# St. Mary's University

## PROCEEDINGS OF THE 13th OPEN AND DISTANCE LEARNING SEMINAR (ODLS)

**Theme: The Future of ODL: How Policy, Pedagogy, and Digital Transformation are Reshaping Open and Distance Learning**

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# The 13th Open and Distance Learning Seminar

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## Preface

On behalf of the Office of the Vice President for Research and International Relations (OVPRIR), it is with immense pleasure that we present this compendium of selected works from the **13th Online and Distance Learning Seminar (ODLS)**.

This Seminar represents a cornerstone of our commitment to advancing scholarship in digital and flexible learning environments. It provides an essential platform for researchers, educators, and practitioners to present innovative findings, engage in meaningful dialogue, and collaboratively address the evolving challenges and opportunities within the field of online education. The caliber and diversity of work featured herein underscore the vibrant and dynamic nature of this critical academic domain.

The papers compiled in this volume were selected from a wide array of submissions to the symposium and reflect a keen focus on contemporary issues in pedagogy, technology, and student engagement in digital spaces. This compilation captures a spectrum of intellectual endeavor, including but not limited to:

- The development of applied technological solutions such as a **Smart Stack Management System for Ethiopian MSEs** and an **Event Management System**.
- Explorations into emerging fields like the use of **block chain technology for enhancing financial inclusion**.
- Critical analyses in business and social sciences, covering **human resource planning challenges in major corporations**, the **psychological benefits of religious practices**, and **social media marketing strategies in the real estate sector**.

Each contribution underscores a rigorous research process, demonstrating the authors' dedication to methodological soundness and the pursuit of knowledge with practical relevance for enhancing online and distance learning ecosystems.

OVPRIR has undertaken the publication of these proceedings to ensure the valuable insights generated reach a wider academic and professional audience. It is our hope that this volume will serve as a catalyst for future innovation, inform pedagogical practices, and contribute significantly to the ongoing global discourse on the future of education.

We extend our deepest appreciation to everyone who contributed to the success of the 13th ODLS and to this subsequent publication. Our sincere thanks go to the dedicated researchers, the insightful reviewers, the engaged participants, and the organizing committee whose collective efforts foster the collaborative spirit essential for advancing excellence in online and distance learning.

**Office of the Vice President for Research and International Relations (OVPRIR)**

# Opening Speech

# Open and Distance Learning (ODL) in Developing Countries: Challenges and Opportunities under the Theme of Promoting Inclusive and Quality Education through Open and Distance Learning,

**Bogale Gebeyehu (PhD) Wolaita Sodo University, bgboge@gmail.com**

***Abstract***

*Open and Distance Learning rather than conventional learning, commands a higher potential in creating a knowledgeable society and related socio–economic transformation benefits. ODL offers many benefits and presents significant challenges that can hinder the learning experience. Using desk review methods, this paper identified major challenges in ODL, assessed the importance of ODL, and approached to designing effective instructional materials. Evidence from international experiences reveals that most of educational institutions adopt multiple and comprehensive materials targeting at diverse students' backgrounds such as location, access to internet and library, students' awareness to technologies, age of the students, and employment backgrounds. The review also identified various factors affecting ODL in different contexts. These factors are access to technology, students' self-motivation, social isolation and limited interaction, inadequate support systems, cultural and linguistic barriers. The potential of these and other ODL factors in various countries in general and in Ethiopia in particular affected the provision of quality education due to underdeveloped infrastructure and resource limitations.*

Keywords: Open and Distance Learning, Challenges, International Experiences, Ethiopia

## Introduction

Distance education is traditionally defined as any educational or learning procedure in which the guide and students are separated geographically. There is no interaction between the teacher and the learner/student. According to UNESCO (2002), the term "open and distance learning" represents approaches that focus on opening access to education and training provision, freeing learners from the constraints of time and place flexible learning opportunities to individuals and groups of learners. Ezeonwurie (2016) defines distance education as an educational process in which a significant proportion of the teaching is conducted by someone far removed in space and/or time from the learners. Thus, the concept of distance learning suggests an educational approach designed to reach learners in their homes, offices, shops and other places. To provide learning resources for them to qualify them without attending formal classes in person, or create opportunities for lifelong learning, no matter where or when they want to study.

Distance learning enables students to access and engage with quality educational content, all from the comfort and convenience of home. Hence, the process of imparting education has gone through a sea change if we look at the picture 10-20 years before now. Technology has taken over almost every field of our lives and the onset of online courses came as a pathbreaker (Lone, 2017). Distance learning and its relationship to emerging computer technologies have together offered many promises to the field of education (Pant, 2014). Distance learning degrees, began to be offered in the world by the University of London in the year 1858 (Kundu, 2014). Colleges and universities have a crucial role to play in national, statewide and regional economic development efforts. Higher education and economic development are interlinked to each other (Kour, 2013).

Open and distance learning is a type of learning whereby opportunity is given to people (young and elderly) who have passed the ages of admission into regular universities to continue their education (Jimoh, 2013). It is also a channel for widening access to mass education. In other words, it is a field of education that centers on teaching methods and technology with the aim of delivering teaching often on an individual basis, to students who are not physically present in a traditional setting such as the classroom (Obasi & Akuchie, 2014).

According to Besong (2014), open and distance learning (ODL) is a form of education strategy used to solve the problems of the overgrowing number of candidates who need higher education. It serves as a bridge for the educationally disadvantaged members of the society. According to Alaezi (2005), as cited in Besong (2014), open and distance learning are educational patterns, approaches, and strategies that permit people to learn with no barriers in respect of time and space, age, and previous educational qualification - no entry qualification, no age limit, no regard to sex, race, tribe or state of origin. ODL can be defined as a flexible, cost effective and learner-centered educational system. It is learner-centered as it aims at providing answers to academic questions and problems of learners, not the other way round (Onwe, 2013). Distance learning is a contributing force to society and economic

development. It is fast becoming an essential part of the mainstream of educational systems in both developed and developing countries (Buselic, 2012). Open distance education provides an opportunity to those who left their studies in between and want to be part of the regular system and want to be part of the learned society.

ODE is not just an alternative but a necessity for millions who face geographical, economic, or social constraints. Despite the numerous benefits, it is essential to acknowledge the challenges associated with ODE. Issues such as digital literacy, access to technology, and socio-economic disparities can affect learner experiences. This review explores the challenges, opportunities, delivery approaches, and country-level strategies to overcome barriers to ODE implementation.

**Research Questions**

i. Why Open and Distance Learning?
ii. What are challenges of ODL?
iii. What are opportunities for ODL?
iv. What lessons to be learned from countries experiences?

**Objectives**

- ✓ To identify the major challenges that ODL students faced
- ✓ To summarize countries best experiences in how to overcome challenges faced by ODL students
- ✓ To suggest better approaches to prepare ODL learning materials

**Methodology**

This paper is based on a review of existing literature using various search methods beginning with a broad search in Google Scholar, followed by a narrower search in journal articles, policy brief papers, and books. Sorting loads of articles to extract relevant information was this author's task. The author also identified both peer-reviewed journal articles and publications from professional organizations such the European University Association and World Bank studies.

**Analysis and Findings**
**Overview**

Open and Distance Education (ODE) refers to educational approaches that allow learners to study remotely, breaking traditional barriers of space, time, and physical presence in the classroom. With advancements in technology, ODE has evolved from correspondence courses to sophisticated digital learning environments, becoming a core strategy for expanding access to education globally. This section explores the historical and theoretical foundation of open and distance education, challenges, opportunities, delivery approaches, and country-level strategies to overcome barriers to ODE implementation.

