaviour and motivates researchers to uphold truthfulness, fairness, and transparency during the course of the research project (Dua et al., 2022).

One of the other major factors that cannot be ignored is how cost-effective research collaborations can be. It's the modern-day barter system where the exchange of knowledge and expertise and resources is happening, helping each researcher to compensate for or enhance what they are lacking. Increased partnerships will save a lot of time and money, and it has been factually observed that breakthrough research frequently results in a collaborative form of research as compared to other research methods which are time-consuming.

Collaborative research has also been a support system for the commercial sector and academia and is regulated or supported by legislation, business or academics, for example, universities are allowed to negotiate patent rights with their partners from the industry under the act of Bayh -Dole Patent Reform Act of 1890- USA. (Berman, 2008).

Data holds a latent potential for innovation and research, which is now generally understood. However, collaborative data usage based on data interchange between the parties concerned is still a long way from being a norm and still confronts a number of difficulties. Information is everything as it has the potential for innovation and research and it has been widely accepted by everyone in the industry now. This information - data can only be collated with the help of collaborations and thus becomes a reason for interchange between parties on a national and international level.

According to the analysis, India's international collaboration increased at a pace of 12.27% throughout this time, from just 20.73% of articles with international collaboration in 2001 to 32.35% of papers with international collaboration in 2020 (Dua, 2022). The top cooperating nations for India throughout this time were discovered to be the USA, Germany, England, South Korea, and China, while significant subject-wise differences were also observed. About 50% of the articles with foreign collaborations feature an Indian researcher as the main (first) author, while more than 50% of the authors are from India. In terms of citation effect and social media visibility, it is also discovered that the Indian articles that have had foreign collaborations have a modest edge. The key policy ramifications and likely driving forces behind Indian foreign cooperation are examined.

Research collaboration also stresses the significance of sharing resources and competencies in addition to the idea of communication.

Collaboration can take place at five levels

### **1. Disciplinary Research**

We are referring to disciplinary research, which occurs when each discipline addresses its target or purpose using its own set of instruments (methodological approaches) without inter-discipline communication. The disciplines provide the research's beginning points and predetermine its results.

### **2. Interdisciplinary Research**

We will be adopting the Lyll et al. (2011) definition of interdisciplinary research. She defines research as investigating a problem from a variety of disciplinary perspectives, during which contributions and actions from various disciplines are acknowledged and collated to produce

systematic results. This type of research project expands upon the theoretical underpinnings of several academic fields and it may be further broken down into **academic and problem-focused categories**.

#### **2.1 Academic**

This aims at addressing problems in academia where domains or disciplines have reached a specific tangent where the involvement of new methodological approaches from various other disciplines is required. This category of research grows on the idea of creating "new homes" for themselves, it promotes the idea of creating new disciplines or sub - sub-sub-disciplines within the existing discipline lol matrix.

#### **2.2 Problem-focused**

Interdisciplinary research can be problem-focused, addressing socially relevant issues and policy challenges. It emphasizes bridging the gap between knowledge and practical solutions, often involving collaboration with researchers from diverse disciplines. However, this approach may yield solutions that are context-dependent and not a long-term research "home" for the researchers involved (Woollen, n.d.).

### **Opportunities and Challenges Opportunities:**

Interdisciplinary research offers the potential for groundbreaking discoveries with practical applications, an expanded toolbox of methodologies, a broader knowledge base, and fresh insights. It fosters adaptability, a higher volume of projects, and access to niche markets.

Collaboration across diverse disciplines leads to larger networks and more cooperative opportunities, making the work engaging and fulfilling.

### **Challenges:**

Maintaining a clear research identity can be challenging, risking deviation from one's trajectory. The evaluation of interdisciplinary research can be complex and undervalued, leading to competitiveness issues. Organizational cultures may not always support interdisciplinary research, hindering career advancement and occasionally causing feelings of isolation or self-prioritization.

### 3. Multidisciplinary Research

Multidisciplinary research aims to achieve a common goal by leveraging expertise from various specialized fields. It involves investigating an issue using a diverse range of academic disciplines and methodologies to contribute uniquely to existing knowledge. This approach is particularly popular in emerging nations and is considered an innovative scholarly method.

In a multidisciplinary approach, knowledge from different fields is applied to a specific problem, allowing complementary insights to be integrated for a comprehensive conclusion. The primary focus remains the research question, and even if individual findings vary, the data is synthesized. This contemporary research approach emphasizes multidisciplinary (Woollen, n.d.).

Benefits of Embracing a Multidisciplinary Research Approach

- Utilized across various domains.
- Driven by problem-solving, leading to widespread adoption and notable growth.
- Incorporates diverse strategies for innovation-driven solutions.
- Unleashes Creative Potential
- Space for Skill Enhancement
- Yields High-Quality Innovations

Challenges Associated with this Approach:

- Coherence Concerns
- Oversight Gaps

### 4. Transdisciplinary Research

Transdisciplinarity goes beyond individual disciplines, bridging the gaps between them. It treats research subjects as complex, interconnected systems rather than confined to one scientific field. This approach also seeks to involve diverse sectors of society in addressing complex issues that affect multiple stakeholders. Through dialogue and collaboration among participants, transdisciplinarity aims to co-produce new understandings of the world and provide solutions to complex challenges that transcend scientific boundaries and stakeholder groups.

Such initiatives, including mergers, affiliations, and consortia, facilitate cross-disciplinary idea exchange, skill acquisition, project funding, broader research reach, and other significant benefits. Additionally, individual researchers are driven by curiosity, enjoyment, and the desire to explore adjacent fields in collaborative research endeavours.

