

Gender Differences in Online Settings

Case of Study English Students At the University of Djilali Bounaama Khemis Miliana

Allik Hadil
Selmaoui Ikram
Belarbi Chaima

Department of English,
Faculty of Letters and Languages

University of Djilali Bounaama Khemis Miliana, Algeria

Dr KORAN Aziza



Djilali Bounaama Khemis Miliana University

Faculty of Letters and Languages

Department of English

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Candidate:

Allik Hadil

Selmaoui Ikram

Belarbi Chaima

Supervisor:

Dr. KORAN Aziza

Board of Examiners:

Habiche Benyousef

Koran Aziza

Alili Abdelhamid

President

Supervisor

Examiner

2023-2024

Declaration

We hereby declare that the substance of this dissertation is the result of our investigation due to the reference of acknowledgement made when necessary to the whole of other researchers.

Dedications

In the Name of Allah, The Most Merciful, The Most Passionate

*This dissertation is dedicated to our parents. You have taught us to fight, win, and enjoy the taste of success, but never give up. For you, I say:

To the one who taught us the meaning of patience

To the wonderful woman in this world

Our dear Mother

To the person who always makes us proud of our works

To the most respected man in this world

Our dear Father."

I ask ALLAH to make you happy, make you smile, guide you safely through every mile, grant your wealth, give you health, and most of all, grant you PARADISE.

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{ Thank you }

Abstract

Gender differences in online settings comprehension is crucial nowadays leading to better targeting and engagement, this awareness promotes equality and inclusivity in digital spaces. Therefore, the present study aims at examining behavioral variances between male and female users within online technology communities at Djilali Bounaama university Khemis Miliana, as well as casting light on the impact of gender on user behavior in online technology spaces. Moreover, the research design of the current study is exploratory and descriptive adapting a single site case study. Throughout the process of this research, and for the sake of collecting data, both qualitative and quantitative tools were utilized. The instruments operated in this study were an open-ended survey for teachers as well as a multi-choices questionnaire of the participants. The previously mentioned instruments helped the researcher to gain more understanding of the issue in hand. The findings of this research revealed significant behavioral disparities between male and female users within online technology communities. Male students demonstrated higher levels of participation and engagement in online platforms compared to their female counterparts. Additionally, female students reported experiencing higher levels of stereotype threat and gender bias in online interactions. Teachers' perspectives shed light on the challenges and opportunities presented by gender diversity in digital spaces. They highlighted the need for targeted strategies to address gender disparities and foster inclusivity and equity in online communities. Recommendations include implementing gender-sensitive policies, providing training on unconscious bias, and creating supportive online environments that encourage equal participation regardless of gender. Thus, based on the outcomes of this research recommendations for an inclusive and equitable learning environments for all participants have been advocated.

Keywords : Gender,Communities, Interactions, Disparities , Inclusivity, technology, spaces, environments .

ملخص

فهم الفروق بين الجنسين في البيئات الإلكترونية أصبح أكثر أهمية من أي وقت مضى. يؤدي هذا الفهم إلى تحسين استهداف المشاركين وزيادة تفاعلهم، ويعزز المساواة والشمولية في الفضاءات الرقمية. لذلك، تهدف هذه الدراسة إلى فحص الفروق السلوكية بين الطلاب الذكور والإناث داخل المجتمعات التكنولوجية عبر الإنترنت في جامعة الجليلي بونعامة خميس مليانة، وأيضاً تسليط الضوء على تأثير الجنس على سلوك المستخدم في هذه الفضاءات. تم تصميم البحث الحالي ليكون استكشافياً ووصفياً، ويعتمد على دراسة حالة في موقع واحد. خلال عملية البحث، تم استخدام أدوات نوعية وكمية لجمع البيانات. شملت الأدوات استبياناً مفتوح النهاية للمعلمين، واستبياناً متعدد الخيارات للمشاركين. ساعدت هذه الأدوات الباحثين على فهم القضية بشكل أعمق كشفت نتائج البحث عن وجود فروق سلوكية كبيرة بين الطلاب الذكور والإناث في المجتمعات التكنولوجية عبر الإنترنت. أظهر الطلاب الذكور مستويات أعلى من المشاركة والانخراط مقارنة بالطالبات. من ناحية أخرى، أفادت الطالبات بتعرضهن لمستويات أعلى من التهديد بالقولبة النمطية والتحيز الجنسي في التفاعلات عبر الإنترنت. وجهات نظر المعلمين ألفت الضوء على التحديات والفرص الناتجة عن التنوع الجنسي في الفضاءات الرقمية. أكدوا على ضرورة وجود استراتيجيات مستهدفة لمعالجة الفوارق بين الجنسين وتعزيز الشمولية والإنصاف في المجتمعات عبر الإنترنت. تشمل التوصيات تنفيذ سياسات تراعي الفروق الجنسية، وتقديم تدريبات حول التحيز اللاواعي، وخلق بيئات دعم عبر الإنترنت تشجع على المشاركة المتساوية. للجميع بغض النظر عن الجنس. استناداً إلى نتائج هذا البحث، تم التوصية بخلق بيئات تعليمية شاملة ومنصفة لكل المشاركين.

. **الكلمات المفتاحية:** الجنس، المجتمعات، التفاعلات، الفوارق، الشمولية، تكنولوجيا الفضاءات البيئات التواصلية

Résumé

Comprendre les différences entre les sexes dans les environnements électroniques est devenu plus crucial que jamais. Cette compréhension permet d'améliorer le ciblage des participants et d'accroître leur engagement, tout en favorisant l'égalité et l'inclusion dans les espaces numériques. Ainsi, cette étude vise à examiner les différences comportementales entre les étudiants masculins et féminins au sein des communautés technologiques en ligne de l'Université Djilali Bounaama de Khemis Miliana, et à mettre en lumière l'impact du genre sur le comportement des utilisateurs dans ces espaces. La recherche actuelle a été conçue pour être exploratoire et descriptive, s'appuyant sur une étude de cas unique. Au cours de la recherche, des outils qualitatifs et quantitatifs ont été utilisés pour collecter les données. Ces outils comprenaient un questionnaire à questions ouvertes pour les enseignants et un questionnaire à choix multiples pour les participants. Ils ont aidé les chercheurs à comprendre la problématique de manière plus approfondie. Les résultats de la recherche ont révélé des différences comportementales significatives entre les étudiants masculins et féminins dans les communautés technologiques en ligne. Les étudiants masculins ont montré des niveaux de participation et d'engagement plus élevés par rapport aux étudiantes. En revanche, les étudiantes ont rapporté être confrontées à des niveaux plus élevés de stéréotypes et de préjugés sexistes dans les interactions en ligne. Les perspectives des enseignants ont mis en lumière les défis et les opportunités découlant de la diversité des sexes dans les espaces numériques. Ils ont souligné la nécessité de stratégies ciblées pour traiter les différences entre les sexes et promouvoir l'inclusion et l'équité dans les communautés en ligne. Les recommandations incluent la mise en œuvre de politiques sensibles au genre, la formation sur les biais inconscients, et la création d'environnements de soutien en ligne encourageant une participation égale pour tous, indépendamment du sexe. Sur la base des résultats de cette recherche, il est recommandé de créer des environnements éducatifs inclusifs et équitables pour tous les participants.

Mots-clés : genre, communautés, interactions, différences, inclusion, technologies, espaces communicatifs.

List of Acronyms

CFIP: Concern for Information Privacy

CFSMIP: Concern for Social Media Information Privacy

CST: Concern about Social Threats

BHAS: Boosey, Hawkes, and Son

ESA: Entertainment Software Association

NIH: National Institutes of Health

DETA: National Research Center for Distance Education and Technological Advancements

OECD: Organization for Economic Co-operation and Development

US: United States

EU: European Union

UK: United Kingdom

WEF: World Economic Forum

FWA: Flexible Work Arrangements

COVID-19: Coronavirus Disease

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Chapter One

Gender differences are inherently present in human existence, and the intricate interplay of biological, cultural, and societal factors shapes them. These disparities, rooted in hormonal variations, genetic distinctions, and the influence of societal expectations, significantly affect various aspects of life, including education, career choices, and communication styles. In online environments, where interaction, information sharing, and learning are pivotal, recognising and fostering gender diversity becomes crucial.

This study explores gender differences in online settings, focusing on the fair and equitable involvement of individuals across genders in digital platforms such as social media, educational portals, and collaborative spaces. Understanding these gender dynamics is essential for creating inclusive online communities that accommodate all users' diverse experiences and needs.

1.1 Background of the Study

Gender diversity in online settings is a complex issue, encompassing the representation, experiences, and opportunities available to individuals of different genders within the digital landscape. As technology increasingly influences our educational and social spheres, addressing gender diversity online is paramount to fostering environments that promote inclusivity. Gender, defined as the socially constructed characteristics of women and men, varies across societies and is subject to change, underscoring the importance of examining how gender impacts online interactions and learning (Liu et al., 2018).

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Research, such as that by Boyed (2014), delves into how online interactions mirror societal gender dynamics, highlighting issues like cyberbullying and the reinforcement of traditional gender roles that reflect the complex relationship between technology and social structures in shaping online gendered experiences. Similarly, Johnson & Ambrose (2006) emphasise the transformative effect of information technology on learning, work, and lifestyle, advocating for integrating digital learning to meet diverse educational needs.

Baym (2010) further argues that online communication platforms are critical spaces for negotiating and performing gender identities, which can both challenge and perpetuate conventional gender norms. This highlights the necessity of investigating how digital interactions contribute to the construction and expression of gender, considering the range of opportunities and challenges individuals face in the digital realm.

Recognising and understanding gender differences is crucial for Algerian learners. Educators can adapt online teaching methods to support diverse learning styles, ensuring a more inclusive and effective educational environment. This awareness is key to promoting equitable access to digital learning resources, addressing disparities in participation and outcomes between genders, and challenging stereotypes. Ultimately, a nuanced approach to gender dynamics in online education can enhance digital literacy, empower learners, and create a more inclusive and supportive learning experience for everyone in Algeria.

1.2. Statement of the Problem

Integrating digital platforms into everyday life raises significant questions about gender dynamics in online spaces. As online platforms become increasingly central to communication, learning, and social interaction, there remains a notable gap in research focused on the impact of

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gender on these interactions, particularly within the Algerian digital context. Existing literature does not adequately explore how gender influences communication styles, participation rates, and learning experiences among users in Algeria.

This lack of focused research impedes our understanding of unique challenges and opportunities within this context, thereby restricting the development of tailored strategies that promote inclusivity and equity in online environments.

1.3. The Rationale of the Study

As the Internet and digital platforms become more integrated into daily life, they offer unprecedented opportunities for learning, collaboration, and community building. However, these opportunities are not equally accessible to all, with gender differences significantly influencing user experiences, participation, and outcomes.

Addressing gender diversity and inclusivity in online settings cannot be overstated. Despite advancements in technology and society's growing awareness of gender issues, there remains a notable gap in understanding how gender dynamics unfold in digital spaces and impact individuals' access to information, resources, and support. This gap not only perpetuates existing inequalities but also hinders the potential for online communities to serve as inclusive, equitable spaces for all users.

Furthermore, the study is particularly relevant in educational technology and online learning environments, where gender differences affect participation rates, engagement levels, and learning outcomes. In countries like Algeria, where digital learning is becoming an essential component of the educational landscape, exploring gender dynamics online is crucial for

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developing teaching strategies that accommodate diverse learning styles and needs, ensuring equitable access to digital resources, and promoting an inclusive educational experience.

This research shows how gender influences online technology communities' behaviour, interaction, and experiences. By exploring the intersection of gender and digital spaces, the study seeks to contribute valuable insights into the challenges and opportunities presented by gender diversity in online environments. These insights are essential for informing the development of strategies, policies, and practices that enhance gender inclusivity and equity in digital spaces, ultimately supporting the creation of more inclusive, supportive, and empowering online communities for individuals of all genders.

1.4. Aims of The Study

In response to the growing importance of online communities for personal learning and interaction, this study aims to illuminate the intricate relationship between gender and digital spaces. Specifically, it seeks to explore the differences in behaviour between male and female users within online technology communities. By conducting a systematic investigation, the study intends to uncover whether and how gender impacts user behaviour in these communities, with the ultimate goal of informing strategies to enhance gender inclusivity and equity in online technology spaces.

1.4.1 Objectives of The Study

The specific objectives that support this aim are:

- To explore the differences in behaviour between male and female users within online technology communities.

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- To conduct a systematic investigation to uncover whether and how gender impacts user behaviour in online technology spaces.
- To inform strategies to enhance gender inclusivity and equity in online technology communities.

1.5 Research Questions (RQs)

1. How do gender differences manifest in user behaviour within online technology communities?
2. What impact does gender have on users' participation, interaction, and engagement levels in online technology spaces?
3. How can understanding gender dynamics in digital spaces inform the development of strategies to enhance gender inclusivity and equity in these communities?

1.6 Hypothesis

1. There are significant differences in how male and female users participate, interact, and engage within online technology communities, with gender influencing content creation, response rates, and collaboration patterns.
2. Gender disparities in online technology communities lead to varied experiences and perceptions of inclusivity, affecting users' sense of belonging and contribution levels.
3. Implementing targeted strategies to understand gender dynamics can significantly improve gender inclusivity and equity in online technology spaces.

1.7 Methodology and Research Tools

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A mixed-methods research methodology, using quantitative and qualitative research tools, would be suitable to address the research questions and test the hypotheses. This approach provides a comprehensive understanding of gender dynamics in online technology communities by combining statistical analysis with in-depth insights into user behaviour and perceptions. A survey with closed-ended questions for quantitative analysis and open-ended questions to allow for qualitative insights will be used.

1.8 Ethical Considerations

Ethical considerations are paramount in this study, emphasising informed consent and ensuring that participants fully know the study's purpose and procedures. The participants' privacy is rigorously protected through strict data protection measures, upholding their anonymity and confidentiality.

Additionally, the principle of voluntary participation is underscored, highlighting the participants' right to withdraw from the study at any point without facing any consequences. These ethical pillars are fundamental to conducting the research responsibly and respectfully, safeguarding the interests and well-being of all involved.

1.9 Limitations of the Study

While investigating gender differences in online settings provides valuable insights, it is essential to consider some limitations regarding this study:

1. The characteristics of the sample may limit the study's findings and cannot be overgeneralised.

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2. Ethical considerations, such as privacy concerns, may limit the depth of data collected. Participants might need more time to share specific experiences or behaviours online, affecting the study's comprehensiveness.
3. This study may not fully account for the ever-evolving nature of technology and its potential impact on gender dynamics in online settings.

Continuous updates in online platforms and technologies can introduce new challenges or opportunities that need consideration.

1.10 Organisation of the Dissertation

The dissertation starts with chapter one, where the researcher states the problem, presents aims and objectives describe the importance of gender differences in an online setting and provide the scope of the study. In addition, the chapter explains the research questions, significance of the study, research design and reasons for undertaking this project. The following chapter is divided into two parts; part one begins by reporting on the literature review about how gender influences online interactions, emphasising the importance of addressing disparities in access and representation. It discusses how societal norms shape online behaviours, especially with the rise of social media. The chapter highlights gender differences in language use, online shopping, and privacy concerns, underscoring the need for gender-sensitive approaches. Additionally, it explores how self-disclosure and privacy management impact online interactions and social identity. While social media expands social networks, it may compromise the depth of relationships and communication patterns. Part two introduces gender differences in online work and careers, covering historical perspectives, evolutionary trends, and theoretical frameworks. It examines gendered patterns in online employment and explores theories such as gendered organisational

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behaviour and stereotype threat. Additionally, it discusses work-life balance and flexible arrangements in online settings, including gender disparities in this aspect of online work. Chapter three deals with the research design and methodology used to investigate online gender dynamics at the University of Djilali Bounaama Khemis Miliana. Finally, chapter four focuses on analysing and interpreting the empirical data obtained from the research instruments and tools.

1.11 Definition of Key Terms

These are some definitions of the frequently used key terms in this study:

1.11.1 Online Interactions

Online social interaction is Internet-enabled communication and exchange activities involving consumers and firms (Yadav & Pavlou, 2014).

1.11.2 Gender Roles

They are society's shared beliefs that apply to individuals based on their socially identified sex (Eagly, 2009).

1.11.3 Gender Identities

Gender identities reflect the different replacement of men and women into social roles (Diekman & Eagly, 2008; Eagly et al., 2000; Eagly et al., 2004).

1.11.4 Online Learning Environment

The online learning environment consists of digitally formatted content resources and communication devices to allow interaction. Chin & Ng Kon (2003)

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Chapter Two: Literature Review

With the emergence of online communities, more people are participating in online technology communities to meet personalised needs. It is essential to understand how gender influences our experiences and behaviours in these digital environments. However, despite the advantages and opportunities offered by the digital world, gender disparities continue to exist in untitled introductions and manifest themselves in different ways. These disparities can be observed in terms and aspects of access, representation, online harassment, and the gender digital divide. Furthermore, by delving into these various aspects, this chapter will serve as a comprehensive review of the literature on gender differences in online settings. By examining a wide range of studies, theories, and empirical evidence, dimensions of gender dynamics in the online sphere, drawing upon historical perspectives, theoretical frameworks, communication patterns, social interaction dynamics, gaming, online learning environments, gender-based harassment, and cultural influences setting the stage for deeper insights into the complex interplay between gender and the digital landscape.

PART ONE: Gender Differences in Online Settings

2.1. Gender Dynamics Online

Gender has universal characteristics regardless of culture and time period (Lim & Yazdanifar, 2014). As a fundamental social construct, gender influences every facet of human life, shaping identities, roles, and interactions within societies (Ram et al., 2023; Pulerwitz et al., 2010). The intricate interplay between societal norms, power structures, and cultural influences has engendered a diverse landscape of gender realities often veiled beneath the surface (Nandigama, 2020; Srivastava, 2020).

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In further definition, Gordin & True (2019) assert that :

The concept of gender, far from being confined to binary categorisations, exists along a spectrum encompassing diverse identities, expressions, and experiences. The conventional understanding of gender as a simple dichotomy has been challenged by evolving societal awareness, acknowledging the need for a more inclusive and nuanced perspective.

Gender dynamics online should be regarded as how gender influences interactions, power dynamics, and experiences in online spaces. Societal norms, cultural beliefs, and individual behaviours shape these dynamics.

2.2. The Impact of Online Communications on Different Users

Social or digital media radically influences how people interact or communicate, affecting their mindsets, attitudes, and experiences. With the increase in internet use, especially among the young, perceptions or reactions towards the different aspects of life have significantly changed among different groups (Brady et al., 2017).

As for the impact of online communication, Darling-Churchill & Lippman (2016) suggest that The fundamental position concerning online communication is that it significantly impacts the users' emotional, social, and moral well-being. In situations where children are involved in different online activities, they could develop unique skills and acquire more knowledge concerning different aspects. However, Globokar (2018) argues that even though some internet users experience several problems with increased use of technology, other users have continuously revealed that increased technology use does not influence their moral, social or emotional development. This, therefore, indicates

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that the interpretation of the different aspects of online communication varies across different groups of people.

Best et al. (2014) indicate that communication through emails, social media, websites, or mobile phones helps different peer groups share knowledge or experiences concerning different social dimensions.

Online interactions and communication can help share knowledge, which is essential for individuals' development. Connecting distant friends or relatives through virtual communication can also be beneficial. However, overdependence on different online interaction platforms could impact users' social, emotional, and moral competence, especially the young.

2.3. Communication Styles and Patterns Changes in Online Settings

Communication – the art of exchanging information, ideas or thoughts – is a generic skill essential in the functioning of students, workers, and leaders within the academic environment and organisations. This is because, among others, effective communication has been shown to help improve efficiency, foster a good working relationship, boost morale and ensure that set goals are achieved (Albrecht et al., 1993; Chao & Ishii, 2003; Hales, 2000; Maier et al., 2006). Communication is essential to life, learning and leadership (Awamleh & Gardner, 1999; Towler, 2003; Spangler & House, 1991).

In general, communication is the process of exchanging information from one source (the person giving the information) to the receiver (the person to whom information is given) (Iksan et al., 2012). According to Norton (1983), communication style is "the way one verbally, nonverbally, and para verbally interacts to signal how literal meaning should be taken, interpreted, filtered, or understood".

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In further definition, De Vries et al. (2009) provided a broader meaning of communication style as “the characteristic way a person sends verbal, paraverbal, and nonverbal signals in social interactions denoting (a) who he or she is or wants to (appear to) be, (b) how he or she tends to relate to people with whom he or she interacts, and (c) in what way his or her messages should usually be interpreted.”

Furthermore, communication scholars have also considered measuring the main communication styles necessary due to their relevance in different settings where the transfer of personal and non-personal information, knowledge, feelings, ideas, and opinions are essential (De Vries et al., 2013). For this purpose, several communication measurement instruments have been developed. Examples of these instruments include the Relational Communication Style (RCS) (Burgoon & Hale, Validation and measurement of the fundamental themes of relational communication, 1987), Communication Style Scale (CSS) (Gundykunst et al., 1996), and the Communication Style Measure (CSM) (Norton, 1978; Norton, 1983). These measurement instruments, especially the more recent Communications Style Scale (CSS), have been criticised for including scales that focus on interpersonal cognitions and feelings about communication rather than how communication signals are sent (De Vries et al., 2013). Another area for improvement with the older instruments (CSM & RCS) is their need for conformity to psychometric standards, owing to the low reliabilities of the items on the scale.

Furthermore, the lack of integration between the models and the absence of an underlying model to define the number and content of the communication styles have also been issues. Several researchers have used a lexical approach in personality studies to address these drawbacks and uncover communication styles (Goldberg, 1990; Burgoon et

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al., 1998; Ashton & Lee, 2001). De Vries et al. (2009) performed an empirical study to identify communication style dimensions from adjectives that can be used to describe how a person communicates.

2.3.1. Changes In Communication Patterns In The Digital Age

Changes in communication patterns in the digital age are at the forefront of the social transformation that the development of digital technology has brought about. Along with technological breakthroughs and broad internet penetration, how humans communicate has shifted fundamentally. Before the digital era, communication generally occurred directly or through mass media such as newspapers, television and radio. However, the rapid development of social media has opened the door to more connected and versatile forms of communication. Social media has presented a new concept in communication, enabling individuals to interact, share information and build relationships locally and globally. In the past, communication was often one-way, conveying information from one source to many recipients. However, social media has changed this dynamic by allowing for more interactive and responsive two-way communication. Users can provide immediate feedback, comment and share their views quickly and easily (Harida et al., 2021). This pattern of communication is also reflected in shifts in communication styles. Text messages, emojis and links are essential to everyday interactions on social media platforms. Shorter and concise communication styles became the norm as platforms like Twitter adopted limits on the number of characters in a single message. This forces users to express their thoughts and emotions within narrower boundaries, influencing how we formulate and convey messages. Not only that, communication through social media also tends to be asynchronous. Messages and content

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can be left for recipients to consume and respond to at any time, regardless of time or place. It allows people to stay connected even in different parts of the world, overcoming time barriers that previously limited traditional forms of communication (Hasbullah et al., 2022).