## Historical and theoretical foundation of open and distance learning
## Historical foundation of open and distance learning

There are a number of literatures revealing the historical foundation of open and distance learning. Different literatures show different periods when open and distance learning started. Some of them are cited in this paper as follows: Distance education traces back to 1728, when Caleb Phillips advertised shorthand lessons to be delivered by mail in the Boston Gazette. In the 19th century, Isaac Pitman in Britain began teaching shorthand via post (1840); later, Anna Eliot Ticknor founded a home study society in Boston (around 1873) (Bozkurt, 2019). The University of London formalized correspondence study, while in the U.S., by around 1910, International Correspondence Schools reached a student body of approximately 184,000 (Williams and Nicholas, 2005). According to Rock (2001), the origins of ODL can be traced to the 19th century with the advent of correspondence courses. The University of London, established in 1836, pioneered this approach globally by offering distance degrees through mailed coursework and examinations. This model allowed students who could not attend university physically—such as those in remote areas or with work commitments—to pursue higher education. Correspondence education during the Victorian era was a significant step toward democratizing access to education.

The 20th century saw rapid growth in correspondence programs worldwide. For instance, the University of South Africa (UNISA), established in 1946, became a leading institution providing distance education across Africa. Its model was designed to serve students who, due to economic or geographical barriers, could not attend traditional institutions. The philosophical foundation also tells us that ODL's foundation rests on principles of educational democracy, accessibility, and learner autonomy. Pioneering educators like Michael Moore emphasized the importance of a learner-centered paradigm, advocating for self-directed learning and flexible access, especially for marginalized populations. His theory of transactional distance explains the psychological and communication space that can exist in distance education, emphasizing the importance of dialogue and structure (Moore, 1997).

## Theoretical foundation of open and distance education/learning

Open and Distance Learning (ODL) has revolutionized education by enabling learners worldwide, especially those with limited access to traditional classroom settings, to pursue their educational goals. Central to the success of ODL is the theoretical foundation that emphasizes learner independence and autonomy. Various theories underpin open and distance learning; however, for simplicity; I have focused only on a few theories.

### Independence and Autonomy Theory

Independence in learning refers to the learner's ability to take control over their educational activities, such as setting goals, selecting resources, and evaluating progress. It involves a degree of self-reliance where learners are responsible for their learning processes without constant direct supervision. Autonomy complements independence but emphasizes self-direction and self-governance. It is about learners making their own decisions regarding what,

how, when, and why they learn, fostering intrinsic motivation and personal relevance (Benson, 2011). Research indicates that autonomous learners tend to perform better because they actively construct knowledge rather than passively receive information (Deci & Ryan, 2000). Specifically, in ODL contexts, where tutor support might be limited, learner autonomy becomes essential.

The Independence and Autonomy Theory, drawing from educational psychologists like Malcolm Knowles' Andragogy, asserts that adults are inherently capable of self-directed learning (Knowles, 1984). This theory underpins ODL by emphasizing that:

- Learners are capable of managing their own learning processes.
- Education should empower learners with the skills needed for autonomous learning.
- The design of ODL programs should foster independence and develop learners' autonomy.

**How This Theory Supports ODL**
**Learner-Centered Approach:**

ODL shifts the focus from instructor-led delivery to a learner-centered model, allowing individuals to choose topics, pace, and methods that suit their needs, thus promoting independence (Moore & Kearsley, 2012).

**Flexible Learning Environments:**

ODL offers asynchronous courses, online resources, and self-paced modules, enabling learners to balance studies with work or family commitments, fostering autonomy in scheduling and resource utilization (OECD, 2012).

**Development of Self-Regulated Learning Skills:**

Effective ODL learners monitor, plan, and evaluate their learning, vital skills in autonomous learning environments (Zimmerman, 2002). The theory advocates that such skills can be cultivated intentionally within ODL programs.

Technology as an Enabler:

Digital platforms support learner independence by providing access to diverse resources, communication channels, and interactive tools that facilitate autonomous exploration (Daniel, 2012).

**Relevance to Ethiopian Context**

In Ethiopia, where access to formal education remains limited for many, ODL provides a vital pathway to democratize education. According to UNESCO (2018), Ethiopia has made significant strides in expanding access but faces challenges related to learner support and resource availability. Fostering independence and autonomy among Ethiopian learners can

mitigate these issues by empowering students to effectively manage their learning journeys.

## Transactional Distance Theory (TDT)

Transactional Distance Theory (TDT) was developed by educational theorist Michael G. Moore in 1972. It provides a conceptual framework that explains the unique dynamics of open and distance education. Unlike traditional classroom learning, where the physical proximity fosters direct interaction, ODL involves learners and instructors separated by physical and psychological distances. TDT emphasizes the importance of three core components that influence learning in this context:

- Dialogue: The degree of interactive communication between learners and instructors.
- Structure: The rigidity or flexibility of the course content, organization, and instructional design.
- Learner Autonomy: The capacity and willingness of learners to manage their own learning processes.

## How TDT Underpins Open and Distance Learning
## Addressing the Challenges of Physical Separation

In traditional classrooms, proximity often minimizes transactional distance, allowing for immediate feedback and interaction. ODL inherently involves greater physical separation, which can increase transactional distance, the psychological and communicative gap that impacts understanding and engagement.

Research indicates that higher transactional distance can lead to feelings of isolation, decreased motivation, and diminished learning outcomes (Moore, 1997). Therefore, designing ODL programs with TDT principles helps bridge this gap by fostering effective communication and adaptable course structures.

## Emphasizing Dialogue for Effective Learning

Dialogue is the primary means of reducing transactional distance. It encompasses two-way communication, feedback, and interactive engagement. A 2015 study in Ethiopia reported that increased instructor-student interaction, such as interactive webinars and prompt feedback, significantly improved student satisfaction and academic performance in distance education programs (Taye & Melaku, 2015).

## Structuring Courses Flexibly

The structure component refers to course design. Highly structured courses with rigid content offer less flexibility, which may be necessary for certain disciplines but can impede learner autonomy. Conversely, flexible structures encourage self-paced learning suited for diverse student needs. For Example, the Open University of Ethiopia leverages modular courses and self-assessment tools to enable learners to control their pace, aligning with TDT's notion of

flexible structure to manage transactional distance effectively.

**Promoting Learner Autonomy**

In open and distance contexts, learners often have to manage their studies independently. TDT posits that increased autonomy can either compensate for reduced dialogue or necessitate increased support. Moore (1993) argues that fostering learner autonomy through skills development, motivation, and self-regulation strategies is essential, especially where dialogue might be limited. For example, institutions can offer tutorials, mentorship, and online communities to support autonomous learners. A UNESCO report (2019) indicates that in Sub-Saharan Africa, including Ethiopia, approximately 80% of adult learners in ODL programs possess moderate to high levels of autonomy, which correlates positively with completion rates.

**The importance of open and distance education**

Open and distance education (ODE), often referred to as distance learning, has emerged as a crucial mode of education worldwide, particularly in recent years due to advancements in technology and shifting societal demands. This mode of education encompasses various methodologies aimed at providing equitable access to learning opportunities, often using innovative tools and platforms. For students in Ethiopia and beyond, understanding the significance of ODE can greatly enhance both personal and professional development.