Opportunities

- Our era is marked by constant change and innovations.
- A wide range of issues faced by humanity require solutions.
- Problems vary from simple tech connectivity to major concerns like pollution.
- Collaboration essential: People joining forces, sharing expertise.
- Diverse researchers can tackle pressing global problems.
- Collaborative efforts yield solutions, technologies, and interventions.
- The fusion of professions leads to impressive achievements.

#### Initiating Collaboration: Approaching Others

Initiating collaboration is essential in academia and research, but there are no universal standards to follow when starting a partnership. To find potential collaborators, utilize both physical and digital communication channels within your organization's network. Seek out individuals who share similar interests and curiosities.

Real-life interactions at conferences, workshops, and seminars are productive and efficient ways to connect with potential collaborators. You can also use professional social media platforms like LinkedIn, Twitter, and email for networking. Collaboration in research can be categorised into: Vertical Research Collaboration (VRC): Researchers focus on specific topics within their field and partner with others in related disciplines, encouraging interdisciplinary cooperation. VRC is common in various academic fields but less so in business and management studies. The role of the dissertation supervisor is crucial in VRC, as they guide doctoral students as co-authors in research projects.

Horizontal Research Collaboration (HRC): This arrangement allows young researchers to explore a wide range of research options across different domains. It is prevalent in fields like management and business studies, offering doctoral and postdoctoral students opportunities to collaborate and delve into related academic areas.

Additionally, there is the Mentor-Mentee arrangement where mentors guide and train the next generation of researchers,

addressing challenges faced during research projects and providing updates on field-related policies and guidelines (Shaikh, 2019).

### Sustainable Development Goals and Research Collaboration

Addressing the challenge of implementing Sustainable Development Goals (SDGs) involves operational organizations like consulting firms, non-profits, and civic institutions offering practical guidelines. However, these guidelines often lack the depth of theoretical and empirical knowledge found in management research. While SDG-focused management research is robust, it struggles to provide actionable guidance due to a gap between theoretical frameworks and practical implementation (Dziubaniuk, 2021)

This disconnect emphasizes the need for stronger collaboration between practical application and academic exploration to bridge the gap between management theory and practice, especially in sustainability studies. To achieve this, there's a call to integrate scholarly management literature with practical guidelines for SDG implementation, creating a more informed and process-based framework (Payumo, 2021).

### TOOLS FOR COLLABORATION

Elsevier's Mendeley platform is a free information-sharing tool that enables individuals and teams to share and annotate articles collaboratively. Users can set up cooperatives for shared areas and engage in discussions and annotations.

Industry Fellow Duncan Casey from the Bristol Centre for Functional Nanomaterials highlights Mendeley's usefulness in managing large groups of people across multiple sites. It functions like Google Docs, allowing numerous users to contribute notes and information. The platform offers an interface to categorize information, facilitate discussions, and easily browse through notes and ideas while surfing the internet.

### COMPARATIVE STUDY OF EXISTING PLATFORMS

To understand the tools that are being majorly used as a channel for communicating thoughts by the research community currently, which also occurred repetitively during the research, a comparative study was done on two major areas: their usability and their user interface. The following table summarises the findings of the study.

	Academia.edu	Google Scholar	ResearchGate
Login & Setup	Easy	Doesn't allow profile creation if you have no work uploaded	Easy, requires organisation email
User Interface	Outdated	Minimal, Similar to Google	Orderly
Access to materials	Ample work available	Requires clarity on what user is looking for	Good access
Activity	Less active users in terms of networking	Less active users in terms of networking	Less active users in terms of networking
Recommendations	Not collaboration-friendly, discipline-specific only	No recommendations without profile	Within the organisation/discipline only, poses challenges to interdisciplinary collaborations

**Table 1.** Comparative study of online platforms for researchers

### RESEARCH OBJECTIVES

1. To address the difficulties being faced by researchers while collaborating or taking an interdisciplinary approach in their work.
2. To review the current methods of conducting collaborative research.
3. To suggest solutions enabling scholars to identify suitable collaborators aligned with their research interests, expand networks, and address challenges in initiating collaborative research.

## RESEARCH METHODOLOGY

### Research Design

Research becomes significant when there is a culmination of information/knowledge collected through works done in the past and added information gained through first-hand study. A mixed-method approach has been applied where both qualitative and quantitative research methods have been used. This approach is beneficial to this study because it allows the collection of factual data with stats and numbers as well as more contextual and interpretational data through the thoughts and opinions of the population.

### Data Collection Technique

As the research area revolves around the challenges being faced by scholars in collaborating with others, it becomes imperative to take their thoughts and opinions into consideration while also understanding what previous data/information tells us about this matter. The quantitative data has been collected through surveys. For the qualitative information and insights, themes were gathered from the secondary research and interviews were taken for primary research.

The primary research was broadly divided into two phases, surveys and interviews.

**I.** Survey- A structured questionnaire was developed using Google Forms as the online tool and circulated using online platforms like WhatsApp and LinkedIn. The targeted respondents for the survey were PhD holders, academicians, PhD scholars and exploratory researchers.

**II.** Interviews- A semi-structured approach was taken to interview the population. The targeted respondents for interviewing were PhD holders and PhD Scholars. The interviews were taken to have in-depth conversations with doctorates and scholars to get a more profound understanding of their views on research collaboration and the challenges that revolve around it.

### Data Analysis Tools

Data analysis primarily relies on radar charts, offering a visual means to transform complex data into insights by plotting multiple influencing factors as polygons for comparison and analysis (Nowicki & Merenstein, 2016). Qualitative research findings were analyzed using affinity mapping, a tool for identifying and organizing recurring words, phrases, or topics within the data (Grass, 2021).