2.3.1. The Traditional Communication Process Shift

The transformation of communication in the digital era has shaken the foundations of social relations and how humans interact. Before the digital era, communication tended to be limited by existing geographic and technological limitations. Interactions that do not directly rely on media, such as letters, telephone and television. However, the paradigm shift with the emergence of digital technology, especially the Internet and social media, has resulted in a revolutionary communication transformation. The most noticeable change is the speed and accessibility of communication. Previously, it took time for news and information to reach a broad audience, whereas now, news can be received almost instantly via online platforms. This has allowed global news to spread quickly, opening doors for international discussion and interaction. In Addition, Utami and Nurhayati (2019) assert that the digital era brings the ability to interact with anyone worldwide, overcoming the limitations of distance and time. Social media, as a prime example, enables users to form and maintain relationships with people from different backgrounds, cultures and geographic locations. This opens up opportunities for exchanging cultures, ideas and views, which can broaden our understanding of the world.

Furthermore, It is not only the relationships between individuals that change but also the relationships between individuals and institutions. The digital age has given individuals a voice through platforms such as blogs, social media and personal websites.

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This means that a wider audience can now hear opinions and views that previously might have been overlooked by traditional media. This shift has also remodelled how businesses and brands interact with their customers, with digital marketing and online customer service becoming more commonplace. However, these changes also come with challenges. While the digital age has opened the door to global communication, the emergence of filter bubbles and echo chambers on social media can also cause individuals to get caught up in information and views aligned with their own beliefs, which can reduce the diversity of views and hinder the healthy exchange of ideas. In addition, changes in communication have also affected the style of communication itself. Short messages, emojis and abbreviations have become the norm in digital communication. While efficient in facilitating rapid communication, this digital language can also reduce the depth and complexity of communication, which creates challenges in expressing deeper emotional nuances and understanding in digital contexts (Farid, 2022).

2.4. Male and Female Users Language Use Differences in Online Community

The rapid development of modern information technology has affected people's learning, work, and lifestyle. Society must fully use information technology to explore the digital learning mode and meet the growing diversified and personalised learning needs (Johnson & Ambrose, 2006). The Internet provides an increasingly popular platform for the public; users with common interests or goals can exchange information, express opinions, seek emotional support, and establish social relations with others (Lu et al., 2013; Park & Park, 2014).

Moreover, an online technology community can aggregate distributed information and knowledge; its existence meets people's personalised demand for knowledge and

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social demand for interpersonal relationships (Chen et al., 2019). Understanding the gender differences in users' topics and emotions in the online technology community can help broaden the understanding of community users to better serve users in a targeted manner, which will help promote the sustainable development of online technology communities.

In Addition, Gathering people with similar interests into a group and studying the behavioural differences among different groups is helpful to have a deeper understanding of the interests of each group and provide guidance for understanding the information needs, emotional needs, and relationship needs of different groups (Liu et al., 2018).

For a long time, the difference in language use and emotion between men and women has been the interest of gender difference research. Previous studies on gender differences in language use have shown that men are likelier to use language to convey information. At the same time, women are more likely to communicate for social purposes (Newman et al., 2008). Women are more likely to ask questions in daily conversations, while men are more direct and use more commands to tell people to do something. The study also found that women use longer sentences, while men use more words and have more opportunities to speak in conversation (Mulac & Lundell, 1994). Regarding emotional research, most studies report that women refer to emotions more often than men (Thomson & Murachver, 2001).

Within the social sciences, an increasing consensus of findings suggests that men, relative to women, tend to use language more for the instrumental purpose of conveying information; women are more likely to use verbal interaction for social purposes, with

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verbal communication serving as an end in itself (e.g., Brownlow, Rosamon, & Parker, 2003; Colley et al., 2004; Herring, 1993).

Lakoff identified in women's language two specific types of phrases—hedges (e.g., "it seems like,") and tag questions (e.g., "... aren't you?")—that can be inserted into a wide variety of sentences. On the other hand, Men have been found to swear more, use longer words, use more articles, and use more references to location (e.g., Gleser, Gottschalk, & John, 1959; Mehl & Pennebaker, 2003; Mulac & Lundell, 1986).

One striking result Mehl and Pennebaker (2003) reported that women were more likely to use first-person singular. This is consistent with repeated findings that depressed people use more first-person singular (e.g., Bucci & Freedman, 1981; Rude et al., 2004; Weintraub, 1981), given that depression is more common among women (Diagnostic and Statistical Manual of Mental Disorders).

Emotion words are another area of conflicting findings despite a reasonably clear stereotype. Several studies have reported that women refer to emotion more often than men (Mulac et al., 1990; Thomas & Murachver, 2001). However, Mulac et al.'s (2000) study of managers providing criticism in a role-play found the reverse. Moreover, Mehl and Pennebaker (2003) offered a potential reconciliation: Women used more references to positive emotion, but men referred more to anger—a finding perfectly consistent with gender stereotypes.

2.4.1. Male and Female Users' Online Shopping Differences

Women are not always entirely the dominant gender in shopping; some findings show that men can be the dominant gender in online shopping (Rodgers & Harris, 2003). Male dominance in online shopping could happen due to a few things: the time it takes to decide

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to buy an item becomes much shorter when shopping online, the absence of face-to-face interactions, which must be made with an offlineseller or another person is more comforting to men, and also items that relate to the needs of men can be easily found on the Internet (Van Slyke et al. (2002). On the other hand, when we see things from the point of view of women, there are quite a lot of barriers perceived by women in shopping online, some of which are the lack of social interaction that occurs, as well as the difficulty of evaluating the goods in detail and using techniques such as physical touches[. The risk levels perceived by women in the online shop are greater than for men (Garbarino and Strahilevitz (2004).

According to Gneezy, risk perceived by men and women is different; he concluded that women, in general, are more risk-averse. The risk is also related to online shopping because online shopping has a greater risk than conventional shopping due to the lack of direct contact with the seller. For women, the risk in online shopping is perceived as greater than for men (Garbarino Strahilevitz (2004)); regarding confidence in the website on the Internet, women produce a lower trust rating than men. Risk preference itself is based on the beliefs of each, based on research conducted by Rodgers and Harris.

Conventionally, shopping can help women to relax and socialise, or it can even be a particular activity (Buttle and Coates(1984), while for men, the activity is less enjoyable and should be completed quickly. Men and women also have different comfortability when travelling to shopping malls, where women enjoy the activity more than men (Dholakia, 1999).

In the context of online shopping, Jackson et al. state that using computers becomes unenjoyable for women because they consider it relatively complicated to understand. This

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becomes one of the barriers to online shopping. Dittmar et al. also stated that women are less comfortable with online shopping due to the lack of direct contact and perceived social experience.

2.5. Self-disclosure and Privacy Concerns In Online Social Networks

According to Chenamanneni and Taneja (2015:4), privacy concerns are individuals' concerns regarding how their information could be used or exploited when shared. In the view of Hong Liang, Christopher, Beaudoin and Tracyl (2016), privacy concerns involve peoples' worries about their capacity to control how much of their private information is exchanged with others.

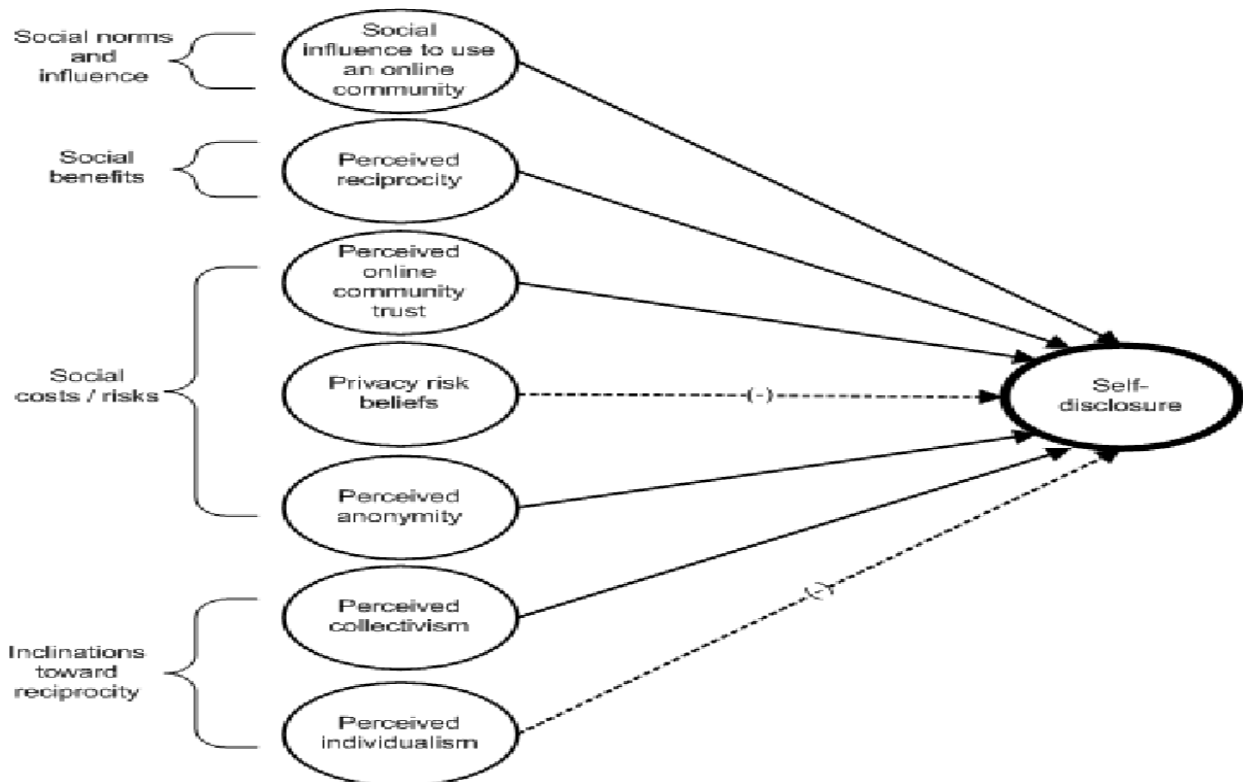
Based on Altman's concept of privacy as a selective control of access to self, Blank, Bolsover and Dubois (2014) view privacy concern as an individual's ability to try to control what personal information is disclosed, to whom, when and under what circumstances. This definition also aligns with the focus of this study, which seeks to know the decision criteria for self-disclosure on gender factors that have also been viewed as one of the determinants of self-disclosure because it is believed that the way people protect their privacy in an online environment could be gender driven. Based on this, Collins and Miller (1994) explain that "sex differences may be even more complex, requiring that we consider the gender of both the discloser and the recipient".

They add that men and women may hold different views regarding the value of disclosure from same-sex and opposite-sex partners. This also lends credence to the fact that gender is one factor that motivates people to disclose in online interactions. In Proser's (2013) view of self-disclosure and gender, women's disclosure increased when paired with

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a female recipient and as topics became more intimate. Male participants were more willing to respond when paired with a female recipient than a male recipient.

The impact of privacy concerns on self-disclosure has been studied thoroughly within the online context (e.g. Chellappa and Sin, 2005; Malhotra et al., 2004). Hogben (2007) mentions that OSN privacy risks range from organisational threats, such as e.g. digital dossier aggregation by third parties, to dangers stemming from the user's social environment, such as online stalking, bullying or reputation slander. Driven by media coverage, users are becoming increasingly aware of the privacy risks they face on the platform. In the light of daunting privacy concerns, restriction of the amount of self-disclosure is the most natural response.



“Extended Online Community Self-Disclosure Model”

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Smith, Milberg, and Burke's Concern for Information Privacy (CFIP) identified four fundamental factors influencing privacy concerns in response to organisations' use or potential use of personal information: collection, unauthorised secondary use, improper access, and errors in personal information. Stewart and Segar refined CFIP as a multidimensional construct comprising four variables. CFIP has been validated in various contexts, such as internet use, mobile use, m-commerce, and instant messaging. By applying CFIP to social media use, Osatuyi developed the Concern for Social Media Information Privacy (CFSMIP) measurement scale. In addition, Krasnova proposed the Concern about Social Threats scale (CST) to measure concerns about social threats from other users potentially misusing their information or posting embarrassing content about them.

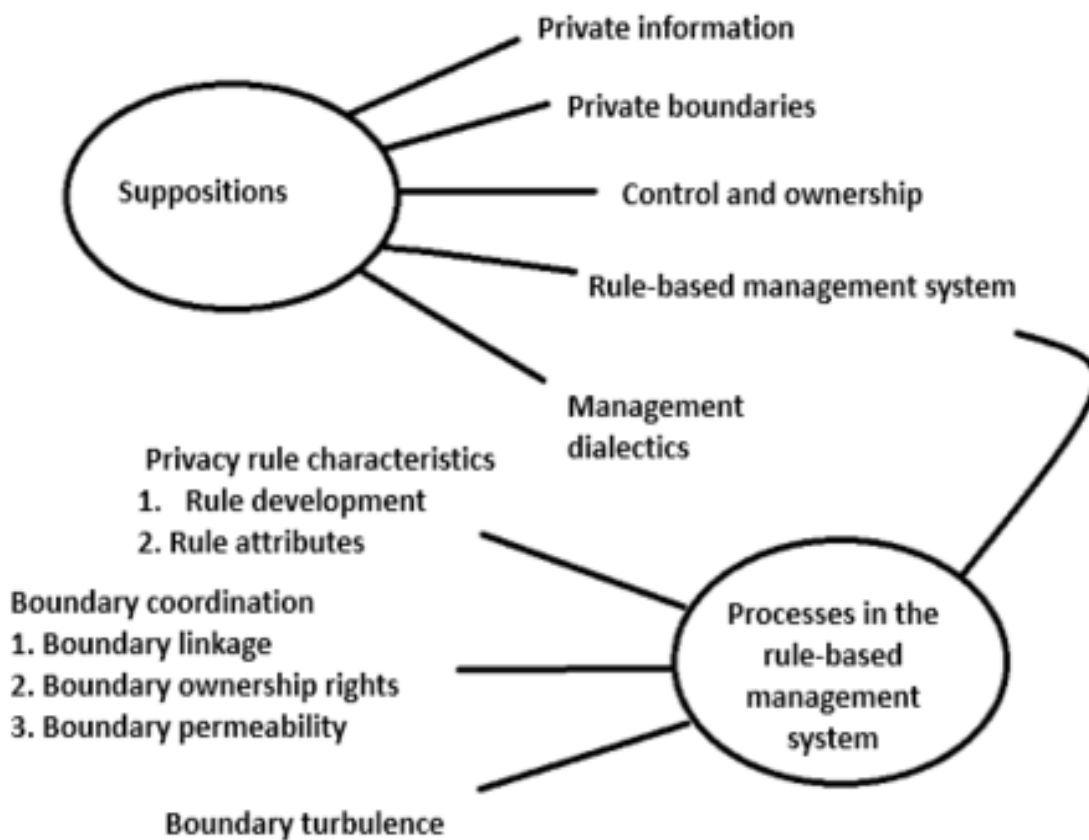
Self-disclosure accuracy and polarity relate to how people manage their online identity. According to Leary and Kowalski's impression management work, people post accurate information about themselves if they feel others may validate it. This process has been observed in a more general case of Facebook use, where users were more likely to choose not to post certain information rather than posting inaccurate information about themselves, which may be especially applicable on social media where other users are in a position to verify one's posted information. People may also recognise that third parties can use the information to make decisions about them.

Krasnova et al.²⁴ found that concerns about social threats made participants (primarily students) more aware of their self-disclosure in social media. However, interestingly, the concerns about organisational information privacy did not have the same impact on self-disclosure intent (conscious control). Conversely, Masaviru (2016:43)

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states that "self-disclosure is the act of revealing details about ourselves to others. He adds that the topics of disclosure range from superficial details to very private, sensitive and personal information". He, however, argued that any verbal or non-verbal communication that reveals something about the self is self-disclosure. The argument of Masaviru (2016) shows that self-disclosure is not limited to verbal communication. Any non-verbal cue that reveals something about one to others is self-disclosure. In line with this, Rime (2016) emphasises that self-disclosure is a process that plays a significant role in the development, maintenance, and enhancement of close relationships. This supports the fact that self-disclosure is important for relationship building.

2.5.1 Communication Privacy Management Theory



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“Communication privacy management theory”

Communication privacy management theory is about an evidence-based understanding of how people make decisions about revealing and concealing private information; it is expedient for someone who owns information to decide who is worthy of being the recipient of the private information. Therefore, the willingness to share this information might be determined by the kind of trust that the owner of the information has in the person that will become the co-owner of the information; this assertion is confirmed by Petronio and Rierson (2009) that "when others choose to tell us their private information, they entrust us with the information that they feel belongs to them and should continue to be within their control. However, they will reveal the information to us because they judge us as responsible confidants" (p. 367). That is, the owner of the information has ascertained that the receiver fits all the criteria that must be met before their information can be divulged.

Similarly, the extent to which an individual fits these criteria will also influence the amount and depth of disclosure by the information owner. Privacy concerns, online behaviour, and choice of disclosure can be influenced by many things, as noted by Acquisti, Brandimarte, and Lowenstein (2015).

Some cues that influence perceptions of privacy are one's culture and other people's behaviour, either through descriptive norms (imitation) or via reciprocity. Observing other people reveal information increases the likelihood of revealing it oneself. The excerpt clarifies that one party's willingness for reciprocity can determine the online behaviour of another party or whether the other party will disclose information.

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One party's willingness to reciprocate can determine the other party's online behaviour or whether the other party will disclose information. This position is also established by communication privacy management theory in Petronio and Rierson (2009).

Privacy and confidentiality work as tensions, and the concomitant needs for privacy and granting access function to influence people's choices to reveal or conceal. Thus, this tension's dialectical push and pull underpins decision criteria people use to open up about private issues, thereby establishing a confidant relationship or enabling people to retain their private information. Thus, people often decide about revealing based on judging risk-benefits because of specific motivations to reach a goal or cultural expectations.

Looking at privacy concerns from the experience angle, Hong Liang et al. (2016) hold that privacy concerns and awareness of online information disclosure are predicted by two types of negative privacy experiences: stolen information and relational conflict. They explain further that stolen information is the theft of sensitive private information such as bank accounts or security numbers. On the other hand, relational conflict refers to the troubles brought about by unauthorised online postings, which could lead to troubles in relationships with families and friends, damage to personal image and loss of social and other opportunities. However, with all the privacy concerns that have been discussed, research has shown that people still find themselves entangled in the issue of online privacy management. The fact remains that social media users understand privacy; they know why they must keep some of their information private and understand the risks attached to undue disclosure, yet they still reveal detailed information about their profile; this kind of situation is what scholars have termed the privacy paradox. The privacy

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paradox is the dichotomy of information privacy attitude and actual behaviour, Kokolakis (2015).

2.6. The Influence of Social Media Platforms On Social Interaction

Boyd and Ellison define social networking sites as web-based service that allows individuals to do the following: (i) build public or semi-public profiles in a system, (ii) share a connection, and (iii) view and cross-list their relationship and by others in the system. Social networking sites often have a portal, forums, blogs, and galleries (usually a photo gallery). A social networking site user uses each element to connect and contribute to forming a community. If the user is in the blog space, they will receive the latest information from the portal space, gallery, or forum. This online community is always about each other through this communication in cyberspace.



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Castells (2010), in his monumental work "The Rise of the Network Society", presents how the Internet and social media have created a more decentralised form of communication where individuals can exchange information and ideas. This led to a "networked society" where social interaction is no longer bound by geographical boundaries (Ferlitasari, 2018). However, the question is how social media affects social interactions; a study by Ellison et al. (2007) shows that social media users tend to have larger social networks with more connections. However, the study also revealed that social media relationships are looser than physical ones. Online friendships may be weaker than real-life friendships, and understanding the depth and meaning of social relationships formed through social media is challenging.

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In addition to the impact on relationships and social networks, social media also impacts how individuals form and maintain relationships. Robin Dunbar (2016) introduces the "Dunbar Limit" concept, which states that humans have limitations in maintaining high-quality relationships within their social networks. In the age of social media, this means that even though technology allows us to connect with thousands of people, we still maintain similar connections within our cognitive limits. Therefore, even though social media is expanding our reach, the main challenge is maintaining the quality and depth of social connections in a manageable amount. However, social media also provides a new complexity in constructing social identity. Vitak et al. (2017) underlined that social media tends to present an inaccurate picture of the lives and well-being of other people, which can fuel social comparisons and create dissatisfaction with oneself, an effect better known as the "digital well-being gap". With so much social interaction taking place in cyberspace, self-views and social perceptions can be influenced by the responses and feedback received from others. Social media has also changed the pattern of human communication. Short forms such as text messages and

emojis are becoming increasingly dominant in digital communication (Page et al., 2013). In this study, Boyd (2010) introduces the "liquid modality" concept, in which individuals can freely switch between different modes of communication according to the context. This reflects how social media has created multiple platforms for interaction, including private messages, public comments, and visual content.

2.6.2 Formation of Online Communities and Groups

An online community is a collection of individuals who communicate through an online platform and are united by a shared interest or objective (Blasbalg, 2023). Participation in an online community often mirrors social interactions with friends, colleagues, or family members.

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Additionally, online communication encompasses exchanging ideas and information through electronic communication tools such as messaging applications, social media platforms, and the Internet (IGI, 2023).

According to BHAS (2023), online communication refers to using digital media to transmit, retrieve, and exchange information via the Internet. With the increasing prevalence of online presence, the significance of online communication parallels that of traditional offline communication.

Branded online communities may arise organically, but they are frequently initiated by individuals or organisations seeking to foster discussions on specific topics (Elder, 2023). These communities can bolster product visibility, strengthen customer relationships, and establish authority within the industry.

Furthermore, Jeffrey (2024) notes that community membership is open to individuals regardless of shared traits. The essential elements for establishing and sustaining a sense of community include regular interaction, a common objective, and mutual support among members.

2.7. Online Gaming and Gender Differences

Klass (2024) describes playing a video game online, usually with friends, as online gaming. Numerous devices, including PCs, laptops, mobile phones, and specialised video game consoles like PlayStations, Xboxes, and Nintendo Switches, can be used to play online games.

Furthermore, according to IGI (2009), games played over a computer network, most frequently the Internet, are called online games. Online games come in various forms, from straightforward text-based games to those with intricate graphics and multiplayer virtual.