**Access to Education**

One of the primary advantages of open and distance education is the increased access it provides to learners. According to the International Council for Open and Distance Education (ICDE), ODE allows individuals who may not have had the opportunity to attend traditional brick-and-mortar institutions—due to geographical, economic, or social barriers—to pursue their studies. In Ethiopia, where rural areas often lack educational infrastructure, ODE can bridge this gap. A study highlighted how ODE initiatives have helped increase enrollment rates, particularly among marginalized communities (Mishra *et al*., 2021).

**Flexibility and Personalization**

Open and distance education affords learners the flexibility to tailor their educational experiences to fit their individual circumstances. This is particularly beneficial for working professionals or those who have familial obligations. According to a report by the United Nations Educational, Scientific and Cultural Organization (UNESCO), flexibility allows learners to manage their time effectively, leading to better study habits and improved outcomes (UNESCO, 2020). For instance, an Ethiopian student who works during the day may choose to engage with course materials at night, thus fitting education into their life instead of the other way around.

**Cost-Effectiveness**

Traditional education often incurs substantial costs, from tuition fees to commuting expenses. Open and distance education tends to be more cost-effective, reducing the financial burden on students. A study by Traxler (2018) states that ODE can significantly lower tuition costs and eliminate transportation expenses, making higher education achievable for a broader audience. This is especially pertinent for many students in Ethiopia, where economic constraints can limit educational opportunities.

**Global Learning Communities**

Open and distance education fosters the development of global learning communities, enabling students from different cultural and geographical backgrounds to interact and collaborate. This not only enhances learning but also prepares students for a globalized work environment. Research indicates that learners who engage in online collaborative projects experience improved cultural competencies and communication skills, vital in today's interconnected world (Garrison & Anderson, 2003).

**Utilization of Technology**

The integration of technology in ODE has transformed the educational landscape. With the advent of Learning Management Systems (LMS), video conferencing tools, and a plethora of online resources, students can engage with interactive content and receive immediate feedback. A case study by the World Bank highlighted how Ethiopian universities adopted platforms like Moodle to facilitate online learning, leading to increased student engagement and retention rates (World Bank, 2022).

**Challenges and Considerations**

Ongoing efforts to improve infrastructure, provide training in digital skills, and create supportive policies are crucial for maximizing the potential of ODE. For instance, innovative initiatives such as government-sponsored internet access programs, mobile learning projects, and training workshops on effective online learning strategies are steps that can help address these challenges. A report from the Ethiopian Ministry of Education emphasizes the need for a comprehensive national strategy to enhance digital learning capabilities across the country (Ethiopian Ministry of Education, 2021).

**The major challenges and opportunities of open and distance learning**

Challenges of Open and Distance Learners: Open and distance learning (ODL) has transformed the educational landscape globally, providing opportunities for diverse learners who may not have access to traditional educational settings. However, while ODL offers many benefits, it also presents significant challenges that can hinder the learning experience. This explanation will delve into these challenges, drawing on academic research and expert opinions, supported by relevant statistics and examples from case studies.

**Thematic Classification of Challenges & Opportunities**

### A. Infrastructure & Technology

- Challenges: Inadequate internet access, high data costs, limited digital devices and infrastructure, particularly in low-income and rural areas of the Global South.
- Opportunities: Leveraging mobile technologies (e.g., mobile-phone-based learning platforms) to bridge connectivity gaps.

### B. Digital & Pedagogical Skills

- Challenges: Faculty and learners lacking ICT and e-learning competencies; inadequate training in instructional design and digital tools.
- Opportunities: Development of holistic faculty development initiatives integrating technological, pedagogical, and content knowledge (TPACK) and fostering communities of practice.

### C. Learner-Centric Constraints

- Challenges: Issues like self-discipline, time management, poor study environments, financial hardship, limited peer interaction, and technical problems.
- Opportunities: Tailored support mechanisms such as structured schedules, mentoring, flexible learning materials, and better learner engagement design.

### D. Policy, Governance & Funding

- Challenges: Lack of guiding policies, insufficient financial investment, underdeveloped support systems, and absence of institutional readiness.
- Opportunities: Collaborative policy-making, public–private partnerships, creation of content-sharing frameworks, and pooling resources across institutions.

### E. Language & Content Accessibility

- Challenges: Learning materials are often in non-native languages and not adapted for screen-based reading; limited language support tools. Distance learners may also face cultural and linguistic challenges. In a multicultural environment, varying cultural norms can impact communication and learning styles. Furthermore, learners who are not native speakers of the language of instruction may struggle with complex terminology and concepts. Evidence suggests that students who are not proficient in the instructional language are at a higher risk of underperforming; a study indicated that 45% of non-native English speakers experienced difficulties in understanding course materials (Bishop et al., 2021).
- Opportunities: Multilingual glossaries, captions, translations, and enhanced learner support to improve comprehension and equity.

### F. Pedagogical Innovation & Engagement

- Challenges: Passive online formats and low interaction; risk of alienation in virtual

spaces.

- Opportunities: Use of active learning strategies like differentiated instruction, discussion forums, and creative deployment of ICT to boost engagement.

### G. Social Isolation and Limited Interaction

Distance education can be a lonely journey. Many students report feeling isolated due to the inherent lack of face-to-face interactions with peers and instructors. Garrison (2016) highlighted that social presence plays a critical role in student satisfaction and retention in online learning environments.

**Example**: A qualitative study of online students revealed that those who engaged in discussion forums felt more connected and were less likely to drop out than those who did not participate in such collaborative activities (Hew & Cheung, 2014).

### H. Inadequate Support Systems

Many distance learners face challenges due to inadequate support systems. Traditional institutions often provide a plethora of support services such as tutoring, counseling, and academic advising that can be less accessible in online formats. In a survey conducted by the Online Learning Consortium, 60% of students reported that they did not receive sufficient academic support (OLC, 2020).

### Assessment and Academic Integrity

Open and distance learning poses unique challenges regarding assessment and academic integrity. With the rise of online learning, there is an increasing concern over academic dishonesty. Henderson *et al*. (2021) reported that instances of cheating in online assessments have risen sharply, prompting educators to rethink examination strategies.

**Solution Approach**: Institutions are exploring innovative assessment methods such as open-book exams or project-based evaluations to combat these issues. For example, embedding assessments in real-world scenarios may encourage authentic learning and reduce the incentive to cheat.

### Instructional Materials and Effective Approaches to Deliver ODL

The topic of instructional materials for open and distance learners is essential as educational systems around the world increasingly adopt flexible learning formats. This is particularly relevant in Ethiopia, where distance education can help to overcome geographical and economic barriers to education.

### Types of Instructional Materials
### Print-Based Materials

- Self-instructional Modules: Designed with clear learning objectives, activities,

summaries, and self-assessments.

- Textbooks and Study Guides: Aligned with curriculum, providing in-depth content with guided learning aids.
- Workbooks: Include exercises to reinforce learning and develop practical skills.

**Digital and Multimedia Materials**

- E-Learning Modules: Interactive, multimedia-based content using animations, videos, and simulations.
- PDFs and eBooks: Easily downloadable and accessible on various devices.
- Audio and Video Lectures: Recorded sessions to accommodate different learning preferences.
- Podcasts/Webinars: Short lectures or discussions accessible on demand.

**Online Learning Platforms**

- Learning Management Systems (LMS) like Moodle, Blackboard, and Canvas allow tracking of progress, assignments, and engagement.
- MOOCs (Massive Open Online Courses): Platforms like Coursera, edX, and Future Learn provide structured online courses.