### Sampling

For sampling, purposive sampling, a non-random approach based on specific participant traits relevant to the study, was employed to reach the targeted population. The study included 50 participants to align with the research area's significance (Aransiola, 2023).

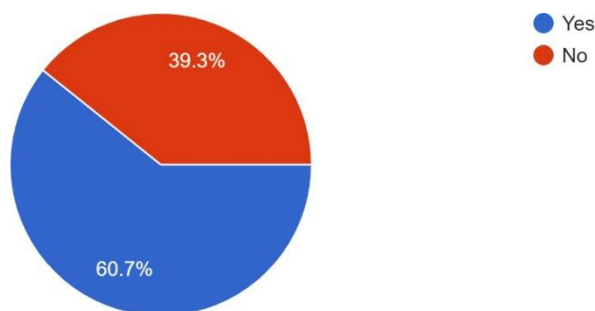
## DATA ANALYSIS

The primary data collection methods provided valuable insights into researchers' perspectives on collaboration. The sample population, consisting of researchers from various fields, revealed commonalities in their approach to networking and finding collaborators for research.

Regarding their designations, 82% were associated with academia, while the remaining 18% were involved in research for industrial projects, theses, or exploration. This alignment with research-focused roles was consistent with the sample population's inclination toward research.

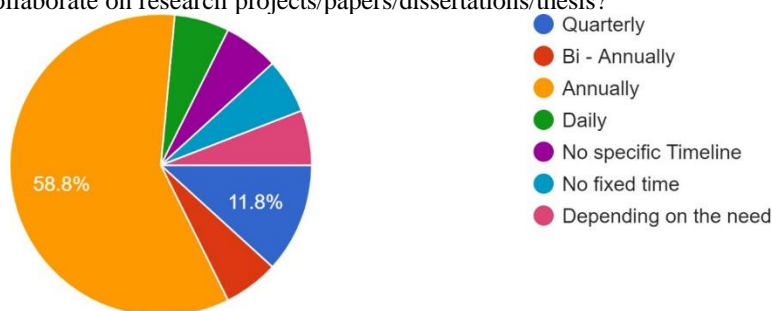
Participants expressed a wide range of research interests, indicating that collaboration is not limited to any specific domain or discipline but is an approach embraced across various fields.

The questionnaire was divided into two categories: one for those with collaborative research experience and the other for those who had not worked collaboratively. When asked if they had engaged in collaborative research, 60% responded affirmatively, while the remaining participants had not yet collaborated.



**Figure 1.** Percent of respondents having done collaborative research

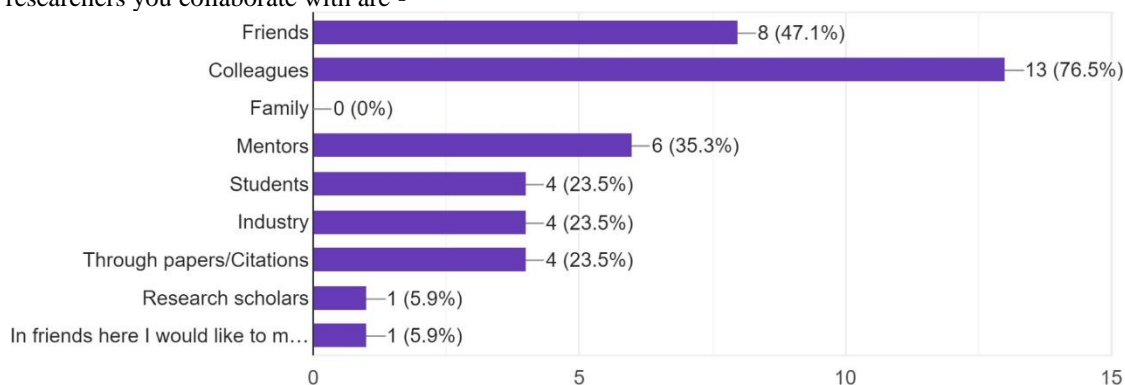
Q. How often do you collaborate on research projects/papers/dissertations/thesis?



**Figure 2.** Frequency of research collaboration

The question was asked to the participants who responded yes to having worked collaboratively on a research to understand the frequency of collaboration among them. Most of the respondents (54%) chose annually, indicating that collaboration does not happen very often. Only a minority of respondents (15.4%) stated that they collaborate bi-annually or quarterly. The remaining responses stated that the participants do it whenever it is required or that there is no fixed frequency. This concludes that while the importance of collaboration is well established and accepted by the community, there is still comparatively less frequency of collaborations among researchers.

Q. The researchers you collaborate with are -



**Figure 3.** People with whom respondents have collaborated

A majority of researchers (75%) tend to collaborate with other researchers who are present in their proximity or are within their reach. They may be their friends or colleagues. This is followed by the choice of collaboration with their mentors. These most opted choices represent the fact that researchers tend to find collaborators who are comparatively easier to reach out to.

But in doing so, they also confine their circle of the network to that proximity only. The next two options chosen by some respondents (18.8%) were collaboration with industry and with researchers that they approach through citations or papers. The number of researchers reaching out to people out of their proximity is less as compared to the ease they find in collaborating with people that they know and meet more frequently. The rest of the responses included collaboration with students or research scholars.