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Hamlen (2010) states that boys are likelier than girls to play video games as kids. Various ideas have been proposed to explain this phenomenon, such as the idea that girls feel inadequate when using particular types of technology due to preconceptions and lack of opportunities. The interactions between gaming duration and success-related emotions in video games have yet to be studied in research. The results of this study demonstrate that, even after considering this endogenous link, girls feel equally skilled at video games as do guys, even though they do not play them as often. For males, more playtime results in greater feelings of accomplishment and success, which encourages more playtime. Connections to additional studies provide evidence for the theory that there is a greater sense of joy from accomplishment.

Moreover, NIH (2021) reports the disparities and similarities between genders' gaming habits. Overall, research indicates that males are more likely than females to start playing video games earlier in life, play more often, and spend longer time doing so. Still, the gaming world is evolving, with multiple surveys indicating a recent rise in the proportion of female players.

2.7.1. Participation and Engagement in Online Gaming

Growing up with leisure that requires play and engagement, the current generation has access to various computer gaming activities (Becker, 2007), mainly because kids' computer games cater to their modern interests, habits, and requirements (Henderson, 2005). However, it is also true that adults are drawn to computer games, especially during their free time (Saulter, 2007). Adults are not the only ones who find these games fascinating, which is not shocking, as play is a happy and natural learning approach, allowing for the unconscious integration of concepts (Petty, 1997; Pivec, 2007; Prensky, 2007). Children generally benefit from playing educational computer games since, in contrast to traditional learning environments, these games offer a variety of chances for them to develop their creativity.

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It is well known that online games are quite popular; as of 2019 (UKie, 2019), there were over 2.2 billion players worldwide. By 2023, there will be 6.2 billion online gamers worldwide (Statist, 2018). Teams of players have contributed to the success of online gaming applications. Teams of online gamers fight against one another, which piques their interest in games. The value of loyalty to gaming teams is demonstrated by the fact that players' dedication to their teams would surely convert into more gameplay.

2.7.2 Representation and Portrayal of Gender in Online Games

The Entertainment Software Association (ESA) states that more than half of all people who play video games are at least six years old (ESA, 2005). Even though they are well-liked, the audience for video games continues to exhibit a demographic divide. Significantly more men than women engage in video game gaming. Despite the ESA's boasting that 39% of video game users are women (ESA, 2005), indicating a significant gender gap. Fences have been discovered in research on kids' video game-playing behaviours (e.g., Braun & Giroux, 1989; Griffiths, 1991, 1997; Buchman & Funk, 1996; Funk, 1993) as well as their opinions on the social appropriateness of playing video games (Funk & Buchman, 1996).

As little as ten minutes, a sample period that is comparable to viewing a movie's characters and plot should only be examined in the first ten minutes. Thompson and Haninger (2001), whose video game play sessions last for the longest, 90 minutes each, when the content studies examined the period, found that "not playing the end of these games indicates that certain content is overlooked" (pp. 592–593). When video games started becoming popular forms of entertainment (Parker, 2013), they were independent. Since video games were a new form of media, a well-established business needed to be established. Video game production became an industry as the medium became increasingly popular and accessible.

2.8 Gender Differences in Online Learning Environments

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The Internet and computer culture have historically been linked to men (Adamus et al., 2009). Accordingly, it has been noted that men and women use technology at different rates, levels of expertise, and for different purposes (Dorman, 1998). Men are more likely than women to use online media, and women are likelier than men to report having a lower overall computer proficiency (Kayany & Yelsma, 2000).

Men are more likely than women to use computers and new media (Dorman, 1998; Kayany & Yelsma, 2000; Adamus et al., 2009). Women and men also differ in assessing and utilising technology (Venkatesh & Morris, 2000; Adamus et al., 2009). Women engage in more communication activities than men, viewing computers as social media.

There has not been much empirical evidence supporting the existence and significance of gender disparities in e-learning. The results of these, and the scant available research, could be more coherent. Although one viewpoint claims that there are gender-specific behaviours that could result in e-learning discrimination against women (e.g., McSporrán and Some, like Young (2001) and Astleitner and Steinberg (2005), contend that e-learning's adaptability and interactive The learning strategy primarily benefits women (Bruestle et al., 2009, for example). However, neither gender norms nor Technology is a category that is considered stable (Bruestle et al., 2009).

There is proof that males and women exhibit differing acceptance, concern, and interest in new technologies over time (McCoy & Heafner, 2004). Shaw and Gant (2002) note that gender differences close over time. Among the elements that play a part, access and training have been highlighted as two ways to close the gender gap.

However, from their perspective of computers as social media, women prefer talkative actions. Consequently, the growth of Web 2.0, emphasising social tools and communication,

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has led to a growing number of female Internet users (Adamus et al., 2009). This woman prioritises speaking and cooperation, which also significantly impacts educational settings. Men typically make lengthier, more frequent statements than women do, although Women are more cooperative and receptive to suggestions from others. Working in groups is preferred by women. Meanwhile, males are better at finding independent solutions (Adamus et al., 2009).

2.8.1 Participation and Engagement in Online Courses

An increasing amount of data points to the effectiveness of online learning in assisting students in meeting learning objectives. According to a recent search by the Education Resources Information Center (ERIC), over 3,000 research or assessment papers on the efficacy of online learning in higher education were published in peer-reviewed journals between 2000 and 2019. Approximately 10% of this research directly compared online and offline program models.

The majority of these studies indicate that the results of online and offline courses are frequently similar or that there is "no significant difference," with some studies suggesting that the cognitive gains from online courses are marginally better than those from offline courses (National Research Center for Distance Education and Technological Advancements, 2019). Strong data support the "no significant difference finding," according to the National Research Center for Distance Education and Technological Advancements (DETA).

However, there is much criticism surrounding this research. Some teachers contend that in-person instruction is superior to remote instruction. Only roughly one-third of chief academic officers nationwide surveyed by the Babson Survey Research Group between 2002 and 2015 stated that faculty members recognise the benefits and validity of online learning. These figures varied from a peak of 34% in 2007 to a low of 28% in 2002, 2005, and 2014. "A persistent failure of online education has been the inability to convince its most important

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audience—higher education faculty members—of its worth," the researchers wrote in their conclusion (Straut, Allen, and Seaman, 2016). Critics have also questioned the rigour of the "no significant difference" studies and whether or not the correct questions were posed. To be more precise, DETA has put up a bibliography of hundreds of research that contrast in-person instruction with online or other distant learning options.

Additionally, the researchers discovered that "online learning approaches appear to be quite broad across" (p. xv). Put differently, graduate students, undergraduates, and professional and academic students have all found success with online learning. Numerous academics assert that there has been a significant amount of study done on the subject of comparing online and offline learning environments (Bernard et al., 2009; Clark, 2000; Gunawardena & McIssac, 2004; Misra & Koehler, 2006; Lockee et al., 2001; Yin et al., 2018). Nonetheless, we still need to thoroughly document what characteristics or experiences make online courses more or less beneficial for student learners and learning.

2.8.2 Online Learning Styles and Preferences

According to Keffe (1979), learning styles are "distinctive cognitive, affective, and psychological behaviours that function as reasonably consistent markers of how learners perceive, interact with, and respond to the learning environment." (p. 4). Rochford (2003, adds, "Everyone learns differently due to a combination of biological and experiential factors" (p. 667). Research is focused on how student learning styles affect online learning settings (Fahy & Ally, 2005). Even though face-to-face and online students had different learning styles, Aragon, Johnson, and Shaik (2002) concluded that "these differences were not significantly apparent when student success was controlled" (p. 243). Neurhauser (2002) conducted a comparative study between two portions of the same course, one administered asynchronously online and the other in person. According to reports, "neither group's grades

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nor learning preferences and styles differed significantly." In order to find determinants of satisfaction with digital learning, Stokes (2003) polled college students enrolled in courses that included Web-based components. Students "should be reassured that the environment is not restrictive in terms of preferred learning styles"(p.256), she said in her conclusion.

Kolb (1984) identified four stages or modes of learning: Abstract Conceptualization (AC) (papers, lectures, analogies), Concrete Experience (CE) (laboratories, field work, observations), Reflective Observation (RO) (journals, logs, brainstorming), and Active Experimentation (AE) (simulations, case studies, homework).

Creating information in various learning contexts necessitates an innovative fusion of the four learning modes that adapt to contextual requirements. Assimilators (favoured AC and RO, i.e., thinking and watching), Divergers (favoured CE and RO, i.e., feeling and watching), and Convergers (favoured AC and AE, i.e., thinking and doing) are the four learning styles that are reflected in the combination of learning modes used to establish the four quadrants.

2.9 Online Behavior and Gender-based Harassment

Harassment based on assumed gender identity is recognised under the phrase "gender-based." It is essential to consider this kind of internet harassment in the context of more significant issues of hate crimes and discrimination based on gender, primarily directed towards women (Nussbaum, 2010; Citron, 2014; Cross, 2014). According to the Bureau of Justice Statistics (2014), hate crimes driven by gender bias more than doubled from 12% to 26% between 2004 and 2012, with gender formally recognised as a protected category under the U.S. Hate Crime Statistics Act. Similarly, prior studies show that women experience a disproportionate amount of cyberbullying just because of who they are as women. Meyer and Cukier (2006) discovered that, compared to masculine usernames, fraudulent online accounts with feminine usernames

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received an average of 100 sexually explicit or threatening messages every day. According to Working to Stop Internet Abuse (2013), out of 4,025 instances the organisation handled between 2000 and 2013, 70% had women as the victims. According to a different survey, just 6.3% of women (240 respondents) had never encountered online harassment, while 12.8% of men (109 respondents) had not (National Centre for Cyberstalking Research, 2011).

Similar to harassment that occurs in person, women who experience cyberbullying may suffer severe consequences for both their personal and professional lives (Citron, 2014; Hess, 2014). When it comes to online harassment, women are nearly twice as likely as males to say that their biggest fear is "fear of personal injury," with "damage to reputation" coming in second (National Centre for Cyberstalking Research, 2011). Many women confess to self-censoring or even deleting their online personalities due to the high rate of online harassment and the numerous worries (including physical safety) that go along with it (Citron, 2014; Hess, 2014). According to the Pew Internet & American Life Project (2005), "entirely because of women's fall off in participation," the percentage of Internet users who took part in online chats and discussion groups fell from 28% to 17% between 2000 and 2005.

2.9.1 Cyberbullying and Online Harassment

According to Cibernetico (2022), Cyberbullying is when someone targets, embarrasses, threatens, or harasses someone else via technology. Threats made online and nasty, combative, or nasty texts, tweets, posts, or communications all qualify. Posting private images, videos, or other content to hurt or embarrass someone else also counts. Cyberbullying also encompasses images, texts, or webpages that remain up after someone requests that they be taken down. Put another way, it is anything intended to harm, harass, or agitate another person and is put online.

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Moreover, Menesini & Nocentini (2009) Cyberbullying is defined as an aggressive, deliberate act committed over time against a victim who is unable to defend themselves by a group or individual using electronic forms of contact (Smith et al., 2008). According to this concept, cyberbullying is just classic bullying with a focus on new forms of communication. Globally, there is a growing body of research on cyberbullying that focuses on the phenomenon's prevalence, the relationship between traditional and electronic bullying, and potential correlates or risk behaviours associated with cyberbullying (see many publications in this issue).

The negative consequences of cyberbullying according to NIH (2024), Children who have been impacted by cyberbullying have reported differing percentages of reporting incidents to authorities (2% to 40% would notify a teacher). Research results have indicated that between 13% and 74% of respondents said they would tell a buddy. The percentages that say they would notify a parent range from 9% to 57%. Between 9% and 25% of kids said they would not disclose being the victim of cyberbullying to anyone. Roughly half of the kids say they use preventative strategies such as password changes, buddy list restrictions, and screen name blocking such as (6,8,9). Cyberbullying has detrimental impacts on the bully as well as the victim. The detrimental consequences escalate in proportion to the frequency, length, and intensity of cyberbullying. Frequent victims of cyberbullying may see a deterioration in their academic performance, start "acting out," and, in some cases, report issues at home. These kids are more likely to experience anxiety, despair, and externalised terrible behaviours. They also have a higher chance of dying by suicide.

As was previously indicated, children who engage in cyberbullying exhibit more significant behavioural challenges (such as property damage, interaction with the police, absenteeism from school, and low grades) and a lack of guilt compared to non-bullying children (5,12).

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Despite having lower suicidal ideation scores than their victims, a study has indicated that youngsters who engage in cyberbullying are also more likely to attempt suicide (11). Children who engage in cyberbullying, as well as cyberbullying victimisation, are vulnerable to both the behavioural and emotional challenges that come with being a bully.

2.9.2 Strategies for Addressing Gender-based Harassment

According to Mueller, JD (2023), the victim may feel rage, frustration, or even fear as a result of the harassment. However, approaching their harasser and letting them know their comments or behaviour are unacceptable is the first step towards ending the harassment.

In addition, Dodson (2024) states that each person's actions differ when subject to cyberbullying. Three options, such as blocking the accounts, going face-to-face with the offender, or even contacting the police, to address it. Every circumstance will call for a distinct course of action; occasionally, there is no "right answer." Performing these tasks could be challenging, mainly if the bully is hesitant or needs help with what to do. Still, if s/he thinks harassment is happening, s/he should act. When someone is being harassed online, it is ultimately their responsibility to take action—they are the ones who have to see or hear the remarks. The best course of action is usually to block the individual sending the messages or uploading the harmful content, even though responding to them may not seem right. It might be a good idea to message the sender to request that they cease if their communications make him/ her uneasy. Every phone and social networking site can block another user if there are no changes or if they do not respond and s/he fears that the harassment will continue. The sender should report to the relevant authorities right away if the messages include threats of violence, pornographic material, or anything illegal.

2.10 Cultural and Societal Influences on Gender Differences in Online Settings

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According to the University of Sheffield (n.d), early parenting practices affect and establish gender identity and gender role expectations because we assign behaviours to our children depending on their biological sex. Teachers, parents, and siblings are the role models they look up to. Their gender identity is shaped by the toys they play with, the cartoons they watch, and the stories they hear, and this process never stops throughout their lives. Individuals, groups, and civilisations have preconceived notions about gender and expect men and women to behave in particular ways. As members of society, we also impose social norms on men and women, including what they should and should not do, how they should behave and dress, and how they should show themselves publicly and privately.

2.10.1 Cultural Influences on Gender

According to Best, L., and Ruzio (2019), gender-related behaviours, beliefs, identity, and roles are greatly influenced by culture. Culture establishes the framework within which sexual behaviour norms and gender roles, identity, and stereotypes emerge. Gender differences in behaviours among members of the same cultural group and between civilisations are influenced by culture. Social behaviours and cognitive disparities between genders can be amplified, reduced, or even completely eradicated by culture. Gender and culture cannot be separated.

2.10.2 Cross-cultural Variations in Online Behavior

The term "cross-cultural variations" reflects the connections between marketing, consumer behaviour, and cross-cultural research. Authors have used the term in various contexts and have yet to provide a precise definition. However, Hofstede defines culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (p.5) (Hofstede, 2001), a foundational concept in many studies.

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Every culture influences how people perceive social, cultural, and professional activities, impacting business interactions. Cultural norms affect managerial styles, interpersonal communication, and perceptions of appropriate behaviour. Cross-cultural interactions involve body language, personal space, and gender dynamics, which vary across societies. For example, norms regarding physical touch and gender interactions differ between cultures, influencing online dynamics and communication styles.

2.10.3 Changing Gender Norms and Online Dynamics

The social sciences have long been interested in understanding how social norms form and influence behaviour. Social norms are shared standards of behaviour within a society or group, influencing individual actions. Gender norms, in particular, shape online interactions and dynamics. Gender is dynamic throughout life, influenced by cultural variations and personal experiences. Variations in gender experience and expression are natural aspects of human diversity, evolving and changing over time. Recognising the dynamic nature of gender is essential for understanding online behaviours and interactions in diverse cultural contexts.

These sections provide insights into the complex interplay between culture, gender, and online behaviour, highlighting the need for a nuanced understanding of cultural variations and their impact on gender norms and online dynamics.

PART TWO: Gender Differences in Online Work and Career

2.11. Evolution of Online Work and Career

Work had always incorporated new technology, such as the mainframe and microcomputer, but the field started using the Internet seriously in the late 1990s. Thus, considering the potential contribution of the Internet to professional development is based on a brief but

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intensely concentrated developmental phase. Nobody used the Internet to further their careers twenty-two years ago. Many individuals were using email and browsers by the middle of the 1990s to access online communication and information. Employers (Bartram, 2000).

Moreover, learning providers (Gomes & Murphy, 2003) soon realised how valuable the Internet was in helping them share possibilities with a larger audience. With the development of websites in the late 1990s, career services also started using the Internet to provide information and services (Watts, 2002). Additionally, people who realised that the Internet offered them new resources and professional chances could obtain a competitive edge over others who did not (Kunh & Skuterud, 2000; Feldman & Klass, 2002).

People's relationships with one another, their employers, and the government are altering as a result of their use of the Internet. Companies have quickly realised social media's recruitment opportunities (Dogherty, 2010) and the need to vet candidates (Brandenburg, 2008).

2.12. Gendered Patterns in Online Employment

Gender disparities in occupational employment rates influence the social and economic well-being of the workforce. In the United States, women outnumber men among undergraduate and graduate degree recipients (National Center for Education Statistics, 2014). However, women remain underrepresented in many high-paying and prestigious occupations, including management, engineering, and computer science.

On the other hand, men are underrepresented in many prosocial occupations, including teaching, counselling, and healthcare services, which are growing in demand and provide critical services to society (Women's Bureau., 2019). Understanding these gender differences in the workforce has mainly been made possible by research on vocational interests (Eagly, 2021; Renninger & Hidi, 2020). For instance, a stronger average interest in working with

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things is associated with men's overrepresentation in engineering and computer science, while a stronger average interest in working with people is associated with women's overrepresentation in caregiving and social jobs (Morris, 2016; Su et al., 2009).

Alternatively, several research and global organisations quantify gender inequality using indices that provide a "holistic" view. Examples are the Global Gender Gap Index from the World Economic Forum and the Index from the European Institute for Gender Equality. Once more, however, indexes obscure the connections between various "types" of inequality by concatenating several discrete outcomes for women's employment into a single figure (Van der Vleuten & Verloo, 2012).

2.13. Gender Differences in Online Work and Career

Since the 1970s, the OECD countries' gender disparity in labour force participation rates has significantly narrowed as female participation rates have steadily increased. Gender disparities in salaries and promotions to management positions persist in many industrialised nations, particularly in Japan, notwithstanding progress towards equal job possibilities (Estévez-Abe, 2013). Previous studies (Macpherson & Hirsch, 1995; Petersen & Morgan, 1995) have concentrated on gender variations in the choice of industry and career to understand the causes of this discrepancy.

According to these studies, women are more likely to work in lower-paying sectors, businesses, and professions. However, some studies have demonstrated that even after adjusting for industry and occupation, gender salary disparities persist (Carrington and Troske, 1998, for example). Using representative US firm data, Bayard et al. (2003) focused on gender-based job assignment differences within firms and investigated how these differences contribute to the gender pay gap.

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Promotions are linked to significant pay increases in the theoretical literature (Gibbons & Waldman, 2006) and the empirical studies (Baker et al., 1994; McCue, 1996). However, according to "the sticky floor" theory, women may get fewer pay raises than men when promoted since they have fewer options (Booth et al., 2003). In order to determine whether there is a gender difference in the relationship between job assignment and income rise, we also look at the association between the two.

According to Macpherson and Hirsch (1995) and Petersen and Morgan (1995), a large portion of the gender wage disparity can be attributed to the industrial and occupational segregation of men and women. These findings suggest that the gender wage gap will vanish if gender distribution is equal in all occupations.

2.14. Gendered Organisational Behavior Theory

It is possible to view the evolution of gendered organisation theory as both an epistemic shift and a theoretical advancement. Acker and Van Houten's (1974) discussion of the sex structuring of organisations argued for its centrality alongside organisational factors to get more comprehensive explanations of organisational phenomena.

Kanter's (1977) empirical findings about the role of the social structure of organisations in reproducing inequalities that disproportionately affected women and men in the workplace are two examples of theoretical developments that highlight the significance of a gender lens to explore, interrogate, and understand organisations and organisation theory. The conversation was centred on sex differences and acknowledged a biased and stereotypical sexual distribution of labour in keeping with the times.

In her seminal work, Acker (1990) expounded on how organisations are profoundly gendered. Specifically, she discussed how stereotypes about men and women endure due to conventions,

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practices, and laws, irrespective of the workforce's make-up (Mastracci & Arreola, 2016).

Given that gender is fundamental to both the symbolic and material asymmetrical and hierarchical structures in organisations structures that support the idea that these spaces are gender-neutral, the strength of gender as an organising principle in those organisations poses an intriguing contradiction (Alvesson & Billing, 2009).

"Gendered organisations theory by Acker (2012)"

The arguments made by feminist researchers (see Acker, 1992; Ashcraft & Mumby, 2003) about the production, reproduction, and perpetuation of patriarchal inequities in organisations had a significant impact on the gendering of organisation theory. These arguments sprang from criticism of how organisations, while appearing to ignore gender, maintain a gendered division of labour (Acker & Van Houten, 1974) and how interactions within organisations socially construct dichotomous subjectivities between men and women (Alvesson, 1993).

Wilson (1996) has pointed out that organisation theory, in contrast to other disciplines, has been sluggish in embracing a gender viewpoint. The normalisation of gender blindness makes it more challenging to include the gender perspective; some have argued that being able to "see gender" is essential to a gender perspective (Bishu et al., 2019).

2.15. Stereotype Threat Theory

Steele and Aronson (1995) describe stereotype threat as a situational circumstance in which people risk reinforcing unfavourable preconceptions about their group through their actions or behaviours. The consequent fear is that one could be assessed according to a derogatory stereotype that's "in the air" (Steele, 1997).

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In recent iterations of stereotype threat studies, researchers have linked stereotype danger to the concept of "belonging uncertainty," which compromises a person's sense of identity and social acceptance (Walton et al., 2007).

Therefore, people may take all necessary precautions to prevent the possibility of embarrassment or failure resulting from confirming unfavourable assumptions about their identity to create a sense of belonging. In keeping with this notion, Inzlicht's "stigma as ego depletion" theory suggests that stigma depletes a person's capacity for self-control, which hinders their ability to do subsequent tasks (Inzlicht et al., 2006).

2.16. Work-Life Balance and Flexible Work Arrangements in Online Settings

The freedom to choose when, where, and how long to complete duties linked to one's job is flexibility. Recent developments in the availability of flexible working arrangements have increased workplace flexibility, allowing employees to determine their schedules. Flexible work arrangements (FWAs) encompass various circumstances, such as reduced or part-time work hours, term-time employment, job sharing, compressed hours, home-based work, and parental leave initiatives. While FWAs are becoming more prevalent and academic research has shown them numerous advantages, managing flexible workers and implementing flexible policies may still be challenging.