**Broadcast and Mass Media**

- Educational TV and Radio Programs: Useful in low-bandwidth or remote areas.
- CD/DVDs and USB drives: for offline access where internet is limited.

**Mobile Learning (mLearning)**

- SMS-based Lessons: Text-based modules delivered through SMS.
- Mobile Apps: Interactive applications for learning.
- WhatsApp/Telegram for Learning: Group discussions, audio/video material sharing.

**ii. Approaches to Deliver Open and Distance Education**

Blended Learning Approach

- Combines online and occasional face-to-face sessions.
- Allows flexibility and caters to different learning styles.

Asynchronous Learning

- Learners access content at their own pace.
- Ideal for students with work or family commitments.

Synchronous Learning

- Real-time interaction via video conferencing or chats.
- Builds community and engagement through live discussions.

Scaffolder Learning

- Provides progressive support using tutor feedback, peer collaboration, and self-assessment tools.

Competency-Based Learning

- Learners advance upon mastering content.
- Focuses on outcomes and skill application.

Use of Analytics and Feedback

- Learning analytics from LMSs to monitor progress and provide timely intervention.

Inclusive and Accessible Design

- Materials should be designed for learners with disabilities (e.g., screen reader-compatible, captions).

**Countries Experiences on Instructional Materials Preparation for ODL: An overview**

Open and Distance Learning (ODL) has become a vital mode of education worldwide, especially in contexts where access to traditional face-to-face education is limited or challenged by various socio-economic and infrastructural factors. Countries across different regions have adopted ODL to expand educational access, but they face unique challenges and pioneer innovative solutions tailored to their specific contexts.

**Global Case Studies**

**The United Kingdom**: The Open University (OU) in the UK is a leading example of successful ODL implementation. The OU employs a variety of instructional materials, including online learning modules, interactive activities, and comprehensive study guides. A study by the OU found that 85% of learners reported that the resources provided helped clarify complex topics, highlighting the effectiveness of structured instructional materials in promoting understanding.

**South Africa**: The University Of South Africa (UNISA), one of the largest distance education institutions in the world, utilizes a blend of traditional textbooks and digital resources. Research conducted by Mjoli (2018) indicated that students utilizing e-resources reported a 30% increase in completion rates compared to their peers relying solely on print materials. The live webinars and rich multimedia content provided by UNISA were particularly noted for engaging students effectively.

**India**: The National Institute of Open Schooling (NIOS) in India uses radio and television broadcasts as part of its instructional material for distance learners. According to a report by the Indian Ministry of Human Resource Development, around 40% of students enrolled in NIOS found these broadcast formats to be very helpful in enhancing their understanding of subjects, especially in remote areas with limited internet access. Similarly, Indira Gandhi National Open University (IGNOU) and other institutions have developed mobile-compatible content and SMS-based support systems (Nayar, 2011). The National Digital Literacy Mission has also established numerous centers equipped with computers and internet in rural areas to support students lacking personal devices (UNESCO, 2018).

**Ethiopia: Current Strategies and Future Steps**

While Ethiopia is in the nascent stages of expanding ODL, recent efforts offer promising insights:

- **E-learning Platforms:** The Ethiopian Ministry of Education launched the "Ethiopian Education Network" (EthER) to provide online content and resources to schools and universities (Ministry of Education Ethiopia, 2020).
- **Radio and Television Broadcasts:** To overcome infrastructural challenges, the government has used mass media to deliver lessons, reaching students in remote areas (World Bank, 2021).
- **Challenges and Opportunities:** Despite progress, issues with unreliable internet, limited digital devices, and low digital literacy remain. Initiatives like the Ethiopian Digital Ethiopia 2025 strategy aim to address these gaps systematically.
- **Case Study:** During the COVID-19 pandemic, Ethiopia scaled up the use of radio- and TV-based lessons significantly, improving access for millions of students temporarily excluded from digital platforms (UNICEF, 2020).

**Key Takeaways**

Open and distance learning refers to educational systems designed to facilitate learning without the constraints of traditional classroom settings. ODL utilizes technological advancements to cater to a broad audience, which often includes students with varied backgrounds and geographical locations. The flexibility that ODL provides is crucial for many learners in Ethiopia, where educational resources may be limited and rural access to institutions can pose significant barriers. Hence, there are some takeaways to consider in this regard:

**Quality of Content**

One of the primary challenges in ODL is the quality and relevance of instructional materials. According to Moore & Kearsley (2012), the effectiveness of ODL is significantly influenced by the quality of the course materials provided. Poor-quality, outdated, or excessively technical materials can hinder understanding and engagement. For instance, a survey

conducted among Ethiopian distance learners indicated that 60% of respondents found existing materials inadequate in fostering understanding of complex subjects (Ayele, 2020).

**Access and Distribution**

In Ethiopia, infrastructure challenges, including inconsistent internet connectivity and limited access to educational technologies, exacerbate the difficulties involved in distributing instructional materials. A report from the World Bank emphasized that despite improvements in mobile networks, many rural students still struggle with internet access. This digital divide impacts the feasibility of using online resources, thereby necessitating the development of offline instructional materials that remain effective and engaging.

**Cultural Relevance**

Cultural relevance is also a critical aspect. Instructional materials that are not contextualized to the learners' cultural backgrounds may alienate students and reduce motivation. Research by Meyer (2018) highlights that learners relate better to content familiar to their context, traditions, and values. For instance, Ethiopian students may benefit significantly from materials that include local case studies, examples, and culturally relevant illustrations.

**Training of Educators**

The ability of educators to effectively use and adapt instructional materials for distance learning directly impacts student success. A study published in the Journal of Open Learning notes that educators often receive little training in creating or curating online content, leading to ineffective teaching strategies (Benfield & Deal, 2013). Ethiopia's educational institutions must invest in professional development programs that equip educators with the skills needed to leverage available resources effectively.

**Student Engagement**

Engaging distance learners effectively remains a major challenge. Studies have shown that students in ODL systems often experience a sense of isolation, which can lead to higher dropout rates. A case study focusing on Ethiopian college students revealed that around 40% felt disconnected due to a lack of interactive materials (Wasir & Kola, 2021). Interactive elements, such as multimedia content, simulations, and collaborative projects, are essential in bridging this engagement gap.

**Suggested Strategies for Improvement**

To tackle these challenges, several strategies can be implemented:

- **Localizing Content Development**: Involving local educators in the creation and review of instructional materials can enhance cultural relevance. This collaboration ensures that materials resonate with students and address their specific educational

needs.

- **Enhancing Technological Infrastructure**: Investments in digital infrastructure by the government and private sector can enhance access. Mixed-mode delivery, which combines both online and offline resources, can be an effective approach to reach those who lack consistent internet access.
- **Interactive and Flexible Materials**: Developing instructional materials that incorporate interactive elements and multimedia can improve engagement. For instance, using short videos, quizzes, and group discussions can provide a more immersive learning experience.
- **Continuous Feedback Mechanisms**: Ongoing feedback from students about the instructional materials and learning experience can help institutions make necessary adjustments and improvements. Surveys and focus group discussions can be valuable tools in this process.
- **Professional Development for Educators**: Continuous training for instructors to adapt to ODL's pedagogical models is essential. Workshops and seminars focusing on online teaching methodologies, and the integration of technology in pedagogy can enhance teaching effectiveness.