Q. How do you find collaborators for research projects/papers/dissertations/thesis?

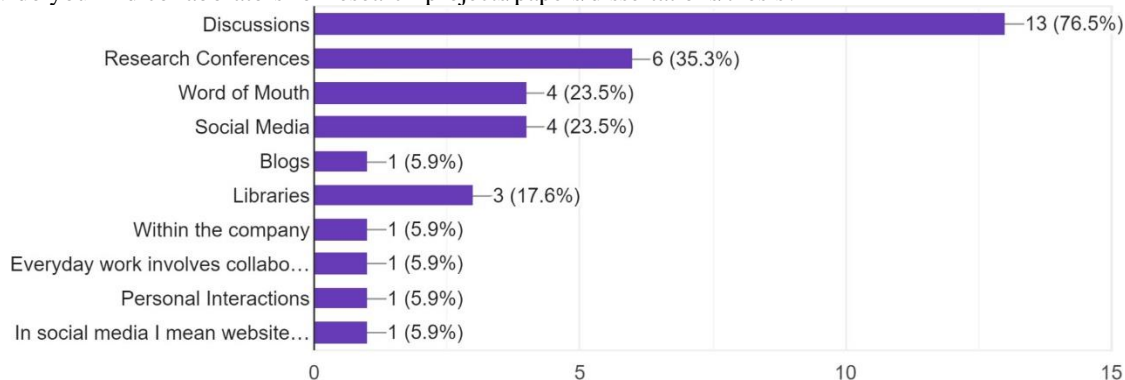


Figure 4. Ways through which researchers find collaborators

When asked about the ways through which respondents find and connect with others to collaborate, a majority (75%) responded that they meet during discussions. This indicates that meeting people in person and finding a common area of interest to work together on while conversing is, according to the respondents, the most widely taken approach by the researchers. This is followed by 31.3% of participants collaborating with people they meet up with and get in dialogue with during research conferences. Research conferences are a good way to build a strong network within the community. This approach also helps in working together with people outside of your close circle of acquaintances. Other means of approaching collaborators, word of mouth, and social media platforms for researchers like Google Scholar, Academia, etc., are the least chosen options. This can be analysed as an insight that there is less to no usage of online platforms to initiate collaborative research among the community.

Q. What are your motivations for research collaboration?

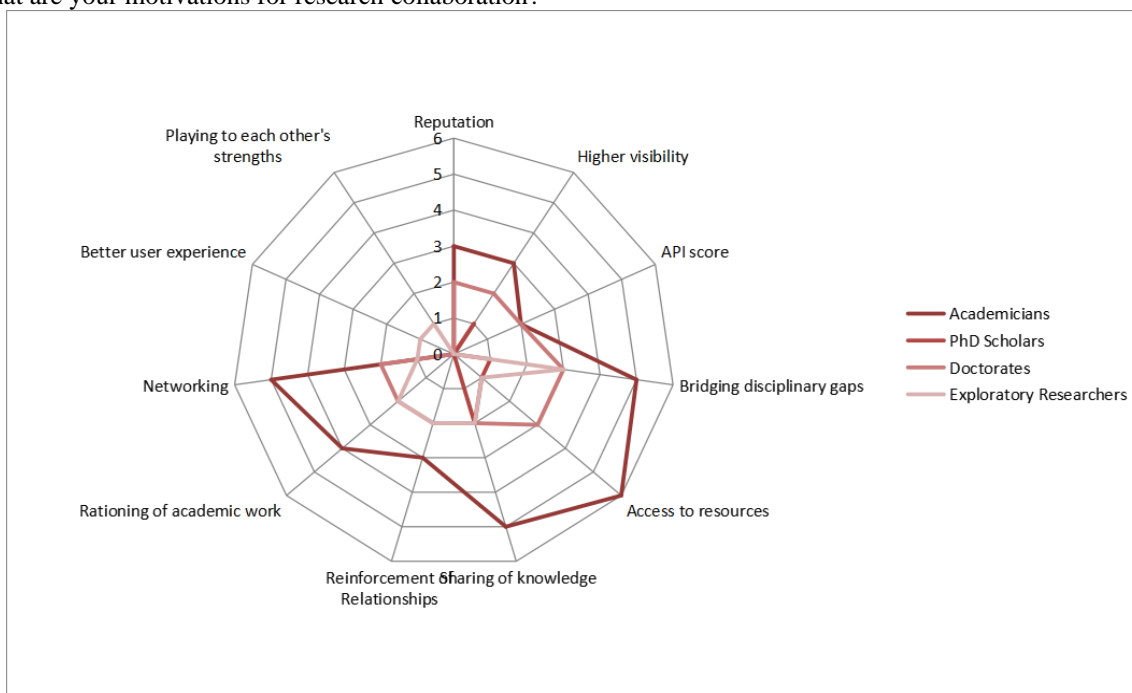


Figure 5. Radar chart on motivations for research collaborations

When asked about their motivations for pursuing collaborative research, most respondents cited knowledge sharing, resource sharing, and bridging interdisciplinary gaps. This underscores the belief among researchers that collaboration injects dynamism into their work. Additionally, many mentioned the equitable distribution of academic work as a significant motivator, highlighting that collaborative research offers equal opportunities for academic advancement to all participants. Networking, relationship-building, and community recognition emerged as other important motivations for collaboration, collectively indicating that collaboration contributes to individual growth and recognition.