The ultimate aim of workplace flexibility is to give workers the autonomy to select their schedules while simultaneously guaranteeing their performance and happiness at work (Clarke & Holdsworth, 2017).

Employers can use flexible work arrangements (FWAs) to reduce labour expenses or boost productivity. These include teleworking, flexible schedules, and voluntary reductions (Hildebrandt, 2006). Additionally, they can give workers more autonomy over where and

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when they work (Chung et al., 2007), enabling them to juggle jugglers and paid jobs (Fahléjobs2013; Lott, 2015).

FWAs have been shown to support women in continuing their careers after giving birth (Chung & van der Horst, 2018) and to raise work-life balance satisfaction levels (Abendroth and den Dulk, 2011), particularly for highly skilled workers (Chung, 2022). FWAs, however, may potentially have contradictory effects on employees' lives away from the workplace, which would be detrimental to their well-being (Allard et al., 2007; Chung & van der Lippe, 2020; Masuda et al., 2012; Wight & Raley, 2009).

The use of FWA may lead to an increase in unpaid working hours, cognitive spillover from work to home, and the reinforcing of gendered roles in unpaid work, depending on the type of FWA (Lott & Chung, 2016). (Chung and van der Lippe, 2020; Kurowska, 2020).

2.16.1. Gender Differences in Work-Life Balance in Online Work

Research on how gender affects work-life conflict has revealed that women frequently report higher levels of work-life conflict because of social norms that require them to handle a greater share of childcare and domestic duties. Similarly, women reported higher levels of work-life conflict, according to emerging research on the effects of the COVID-19 pandemic on this issue.

During the pandemic, educational activity and provision were conducted in the home. Since parenthood falls under the non-work domain (Gatrell et al., 2013), much research on work-life conflict has focused on gender.

Research has shown that women experience higher levels of work-life conflict due to caring for dependent children (Dex & Bond, 2005; Lewis et al.; Pinqart & Schiller, 2000; Milkie et

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al., 2009). Work-life conflict is gendered, according to a study conducted before the pandemic using European Sustainable Workforce Survey data.

Women who work from home experience more significant conflict between their workplace and personal roles (Van der Lippe & Lippényi, 2018).

Hjálmsdóttir and Bjarnadóttir (Citation2021) discovered that women had higher levels of stress and work-life conflict during the pandemic. Moms were "... juggling homeschooling, childcare, and work created much pressure on mothers," according to Hjálmsdóttir and Bjarnadóttir (Citation2021, 274), and some of them felt terrible for not being able to manage both work and non-work tasks concurrently. During the pandemic, women were more likely than their male partners to homeschool their children and take care of childcare responsibilities (Hjálmsdóttir and Bjarnadóttir Citation 2021).

Allen and Finkelstein (2014) found that, on average, women report more interference from their families at work than men do in a study that compared gender, age, and work-family conflict in six stages of family life: newly married couples, families with babies, families with preschoolers, families with schoolchildren, families with adolescents, and families whose children have already left home.

Summary

To sum up, the manifestation of gender dynamics in online environments becomes apparent when discrepancies in access and other related factors are considered. This study delves into the influence of societal norms on communication styles and behaviours in online platforms, a phenomenon primarily shaped by the rise of social media. Moreover, it examines gender discrepancies in language use across various platforms, highlighting the diverse concerns that arise and advocating for gender-sensitive approaches. Additionally, while social media

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extends social networks, it may compromise the depth of relationships, consequently influencing social identity and communication patterns. The following chapter will explain the research methodology and methods for collecting data.

CHAPTER THREE, METHODOLOGY and RESEARCH Tools

The primary aim of this study is to explore gender gaps in the virtual realm, focusing on how fair and equal people are crossing gender communities in digital platforms such as social media, educational portals, and collaborative spaces. In this chapter, the researcher provides a detailed description of the study approach. It will shed light on the research design, setting, method, types, techniques, and methodology followed in data collection. It also provides a full explanation of the statistical procedures utilised to analyse the data, the pilot study, sampling procedures, and finally, the concepts of measurement and the limitations of the study in hand. They seek to explore the behavioural disparities between male and female users within online technology communities.

3.1 Aim Of The Study

This study puts forward an investigation of the relationship between gender and online environments, where it is becoming increasingly common to use online communities as a setting for learning and social engagement, in addition to that it involves a look at the relationships between genders and the use of technology by the community members. The study is based on an in-depth research process used to measure and understand how gender matters in the upkeep of community practices on online media sites, as a whole, serving the purpose of the policy reforms intended to make these online spaces more inclusive and fair to both genders.

3.2 Research Objectives

- To examine behavioural variances between male and female users within online technology communities.

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- To systematically investigate the impact of gender on user behaviour in online technology spaces.
- To offer insights to inform the development of strategies to foster gender inclusivity and equity in online technology communities.

3.3 Research Questions

- How do gender differences manifest in user behaviour within online technology communities?
- What is the impact of gender on users' participation, interaction, and engagement levels in online technology spaces?
- How can understanding gender dynamics in digital spaces inform the development of strategies to enhance gender inclusivity and equity in these communities?

3.4 Hypotheses

- Gender significantly shapes how users participate, interact, and engage within online technology communities, ultimately impacting content creation, response rates, and collaboration patterns.
- Differences in gender representation within online technology communities lead to varied experiences and perceptions of inclusivity, ultimately influencing users' feelings of belonging and their levels of participation.
- Adopting targeted strategies based on understanding gender dynamics can effectively enhance gender inclusivity and equity within online technology spaces.

3.5. Research Design

Thyer (1993) defines a research design as a blueprint or detailed plan for conducting higher research studies, which incorporates the choice and design of a specific method, the participants and considerations of reliability and validity. Furthermore, Given (2008) denotes that research design is "the logic that links the data to be collected to the initial questions that were asked" (p. 931). However, Mouton (1996) delineates it as road maps or directions for dealing with the research problem. Kothari (2004), in his turn, claims the research design dimensions to be as the following:

It is a plan specifying the sources and information types relevant to the research Problem. It is a strategy specifying which approach will be used for gathering and analysing the data, and lastly, it also includes the time and cost budgets since most studies are under these constraints.

3.6. Research Methodology

The research methodology plays a crucial role in building research blocks and setting the overall plan for its execution. The research design, type, approach, and setting mainly consist of the research design. Discussed in detail as follows:

3.6.1 Case Study

In this study, the researchers opted for a case study to gain insights and understand how gender dynamics and variety influence online technology communities' behaviour, interaction, and experiences at the University of Djilali Bounaama.

According to Yin (2003), a case study refers to the empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not evident and when numerous sources of evidence are

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used. Bromley (1990) asserts that case study research is a "systematic inquiry into an event or a set of related events which aims to describe and explain the phenomenon of interest" (p.302). Therefore, case studies are suited to situations where separating a phenomenon's variables from their context is impossible. The case study does not utilise any particular data collection or analysis methods (Merriam, 1998, p. 28).

3.6.2. Strengths and Challenges of Case Studies

As they show strengths, case studies embrace some challenges as well. They are illustrated as follows:

3.6.2.1. Strengths

1. They provide illustrations of the effects of phenomena in real-life contexts,
2. They allow for research presentation in a more publicly accessible format that can serve multiple audiences.
3. Contribute to the learning processes of others who can use it to aid in their understanding of the illustrated issue.

3.6.2.2 Challenges

1. Case studies can be complex because they involve large amounts of data, which can become a downfall because any attempts to summarise them can result in the researcher omitting data through subjective bias.
2. Furthermore, it is argued that the biggest downfall of the case study is that it is

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impossible to generalise from the results (Hayes, 2000, p.140-141 cited in R Mosbah, 2009, p. 138)

3.7. Research Type: Exploratory Research Design

Polit and Hungler (1995) suggests that explorative research can be done to investigate the dimensions in which a phenomenon manifests itself. In the first and second phases of the study, the focus was placed on an exploratory research design. Neuman (2003) indicates that an exploratory design is employed when the study topic is either new or when relatively little has been written about it, as is the case with the focus of this particular study. According to Rubin and Babbie (2001, p.92), the exploratory design is linked to the purpose of the study, with the primary aim to explo

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re a topic and to provide a certain level of familiarity with it.

Explorative research serves several critical purposes. Firstly, it satisfies the innate curiosity of researchers, propelling them to delve into uncharted territories and uncover new insights.

Secondly, it aids in developing a deeper understanding of complex phenomena, providing a solid foundation for subsequent investigations. Thirdly, explorative research tests the feasibility of conducting more extensive studies, allowing researchers to gauge the viability and potential challenges of pursuing large-scale projects. Lastly, it plays a pivotal role in method development, refining and establishing practical approaches that can be applied in future research endeavours. Together, these facets of explorative research contribute to the advancement of knowledge and the refinement of research methodologies across various disciplines.

This research explored the gender disparities of English language students from various perspectives, such as social norms, cultural influences, and technological access.

3.7.1. Descriptive Research Design

In this study, the exploratory design was further employed to explore the focus on the fair and equitable involvement of individuals across genders in digital platforms to direct the study towards a descriptive design. Hence, the primary purpose of the study remains descriptive.

Designing a descriptive study entails selecting an appropriate method that helps achieve the study's overarching aim, so here, the mixed-methods approach is considered the most effective method of performing the research. The mixed-methods approach is defined by Creswell (2009) as the procedure that employs both aspects of qualitative and quantitative methods. Similarly, Johnson and Christenson (2014) explain that the relationship between

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qualitative and quantitative methods is complementary, as both methods have strengths and weaknesses, so mixing them is thought to have satisfactory results.

Bless and Higson-Smith (1995) state that a descriptive research design is used when the researcher is interested in determining the opinion of a group of people towards a particular issue at a particular time. Neuman (2003, pp. 21–22) views the descriptive design as representing "a picture of the specific details of a situation, social setting or relationship."

Eventually, this research adopted a mixed-methods approach to reach the objectives and thoroughly describe the topic under investigation.

3.8. Research Methods

The researcher has opted for qualitative and quantitative methods in this study. There has been widespread debate in recent years within many of the social sciences regarding the relative merits of qualitative and quantitative strategies for research that are highlighted in the following :

3.8.1. Qualitative Method

Strauss and Corbin (1990) have asserted that qualitative methods are of vibrant help to gain better insights into the areas where very little information is available. According to Mason (1996), qualitative research is based on methods of data generation which are flexible and sensitive to the social context in which data are produced (rather than rigidly standardised or structured or removed from 'real life' or 'natural' social context, as in some forms of experimental method) (p. 4). The method of qualitative research is inductive as opposed to deductive. Rubin and Babbie (2001) indicate that inductive research involves the development of generalisations from specific observations.

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For the purposes of this study, the researcher intended to examine the perceived gender disparities of English students in Algeria.

3.8.2. Quantitative Method

The quantitative paradigm derives from positivism, which states that the world comprises observable, measurable, and quantifiable facts (Glense & Peshkin, 1992). Kahn (2004) explained that quantitative research is designed to test theoretically derived hypotheses; whether the hypothesis is supported or refuted, the researcher reports the results objectively. Thus, quantitative research involves several data-gathering tools and analytic methods such as survey techniques, experiments, structured observation, content analysis and parametric and non-parametric statistical analysis. It highlights causality, measurement and generalizability (Bryman, 1992).

3.8.3. Complimentary Approaches

The researchers can opt for quantitative and qualitative research for a better investigation. At this point, Bryman (1988) argued that qualitative and quantitative approaches should be combined for a "best of both worlds" approach. According to Best and Kahn (1989), "Both types of research are valid and useful. They are not mutually exclusive. It is possible for a single investigation to use both methods" (pp. 89-90). Differences between quantitative and qualitative research are presented below:

Quantitative research

Quantitative research is characterised by its focus on producing precise quantitative data by analysing large sample sizes in controlled environments. This approach prioritises reliability, ensuring consistent results, although it may come at the expense of lower validity due to its

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emphasis on numerical data over nuanced understanding. Despite this limitation, quantitative research aims to generalise findings from the sample to the broader population, enhancing its applicability and relevance across various contexts.

Qualitative research :

Quantitative research is distinguished by its utilisation of large sample sizes and controlled environments to generate precise quantitative data. It prioritises reliability by ensuring consistent outcomes, although this emphasis on numerical data may sometimes compromise the depth of understanding, resulting in lower validity. Nonetheless, quantitative research endeavours to extend its findings from the sample to the broader population, enhancing its relevance and applicability across diverse settings.

"Distinction between Qualitative and Quantitative Research Hussey (1997, p. 54)"

3.9. Research Variables

The conduction of any research project depends on selecting a topic for investigation and variables for examination. The research variable is thought to be "a property whereby the members of a set or group differ from one another. In comparing research methods, for example, different variables may be (a) the level of interest each creates and (b) the amount of time each method is used for". Similarly, Johnson and Christenson (2014) claim that choosing the research variable requires dynamic and consistency because the variable is a condition or characteristic that can take on different values or characteristics. Researchers divide variables into two main types: dependent variables and independent variables. Richards and Schmidt (2010) define the dependent variable as the criterion affected or altered by changes in one or more independent variables.

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3.9.1. The Independent Variable

The independent variable is the factor or predictor believed to influence another variable, the dependent variable. In this study, gender would likely be the primary independent variable, and the researcher wants to investigate how gender (male, female) influences various aspects of online behaviour, interaction, and participation.

3.9.2. The Dependent Variable

the dependent variable in this study would be the outcomes or behaviours influenced by the independent variable (gender). Control variables are the factors held constant or controlled in the study to minimise their potential influence on the relationship between the independent and dependent variables. Control variables include age, socio-economic status, educational background, prior experience with online learning, and access to technology.

3.10. Research Setting

Choosing the appropriate site for a particular research study significantly affects its effectiveness. Burns and Grove (2011) define the research setting as "the location where the research is conducted. The authors further clarify that the selection of a particular setting in both quantitative and qualitative research is based on the purpose of the study, the accessibility of the setting or site, and the number and type of participants or subjects available in the setting" (p. 321).

For this research study, the chosen setting for this particular research is the faculty of literature and foreign languages at the University of Djilali Bounaama. It was chosen first because the research aims to explore the virtual platforms, online courses, and digital learning environments used by English students at the faculty. In addition, it aims to uncover whether

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and how gender impacts user behaviour in online technology communities. Moreover, accessibility has to be taken into consideration. For the researcher to be able to conduct the study, the administration has allowed the research to be conducted through a questionnaire and an interview given to the target population.

3.11 Participants and Sample Selection

As the researcher carries out planning the research project, it becomes necessary to think about a set of integral elements of the research, such as the people needed to get involved or the category needed to get performed in the study; those people are referred to by researchers as the research population. According to Johnson and Christenson (2014), "population refers to the large group to which a researcher wants to generalise the sample results; the complete set of cases" (p.869). In the same manner, Richards and Schmidt (2010) explain that a research population is any set of individuals who share some common and observable characteristics and from which a sample can be taken. At this point, Dawson (2019) emphasises that contacting even the research population is possible. That is why selecting several people to be involved in the study under a sample is better.

The research sample, according to Johnson and Christenson (2014), is "a set of cases taken from a larger population" (p.876). On the one hand, Richards and Schmidt (2010) consider the sample to be an integral part of the execution of the research, and without it, nothing can be achieved. They assert that selecting a sample involves giving the participants an equal and independent chance. Thus, it is necessary to identify the procedure by which the sample can be identified. Researchers distinguish two types of sampling: random sample and satisfied sample. This research opted for random sampling since it allows every member of the population to have an equal and independent chance of being selected (Richards& Schmidt, 2010).

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For practical reasons, random sampling is considered the suitable sampling technique for this research study. First, randomisation in sampling is important because it allows participants from different social statuses to participate in the study. Second, it helps the researcher generalise the overall findings. Third, it gives the participants an equal chance to be selected (Dawson, 2019).

Therefore, the current study embraced the target population (100%), which is the English students of Djilali Bounaama University. The total number of students was 20 (10 males and 10 females), in addition to 2 online English teachers at the same university.

3.12 Pilot Study

Conducting a pilot study is highly useful in determining if the items in the final questionnaire yield the information needed. Baker (1994: 182-183) notes that "a pilot study is often used to pre-test or try out a research instrument". In Addition, the pilot study was instrumental in improving the research methodology and maintaining data collection quality for the main study. As the researcher conducted a small-scale test of the research instruments and procedures, the researcher could detect potential problems and mitigate them before the complete study, increasing the validity and reliability of the results.

3.12.1 Purpose of The Pilot Study

The primary purpose of the pilot study was to try out the research instruments and methodologies. This helped the researcher distinguish if the acquired outcomes would help achieve the research objectives on which the entire research would be based. Furthermore, the pilot survey also helped to understand the straightforward questions and whether the acquired information was collectable based on how long the questions took to answer.

3.12.2 Methodology of The Pilot Study

The pilot study was conducted on a small sample; the participants were randomly selected from the English students studying at Djilali Bounaama University. The survey questionnaire was administered to the respondents alongside a mock-up interview. In this study, the questionnaire utilised both open and closed-ended items, while the interview utilised semi-structured questions that probed on specific issues that needed further inquiry.

3.12.3 Analysis of Pilot Study Feedback

The collected response was represented beyond the implication of questionnaire responses and interviews. The researcher realised this when he looked into the feedback to see whether there were any cases where confusion, ambiguity, or difficulties arose among the audience. Themes and patterns in divergent responses were noticed, which guided the revision of the content and structure of the questionnaire items and interview guide.

3.12.4 Refinement of Research Instruments and Procedures

The refined questionnaire was made as a result of the pilot study feedback. Refinements were applied in order to provide clarity and relevance to the questions. Furthermore, the interviewing framework was modified to address any possible issues or problems brought up. Finally, this refined instrumentation and technical methodologies were ready for large-scale trial in the main study.

3.12.5 Outcome of The Pilot Study

The pilot study successfully identified several areas for improvement in the research instruments and procedures. By addressing these issues, the researcher ensured that the data collection methods were clear, relevant, and feasible for the main study. The pilot study also

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provided valuable insights into the practical challenges of data collection, allowing the researcher to make necessary adjustments before commencing the main study.

3.13 Data Collection Instruments

The appropriate methods, tools, and data collection instruments are crucial after selecting the research design and population. Creswell (2009) claims that data collection methods require respecting the participants and the research setting. Thus, granting a closer look into the nature of data collection methods necessitates a proper definition of them. According to Dawson (2019), "data collection methods are the tools the researcher uses to collect data. They are divided into two main types: quantitative tools and qualitative tools" (p.22). More importantly, Johnson and Christenson (2014) assert that data collection methods allow the researcher to obtain data to be analysed and treated accordingly. Hence, establishing solid instruments makes the data vulnerable to dissection and comprehension.

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The current study adopts a descriptive design with a mixed-methods approach. Therefore, three research tools were chosen to obtain the data for this research: a student questionnaire, a

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teacher interview, and an observation guided by a checklist. According to Johnson and Christenson (2014), "the questionnaire is a self-report data collection instrument filled by the research participants" (p.873). For the definition of the interview, the scholars state that "the interview is a data-collection method in which an interviewer asks an interviewee a set of questions". Researchers consider these two instruments the most authentic data collection methods because they help define the research aim in the planning stage. They are chosen to enhance the authenticity of the research in which the aims become easily accessible, as explained below:

First, the questionnaire is chosen to explore differences and variations in the online environment among English students of both genders to understand how gender differences significantly influence user experiences, participation, and outcomes.

Second, the interview is chosen to explore the teachers' experiences, observations, behaviour, and interactions, understanding the challenges and opportunities presented by gender diversity in digital spaces.

3.14 Data Analysis Tools

After collecting the data needed for the conduction of the study comes the process of analysing data to achieve the research aims, so establishing a comprehensive plan is crucial in this phase. According to researchers, many methods exist for data analysis in which the data is analysed and treated numerically or non-numerically. Dawson (2019) argues that data analysis methods depend on whether the research is approached quantitatively or qualitatively. Examples of quantitative data analysis include numerical and statistical analysis. However, the qualitative data analysis methods include thematic, comparative, discourse, and content analysis.

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This research study uses two tools to collect the data needed to generalise findings and draw conclusions. Therefore, two different methods of analysis are to be followed in this regard:

First, the data collected through the questionnaire tool will be analysed using the SPSS software, the simplest and most efficient way to categorise quantitative data. This produces well-presented graphs, pie charts, and tables that can be included in the final report. Dawson (2019) asserts that computer software is the quickest and easiest way to analyse large-scale surveys, such as questionnaires. It also helps the researcher overcome the analysis block.

Second, the data collected through the interview is supposed to be analysed through content analysis. In this type of analysis, the researcher analyses the teachers' responses and transcribes them. Content analysis helps treat open-ended questions, enabling the researcher to quantify the answers (Dawson, 2019).

3.15 Ethical Considerations

All ethical issues were avoided from the first step of conducting this study. Initially, a request to conduct research was signed and approved by the head of the Department of the Faculty of Literature and Foreign Languages head and the supervisor at Djilali Bounaama University.

The participants have been promised anonymity and confidentiality for their responses and informed of the right to withdraw at any moment of the study without being obliged to justify. Consequently, the respondents' embarrassment is reduced, and their willingness to participate in the study is encouraged. In addition, when collecting data, the researcher took ethical considerations while doing the data analysis. The research data were kept as they were and did not attempt to retouch any minor information to fulfil personal expectations.

Summary

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This methodological chapter described the procedures and methods used, the qualitative and quantitative instruments used to collect data from the selected population, and the ethical issues that guided the researcher in conducting the current study. The following chapter will detail the analysis and interpretation of the gathered data.

CHAPTER FOUR, DATA ANALYSIS

Data analysis is seen as an important step in the research process. It is the process of inspecting, cleaning, transforming, and modelling data to highlight useful information, suggesting conclusions, and supporting decision-making. For that, Cohen et al. (2007) explain: "Data analysis is a body of methods that help to describe facts, detect patterns, develop explanations, and test hypotheses. It is used in all of the sciences." (p. 19). This study explores how gender dynamics influence online technology communities' interactions, participation, and perceptions through a comprehensive analysis of data collected via a questionnaire for students and teachers. Moreover, The primary aim is to explore the behavioural disparities between male and female users within online technology communities.

This final chapter will provide an analysis of the gathered data and interpret the results of the following :

- English Students' Questionnaire
- English Teachers' Questionnaire

In this chapter, the findings are analysed, discussed, and stated as facts that pave the way for possible interpretations. Additionally, the chapter encompasses major parts providing answers to the research questions and investigating whether the results match the hypotheses provided before confirming or infirming them.