## Conclusion and Recommendations

### Conclusion

In conclusion, while open and distance learning offers flexible educational opportunities, it is not without its challenges. Addressing issues such as access to technology, self-motivation, social isolation, inadequate support systems, concerns about academic integrity, and cultural barriers is crucial for improving the experiences of distance learners. Institutions and educators must work collaboratively to develop targeted strategies that can mitigate these challenges, ensuring that ODL can serve as an equitable educational pathway for all students, including those from diverse backgrounds such as Ethiopia.

Effective instructional materials for open and distance learners must be tailored to meet the specific needs of a diverse student body while supporting engagement, usability, and alignment with learning objectives. By leveraging various types of resources and integrating interactive technologies, educators can enhance the learning experience for distance learners.

The experiences of different countries in managing instructional materials for open and distance learners provide valuable insights for enhancing distance education systems worldwide, including in Ethiopia. The importance of carefully crafted educational resources cannot be overstated; as evidenced by research and international case studies, they play a vital role in student success. By focusing on localization, technology adoption, and educator training, Ethiopia can improve its instructional materials and provide a more effective learning experience for distance learners. Continued research and adaptation to local needs are essential as ODL evolves, ensuring that it fulfills its promise as an inclusive educational approach.

While the challenges associated with instructional materials for open and distance learners in

Ethiopia are significant, they are not insurmountable. By addressing quality, access, cultural relevance, educator training, and student engagement, educational institutions can create an inclusive and effective ODL environment. The scope for enhancing educational equity and expanding access to learning through ODL in Ethiopia is immense, contingent on our collective efforts to produce high-quality instructional materials tailored to the diverse needs of learners.

ODL offers transformative potential to democratize education, especially in underserved areas. Effective instructional materials must be diverse, accessible, and adaptable, delivered using inclusive technologies and learner-centered approaches. Global examples from India, South Africa, the UK, and others showcase that strong infrastructure, policy support, and innovative delivery methods are essential for success in ODL systems.

**Recommendations**

- ✓ **Localization**: Instructional materials should be tailored to reflect the Ethiopian context, incorporating local examples, languages, and cultural references to make learning more relatable.
- ✓ **Technology Adoption**: Utilizing mobile technology could greatly enhance access to learning materials. A report from the UNESCO Institute for Information Technologies in Education (2019) emphasizes the potential of mobile learning in African nations, encouraging institutions to harness mobile platforms.
- ✓ **Training Educators**: Providing training for educators on the effective use of instructional materials can lead to better student outcomes. Professional development programs focused on technology integration have proven beneficial in various contexts.

**References**


Alemayehu, B., Tesfaye, M., & Hailu, Z. (2021). Impact of COVID-19 on students in rural Ethiopia during emergency distance learning. *Educational Research for Policy and Practice*.

Almarzooq, Z., et al. (2020). The impact of learning management systems on student learning outcomes. *Journal of Educational Technology, 15*(3), 205–223.

Anderson, T. (2017). Theories for learning with emerging technologies. *Journal of Distance Education*.

Ayele, T. (2020). A study on the effectiveness of open and distance learning in Ethiopia. *International Journal of Education and Development*.

Barrett, D., & Church, K. (2019). Improving student engagement: Lessons from online learning. *International Review of Research in Open and Distributed Learning, 20*(5), 42–57.

Bawa, P. (2020). Retention in online courses: A review of the literature. *Educational Technology Research and Development*.

Benfield, G., & Deal, A. (2013). The role of the educator in open and distance learning. *Journal of Open Learning*.

Benson, P. (2011). *The power of autonomy in language learning*. Multilingual Matters.

Bishop, A. P., et al. (2021). Language and educational equity in multicultural classrooms. *Journal of Multicultural Education*.

Bozkurt, A. (2019). From distance education to open and distance learning: A holistic evaluation of history, definitions and theories. Anadolu University.

Daniel, J. (2012). Making sense of the MOOC phenomenon. *Journal of Interactive Media in Education, 2012*(1).

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268.

Ethiopian Ministry of Education. (2021). *National strategic plan for digital education in Ethiopia*. Retrieved from https://www.moe.gov.et

Garrison, D. R. (2016). Thinking collaboratively: Learning in a community of inquiry. *International Review of Research in Open and Distributed Learning*.

Garrison, D. R., & Anderson, T. (2003). E-learning in the 21st century: A community of inquiry framework for online learning. *Journal of Distance Education, 4*(2), 73–89.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81–112.

Henderson, M., et al. (2021). Academic integrity in online learning: Market trends and institutional responses. *Journal of Educational Technology Systems*.

Hew, K. F., & Cheung, W. S. (2014). Students' behavioral engagement in online discussion: Influence of social presence and motivation. *International Journal of Educational Technology in Higher Education*.

International Telecommunication Union. (2020). *Measuring digital development: Facts and figures*.

Knowles, M. (1984). *Andragogy in practice: Applying modern principles of adult learning*. Jossey-Bass.

Lange, C., & Costley, J. (2016). Enhancing learning through technology: Student perspectives on engagement. *Journal of Educational Psychology, 108*(2), 162–177.

Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.

Meyer, K. A. (2018). Culturally relevant content in distance learning. *International Review of Research in Open and Distributed Learning*.

Mishra, A., et al. (2021). Innovations and opportunities in open and distance education: A review of the literature. *International Review of Research in Open and Distributed Learning, 22*(1), 23–37.

Moore, M. G., & Kearsley, G. (2012). *Distance education: A systems view of online learning*. Wadsworth Publishing; Cengage Learning.

Moore, M. G. (1997). Distance education theory. *American Journal of Distance Education, 11*(2), 1–7.

Moore, M. G. (1993). Theory of transactional distance. In R. D. Anderson (Ed.), *Recent developments in distance education* (pp. 22–38). Routledge.

Nayar, S. (2011). Use of mobile devices in distance education in India. *International Journal of Mobile and Blended Learning, 3*(2), 35–50.

OECD. (2012). *Lifelong learning in focus*. OECD Publishing.

Online Learning Consortium. (2020). *Quality scorecard for the administration of online programs*.

Open University. (2021). Student satisfaction and outcomes in distance learning. Retrieved from Open University website.

Selim, H. M., & Salloum, S. A. (2020). Digital literacy and student success in online learning. *International Journal of Educational Technology, 8*(3), 55–69.

Shale, D. (2018). Alignment of learning materials to learning outcomes in distance education. *European Journal of Open, Distance and E-learning, 21*(1), 1–15.

Tadesse, S., & Gillies, R. M. (2020). Examining the challenges of distance learning in higher education in Ethiopia. *Journal of Studies in Education*.

Taye, M., & Melaku, T. (2015). Enhancing student engagement in Ethiopian distance education: The role of interaction and feedback. *International Journal of Educational Development, 42*, 105–113.

Traxler, J. (2018). Learning and teaching with mobile devices. *Journal of Online Learning and Teaching, 14*(1), 67–76.

UNESCO. (2018). *Mobile learning strategies in India*. UNESCO Policy Papers.

UNESCO. (2018). *Ethiopia education sector analysis*.

UNESCO. (2019). *The state of education in low-income countries*.

UNESCO. (2019). *Global education monitoring report*. UNESCO Publishing.

UNESCO. (2020). The impact of the COVID-19 pandemic on education. Retrieved from https://www.unesco.org

Wasir, M. I. A., & Kola, A. (2021). Student engagement in open and distance learning in Ethiopia: A case study. *Ethiopian Journal of Educational Research*.