Q. What are the difficulties you faced during collaborative research?

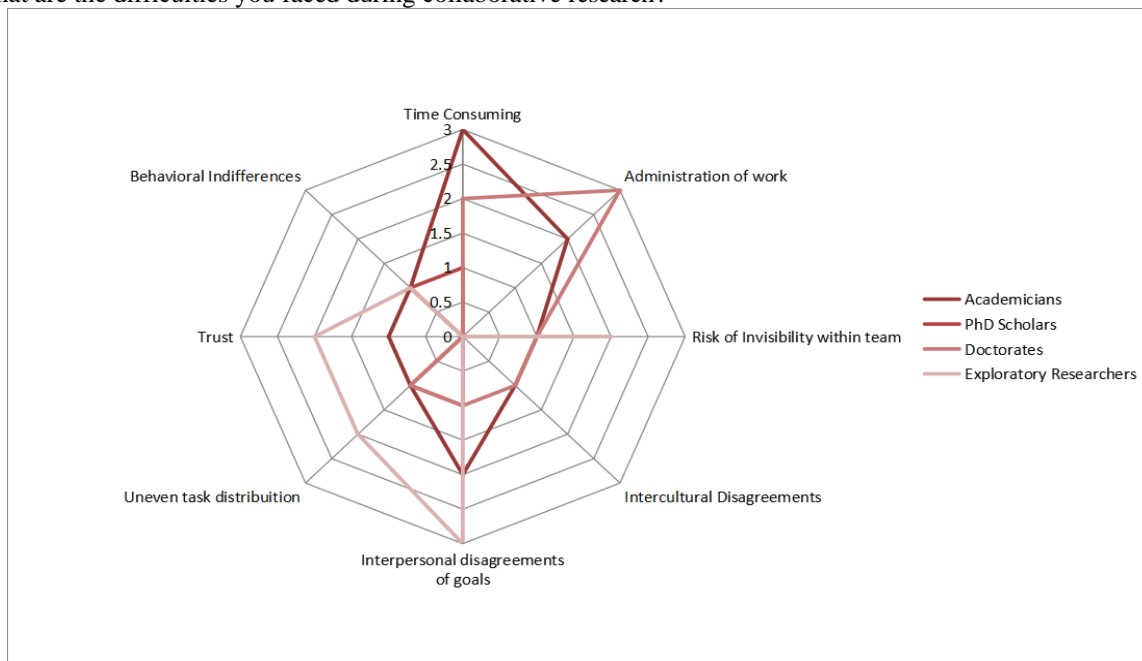


Figure 6. Radar chart on difficulties faced around collaborative research

The major challenges(56.3% & 43.8%) being faced by researchers who have collaborated on at least one research project are the disagreement on the administration of work and the goals and outcomes of the research. The second most opted difficulty(43.8%) was the time consumption of research of a collaborative nature. This could be due to the fact that if the collaboration is being done outside the immediate circle, it becomes difficult to find a common timeframe to follow.

Q. What platforms do you use for finding collaborators for research projects/papers/dissertations/thesis?

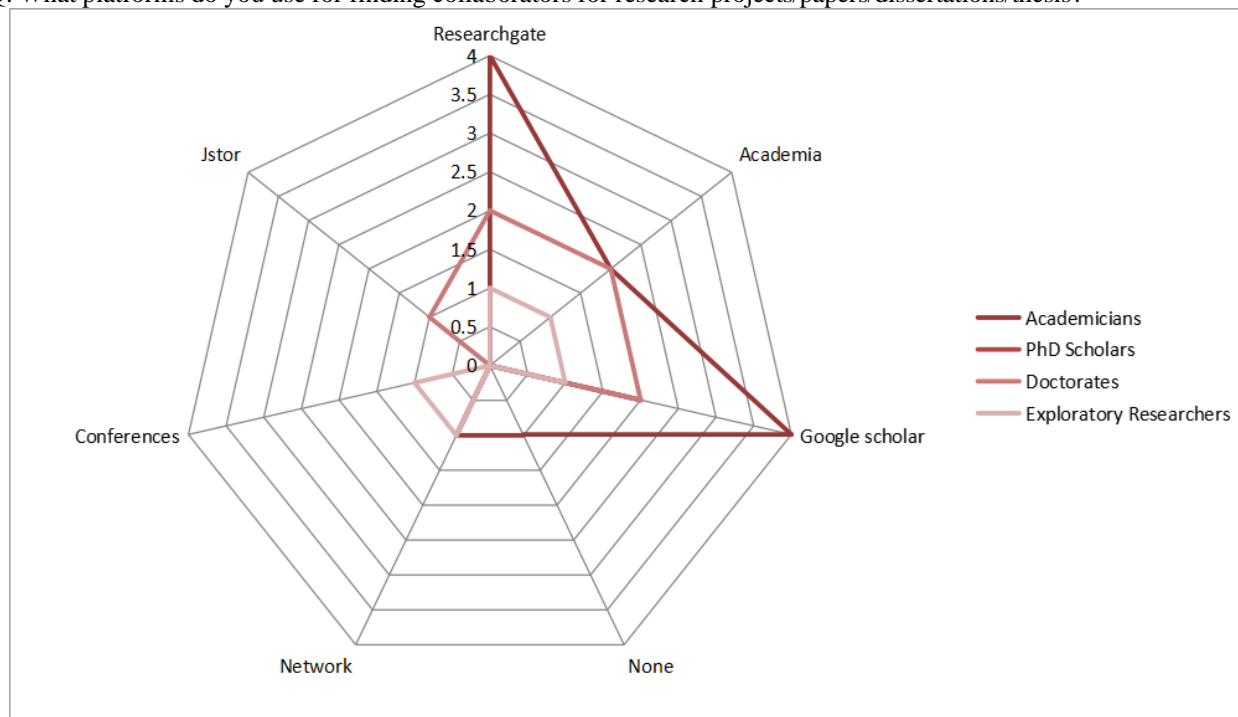
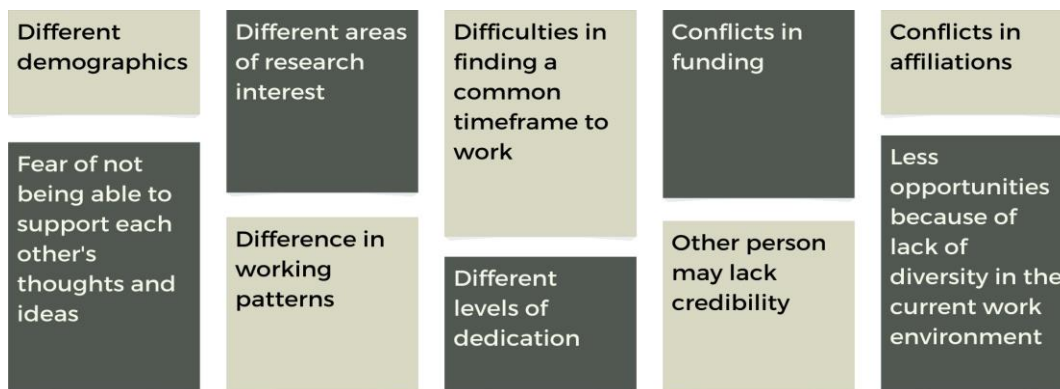