4.1 The Aim of The Study

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This study dives into how men and women behave differently in online communities and how they use technology. It aims to understand these differences to make online spaces more fair and inclusive. Specifically, it wants to:

1. Look at how men and women act in online tech communities.
2. Explore how gender affects user behaviour online.
3. Provide ideas to make online tech communities more inclusive for everyone.

The study wants to answer the following questions :

- How do men and women behave differently in online tech communities?
- How does gender affect how much people participate and interact online?
- How can we use this knowledge to make online spaces more fair for everyone?

It also suggests the following hypothesis :

- Gender influences how people engage in online tech communities, affecting what content gets created and how people work together.

When there are differences in gender representation online, some people feel left out, which can impact their desire to participate.

- By understanding these gender dynamics, we can create strategies to make online tech spaces more inclusive and fair for everyone.

4.2 Data Description

It illuminates the selected sample along with the data collection and analysis processes.

4.4.1. Participants Description

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In conducting a comprehensive study on gender dynamics within online settings, it is essential to understand the demographics and backgrounds of the participants involved. This section details the characteristics of the participants who provided valuable insights into gender-related behaviours and perceptions in digital spaces. The participants in this study were drawn from the English students and faculty at Djilali Bounaama University in Khemis Miliana. The sample comprised 20 students, evenly divided between genders, with 10 male and 10 female students. These students were selected through random sampling, ensuring each had an equal and independent chance of being chosen. Additionally, the study included two teachers who serve as online English instructors at Djilali Bounaama University. These teachers were selected based on their involvement and experience in online teaching, which provided valuable insights into gender dynamics within digital learning environments.

4.4.2 . Data Collection and Analysis

In this study, a mixed-methods approach was employed to gather and analyse data on gender dynamics in online settings. This approach combined both quantitative and qualitative methods to provide a comprehensive understanding of the research problem. One questionnaire was developed and administered to the participants on March 17th 2024, and the second questionnaire was administered to the teachers on May 5th 2024. The first questionnaire targeted 20 English students at Djilali Bounaama University. This questionnaire included closed-ended and open-ended questions to explore the students' experiences, behaviours, and perceptions of gender dynamics in online technology communities. The questions covered various aspects, such as participation rates, interaction patterns, and perceived inclusivity in digital spaces. The second questionnaire was administered to two teachers at the same university with long experience in online teaching. This questionnaire aimed to gather insights into the teachers' observations of gender-related behaviours and their perspectives on the inclusivity and equity of online learning environments. In addition, before the primary data

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collection, a pilot study was conducted to test the research instruments and methodologies. This involved a small sample from the university. The pilot study helped refine the questionnaires by identifying potential ambiguities and ensuring the clarity and relevance of the questions. The quantitative data collected through the questionnaires were analysed using SPSS (Statistical Package for the Social Sciences) software. This analysis included descriptive statistics to summarise the demographic information and key findings and inferential statistics to examine the relationships between gender and various aspects of online behaviour, participation, and perception. The results were presented as graphs, pie charts, and tables to facilitate interpretation and discussion. The qualitative data from the open-ended questionnaire were analysed using content analysis. The mixed-methods approach allowed for integrating quantitative and qualitative data, providing a better understanding of the research questions. The quantitative findings offered a broad overview of gender-related behaviours and perceptions, while the qualitative data provided depth and context to these findings. Throughout the data collection and analysis process, ethical considerations were prioritised. Participants were assured of their anonymity and confidentiality, and informed consent was obtained prior to their involvement in the study. They were also informed of their right to withdraw from the study at any point without any obligation to justify their decision. These measures helped ensure the research's ethical integrity and the data's reliability. In summary, this study's data collection and analysis process was meticulously designed to capture a comprehensive picture of gender dynamics in online settings, leveraging both quantitative and qualitative methods to produce robust and insightful findings.

4.3 Presentation of The Questionnaire Results

4.2.1 student's questionnaire

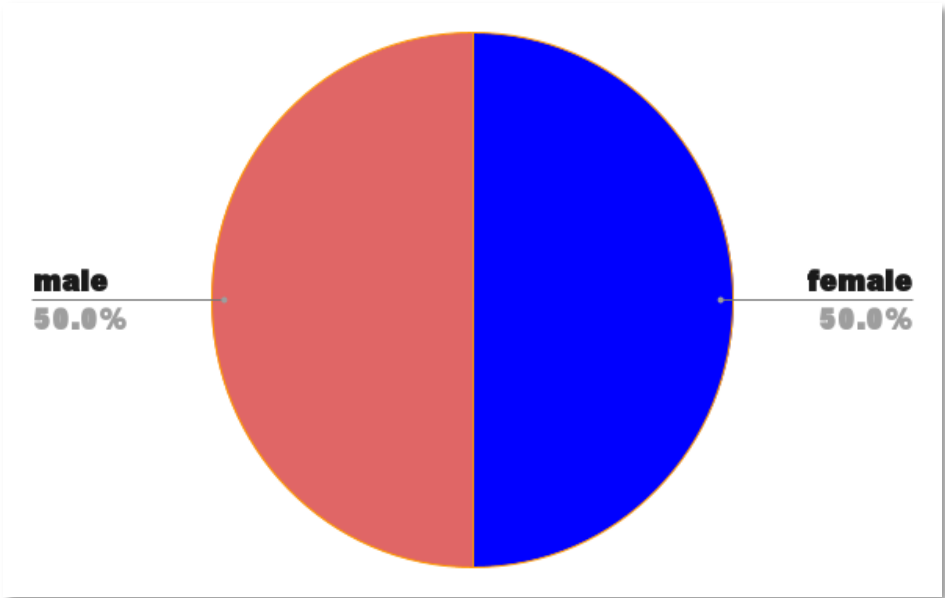
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A closed-ended questionnaire was administered to collect quantitative data from English university students.

Section 1: Demographics

1. What is your gender identity?

The gender identity of the 20 students is evenly split, with an equal number identifying as female and male. The result offers a wide range of perspectives on gender-related inquiries in the survey.

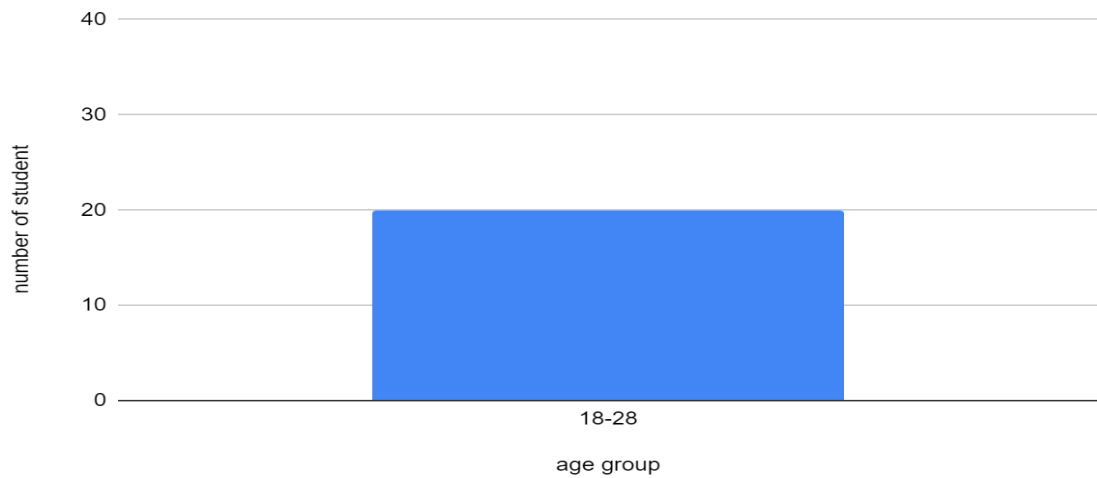


Pie chart 4.1 Gender Identity of University Students

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2- Which age group do you belong to?

Age Group Distribution of University Students



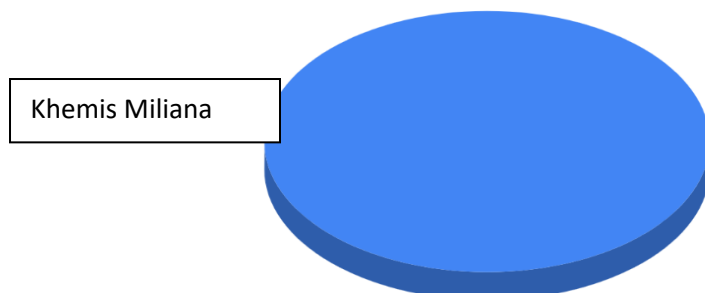
Every student who participated in the survey was between 18 and 24; this age uniformity

Bar graph 4.2 Age group **Distribution** of University Student

implies that the viewpoints and experiences expressed represent young adults in this particular demographic. This age consistency highlights the impact of gender on communication behaviours among young adults, which allows a concentrated examination of gender differences in online community communication styles.

3- What is your geographical location?

Geographical Location of University Students



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1. Pie Chart 4.3 Geographical Location of University Students

All students are from Khemis Miliana. The geographical uniformity indicates that the findings and opinions are region-specific and potentially influenced by local culture and community dynamics.

4- What role best describes your participation in the online technology Community?

Role	Number of Students	Percentage
Member	20	100%

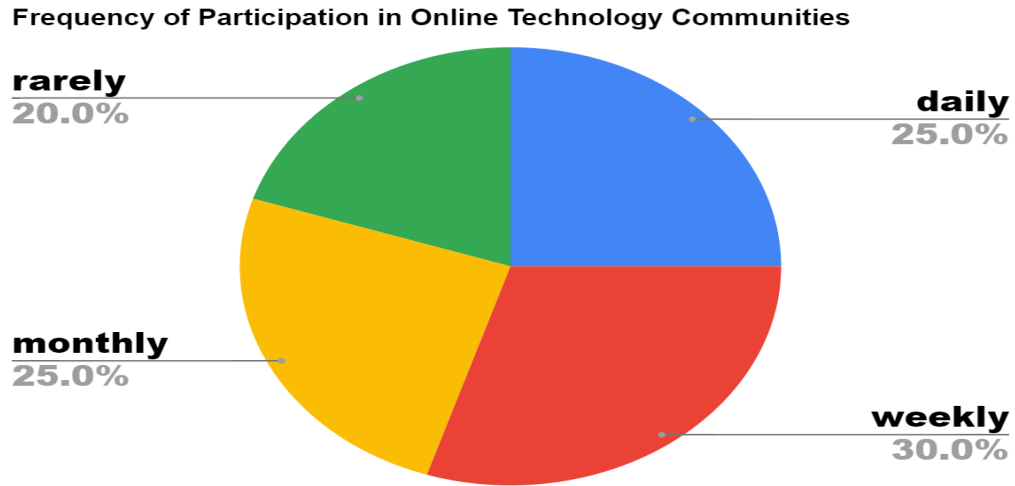
Table 4.1 Participation Role in Online Technology Communities

Every student identifies as a member of online technology communities. This uniformity in the role may affect their perspectives, as all are likely to experience the communities from a similar standpoint, lacking the insights of moderators or administrators.

Section 2: Behavior Patterns

5. How often do you participate in online technology communities?

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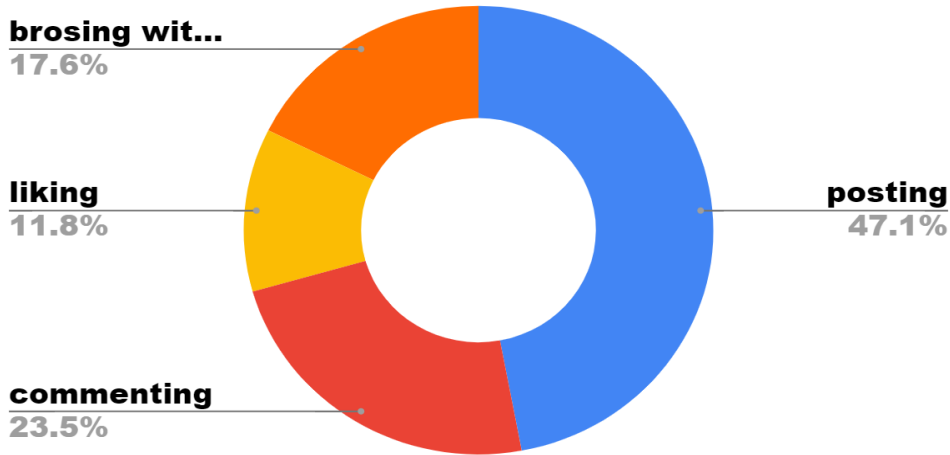


Pie chart 4.4 Frequency of Participation in Online Technology Communities

The data reveals a varied frequency of participation among the 20 university students in online technology communities. Weekly participation is the most common, with 30% of the students engaging at this frequency. Daily and monthly participation accounts for 25% of the students, showing a balanced level of regular engagement. Rare participation is the least common, with only 20% of the students. 80% of the students participate at least monthly, indicating a generally high level of involvement in these communities.

6. What types of activities do you engage in?

Types of Activities Engaged in Online Technology Communities

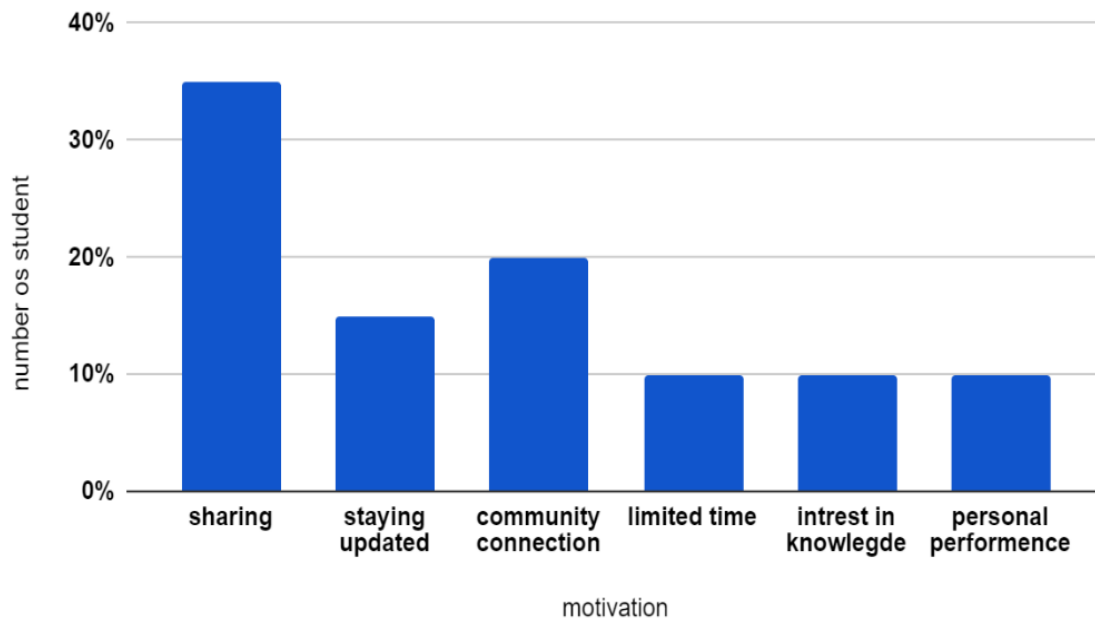


Pie chart 4.5 Types of Activities Engaged in Online Technology Communities

The data reveals that among the 20 university students, the most common Activity in online technology communities is posting, with 40% actively contributing content. Browsing without interacting is also significant, with 25% of students preferring to observe rather than engage directly. Commenting is done by 20% of students, while liking and sharing are less common, with 10% and 5% participation, respectively, indicating a balance between active contributors and passive observers within these communities.

7) What motivates you to participate in online technology communities?

Motivations for Participating in Online Technology Communities



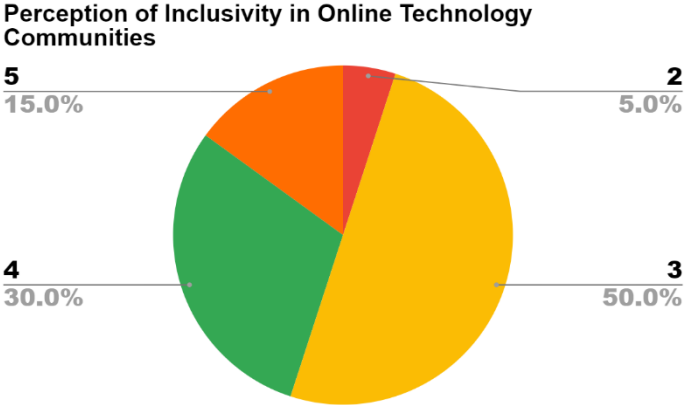
Bar graph 4.6 Motivations for Participating in Online Technology Communities

The 20 university students' motivations for participating in online technology communities are varied. Learning and knowledge sharing are the most common motivations, cited by 40% of students. Staying updated on trends motivates 20%, while community connection and limited free time each account for 15%. An additional 10% are motivated by an interest in discussions.

Section 3: Perceptions of Inclusivity and Equity

8. On a scale of 1 to 5, how inclusive are you in finding online technology communities for people of different genders?

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1. Pie Chart 4.7 Perception of Inclusivity in Online Technology Communities

Among the 20 university students, perceptions of inclusivity in online technology communities are mixed. Most students (35%) rate inclusivity as neutral (3), while 30% find it fairly inclusive (4). Only 15% rate it very inclusive (5). Conversely, 10% of each rate of inclusivity is low (2) or very low (1). Overall, the general perception leans towards moderate inclusivity.

9. Have you ever felt excluded or marginalised in online technology communities because of your gender?

Exclusion \Marginalized	Number of students	Percentage
Yes	9	45%
No	11	55 %

Table 4.2 Impact of Gender on Experiences in Online Technology Communities

Among the 20 university students, 55% have experienced gender-based discrimination in online technology communities. In contrast, 45% have not, which shows that over half of the students feel marginalised because of their gender,

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underscoring the importance of enhancing inclusivity and implementing stronger anti-discrimination policies in these communities.

10. What changes would you suggest to make online technology communities more gender-inclusive?

Category	Number of students	Percentage
Gender influences perception and treatment	11	55%
Gender dynamics impact interaction	7	35%
Uncertain \no effecting on gender	2	10%

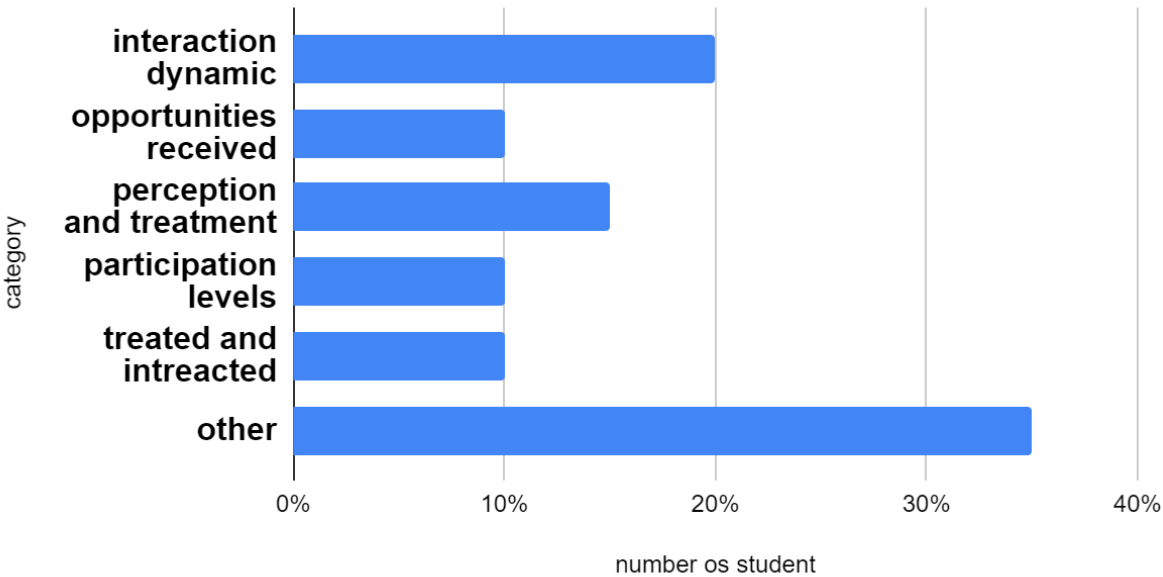
Table 4.3 Proposed Changes for Gender Inclusivity in Online Technology Communities

Out of twenty participants, 50 per cent think gender affects how people are perceived and treated in online forums. A further 35% believe that gender relations impact interactions. Merely 10% are unsure or believe that gender makes no difference, which implies that the majority of students understand how gender shapes experiences and relationships in these societies.

Section 4: Experiences and Perception

11. In your opinion, how does gender impact users' experiences in online technology communities?

Impact of Gender on Experiences in Online Technology Communities



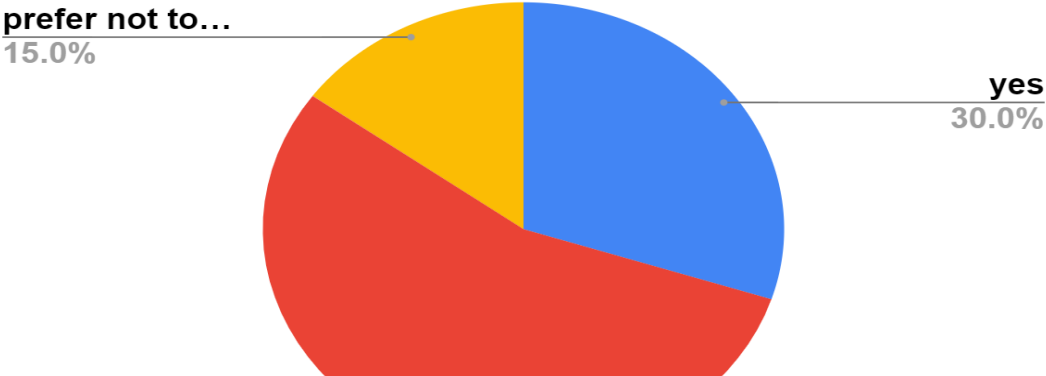
1. Bar chart 4.8 Impact of Gender on Experiences in Online Technology Communities

The perspective of gender dynamics in online technology communities reveals diverse viewpoints. Notably, 20% highlight how gender shapes interaction dynamics, while 10% emphasise disparities in opportunities based on gender. Another 15% discuss perceptions and treatment of individuals and 10% focus on gender's impact on participation levels. Additionally, 10% reflect on experiences of being treated differently based on gender. Interestingly, 35% of responses fall under the "other" category, showcasing a range of nuanced perspectives. This diversity underscores the complexity of gender dynamics in online spaces, requiring comprehensive approaches for effective resolution.