Williams, P., & Nicholas, D. (2005). E-learning: What the literature tells us about distance education: An overview. *Emerald Group Publishing Limited, 57*(2), 109–122.

World Bank. (2020). Access to education for all: The importance of inclusive learning materials. Retrieved from World Bank website.

World Bank. (2022). Digital learning in Ethiopia: A case study of response to COVID-19. Retrieved from https://www.worldbank.org

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, 41*(2), 64–70.

# Student Satisfaction Survey

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***Abstract***

*The survey aims at identifying the types of services provided to distance students, the level of satisfaction of the students, the reason for dissatisfaction, and recommending mitigating mechanisms. The survey employed a descriptive research design involving a sample of 231 students. Data were collected through a structured five-point Likert scale questionnaire that is supplemented by focused group discussions to capture qualitative insights. The study assessed key academic and administrative support services, including tutorial and, registrar services, senior essay advising, and the Learning Management System (LMS). The findings indicate several areas of concern contributing to student dissatisfaction, notably delays in grade reporting, inconsistency in the provision of tutorial services, and insufficient student support mechanisms. The overall mean satisfaction score was 3.31, reflecting a moderate level of satisfaction. These results underscore the need for institutional improvements in service delivery to enhance the distance learning experience.*

## Introduction

### Background

In the history of Ethiopian private higher education, St. Mary's University stands as a pioneer in promoting both formal and distance education in alignment with the Ethiopian education policy. The University began its operations in 2000 at the diploma level and has since expanded to offer undergraduate and postgraduate degree programs in various disciplines. Alongside its on-campus programs, St. Mary's University provides degree-level distance learning programs that are academically equivalent to its formal undergraduate offerings.

Distance learning enables students to pursue education without the need for physical presence in a classroom, offering flexibility in time and place. Recognizing this potential, St. Mary's University launched its distance learning program in March 2000 at the diploma level. Over time, the program evolved and upgraded to degree level, currently serving three departments—Business and Economics, Social Sciences and Humanities, and Agriculture and Development Studies—covering 16 fields of study (St. Mary's University, 2023).

To increase accessibility, the University has established 12 accredited Distance Learning Centers in Addis Ababa, Adama, Arba Minch, Assosa, Bahir Dar, Dessie, Dire Dawa, Dubti, Gondar, Hawassa, Jimma, and Mekele. These centers coordinate all academic and supportive issues together with the university. The College of Distance Learning operates under an organizational structure designed for effective program implementation, supported by legal accreditation in all fields of study. Instructional delivery combines printed modules, online assignments, tutorials, and assessments, with admission requirements set by the Ministry of Education. Programs typically took four years, divided into three terms of four months each.

The college provides a range of supportive services, including enrollment assistance, tutorial facilitation, examinations, and access to modules, resource center services, and counseling. The professionalism and ethical conduct of staff members are vital to maintaining service quality. Student satisfaction is a critical determinant of program success; dissatisfaction may negatively impact academic performance, reduce the institution's competitiveness, and threaten its long-term viability.

Distance programs are a means for those who are for various reasons unable to attend the formal on-campus program though their effectiveness is highly dependent on the quality of the programs and accessibility.

The learning materials offered must be simple, comprehensive, and user-friendly; tutorial programs must address academic challenges effectively; and resource centers must provide both printed and digital resources with adequate guidance, particularly for new e-learning platforms. Besides, staff professionalism is organized in a way that influences the overall student experience.

## Statement of the Problem

Despite CODL's established network of coordination centers and extensive service offerings, there is limited empirical evidence on how these services are perceived by students, the extent to which they meet learners' needs, and their contribution to academic satisfaction. Without such insights, potential gaps in service delivery may remain unaddressed, undermining student success and institutional sustainability.

## Research Objectives

### General Objective

The main objective of the survey is to assess the adequacy and effectiveness of services provided by the College of Open and Distance Learning (CODL) at St. Mary's University and evaluate the level of student satisfaction.

### Specific Objectives

1. To assess the quality and effectiveness of academic and administrative support provided by coordination centers.

2. To examine students' levels of satisfaction with the services provided by CODL.

3. To identify challenges and areas for improvement in CODL's service delivery from the students' perspective.

4. To recommend possible solutions to mitigate the challenges observed in the study.

### Basic Research Questions

1. What types of academic and administrative services are provided to distance learning students at St. Mary's University?

2. How do students perceive the quality and effectiveness of services provided by the CODL?

3. What is the overall level of student satisfaction with CODL's services?

4. What challenges and gaps exist in CODL's service delivery?

5. How can the challenges and gaps be addressed to improve student satisfaction?

## Scope of the study

This survey study is intended to be done on Saint Mary's University College of open and Distance Learning's 12 coordinating centers. It stresses distance education degree program for male and female students ranging from term 1 up to term 12. The survey stresses the quality

and satisfaction level of the provision process. The services provided by academic and administrative sectors are the main concern

**Limitations of the Survey**

While useful, potential biases in responses and limitations in capturing students' experiences are some of the limitations in the study. In addition to that, this survey may not fully capture the reasons behind students' satisfaction.

**Review of Related Literature**

In recent years, increasing attention has been given to the concept of student satisfaction in the delivery of education. This is particularly relevant to the context of open and distance learning (ODL), which is the central focus of this study. Accordingly, this chapter synthesizes literature on (i) the historical progress and definition of Open and Distance Learning (ODL), (ii) student satisfaction and the SERVQUAL model as a lens for service quality in ODL, and (iii) the theoretical foundations of the Likert scale as a measurement model in satisfaction research.

**Historical Progress and Definition of Open and Distance Learning (ODL)**

**Definition:** Distance education, often referred to as ODL, is defined as the provision of education where students and teachers are separated by physical distance and rely on technology or mediated communication for interaction. According to *The Economic Times* (2023), distance learning involves learning remotely without face-to-face interaction in a classroom. Similarly, Moti (2008) explains that ODL emphasizes pedagogy, technology, and instructional design to deliver education to students who are not physically present on site. Communication may be asynchronous, through printed or electronic materials, or synchronous, through real-time technological platforms. When minimal face-to-face interaction is required, such as examinations, ODL may take the form of hybrid or blended programs.

**Historical progress of ODL**

- ✓ Correspondence era (mid-19th–early 20th c.): Instruction by post enabled learners to study at a distance using printed study guides and assignments returned by mail.
- ✓ Broadcast era (1920s–1960s): Educational radio and later television expanded reach; universities partnered with public broadcasters to beam lectures and course series to dispersed learners.
- ✓ Open universities (late 1960s–1980s): Purpose-built mega-universities (e.g., The Open University, 1969) institutionalized large-scale ODL with course teams, standardized materials, and regional study centers.
- ✓ Dual-mode expansion (1970s–1990s): Conventional universities adopted distance modes alongside on-campus provision, adding weekend schools, print packs, and teleconferencing.
- ✓ Networked/e-learning (mid-1990s–2000s): The internet, email, and early Learning

Management Systems (LMS) enabled online discussion forums, digital libraries, and multimedia content.

- ✓ MOOCs and OER (2010s): Massive Open Online Courses and open educational resources scaled global access and diversified ODL pedagogies (video lectures, auto-graded quizzes, peer forums). Pandemic acceleration (2020–2022): Emergency remote teaching mainstreamed synchronous platforms and catalyzed hybrid models, analytics, and student support at scale.
- ✓ Current trends: data-informed learner support, mobile-first design, micro-credentials, and AI-supported tutoring—while maintaining ODL's core commitments to access, flexibility, and learner support.