Figure 7. Radar chart on platforms used for finding collaborators

Among researchers who have collaborated during their academic span, Google Scholar surfaced as the most widely

opted(56.3%) platform to find collaborators, followed by ResearchGate(50%) & Academia.edu (31.3%). Further, the following question was asked by respondents who haven't worked on a collaborative research project yet.

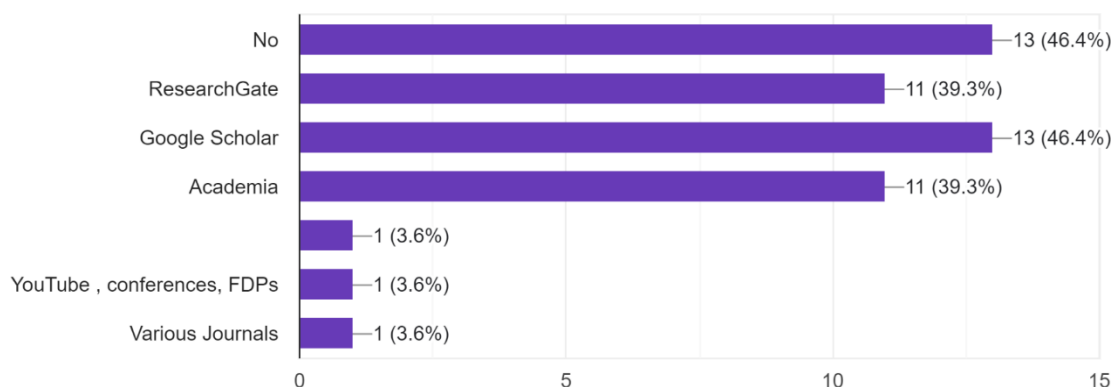
Q. Are there any challenges that you might be facing as a reason for not collaborating with other researchers? If so, please list them out.



The major challenges that could be themed out were difficulties in finding commonalities among collaborators, along with the lack of diversity in the disciplines in the work environment.

The following question was asked to understand the overall awareness of some of the most commonly termed online platforms for researchers globally.

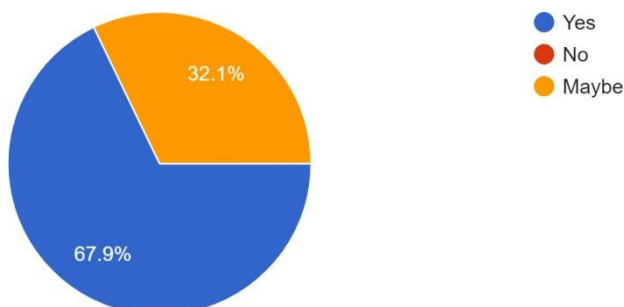
Q. Are you aware of any platforms that help you find research collaborators for research projects/papers /dissertations/thesis?



**Figure 8.** Awareness about online platforms for research collaborations

While most of the respondents(48%) answered that they do not know of any such platforms, Google Scholar stands out as the most widely known platform among the rest of the responses(44%).

Q. Would you be interested in a platform that allows you to know fellow researchers in and around your organization/domain/area of interest willing to collaborate on research projects?



**Figure 9.** Interest towards a research-friendly digital platform for collaboration

The need for a platform that provides opportunities for collaboration was made clear by the responses. Two-thirds (66.6%) of the respondents gave a positive reply to the requirement of such a platform while the rest also showed an inclination towards the possibility of the success of such a mode that supports research collaboration.

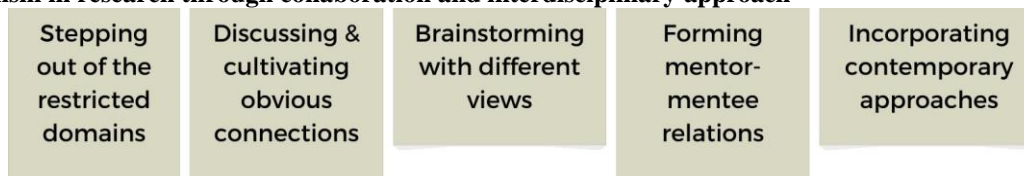
Interviews were also taken with PhD holders and PhD scholars to understand their opinions on the subject matter from the point of view of someone who has already been through such challenges or is facing them as they continue their research work. These interviews and discussions provided an in-depth outlook on the underlying difficulties that researchers have faced with the collaborative approach, as well as, how critical it is to expand one's networking circle in this community.