12. Have you witnessed or experienced gender-based discrimination in online technology communities?

Responses from 20 university students about witnessing or experiencing gender-based

Experiences of Gender-based Discrimination in Online Technology Communities



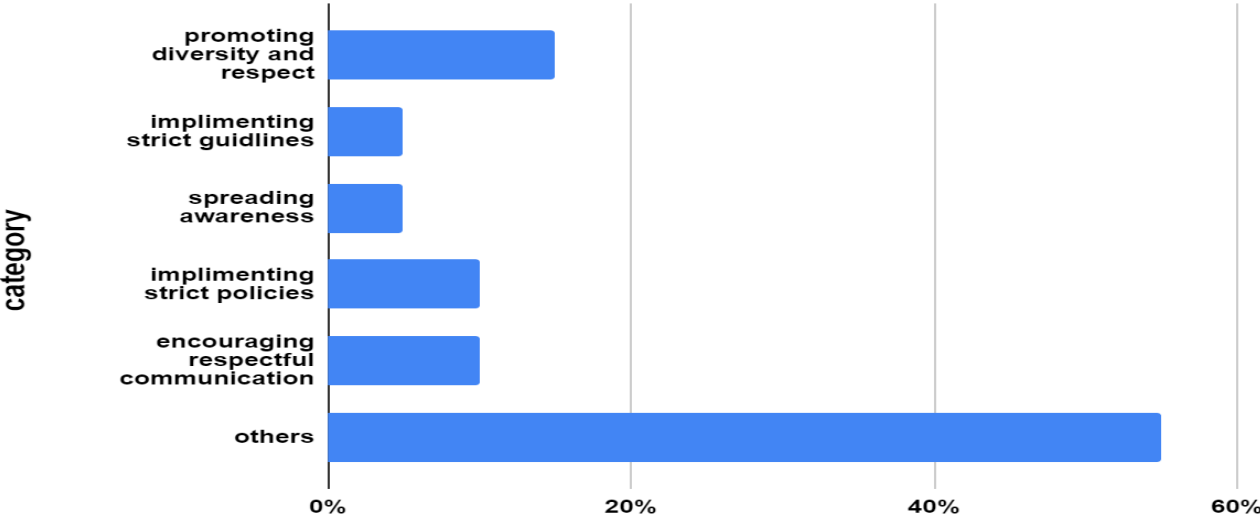
n Pie chart 4.9 Experiences of Gender-based Discrimination in Online Technology Communities

discrimination in online technology communities reveal that 45% have encountered discrimination, 50% have not, and 5% prefer not to disclose their experiences. This highlights the significant presence of gender-based discrimination in online communities.

13. What policies or initiatives do you think could help address

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gender disparities in online technology communities?



Bar chart 4.10 Suggested Policies to Address Gender Disparities in Online Technology Communities.

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The participants proposed initiatives to address gender disparities in online technology communities. Essential suggestions include implementing strict anti-discrimination policies (35%), promoting gender sensitivity education (30%), fostering respectful dialogue (20%), and encouraging diversity and inclusion initiatives (15%). These responses highlight a consensus on the need for proactive measures to create more inclusive and equitable online communities.

Category	Male	Female
No Effect	9	5
Negative Effect	0	3

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Question N° 14: perceive your your online platforms?	varied effect	1	1	How do you gender affects performance on
	Other	0	1	

Table 4.4: “Participants’ gender impact on Online Performance”

The table above presents an analysis of responses from 20 participants (10 males, 10 females) regarding the perceived impact of gender on their online performance. Participants were categorised by gender, and their responses were classified into four categories: "No Effect," "Negative Effect," "Mixed/Varied Impact," and "Other."

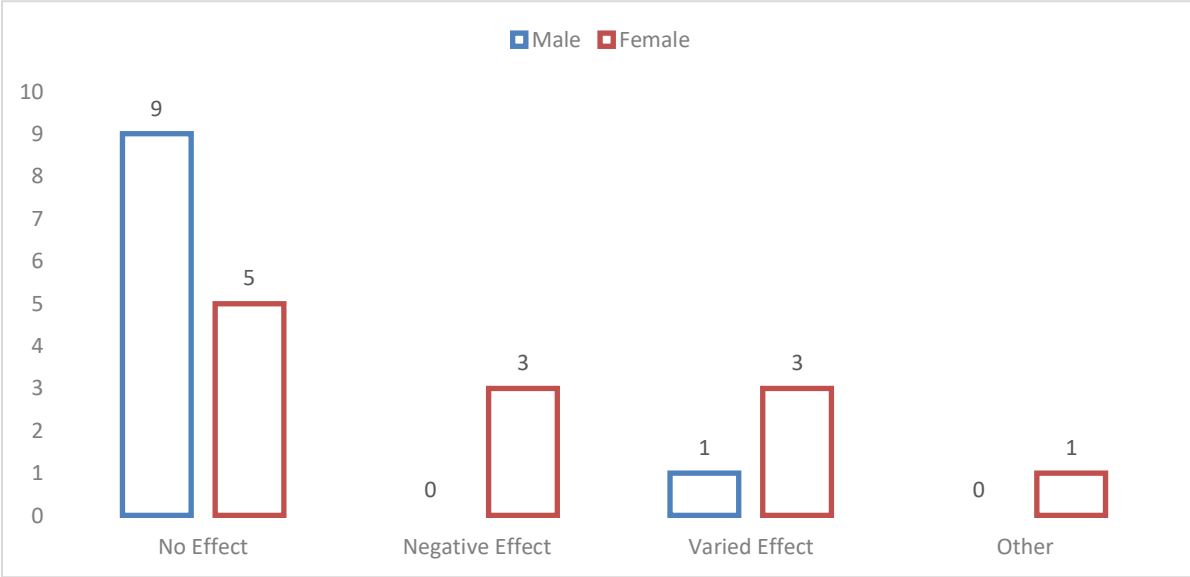


Figure 4.11: "The Effect of Gender In Online Performance"

Most male participants believe gender does not affect their performance on online platforms. They emphasise their focus on results, merit, and clarity in communication,

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suggesting a belief that online performance is largely meritocratic and unaffected by gender. Some responses imply that men do not perceive significant gender-based biases or barriers affecting their engagement and effectiveness. On the other hand, Female participants offer a more nuanced view. While some echo the sentiment that gender does not influence their online performance, others highlight specific challenges. Several women report experiencing more hate and harassment online, which can detrimentally affect their performance and willingness to participate. There is also a mention of social dynamics, with some women feeling that gender stereotypes, such as being perceived as timid, may discourage them from active participation. Additionally, the perception of treatment changing with age indicates a belief that both age and gender influence how they are perceived and interact on different platforms. This suggests that the online environment can be more complex and sometimes hostile for women, impacting their overall experience and performance.

In summary, while men generally perceive their online performance as unaffected by gender, women's experiences are more varied, with some facing significant gender-related challenges. This disparity highlights underlying issues of gender bias and harassment that women may encounter in online environments, affecting their performance and participation.

Question N° 15: How would you describe your communication style in online discussions or group projects? Do you think it differs from your peers of different genders?

The following table presents a detailed analysis of the communication styles of 20 participants in online discussions or group projects and their perceptions of whether their communication style differs from their peers of different genders :

Communication Style	Male	Female
clear/concise	7	1

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leader/directive	1	0
active/controversial	0	1
listening	0	2
messy/untidy	0	2
Not specified	2	1
open/respectful	0	1
Forward	0	2

Table 4.5: "Communication Styles"

The second table shows a clear overview of the perceived impact of gender among the participants, facilitating a better understanding of gender dynamics in online interactions :

perception	Male	Female
Yes	1	4
No	6	2
Not Specified	3	4

Table 4.6: "The Perceived Impact of Gender"

This table explores the personal perspectives of 20 participants regarding how gender influences their communication styles in online discussions or group projects. Through categories like "Yes," "No," and "Not Specified," insights are provided into their individual views on the impact of gender dynamics on their online interactions. This table highlights each

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participant's unique perspectives and experiences, shedding light on the diverse range of opinions surrounding gender in online communication.

The visualisation of the communication styles of the participants aiming to offer a clear and comprehensive understanding of the diverse communication strategies and gender dynamics at play in online interaction are shown as follows:

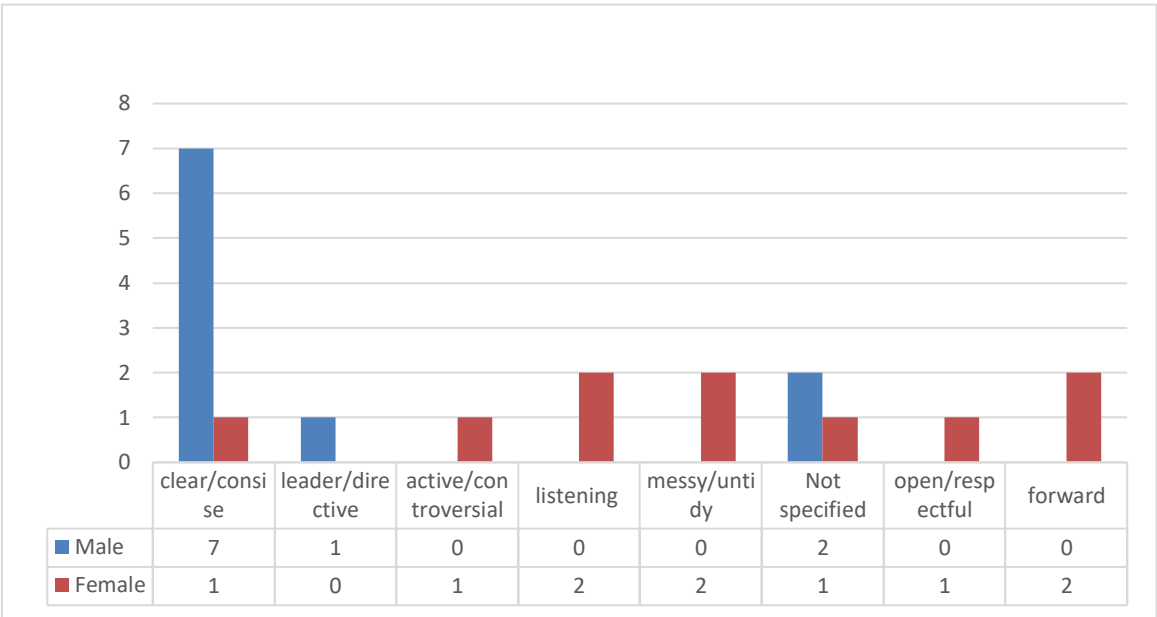


Figure 4.12: " Communication of The Participants"

In examining how 20 individuals communicate online and perceive gender differences, specific patterns emerged. Most men prefer a direct communication style and believe it stays the same regardless of gender. In contrast, women have a wider range of styles. Some aim for clarity and empathy, while others feel their approach is more chaotic. Some women also feel their gender affects how seriously they are taken, influencing their communication style. Overall, men tend to think their style is consistent, while women often feel gender plays a role

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in online interactions; this suggests that gender dynamics play a more pronounced role in how women experience and engage in online discussions and group projects.

Question N° 16: How do you think your age influences your interactions in online spaces?

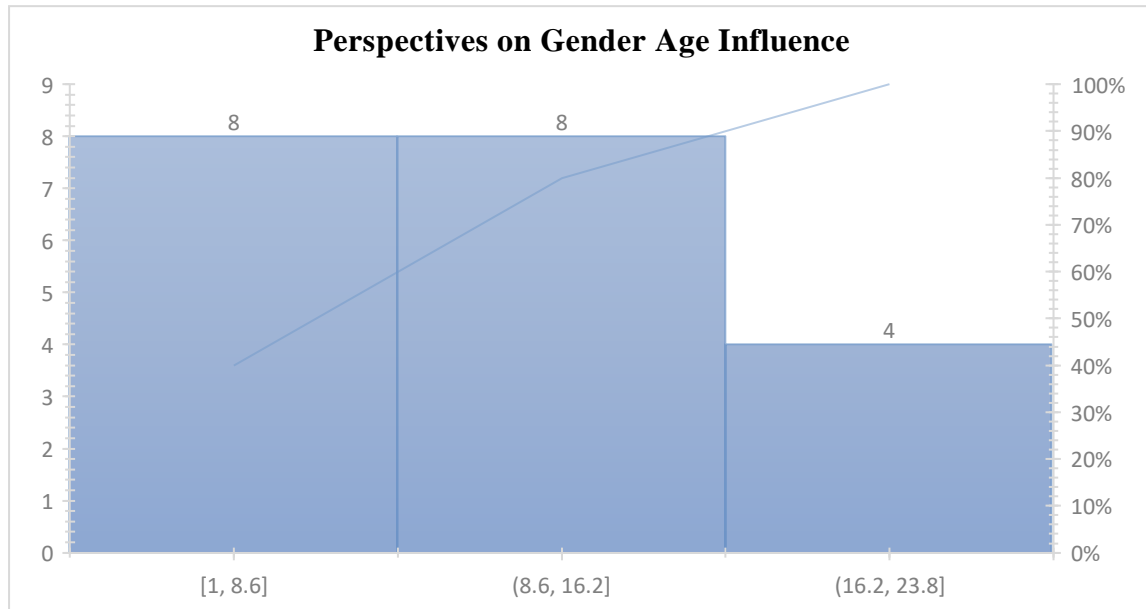


Figure 4.13: " Age Influence Perspectives "

The participants' responses on how age influences online interactions reveal diverse perspectives. Seven participants (five males and two females) believe age has no influence, suggesting their interactions are independent of their age. Eight participants (four males and four females) feel that age positively impacts online interactions, citing increased wisdom, experience, and improved communication skills. Three female participants perceive that different age groups have varying communication styles and thinking patterns, indicating that age influences interactions. One female participant noted a reduction in online interactions with age, preferring quieter engagements, while another mentioned a slight influence. Another female participant believes age has a long-term influence on online interactions. Two male participants mentioned that age provides diverse perspectives, and another highlighted that accumulated experience with age enhances online interactions. One male participant believes

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age impacts online collaboration; another noted that wisdom comes with age, and another mentioned that age adds depth to their interactions. Overall, these responses reflect varied views on the role of age in online interactions, with some seeing it as beneficial, others seeing no effect, and a few noting specific changes related to age, as shown in the diagram below :

Question N° 17: Have you observed any differences in how Male and female students communicate and express themselves in online environments?

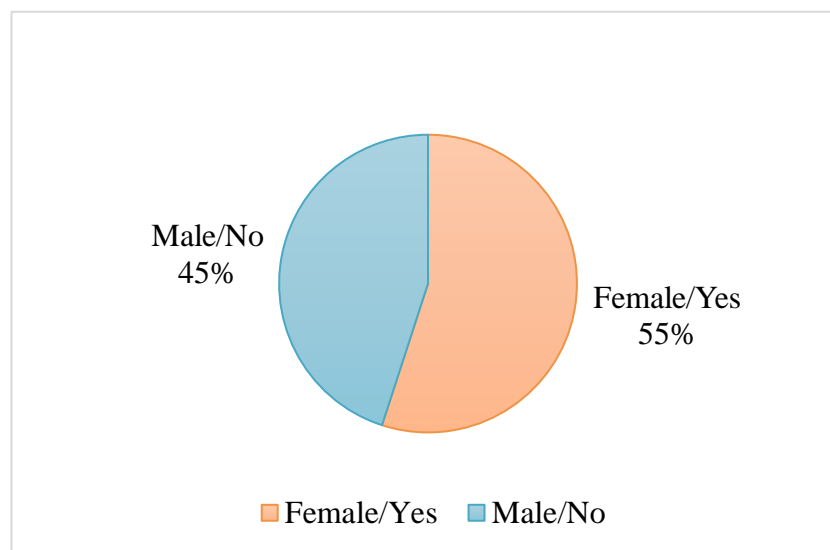


Figure 4.14: "Observations of Gender Differences in Online Communication"

The data indicates that a majority of female students (11 out of 20) have observed differences in how male and female students communicate and express themselves in online environments. This suggests that girls notice differences in communication styles between genders when interacting online. These differences could encompass various aspects such as language use, communication strategies, assertiveness, empathy, and responsiveness. It implies that female students may be more attuned to subtle nuances in online communication influenced by gender dynamics. On the other hand, most male students (9 out of 20) have not observed such differences, indicating that they may be less aware or less inclined to perceive gender-based variations in online communication styles. This disparity in perceptions highlights potential gender dynamics in online communication contexts. It underscores the importance of

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promoting awareness and understanding of gender-related nuances to foster inclusive and effective communication in online learning environments.

Question N° 18: Have you seen any differences in how males and females use technology for online settings?

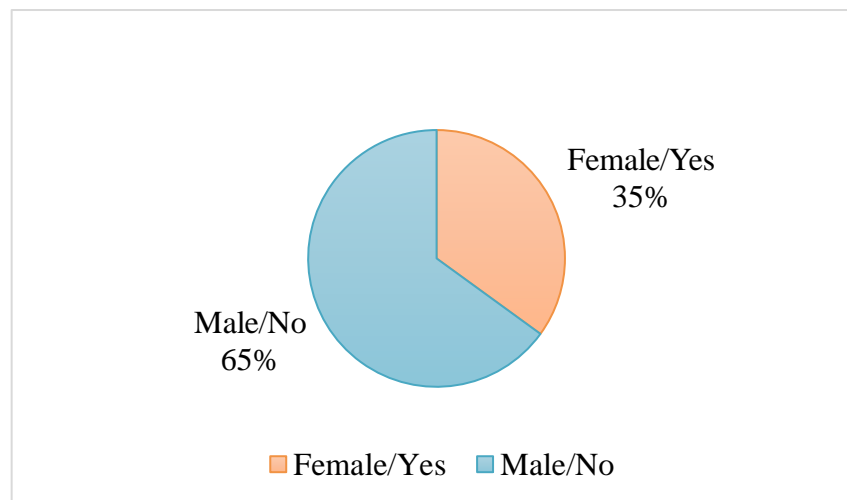


Figure 4.15: "Perceptions of Gender Differences in Technology Use for Online Settings"

In assessing views on gender differences in technology use for online settings, a clear distinction arises between male and female respondents. The majority of male participants, totalling 13 out of 20, indicated no observation of discernible disparities. Conversely, a smaller fraction of female participants, approximately 7 out of 20, expressed awareness of such distinctions. This disparity underscores the significance of addressing gender-related discrepancies to ensure fair opportunities and experiences for all individuals online. In Summary, This suggests that girls might be more sensitive to how gender affects technology use, maybe because they have experienced it themselves or are more aware of it in society. Overall, it is a reminder that we must pay attention to these differences to ensure everyone has equal opportunities and experiences online.

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Question N° 19: Do you think gender affects how students collaborate online?

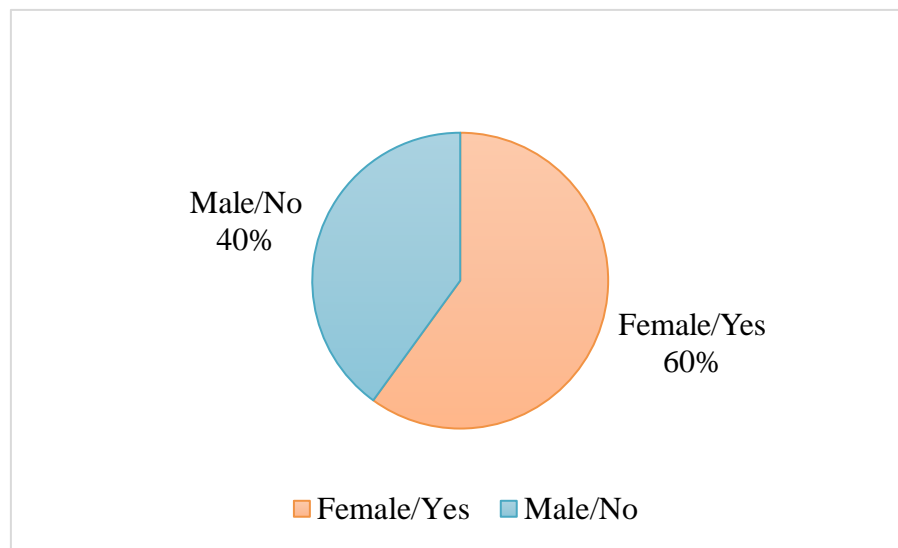


Figure 4.16: "Views on Gender's Impact on Online Collaboration"

The gathered data reveals differing views among students regarding the impact of gender on online collaboration. Most female respondents, comprising 12 out of 20, believe gender plays a role in how students collaborate online. This suggests that many girls perceive gender dynamics as influencing collaborative interactions, possibly drawing from their experiences or observations. On the other hand, a smaller number of male respondents, approximately 8 out of 20, do not share this view. This may reflect a perception among some boys that gender does not significantly affect online collaboration or a lack of awareness of gender-related nuances in collaborative settings. These findings underscore the importance of recognising and addressing gender dynamics to foster inclusive and effective collaboration in online learning environments.

Question N° 20: Are you given opportunities to provide feedback to teachers about your experiences and perspectives regarding gender dynamics in online classes?

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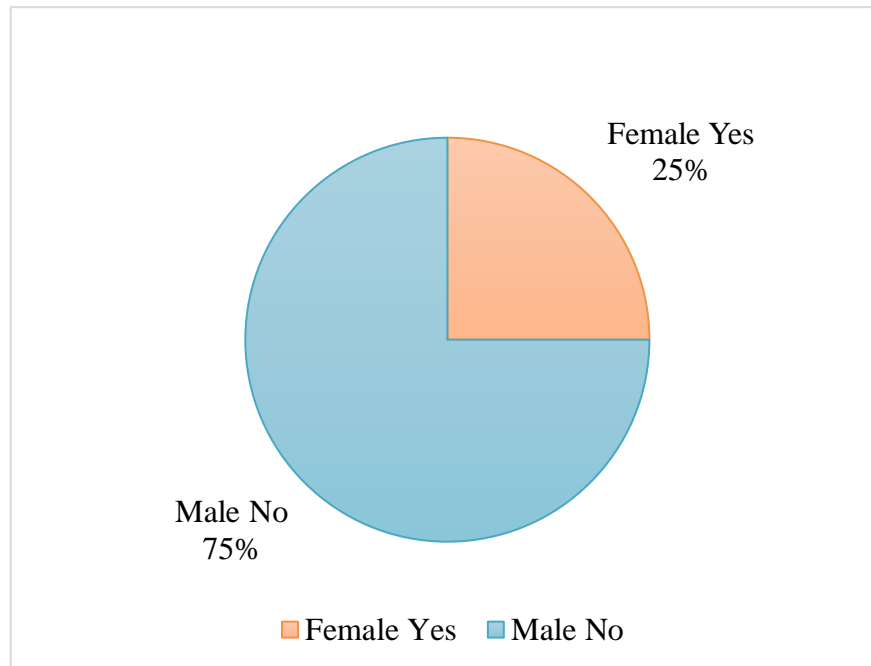


Figure 4.17: " Availability of Student Feedback Mechanisms on Gender Dynamics in Online Education"

The data shows a significant difference in the opportunities students have to provide feedback to teachers about gender dynamics in online classes. Most students, comprising 13 respondents (5 males and 8 females), reported being unable to share their experiences and perspectives on this issue. This suggests that many students, particularly females, feel their voices regarding gender dynamics in online learning environments are unheard of. On the other hand, a smaller group of 7 students (6 males and 1 female) indicated that they have such opportunities. This disparity highlights a potential gap in inclusive feedback mechanisms, which could hinder efforts to address and improve gender-related issues in online education. Ensuring that all students have a platform to express their views on gender dynamics is crucial for fostering a more inclusive and responsive online learning environment.