This implies that the evolution from "content delivery at a distance" to "networked ecosystems of support" makes service quality (advising, technical help, responsiveness) as crucial as course content—directly linking ODL's maturity to student satisfaction frameworks discussed below.

**Student Satisfaction and SERVQUAL Model**

Recent studies have shown that higher education institutions have given greater emphasis to the issue of assessing students' satisfaction. According to Kanwar & Sanjeeva (2022), students are the most important stakeholders of any educational institution. Along with students' progression and placements, one of the main indicators of a college's progress is the students' level of satisfaction. Students who are studying in a higher educational institution seek more quality education and perfection of the system in terms of approachability of the place, good infrastructure, a quality education system, services offered by the institution, additional inputs in the form of value-added and employability enhancement courses, etc.

Kanwar & Sanjeeva (2022) also emphasized that higher education institutions are facing greater competition to adopt market-oriented methods to separate themselves from their competitors and attract as many students as possible while still meeting the requirements and expectations of present students.

As a result, several research studies have been carried out to determine the elements that influence student happiness in higher education.

Kanwar & Sanjeeva (2022) further elaborated that student satisfaction can be defined as an attitude resulting from an assessment of students' educational experience, services, and facilities provided by the institution. Because students are the important internal judges of the performance of the institute, student satisfaction surveys are important and help the higher education institution to improve and adjust accordingly in the landscape of higher education. It also provides satisfaction to the institute that offers quality education. (Kanwar & Sanjeeva, 2022).

Elliot & Shin (2002) defined students' satisfaction as a short-term attitude, resulting from an

evaluation of students' educational experiences. It is a positive antecedent of student loyalty (Navarro & Torres, 2005). And it is the result and outcome of an educational system (Zeithaml, 1988). Again, Elliot & Shin defined student satisfaction as students' disposition by subjective evaluation of educational outcomes and experience. Therefore, student satisfaction can be defined as a function of the relative level of experiences and perceived performance of educational services (Mukhtar & Baloch, 2015).

Student satisfaction has been the subject of numerous studies on universities' services in private and public education sectors. According to Itasanmi & Oni (2020), the findings of the study revealed that teaching & learning experience, educational resources, technical support service, and infrastructure have a significant relationship with the general satisfaction of students in ODL programs, and when the four independent variables are taken together, they jointly correlate positively with learners' satisfaction in ODL programs. Also, the result shows that among the four independent variables, technical support service had the highest contribution to learners' satisfaction in ODL programs, and it was further established that while age, sex, and school significantly jointly predict general satisfaction of students in ODL programs, marital status and academic level of the students do not.

Based on these results, it was recommended that there is a need for ODL institutions to make concerted efforts in improving the educational resources and infrastructural facilities available to enhance the teaching and learning process for students, which will, in turn, boost their satisfaction level in the programs. Technical support services in the institutions should be strengthened significantly to reduce students' sense of isolation and anxiety that always leads to a high dropout rate and long completion time among the ODL students (Itasanmi, & Oni, 2020).

As depicted by other studies, Butta & Kashif's (2010) student satisfaction survey stated that, from the results, it is evident that students are satisfied with higher education in Pakistan; however, level of satisfaction is different between male and female students, owing to the socioeconomic setting in the country. Since all the variables are significantly and positively related to students' satisfaction it is concluded that teachers' expertise, courses offered, learning environment, and classroom facilities enhance the student satisfaction, in higher education. Butta & Kashif (2010) also added, according to results, teachers' expertise is the most influential factor on the student satisfaction, whereas courses offered and learning environment are the next important factors, and classroom facilities are the least important factor among all the variables. This means that teachers' expertise, courses offered, and learning environment do a good job of enhancing students' satisfaction in higher education ( Butta & Kashif, 2010).

**SERVQUAL Model of Satisfaction**

To systematically evaluate satisfaction, the SERVQUAL model developed by Parasuraman, Zeithaml, and Berry (1988) has been widely applied in education. The model posits that satisfaction results from the gap between students' expectations and their actual perceptions of

services. It identifies five key dimensions of service quality:

1. Tangibles–physical facilities, equipment, and appearance of educational materials.

2. Reliability–the ability of the institution to provide promised services dependably and accurately.

3. Responsiveness–willingness to help students and provide prompt service.

4. Assurance–knowledge, competence, and courtesy of staff, and their ability to convey trust.

5. Empathy–provision of caring, individualized attention to students.

Within ODL, the SERVQUAL framework highlights how factors such as teachers' expertise, learning environment, technical support, and institutional responsiveness significantly shape student satisfaction (Butta & Kashif, 2010; Itasanmi & Oni, 2020). Technical support is particularly critical in reducing the sense of isolation and dropout rates often associated with distance learning.

From these perspectives, it is evident that student satisfaction in ODL depends on both the definition and practice of service quality. While ODL emphasizes accessibility, flexibility, and technology-mediated learning, satisfaction is determined by how well institutions deliver reliable, responsive, and empathetic services that meet students' expectations. The SERVQUAL model offers a comprehensive lens for assessing these aspects and ensuring continuous quality improvement in ODL programs.

**iii) Likert Scale**

The Likert scale measures latent attitudes by aggregating responses to items that express degrees of agreement or frequency on a symmetric ordinal continuum (typically 5 or 7 categories). Each item contributes to a composite that reflects the underlying construct (e.g., satisfaction with ODL services).

**Core features:**

- ✓ Ordered categories: e.g., 1=strongly disagree … 5=strongly agree (or Very dissatisfied … Very satisfied).
- ✓ Item wording: Clear, single-idea statements; include both positively and negatively keyed items to counter acquiescence bias.
- ✓ Reliability: Assess internal consistency (e.g., Cronbach's $\alpha \geq 0.70$ acceptable for research use); examine item–total correlations to refine the scale.
- ✓ Validity: Content (expert review aligned to SERVQUAL dimensions), construct (factor analysis), and criterion (association with outcomes like retention or GPA).

**Interpreting levels on a 5-point Likert scale (useful for reporting).**

Let 1–5 map to Strongly Disagree → Strongly Agree (or Very Dissatisfied → Very Satisfied). Typical descriptive bands used in HE research reporting are:

1.00–1.80 = Very Low

1.81–2.60 = Low

2.61–3.40 = Moderate

3.41–4.20 =High

4.21–5.00 = Very High

**Research Design and Methodology**

**Method**

The study employs a descriptive research method that intends to explain the population of the study and level of satisfactions with the service they got from CODL. It also focuses on identifying the services and the causes for their dissatisfaction and the way forward.

**Study sample and sampling technique**

According to the current statistics of the CODL Registrar's office, there are more than 7,000 students that attend the program. Since the population is too large and unreachable by its nature, the researcher employed a sample of the population. Accordingly, availability, purposive, and random samplings are used to fit the purpose

Purposive sampling is employed to select graduating class students and their feelings about the services delivered in coping with exit exam preparation. The availability sampling method is employed because participants are chosen based on their accessibility and availability. Random sampling is also used to select data sources among students that were available to take the final exam of 2017B in 11 coordinating centers outside Addis Ababa. The data is collected within a period of a term, between February and May 2025. Descriptive statistics are employed to analyze continuous and categorical data. Data obtained from open-ended questions were described and interpreted in in line with the Likert scale presentations.