Some common themes that emerged from the interviews were-

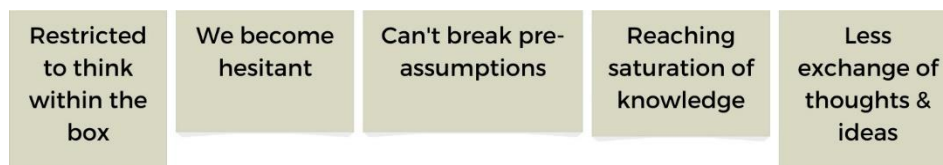
**1. Importance of research collaboration**



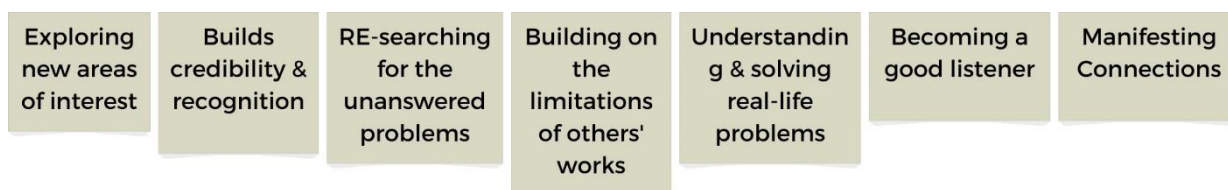
**2. Dynamism in research through collaboration and interdisciplinary approach**



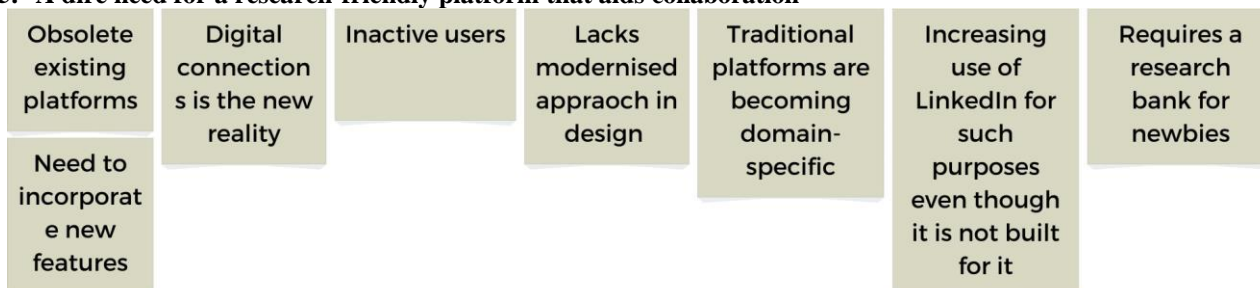
**3. Limited growth in one's own circle**



**4. Cultivation of individual growth while collaborating**



**5. A dire need for a research-friendly platform that aids collaboration**



With their years of experience researching and mentoring, the most common theme that came out from all the interviewees was the gap that lies between researchers and the vast community that they can be a part of.

## RESULTS & FINDINGS

### Inferences from the Survey

Throughout this research project, it has become evident that there is a significant demand for a research-friendly platform. This conclusion is drawn from the outcomes obtained through the quantitative study. The survey uncovers many facets such as the acknowledgement by researchers towards the significance of research collaboration and their preference for collaborating within their immediate organizational networks and familiar connections. The conventional means of finding collaborators, such as conferences, discussions, and faculty development programs, continue to be the primary channels for researchers to locate potential collaborators. Unfortunately, this often limits the potential for both intra-disciplinary and cross-disciplinary collaboration. The inclination for engaging in research collaboration is considerably influenced by the researcher's position within their respective organization. Despite the existence of online platforms like ResearchGate, Google Scholar, and Academia, researchers display a moderate level of awareness and usage of these platforms, primarily due to their less-than-user-friendly interfaces. Two significant barriers to research collaboration are namely, the difficulty in identifying common research interests and the lack of a suitable platform to facilitate collaboration. These challenges contribute to considerable friction in the collaboration process.

### Inferences from the Interview

From the common themes that emerged from the interviews, this could be concluded that researchers unanimously agree that multi-faceted collaboration improves an individual's intellect as well as other skills associated with it. The affinities that all the interviewees talked about such as the limitations on growth while being in closed circles and not building strong networks, be it in intra or inter-disciplinary, and the manifestations of connections of thoughts and interests indicate the gap that lies in the adaptation of collaborative approach. There was also a strong agreement towards the possibility of this gap being filled by the introduction of a digital, modern-day, research-friendly and user-centric platform that closes the interdisciplinary boundaries, both nationally and internationally.

## DISCUSSION & SUGGESTIONS

Research collaboration holds immense significance by injecting fresh perspectives through the integration of external influences from both intra and transdisciplinary domains. This collaborative approach acts as a catalyst, enhancing academic rigour and establishing a robust presence within the scholarly arena. While collaborating within familiar circles is valuable, it can inadvertently constrain exposure to diverse fields, impeding the exploration of novel research dimensions and opportunities for experiential learning. The embrace of interdisciplinary collaborations not only amplifies a researcher's credibility but also nurtures the development of crucial skills in areas like project management, effective communication, and synergistic teamwork. Two prominent challenges come to the fore: the need to identify shared interests and the lack of a suitable collaborative platform, leading to friction in collaboration efforts. Despite the availability of platforms such as ResearchGate, Google Scholar, and Academia, their adoption remains moderate due to complex interfaces and a focus on sharing prior information rather than actively promoting collaboration. The prevalent non-user-friendly interfaces of these platforms underscore the urgency for a more user-centric approach. Notably, recommendations from practice-based organizations for Sustainable Development Goal (SDG) implementation reveal a noticeable gap between theoretical propositions and practical execution. This study's distinctive contribution lies in pinpointing and addressing usability concerns, aiming to facilitate smoother and more effective research collaboration.