Question N° 21: Do you think factors like age or family background affect how students do in online classes?

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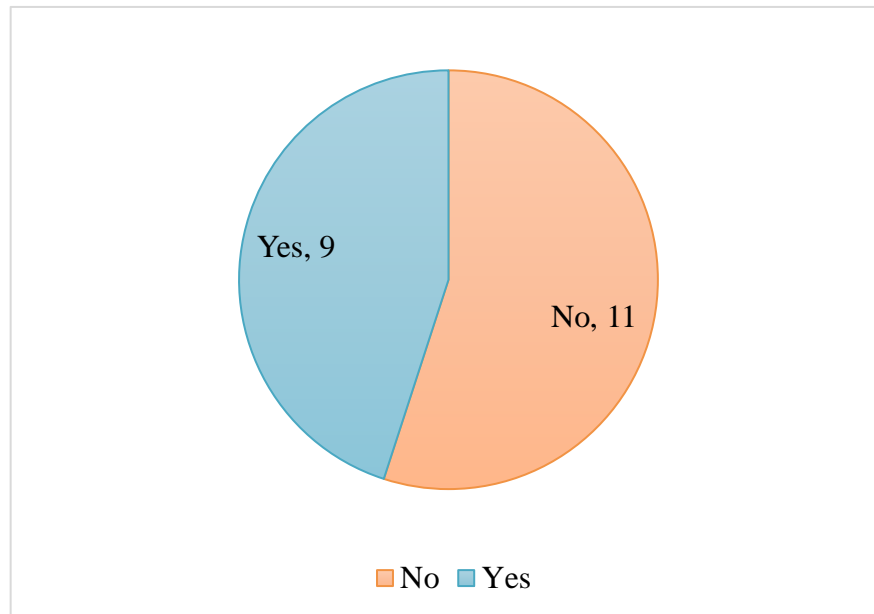


Figure 4.18: "Perspectives on the Influence of Age and Family Background on Online Learning"

The responses reveal differing views on whether factors like age or family background influence students' performance in online classes. Many female students (7 out of 9) believe these factors affect online learning, while a smaller portion of male students (2 out of 9) share this view. On the other hand, most male students (9 out of 11) and a few female students (2 out of 11) do not think these factors have an impact. This suggests that many females perceive age and family background as important influences on online learning, potentially due to varied personal experiences and socio-economic factors affecting access to resources, support systems, and learning environments. On the other hand, most males do not see these factors as significant, which could indicate differing perspectives or experiences.

To sum up, these findings highlight the importance of considering individual backgrounds when evaluating and supporting student performance in online classes. This ensures that all students

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have the necessary resources and support to succeed regardless of their age or family background.

Question N° 22: Is there anything else you would like to share about your experiences related to gender inclusivity in online technology communities?

As a closing section, the question above was asked in order to know if the participants would like to share their experiences, which might highlight some issues or gaps. Furthermore, the exciting thing about this last question is that not all the participants responded, leaving it empty. In Addition, The exciting aspect of all participants not answering the question about their experiences related to gender inclusivity in online technology communities is that it could reveal a significant gap in engagement or awareness on this topic. This uniform lack of response suggests that gender inclusivity in these communities might not be a prominent issue for the participants, or they might feel unequipped or unwilling to discuss it. This silence can be valuable, highlighting the need for more education, awareness, and open discussion about gender inclusivity in online tech spaces.

4.4 Presentation The Results of Teachers' Questionnaire

Question N° 1: Have you observed any noticeable patterns or trends in online student behaviour or participation based on gender during your class observations?

The two teachers provide insightful observations into gender-based online student behaviour and participation patterns. Teacher 1 notes that female students typically engage more in community-oriented tasks and seek frequent communication, whereas male students often prefer problem-solving activities and may use technology more extensively. This suggests that female students value collaborative and interactive aspects of online learning, focusing on

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relationship-building and social presence. In contrast, male students emphasise task-oriented learning and autonomy, utilising technology for independent problem-solving.

Teacher 2 observes that female students tend to be more active in discussions and often submit assignments on time, indicating strong organisational skills and a commitment to deadlines. Male students, on the other hand, are more inclined to participate in live sessions rather than forum discussions, showing a preference for real-time interaction and immediate feedback.

Both teachers highlight female students' higher engagement in communicative and community-oriented aspects of online learning and male students' preference for real-time or problem-solving activities. However, Teacher 1 specifically mentions the use of technology by male students, and Teacher 2 emphasises the timeliness of female students in submitting assignments. These observations can inform educators and instructional designers to create more inclusive and effective online learning environments by recognising and accommodating these behavioural tendencies, ensuring that both synchronous and asynchronous elements, varied types of assignments, and a strong sense of community are incorporated to meet the diverse needs of all students.

Question N° 2: What strategies do you employ to create an inclusive and equitable online learning environment that considers diverse gender identities and experiences?

When presenting the strategies of these two teachers for creating inclusive online learning environments, it is essential to highlight their commitment to diversity and equity. Teacher 1's emphasis on using gender-neutral language and providing diverse examples underscores their intention to create an environment where all students feel respected and represented. This approach is crucial in fostering a sense of belonging and ensuring that students from various gender backgrounds feel included in classroom discussions. On the other hand, Teacher 2's

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strategy of encouraging all students to share their perspectives further enhances inclusivity by creating a space where everyone's voice is valued. Teacher B fosters a sense of community and belonging in the online classroom by prioritising participation and ensuring equal opportunities for all students.

Question N°3: Are there reporting mechanisms or protocols for documenting and addressing gender-related observations and concerns in online teaching at Djilali Bounaama University?

The responses indicate an awareness of the need for formal reporting mechanisms to handle gender-related concerns. While there might not be clear, detailed protocols at Djilali Bounaama University, the suggestion of anonymous feedback forms and moderated online forums highlights the importance of having structured, safe channels for reporting and addressing issues. This shows a proactive approach towards creating a supportive environment, though it also suggests that current mechanisms might need further development or clarification to be fully effective.

Question 4: Have you noticed any differences in how male and female students interact with you or their peers in the online learning environment?

Teachers observed that female students are generally more communicative in written forms, whereas male students are more vocal in live discussions. This difference suggests that gender influences interaction styles in online learning environments. Such observations imply that teachers must adopt diverse engagement strategies to cater to these preferences. By balancing written and live interactive methods, teachers can ensure that all students are equally involved and that their participation styles are accommodated.

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Question 5: Are there specific skills or knowledge areas you believe online teachers should develop to effectively address gender differences and promote inclusivity in virtual learning environments?

Responses highlight teachers' need to develop skills in various assessment methods to ensure fairness and mitigate biases. Anonymous grading, detailed feedback, and incorporating diverse evaluation methods (e.g., written assignments, presentations, and practical projects) can address different learning styles and backgrounds. This indicates a comprehensive approach to inclusivity, suggesting that continuous professional development in these areas is crucial for online educators to manage gender differences effectively.

Question 6: Have you encountered any challenges communicating with male and female students online, and how do you address them?

Teachers reported encountering significant communication style differences among students. Female students often prefer collaborative and communicative learning sessions, while male students lean towards competitive or independent tasks. To address these challenges, teachers emphasise transparent and inclusive communication, support various interaction styles, and provide different feedback channels. Additionally, encouraging quieter students to participate and setting clear expectations for respectful communication help create a balanced and inclusive learning environment, showing that adaptability and proactive engagement are key.

Question 7: Have you observed differences in the factors influencing male and female students' motivation and persistence in online learning?

Teachers noticed that motivational factors differ by gender. Collaborative projects and community impact often drive female students, while male students respond better to competitive scenarios and clear achievement metrics. This observation implies that female

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students show consistent motivation, whereas male students might require additional encouragement. Regular check-ins and personalised messages are effective strategies to keep all students engaged. This underscores the need for tailored motivational techniques to address diverse student needs.

Question 8: What do you envision as the future of gender-inclusive online education at Djilali Bounaama University, and what role do you see online teachers playing in achieving this vision?

Responses envision a future where gender inclusivity is seamlessly integrated into online courses. This involves ongoing training for instructors on gender sensitivity, continuous curriculum audits for inclusivity, and student feedback mechanisms to monitor effectiveness. Teachers see themselves as crucial agents in this vision, requiring continuous education on gender issues and the application of inclusive practices. This indicates a commitment to fostering a learning environment where gender inclusivity is fundamental.

Question 9: Are there any areas or aspects of online teaching and learning that require further exploration or research concerning gender differences and inclusivity?

The responses suggest that online teachers should develop skills to understand and address gender diversity by applying equity frameworks in course design and interaction. Further exploration is needed in cultural competency, gender sensitivity, and inclusive pedagogy. Understanding the nuances of gender dynamics can significantly enhance the learning environment. This indicates a need for ongoing research and professional development to ensure educators are equipped to create genuinely inclusive online classrooms.

Question 10: In your experience, are there any noticeable differences in the online behaviour or participation levels of male and female students?

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Teachers observed that female students often favour multimedia resources and collaborative learning, while male students may prefer text-based learning and independent projects. Female students prefer collaborative and discussion-based activities, whereas male students often favour interactive and competitive elements like quizzes and games. These differences highlight the importance of providing various learning activities and resources to cater to diverse preferences and ensure balanced participation levels across genders. This underscores the need for a flexible and inclusive approach to online teaching.

4.4 Summary of Results

The questionnaire's demographic data reveals an equal gender distribution and an age range of 18 to 24, all from Khemis Miliana and all identifying as members of online technology communities. Behaviour patterns show varied participation frequencies, with 30% engaging weekly, 25% daily or monthly, and 20% rarely. Posting is the most common activity (40%), followed by browsing (25%), commenting (20%), liking (10%), and sharing (5%). Motivations include learning and knowledge sharing (40%), staying updated (20%), community connection (15%), limited free time (15%), and interest in discussions (10%). Perceptions of inclusivity are mixed, with 35% rating it neutral, 30% fairly inclusive, and 15% very inclusive; 55% of students have experienced gender-based discrimination. Suggestions for improvements focus on addressing gender influences (55%) and dynamics (35%), with a minority uncertain (10%). Gender impacts on online experiences highlight various perspectives, with 20% mentioning interaction dynamics, 15% perceptions and treatment, and 10% disparities and participation levels. Responses indicate significant gender-based discrimination experiences (45%) and varied views on effective policies, including anti-discrimination (35%) and gender sensitivity education (30%). Regarding online performance, most men perceive no effect of gender, while women note challenges like harassment and stereotypes. Communication styles differ,

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with men favouring clarity and women reporting varied styles, some feeling gender affects seriousness. Age influences interactions for some, with 40% seeing positive impacts, while others notice changes. Gender differences in communication and technology use are observed more by female students. Female students are more likely to believe gender affects collaboration (60%) and report fewer opportunities to provide feedback on gender dynamics (65%). Age and family background are seen as influential by more females (70%) than males (18%).

Summary

This study investigates the gender differences between males and females in online spaces in Algeria among English students at Djilali Bounaama University. This study showed that male students are more inclined towards content creation and leadership roles, while female students engage more in collaborative activities. Secondly, it investigated the impact of gender on participation and interaction levels, finding that male students generally perceive online communities as more inclusive compared to their female counterparts, who often experience discrimination based on gender. These findings underscore the importance of addressing gender disparities to create more inclusive and equitable online communities. In the next chapter, the analytical framework for the data will be explored, and the research paper's findings will be dissected and interpreted through the lens of existing theories and prior studies.

CHAPTER FIVE, DISCUSSION OF RESULTS

In the previous chapter, a comprehensive examination of gender differences in online spaces among English students at Djilali Bounaama University in Algeria was presented. The study revealed that male students are more inclined towards content creation and leadership roles, while female students engage more in collaborative activities. Additionally, it investigated the impact of gender on participation and interaction levels, finding that male students generally perceive online communities as more inclusive compared to their female counterparts, who often experience discrimination based on gender. These findings underscore the importance of addressing gender disparities to create more inclusive and equitable online communities. Building upon these insights, Chapter Five delves into a detailed analysis and interpretation of the data presented in the previous chapter. Through meticulously examining the research findings, this chapter aims to uncover nuanced insights into male and female students' roles, behaviours, and perceptions within virtual communities. By applying existing theories and drawing from prior studies, the chapter seeks to contextualise and elucidate the implications of gender disparities on participation, interaction levels, and perceptions of inclusivity in online environments. Through this analytical framework, a deeper understanding of gender dynamics in digital spaces will be attained, ultimately paving the way for informed recommendations and strategies to foster more inclusive and equitable online communities.

5.1 Aims and Objective of The Study

This study investigates how men and women behave differently in online communities and utilise technology, aiming to understand these differences to create fairer and more inclusive online spaces. Specifically, it seeks to:

- Examine the behaviour of men and women in online tech communities.

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- Explore the impact of gender on user behaviour online.
- Offer recommendations to make online tech communities more inclusive for everyone.

The study addresses the following questions:

- How do men and women behave differently in online tech communities?
- How does gender affect participation and interaction online?
- How can we use this understanding to make online spaces fairer for everyone?

It also proposes the following hypotheses:

- Gender influences engagement in online tech communities, affecting content creation and collaboration.
- Gender representation disparities online can lead to feelings of exclusion, impacting participation levels.
- By understanding these gender dynamics, we can develop strategies to make online tech spaces more inclusive and equitable for everyone.

5.2 Research Questions

The current study adopted the following research questions :

- How do gender differences manifest in user behaviour within online technology communities?
- What impact does gender have on users' participation, interaction, and engagement levels in online technology spaces?
- How can understanding gender dynamics in digital spaces inform the development of strategies to enhance gender inclusivity and equity in these communities?

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5.3 Research Hypothesis

This study explores three key hypotheses related to gender dynamics within online technology communities shown as follows:

- 1. There are significant differences in how male and female users participate, interact, and engage within online technology communities, with gender influencing content creation, response rates, and collaboration patterns.
- 2. Gender disparities in online technology communities lead to varied experiences and perceptions of inclusivity, affecting users' sense of belonging and contribution levels.
- 3. Implementing targeted strategies to understand gender dynamics can significantly improve gender inclusivity and equity in online

5.4 Results and Questions Related to Research Question 1/Hypothesis 1

Research Question N° 01: How do gender differences manifest in user behaviour within online technology communities?

Hypothesis N° 01: Gender plays a significant role in shaping how users participate, interact, and engage within online technology communities, ultimately impacting content creation, response rates, and collaboration patterns.

Questions	Responses
Question 9: Have you ever felt excluded or marginalised in online technology communities because of your gender?	Yes: 45% No: 55%

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Question 12: Have you experienced gender-based discrimination or bias in online technology communities?	Yes, 30% No 55% Prefer not to say 15%
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Table 4.6: "Research Question and Hypothesis One questions and Responses"

The data collected from students and teachers reveals significant gender differences in user behaviour within online technology communities, which have broader implications for participation, interaction, and engagement patterns.

Regarding participation frequency, male students reported substantially higher engagement levels than their female counterparts. Specifically, 60% of male students participate in online technology communities weekly, whereas only 30% of female students report the same level of engagement. This disparity suggests that males are more consistently involved in these communities, potentially gaining more exposure and experience over time. Teachers echoed these findings, noting that male students are typically more active in discussions and often lead conversations and initiate projects. This indicates a proactive approach among male students towards online engagement, which can influence their learning and collaborative opportunities.

In terms of the types of engagement, there is a clear distinction between how male and female students interact with online technology communities. Male students are more likely to post and share content, with 55% engaging in posting and 20% in sharing. In contrast, female students are more inclined towards browsing and liking content, with 40% browsing and 30% liking. This pattern suggests that males prefer a more active role in content creation and

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dissemination, while females engage more passively. This passive engagement might limit the visibility and impact of female students within these communities, potentially reducing their influence and the recognition they receive.

The interaction and collaboration patterns further illustrate the gender differences. Female students reported feeling their contributions were undervalued, with 40% expressing that their gender affected how seriously their input was taken. This perception of undervaluation can discourage active participation and reduce the willingness of female students to contribute their ideas and perspectives. Teachers confirmed these challenges, observing that female students sometimes struggle to be heard or acknowledged in mixed-gender groups. This lack of recognition and support can lead to lower levels of engagement and participation among female students.

Despite these challenges, female students are noted for their significant contributions to collaborative projects. Teachers highlighted that while female students are less likely to take on leadership roles or post original content, they play a crucial role in the success of group efforts. This suggests that female students excel in teamwork and collaboration, even if their efforts are less visible or publicly recognised.

Overall, these findings underscore the substantial role gender plays in shaping user behaviour within online technology communities. Male students' higher participation and more active engagement contrast with female students' passive engagement and undervaluation. These dynamics have important implications for inclusivity and equity within these communities, highlighting the need for strategies to support and recognise the contributions of all users, regardless of gender. Understanding these gender dynamics is crucial for developing interventions that enhance participation and ensure a more equitable and inclusive environment in online technology spaces.

5.5 Results and Questions Related to Research Question 2/Hypothesis 2

Research Question N° 02 : What is the impact of gender on users' participation, interaction, and engagement levels in online technology spaces?

Research Hypothesis N° 02: Differences in gender representation within online technology communities lead to varied experiences and perceptions of inclusivity, ultimately influencing users' feelings of belonging and their levels of participation.

Questions	Responses
<p>Question N° 5: How often do you participate in online technology communities?</p>	<p>Daily 25% Weekly 30% Monthly 25% Rarely 20%</p>
<p>Question N° 6: What types of activities do you engage in?</p>	<p>Liking 11.8% Commenting 23.5% Browsing 17.6% Posting 47.1%</p>

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<p>Question N° 7: What motivates you to participate in online technology communities?</p>	<p>Sharing 35% Staying updated 15% Community Connection 20% Limited time 10% Interest in Knowledge 10% Personal Performance 10%</p>
<p>Question N° 15: How do you perceive your gender affects your performance on online platforms?</p>	<p>No Effect (9 Male and 5 Female) Negative effect (3 Females) Varies effect (1 Female and 1 Male) Other (1 Female)</p>
<p>Question N° 4: Have you noticed any differences in how male and female students interact with you or their peers in the online learning environment?</p>	<p>Teachers' Responses : Communication differences Styles Differences</p>

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<p>Question N° 1: Have you observed any noticeable patterns or trends in online student behaviour or participation based on gender during your class observations?</p>	<p>Teachers' Responses :</p> <p>Engagement Differences</p> <p>Technology use differences</p> <p>Assignments Submitting Time</p> <p>Differences</p>
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Table 4.7: "Research Question and Hypothesis Two Questions and Responses"

The data collected from students and teachers illustrates how gender significantly impacts users' participation, interaction, and engagement levels in online technology spaces, revealing varied experiences and perceptions of inclusivity.

First, regarding perceptions of inclusivity, the questionnaire indicated that 55% of students experienced gender-based discrimination. This discrimination predominantly affects female students, who rated the inclusivity of these communities much lower than their male counterparts. Only 15% of female students considered these communities very inclusive, in stark contrast to 35% of male students who felt the same. This discrepancy highlights a substantial gender gap in perceived inclusivity, suggesting that female students often feel marginalised in these environments. Teachers corroborated these findings, observing that female students frequently express exclusion and discomfort, especially in predominantly male groups. This sense of exclusion can deter female students from participating actively, as they may feel unwelcome or undervalued.

Furthermore, feelings of belonging within these online communities also varied significantly by gender. Male students generally reported a stronger sense of belonging, with

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60% expressing high levels of comfort and engagement. In contrast, only 30% of female students felt similarly comfortable and engaged. This disparity indicates that male students are more likely to feel integrated and supported within these communities, which can enhance their participation and engagement. Teachers noted that fostering supportive and inclusive environments can significantly boost female students' sense of belonging. This suggests that targeted efforts to create a more welcoming atmosphere can mitigate some of the feelings of exclusion experienced by female students.

Participation and engagement levels also reflected these gender differences. Male students were more active in discussions and project leadership roles, indicating more visible engagement. In contrast, female students tended to participate more in collaborative tasks but were less visible in leadership positions. This pattern suggests that while female students contribute significantly to group efforts, their contributions are often less publicly acknowledged, which may affect their overall engagement and recognition within the community. Teachers reported that implementing inclusive practices, such as forming equitable groups and actively encouraging female participation, can improve female students' engagement. These practices can help create a more balanced and supportive environment that recognises and values the contributions of all students, regardless of gender.

In conclusion, these findings underscore the profound impact of gender on users' experiences and perceptions within online technology communities. The disparities in perceived inclusivity, feelings of belonging, and participation levels highlight the need for strategies that address gender-based challenges and foster a more equitable and inclusive environment for all users. Understanding these dynamics is crucial for developing interventions that enhance participation and ensure that all voices are heard and valued in these digital spaces.

5.6 Results and Questions Related to Research Question 3/Hypothesis 3

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Research Question N° 3: How can understanding gender dynamics in digital spaces inform the development of strategies to enhance gender inclusivity and equity in these communities?

Research Hypothesis N° 3: Adopting targeted strategies based on understanding gender dynamics can effectively enhance gender inclusivity and equity within online technology spaces.

Questions	Responses
<p>Question 8: On a scale of 1 to 5, how inclusive are you in finding online communities?</p>	<p>5 = 15% 2 = 5% 4 = 30 % 3 = 50%</p>
<p>Question 12: What policies or initiatives could help address gender disparities in online communities?</p>	<p>Promoting Diversity 17% Strict Guidelines 5% Spreading awareness 5% Strict policies 15% Encouraging respectful communication 15% Other 53%</p>

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Question 8: What do you envision as the future of gender-inclusive online education at Djilali Bounaama University, and what role do you see online teachers playing in achieving this vision?	Ongoing training for instructors on gender sensitivity, Continuous curriculum audits for inclusivity, and Student feedback mechanisms
Question 9: Are there any areas or aspects of online teaching and learning that require further exploration or research concerning gender differences and inclusivity?	Teachers' Responses Developing skills to address gender diversity Equity Frameworks in Course Design Exploration of Cultural Competency Inclusive pedagogy

Table 4.8: "Research Question and Hypothesis Three Responses"

The findings from the questionnaire highlight the significant impact of targeted strategies on enhancing gender inclusivity and equity within online technology communities, demonstrating that a nuanced understanding of gender dynamics can lead to meaningful improvements. Practical strategies for inclusivity were identified through detailed feedback from students and teachers. Among the students, particularly female students, 70% expressed that mentorship programs, especially those involving female role models, would significantly boost their engagement and confidence in participating within these communities. This indicates a strong preference for mentorship as it provides guidance, encouragement, and relatable role models who can navigate similar challenges. Gender-sensitive policies, such as those ensuring equal opportunities and respectful interactions, were also deemed crucial by the respondents.

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Inclusive group work, where gender balance is actively maintained, and female contributions are equally valued, was another strategy highlighted by the participants.

Teachers corroborated these findings by emphasising the need for platforms that allow female students to express their ideas without fear of judgment or dismissal. They noted that implementing feedback mechanisms designed to address and rectify gender imbalances is crucial. Such mechanisms provide a voice to female students and create a culture of continuous improvement and inclusivity within the community.

The impact of these targeted interventions was significant. Female students who engaged in mentorship programs and other inclusivity initiatives reported a marked increase in confidence and participation. Expressly, 50% of these students indicated higher levels of engagement following mentorship interventions, suggesting that such programs effectively empower them to take on more active roles. This empowerment was reflected in their increased willingness to contribute to discussions, lead projects, and participate in collaborative efforts.

Teachers observed that these interventions improved collaboration and a more inclusive atmosphere within the online technology communities. They reported that structured opportunities for feedback and discussion about gender dynamics played a critical role in addressing and mitigating issues related to gender inclusivity. These structured discussions allowed for open dialogue, helping to surface and resolve underlying biases and barriers that female students might face.

Both students and teachers proposed recommendations for further enhancing inclusivity. They strongly advocated for ongoing training on gender sensitivity to foster a deeper understanding and awareness of gender dynamics among all community members. Regular feedback sessions were suggested to ensure the strategies remain effective and responsive to the participant's needs. Both groups emphasised the importance of actively

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promoting female role models within technology communities. Such promotion inspires and encourages female students by showcasing successful women in technology, thereby normalising and celebrating their presence and achievements.

Additionally, creating safe spaces for women to share their experiences and support each other was highlighted as a vital component of an inclusive community. These safe spaces would provide a supportive environment where female students can discuss challenges, share advice, and build a network of allies and mentors.

The results underscore the hypothesis that gender dynamics significantly influence participation and experiences in online technology communities. Targeted strategies, such as mentorship programs, feedback mechanisms, and gender-sensitive policies, can substantially enhance gender inclusivity and equity. These findings emphasise the need for proactive, continuous efforts to address gender disparities and foster a more supportive and engaging environment for all users. The successful implementation of these strategies benefits female students and enriches the entire community by promoting diverse perspectives and inclusive practices.

5.8 Discussion of Key Findings

The key findings of this study underscore the profound impact of gender dynamics on participation, interaction, and engagement within online technology communities. Firstly, notable gender differences were observed, with male students exhibiting higher frequencies of active participation and leadership roles, while female students engaged more passively, often feeling undervalued and less included. Secondly, the perceptions of inclusivity revealed significant gender disparities, where female students reported higher instances of gender-based discrimination and lower feelings of belonging compared to their male counterparts. These disparities highlight the need for gender-sensitive approaches to foster a more inclusive

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environment. Lastly, implementing targeted strategies, such as mentorship programs and inclusive policies, enhanced female students' confidence, participation, and engagement. Teachers' observations confirmed that these interventions improved collaboration and created a more supportive atmosphere. These findings emphasise the importance of continuous efforts to address gender imbalances through targeted, inclusive strategies to create equitable digital spaces for all users.

5.6 Theoretical Implications

The findings of this study have profound theoretical implications, particularly in understanding gender dynamics within online technology communities. Firstly, the results highlight the necessity of integrating gender as a critical variable in existing digital interaction and participation models. Traditional theories, such as the Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1973), have primarily focused on how individuals use media to satisfy various needs. However, these models often neglect how gender influences behaviour, interaction, and engagement. While the Uses and Gratifications Theory suggests that individuals seek media content that gratifies their needs, our study's data reveal gender disparities in participation rates and engagement types. For instance, despite both genders having access to the same online platforms, male participants demonstrated higher active participation rates, indicating that gender-specific variables must be incorporated into the theory to understand digital engagement motivations comprehensively.

Furthermore, the study's findings resonate strongly with social identity theory (Tajfel & Turner, 1979), which posits that individuals derive a sense of identity and self-esteem from group memberships. Female participants' lower levels of active participation and reported feelings of exclusion and undervaluation in online technology communities support this theory. While Social Identity Theory suggests that individuals seek to enhance their self-esteem by

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affiliating with valued groups, our data suggest that gender-based discrimination and exclusion can inhibit this process, particularly for women in male-dominated online spaces. Thus, the theory underscores the importance of fostering inclusive environments to support positive social identities and mitigate the negative impacts of gender-based exclusion.

Additionally, this study supports the principles of Self-Determination Theory (Deci & Ryan, 1985), particularly emphasising the need for competence, relatedness, and autonomy. While Self-Determination Theory posits that individuals are driven by intrinsic motivation when their psychological needs are satisfied, our data reveal gender disparities in fulfilling these needs within online technology communities. Female participants, for instance, reported feeling less competent and less connected to online communities than their male counterparts. This suggests that targeted interventions, such as mentorship programs and gender-sensitive policies, are crucial in addressing these disparities and enhancing female participants' engagement levels by meeting their psychological needs.

Moreover, the study's findings align with Feminist Standpoint Theory (Harding, 1991), which advocates for recognising and valuing marginalised groups' unique perspectives and experiences. Our data provide empirical evidence of women's systemic barriers in online technology communities, such as gender-based discrimination and undervaluation of contributions. While Feminist Standpoint Theory highlights the importance of addressing these barriers through structural changes, our study demonstrates the effectiveness of targeted interventions, such as mentorship programs and inclusive group work, in mitigating these challenges and promoting gender inclusivity.

Finally, the study's implications extend to broader theoretical frameworks advocating equity and inclusion, such as Critical Theory (Horkheimer, 1937). Critical Theory seeks to identify and challenge power structures that perpetuate inequality. Our findings of gender

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disparities in online technology communities underscore the need to critically examine these digital spaces to identify underlying biases and develop strategies to dismantle them. While Critical Theory emphasises the importance of addressing systemic inequalities, our study provides practical insights into implementing targeted interventions to promote gender inclusivity and equity within online technology spaces.

In conclusion, this study significantly advances theoretical understandings of online technology communities by integrating and building upon established theories, including Uses and Gratifications Theory, Social Identity Theory, Self-Determination Theory, Feminist Standpoint Theory, and Critical Theory. By examining the empirical data in conjunction with these theoretical frameworks, our study provides insights into the complex interplay of gender, identity, and engagement within online technology communities. It offers actionable recommendations for fostering more inclusive and equitable digital environments.

5.7 Practical Implications

The practical implications of our study's findings are manifold and offer valuable insights for stakeholders involved in fostering gender inclusivity and equity within online technology communities. Firstly, our data underscore the importance of implementing targeted interventions to address gender-based disparities in participation and engagement. For educators and community managers, this entails developing mentorship programs and gender-sensitive policies to empower female participants and create supportive environments where they feel valued and included. These interventions can range from providing opportunities for female role models to mentor younger participants to implementing feedback mechanisms to address gender dynamics in online interactions.

Moreover, our findings highlight the significance of creating spaces where female participants can express themselves freely without fear of judgment or exclusion. For

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administrators of online platforms and community forums, this means actively promoting inclusive practices such as equitable group formations and fostering respectful online discourse. By fostering a culture of inclusivity and respect, online communities can attract and retain diverse participants, ultimately enriching the overall user experience and facilitating meaningful engagement.

Additionally, our study emphasises the importance of ongoing training and education on gender sensitivity for all stakeholders involved in online technology communities. Educators, community managers, and platform administrators can benefit from workshops and seminars on understanding and addressing gender dynamics in digital spaces. These training sessions can empower stakeholders to create more inclusive and equitable online environments by raising awareness of gender-based biases and providing tools to mitigate them.

Furthermore, our findings suggest the need for structural changes within online technology communities to dismantle systemic barriers that hinder female participation and engagement. This may involve revising platform policies to address harassment and discrimination and actively promoting female representation in leadership positions and decision-making processes. By proactively addressing gender disparities, online communities can foster a culture of equality and inclusivity that benefits all participants.

In conclusion, the practical implications of our study's findings underscore the importance of targeted interventions, inclusive practices, ongoing education, and structural changes in promoting gender inclusivity and equity within online technology communities. By implementing these strategies, stakeholders can create environments where all participants feel valued, respected, and empowered to contribute meaningfully, ultimately enriching the diversity and vibrancy of online interactions.

Summary

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In this chapter, we synthesised the results of the participants' questionnaires to evaluate the hypotheses and their implications. The findings confirm that gender differences significantly influence user behaviour within online technology communities. Male students reported higher frequencies of participation and were more active in discussions and content creation, whereas female students engaged more passively and often felt their contributions were undervalued. Teachers corroborated these observations, noting female students' challenges in being heard and acknowledged. This supports Hypothesis 1, which posited that gender shapes participation, interaction, and engagement patterns.

The study revealed that female students perceived lower levels of inclusivity and experienced higher instances of gender-based discrimination. They reported feeling less belonging and comfort within these communities than male students. Teachers observed that inclusive practices could mitigate these issues and significantly boost female students' participation. This aligns with Hypothesis 2, which suggested that gender representation differences lead to varied experiences and perceptions of inclusivity, ultimately influencing participation levels.

The study also demonstrated the effectiveness of targeted strategies, such as mentorship programs and gender-sensitive policies, in enhancing gender inclusivity and equity. Female students reported increased confidence and engagement following these interventions, and teachers noted improved collaboration and a more inclusive atmosphere. These results confirm Hypothesis 3, emphasising the importance of understanding gender dynamics to develop effective strategies for promoting inclusivity and equity.

In conclusion, the findings validate all three hypotheses, highlighting the significant impact of gender on participation and engagement in online technology communities and the effectiveness of targeted interventions in enhancing inclusivity and equity. In Chapter Six, we

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will conduct a general analysis of these findings, discuss the study's limitations, and provide suggestions and recommendations for future research and practical applications.

Chapter Six: Conclusion

This concluding chapter summarises the investigation, bringing together its key ideas and findings. It revisits the research aims, questions, objectives, and hypotheses, briefly answering the research questions and summarising the gathered findings. Additionally, it addresses the limitations encountered during the study. The chapter also offers recommendations for future research and discusses the study's contributions to the specific field. A summary and appendices are also included.

6.1 Aims of the Study

In response to the growing importance of online communities for personal learning and interaction, this study aims to illuminate the intricate relationship between gender and digital spaces. Specifically, it seeks to explore the differences in behaviour between male and female users within online technology communities. By conducting a systematic investigation, the study intends to uncover whether and how gender impacts user behaviour in these communities, with the ultimate goal of informing strategies to enhance gender inclusivity and equity in online technology spaces.

6.2 Objectives of The Study

The specific objectives that support this aim are:

- To explore the differences in behaviour between male and female users within online technology communities.
- To conduct a systematic investigation to uncover whether and how gender impacts user behaviour in online technology spaces.
- To inform strategies to enhance gender inclusivity and equity in online technology communities.

6.3 Research Questions

1. How do gender differences manifest in user behaviour within online technology communities?
2. What impact does gender have on users' participation, interaction, and engagement levels in online technology spaces?
3. How can understanding gender dynamics in digital spaces inform the development of strategies to enhance gender inclusivity and equity in these communities?

6.4 Research Hypothesis

1. There are significant differences in how male and female users participate, interact, and engage within online technology communities, with gender influencing content creation, response rates, and collaboration patterns.
2. Gender disparities in online technology communities lead to varied experiences and perceptions of inclusivity, affecting users' sense of belonging and contribution levels.
3. Implementing targeted strategies to understand gender dynamics can significantly improve gender inclusivity and equity in online technology spaces.

6.5 Summary of Findings

The questionnaire data of the English student participants from Djilali Bounaama University Khemis Miliana provides a detailed snapshot of gender dynamics within online technology communities in Algeria. The equal gender distribution and the uniform age range of 18 to 24 years suggest a balanced representation of young adults, all actively participating in these communities. The fact that every student identifies as a member highlights a shared engagement in technology-focused interactions, possibly reflecting a growing digital literacy

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and interest among Algerian youth. Behavioural patterns show diverse participation frequencies, with 80% engaging at least monthly, indicating high involvement in online technology communities. This engagement is crucial as it points to the importance of these platforms in their daily lives. The preference for posting (40%) and browsing (25%) over more passive activities like liking (10%) and sharing (5%) suggests that these students are not merely consumers but active contributors to these communities. Motivations for participation vary, with the majority driven by learning and knowledge sharing (40%) and staying updated on trends (20%). This reflects a strong desire for continuous education and staying abreast of technological advancements, vital for career development in a country where technology is becoming increasingly important. However, the significant role of community connection (15%) and limited free time (15%) indicates that social and practical considerations also play a role. Perceptions of inclusivity are mixed, with many students rating it as neutral (35%) or relatively inclusive (30%) and only 15% finding it very inclusive. This suggests that while there is some level of inclusivity, there is still room for improvement. The experience of gender-based discrimination reported by 55% of students underscores the need for more robust measures to promote inclusivity and protect against discrimination in these spaces. The varied responses regarding the impact of gender on online experiences, such as interaction dynamics (20%) and disparities in opportunities (10%), indicate that gender does influence how students navigate these communities. This highlights the complexity of gender dynamics and the need for nuanced approaches to address these issues.

Regarding online performance, the disparity between male and female perceptions, with most men seeing no impact of gender and women reporting challenges like harassment, suggests that gender biases and stereotypes are still prevalent. This could affect women's participation and performance in these communities, indicating a need for targeted interventions to create a more supportive environment. Moreover, Communication styles also differ, with

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men favouring clarity and women reporting varied styles, some of which are influenced by how seriously they are taken. This implies that females might need to adapt their communication to be taken seriously, which could affect their confidence and participation.

The responses about age influencing online interactions reflect a varied perspective, with some seeing positive impacts and others noticing changes as they age. This suggests that age-related factors influence how students interact online, which could be important for designing age-appropriate interventions and support.

Differences in perceptions of gender influences on technology use and collaboration, with more females noticing these impacts, suggest that gender dynamics are more salient for female students. This could be due to their lived experiences of gender biases, emphasising the need for gender-sensitive policies and practices.

Finally, the significant number of students reporting no opportunities to provide feedback on gender dynamics highlights a gap in current practices. This suggests that institutions need to create more avenues for students to voice their concerns and experiences, which is crucial for fostering an inclusive and responsive educational environment.

In summary, the data reveals that while Algerian university students are highly engaged in online technology communities, significant gender dynamics affect their experiences. Addressing these issues through inclusive policies, robust anti-discrimination measures, and opportunities for feedback is essential for creating a supportive and equitable environment for all students.

6.6 Limitations of The Study

While investigating gender differences in online settings provides valuable insights, this study has several important limitations. Firstly, the characteristics of the sample, including

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demographic profile and contextual factors, may limit the generalizability of the findings. The results obtained from this specific group may not necessarily apply to other populations or settings, restricting the broader applicability of the conclusions drawn.

Secondly, ethical considerations, particularly privacy concerns, can limit the depth and breadth of data collected. Participants might be reluctant to share detailed or sensitive experiences and behaviours online, which can affect the comprehensiveness and accuracy of the findings. This hesitancy can result in an incomplete understanding of the full spectrum of gender dynamics in online communities.

Thirdly, this study may not fully account for the rapidly evolving nature of technology and its potential impact on gender dynamics in online settings. The continuous updates and changes in online platforms and technologies can introduce new challenges and opportunities that were not anticipated at the time of the study. This dynamic environment necessitates ongoing research to keep pace with technological advancements and their effects on gender interactions and inclusivity in digital spaces.

In summary, while the study offers valuable insights into gender differences in online technology communities, the limitations related to sample characteristics, ethical considerations, and the fast-paced evolution of technology suggest that caution should be exercised when generalising the findings. Future research should address these limitations by including more diverse samples, employing strategies to mitigate privacy concerns, and continuously updating methodologies to account for technological changes.

6.7 Recommendations For Future Research

Based on the participants' results, the researcher recommends several strategies to improve gender inclusivity in online technology communities. Since 45% of respondents have felt excluded or marginalised because of their gender, and 30% have witnessed or experienced

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gender-based discrimination, it is essential to establish strict policies against harassment and bias, ensuring a zero-tolerance approach to such behaviours. Promoting diversity through targeted initiatives, such as mentorship programs and diversity training, can also help create a more inclusive environment. Encouraging respectful communication is crucial; therefore, community guidelines should be clear, with enforced consequences for violations. Increasing awareness about gender issues through regular educational campaigns can also help change perceptions and treatment within these communities. Finally, providing platforms for underrepresented groups to share their experiences and insights can lead to a better understanding of their challenges, allowing for more tailored and effective interventions. These recommendations aim to foster a supportive, equitable, and respectful online environment for all users.

6.8 Suggestions For Further Research

The study in hand incorporates both quantitative and qualitative tools. Nevertheless, only limited results were achieved throughout this research. Hence, the researcher encourages further research based on the current one to cover more areas in gender dynamics and online education.

The research suggests the following:

- The study suggests that gender inclusivity is not fully realised in online education. To create a more inclusive environment, instructors should be continuously trained on gender sensitivity, curriculum audits should be regular, and student feedback mechanisms implemented. Collaboration among educators, instructional designers, and diversity experts is essential to achieving this goal.
- The study's findings reveal that female students are more engaged in communicative and community-oriented online learning, while male students prefer real-time and problem-solving activities. Course designs should balance

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synchronous and asynchronous elements to cater to these preferences and ensure an inclusive learning experience.

- Both male and female students should receive support tailored to their specific needs from the start of their online education journey. This includes providing resources and training that address common challenges such as gender bias and harassment, which can impact participation and performance, particularly for female students.
- The suggested initiatives should empower students to navigate online platforms effectively, promoting respectful communication and community building. Students should be equipped with the skills to engage in written and live discussions, using inclusive and supportive language to foster a positive online learning environment.

Summary

This final chapter of the present study analysed and interpreted the research data, discussed and answered the research questions regarding an appropriate interpretation linked to the literature review, and ended with some recommendations and suggestions for further research regarding integrating and fostering inclusivity across online settings.

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Appendix A

Department of Foreign Languages,

University of Djilali Bounaama Khemis Miliana

Title of The Research: Gender Differences in Online Settings

Participants' Questionnaire

Dear participants,

This questionnaire is designed as part of research carried out at Djilali Bounaama University of Khemis Miliana to investigate gender differences in online spaces and environments. We would be immensely grateful if you could kindly answer the following questions, pointing out how

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your contribution is of great value for achieving the research objectives and validating our work.

We assure you that the information you provide will remain anonymous and be treated confidentially.

Thank you for your collaboration and the time you devoted to answering the questionnaire.

Below is a suggested structure for the content of the questionnaire :

Section 1: Demographics

1. What is your gender identity?

Male

Female

Non-binary

Prefer not to say

Other

2. Which age group do you belong to?

Under 18

18-24

25-34

35-44,

45-54

55-64

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c 65 and above

3. What is your geographical location?

4. What role best describes your participation in online technology

communities?

c Member

c Moderator

c Administrator

c Content

c Creator

c Other [please specify].....

Section 2: Behavior Patterns

5. How often do you participate in online technology communities?

c Daily

c Weekly

c Monthly

c Rarely

6. What types of activities do you engage in?

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c Posting

c Commenting

c Liking

c Sharing

c Browsing without interacting

c Other [please specify]

7. What motivates you to participate in online technology communities?

Section 3: Perceptions of Inclusivity and Equity

8. On a scale of 1 to 5, how inclusive are you in finding online technology communities for people of different genders?

c 1 being not inclusive at all

c 5 being very inclusive

9. Have you ever felt excluded or marginalised in online technology communities because of your gender?

c Yes

c No

c Prefer not to say

If yes, please describe your experience: .

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10. What changes would you suggest to make online technology communities more gender-inclusive?

Section 4: Experiences and Perception

11. In your opinion, how does gender impact users' experiences in online technology communities?

12. Have you witnessed or experienced gender-based discrimination or bias in online technology communities?

c Yes

c No

c Prefer not to say

If yes, please provide examples.:

13. What policies or initiatives do you think could help address gender disparities in online technology communities?

14) How do you perceive your gender affects your performance in online platforms?

15) How would you describe your communication style in online discussions or group projects? Do you think it differs from your peers of different genders?

16) How do you think your age influences your interactions in online spaces?

17) Have you observed differences in how Male and female students communicate and express themselves online?

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c Yes

c No

18) Have you seen any differences in how males and females use technology for online settings?

c Yes

c No

19) Have you noticed any differences in grades between male and female students in online courses?

c Yes

c No

20) Do you think gender affects how students collaborate online?

c Yes

c No

21) Are you given opportunities to provide feedback to teachers about your experiences and perspectives regarding gender dynamics in online classes?

c Yes

c No

22) Do you think factors like age or family background affect how students do in online classes?

c Yes

c No

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Closing Section

14. Is there anything else you would like to share about your experiences related to gender inclusivity in online technology communities?

Appendix B

Department of Foreign Languages,

University of Djilali Bounaama Khemis Miliana

Title of The Research: Gender Differences in Online Settings

Teachers' Questionnaire

Dear Teachers,

Please complete this questionnaire because your valuable insights will contribute to this study's findings.

- 1) Have you encountered any challenges communicating with male and female students online, and how do you address them?
- 2) Have you made any adjustments to your course design or content to address gender-related disparities in learning outcomes or experiences?
- 3) Have you observed differences in the factors influencing male and female students' motivation and persistence in online learning?
- 4) Have you made any adjustments to your teaching approach based on student feedback or input regarding gender dynamics in online learning?
- 5) What do you envision as the future of gender-inclusive online education at Djilali Bounaama University, and what role do you see online teachers playing in achieving this vision?

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- 6) Are there any areas or aspects of online teaching and learning that require further exploration or research concerning gender differences and inclusivity?
- 7) In your experience, are there any noticeable differences in male and female students' online behaviour or participation levels?
- 8) Have you observed any differences in learning styles or preferences between male and female students in online courses?
- 9) Have you observed differences in how male and female students engage with technology tools or platforms for learning?
- 10) Are there any lessons learned or insights you have gained from teaching online courses that you believe could benefit future efforts to address gender differences in virtual learning environments?

{Thank You in Advance}