## CONCLUSION

Research collaboration holds profound significance and has garnered widespread acknowledgement within the community. However, like all positive endeavours, collaborative research presents its share of challenges, particularly during the phase of team formation and initiation. It becomes paramount to effectively address and mitigate these challenges. This study undertook the task of precisely that, while also taking into account the well-established channels that researchers have relied upon for years. Despite the numerous factors tied to collaboration that contribute to personal growth, credibility, and recognition, researchers often lean toward collaborating within their existing circles. Notably, the absence of a platform that addresses the limitations of current channels emerged as a key reason for the lack of dynamic collaboration.

This study sought to reassess current approaches to research collaboration and spotlight their shortcomings. The existence of a platform capable of overcoming initial collaboration challenges holds promise for enhancing collaboration and thereby aligning with Sustainable Development Goal (SDG) 17, which focuses on fostering partnerships for overarching goals.

## REFERENCES

1. Aransiola, O. (2023). Judgmental Sampling: Definition, Examples and Advantages. Retrieved from <https://www.formpl.us/blog/judgmental-sampling-definition-examples-and-advantages%20%20%0d7>
2. <https://www.formpl.us/blog/judgmental-sampling-definition-examples-and-advantages%20%20%0d7>
3. Bansal, S., Mahendiratta, S., Kumar, S., Sarma, P., Prakash, A., & Medhi, B. (2019).
4. Collaborative research in modern era: Need and challenges. *Indian journal of pharmacology*, 51(3), 137.
5. Berman, E. P. (2008). Why Did Universities Start Patenting? Institution-Building and the Road to the Bayh-Dole Act. *Social Studies of Science*, 38(6), 835-871. Retrieved from <https://www.jstor.org/stable/25474613>
6. Choudhary, A. (2015, November 13). Multidisciplinary Research. Retrieved from <https://www.lawctopus.com/academike/multidisciplinary-research/>
7. Dua, J., Singh, V. K., & From, H. H. L. (2022). Measuring and Characterizing International Collaboration Patterns in Indian Scientific Research. Retrieved from arXiv preprint: <https://arxiv.org/abs/2204.00450>
8. Dziubaniuk, O., Ivanova-Gongne, M., & Berdysheva, E. (2021). Challenges of network interaction in managing sustainable development projects in developing countries: Case of an international consulting company. *Critical Perspectives on International Business* <https://www.emerald.com/insight/content/doi/10.1108/cpoib-08-2020-0115/full/html>
9. Elo, S., Kaarianinen, M., Kanste, O., Polkki, R., Utriainen, K., & Kyngas, H. (2014). Qualitative Content Analysis: A focus on trustworthiness. *Sage Open*. 4:1-10.
10. Florian Meißner, F., Weinmann, C., Vowe, G. (2021). Understanding and Addressing Problems in Research Collaboration: A Qualitative Interview Study From a Self-Governance Perspective. *Frontiers in Robotics and AI*, 8. <https://doi.org/10.3389/frma.2021.778176>
11. Grass J. (2021). What is an Affinity Map? (And How to Make One). *Career Foundry*. Retrieved from <https://careerfoundry.com/en/blog/ux-design/affinity-map/>
12. Interdisciplinary Research & IAD Development Team. (n.d.). Interdisciplinary Research: A
13. guide for early career researchers. University of Edinburgh Institute for Academic Development. [http://www.docs.hss.ed.ac.uk/iad/Researchers/Research\\_staff/Interdisciplinary\\_Research\\_a\\_guide\\_for\\_ECR\\_IAD.pdf](http://www.docs.hss.ed.ac.uk/iad/Researchers/Research_staff/Interdisciplinary_Research_a_guide_for_ECR_IAD.pdf)
14. Katz, J. S., & Martin, B. R. (1997). What is research collaboration?. *Research policy*, 26(1), 1-18.
15. Melin, G. (2000). Pragmatism and self-organization: Research collaboration on the individual level. *STINT (The Swedish Foundation for International Cooperation in Research and Higher Education)*, Skeppargatan 8, SE-114 52 Stockholm, Sweden. Received 17 March 1997, Revised 2 March 1999, Accepted 7 April 1999, Available online 21 January 2000. URL: <https://www.sciencedirect.com/science/article/abs/pii/S0048733399000311>
16. Nowicki, H. & Merenstein, C. (2016). Radar Chart. Retrieved from [https://www.cs.middlebury.edu/~candrews/showcase/infovis\\_techniques\\_sl16/radar\\_chart/](https://www.cs.middlebury.edu/~candrews/showcase/infovis_techniques_sl16/radar_chart/)
17. Payumo, J., He, G., Manjunatha, A. C., Higgins, D., & Calvert, S. (2021). Mapping Collaborations and Partnerships in SDG Research. *Frontiers in Research Metrics and Analytics*, 5, 612442. <https://doi.org/10.3389/frma.2020.612442>
18. Shaikh, A. A. (2019, August 30). A brief guide to research collaboration for the young scholar. Working with other scholars can boost your profile, but some arrangements are more likely to lead to publication. Retrieved from <https://www.editage.com/insights/a-brief-guide-to-research-collaboration-for-the-young-scholar>
19. UNESCO. (2021). UNESCO Science Report 2021: Data visualization - Trends. Retrieved from <https://www.unesco.org/reports/science/2021/en/dataviz/trends>
20. Woollen, E. (n.d.). Interdisciplinary Research: Making the most of the opportunities and navigating the challenges for early career researchers. Retrieved from [http://www.docs.hss.ed.ac.uk/iad/Researchers/Research\\_staff/Interdisciplinary\\_Research\\_a\\_guide\\_for\\_ECR\\_IAD.pdf](http://www.docs.hss.ed.ac.uk/iad/Researchers/Research_staff/Interdisciplinary_Research_a_guide_for_ECR_IAD.pdf)