**Data Collection Instruments**

Data are collected from the respondents through questionnaires and focused group discussions. The questionnaire is constituted of three parts, namely part one bio data that indicates the student's personal data in terms of age, sex, department, and coordination center of the student; part two, is devoted to 7 issues in which respondents mark the degree of their satisfaction level, 1 representing the very low level of satisfaction and 5 the very high level of satisfaction. There are almost 54 questions presented under part two, and part three is an open-

ended part in which students are expected to add opinions that are helpful for the survey.

The 5-point Likert scale ranges from 1 up to 5 whose interpretations are here to follow.

1. Implies very low level of satisfaction
2. low level of satisfaction
3. Moderate level of satisfaction
4. High level of satisfaction
5. Very high level of satisfaction

In addition to the questionnaire, five broader questions were coined for focused group discussion that was conducted for center coordinators, registrars, and material dispatchers via correspondence and video conference.

**Process of Data Collection**

Data were collected from 12 coordinating centers using questionnaires and focused group discussions. The data collectors for the questionnaire were the Addis Ababa Center registrar for those who visited the registrar for various reasons within the term's period of time and the 2017B final exam invigilators who were sent to invigilate the centers students for the 2017 B final exam

They were given orientation on how to distribute and collect data from the students who sat for the exam. 250 questionnaires were distributed, from which 231 were collected. A focus group discussion was arranged at the center and a video conference was carried out. At least 12 were expected for the discussions, among whom 11 were present for it.

To triangulate the questionnaire, focus group discussion (FGD) was conducted with coordinating centers using video conference. Through video conference, 11 coordinating centers representatives discussed the structured questions related to the delivery of service provided to students. The same FGD questions were sent to coordinating center material dispatchers and registrars to give their opinion in written form. Out of the expected 24 responses, 21 were received.

**Statistical Methods Used to Analyze Data**

Statistical tools play a vital role in transforming raw data into meaningful insights. In this study, both descriptive and inferential statistical methods were employed to analyze the survey results. These tools not only summarized the characteristics of the respondents but also provided a systematic basis for interpreting patterns, trends, and variations in students' satisfaction with open and distance learning services. The following techniques were applied.

**SPSS (Statistical Package for the Social Sciences)**

SPSS served as the primary software for data analysis. It is widely recognized for its reliability

in handling both small- and large-scale survey data, offering options for data cleaning, coding, and running statistical tests. Its use ensured accuracy, consistency, and efficiency in generating descriptive and inferential results.

**Frequency and Percentage Distribution**

Frequency refers to the number of times a particular response or value occurs, while percentage translates this frequency into a proportion relative to the total number of responses. These tools are particularly useful in demographic profiling (e.g., age, gender, education level) and in presenting categorical variables. They provide a straightforward picture of how responses are distributed, allowing for easy interpretation of dominant trends.

**Mean (Arithmetic Average)**

The mean was used to measure central tendency, i.e., the point around which most responses cluster. In satisfaction surveys based on Likert scales, the mean helps to determine the average level of agreement or satisfaction across items. For instance, a mean score of 4.2 on a five-point scale indicates that, on average, respondents are highly satisfied.

**Grand Mean**

Beyond item-level analysis, the grand mean was computed to provide an overall measure of satisfaction across different variables or dimensions. It is obtained by averaging the means of several related items, yielding a single index of respondents' overall perception. The grand mean is especially valuable in identifying general levels of satisfaction across service categories, such as responsiveness, reliability, and support systems.

**Standard Deviation (SD)**

Standard deviation was employed to assess the dispersion of responses around the mean. A small SD indicates that responses were close to the mean (i.e., high agreement among respondents), while a large SD suggests diverse or polarized opinions. In interpreting Likert-scale satisfaction data, SD adds depth by showing not only the average level of satisfaction but also how consistently respondents share that perception.

**Analysis and Interpretation**

This chapter deals with data analysis and interpretation. The data are classified as data gathered from the main campus and that of coordinating centers. The main topics are academic issues, administrative issues, student support, and issues related to the higher education exit exam. It uses both quantitative (Likert-scale surveys) and qualitative (open-ended responses) data. The chapter is systematically divided into

1. Demographics–age, gender, department, and center location.

2. Service provided–broken into:

- Academic-related issues
- Administrative services (main campus)
- Student support/facilities (main campus)
- Student support/facilities (regional centers)
- Administrative services (regional centers)
- Higher Education Exit Exam

Open-ended Responses–highlighting qualitative feedback, complaints, and suggestions

Focus Group Discussion (five questions related to the topic)

**Demographic Characteristics**

This part describes the data sources in ages, sex, department, and centers. Table 1 below indicates the frequencies as well as the percentage of respondents with respect to specific categories.

**Table 1: Demographic (Age, Gender, Department, and Centers)**

| Category | Age Group | Frequency | % |
|---|---|---|---|
| **Age** | 20- 25 | 139 | 60.1 |
| | 26-30 | 40 | 17.3 |
| | 31-40 | 18 | 7.8 |
| | 41 &above | 5 | 2.2 |
| | Not indicated | 29 | 12.6 |
| **Sex** | Male | 88 | 38.1 |
| | Female | 111 | 48.1 |
| | Not indicated | 32 | 13.8 |
| **Department** | Agriculture & Development Studies | 7 | 4.3 |
| | Business and Economics | 173 | 74.9 |
| | Social Science & Humanities | 23 | 10 |
| | Not indicated | 28 | 14.1 |
| **Center** | Addis Ababa | 113 | 49 |
| | Regional (all 11 centers) | 118 | 51 |
| **Total** | | 231 | 100 |
| **FGD participants** | From 12 coordinating Centers | 33(36) | 91.7 |

Table 1 above depicts the biodata of respondents that participated in filling out the questionnaire. In addition to this, there are also data sources that participated in focus group discussions drawn from 12 coordinating centers. The bio data of the questionnaire is constructed of age, sex, department, and coordinating center. The table classifies the data as age, sex, departments, and coordinating centers. It is analyzed in the following way:

Total Respondents: 231

**Age**: The majority (60.1%) are aged 20–25, followed by 26–30 (17.3%).

**Gender:** Female respondents slightly outnumber males (48.1% to 38.1%).

**Departments:** Most respondents are from Business & Economics (74.9%), with smaller proportions from Social Sciences & Humanities (10%) and Agriculture & Development Studies (4.3%).

**Centers:** Distribution is balanced between Addis Ababa (49%) and regional centers (51%).

**Academic related Issues in the main campus**

Academic related issues usually means discussing factors that influence or reflect students' academic life, progress, or challenges. These are often linked to teaching, learning, and educational services. The table below depicts the variables that constitute academic issues and the scale of satisfaction.

**Table2. Academic related Issues**

| S/N | Academic Issues | Frequency (%) | | | | | Mean |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | Presentations of senior researches and project work are conducted in line with dates of appointments and as in the order of service requests. | 5 | 33 | 28 | 18 | **17** | **3.1** |
| 2 | Upon the request of students, makeup exams & assignment works are carried out on time. | 11 | 22 | 40 | 19 | **19** | **3.12** |
| 3 | All tutors and department heads are handy enough to provide the necessary information & consultancy services to their students | 7 | 27 | 46 | 12 | **18** | **3.06** |
| 4 | All tutors and department heads are willing to give prompt responses to the appeals of all students. | 4 | 30 | 40 | 20 | **27** | **3.59** |
| 5 | Every term, I received the necessary learning materials and modules for all courses in advance. | 7 | 22 | 33 | 16 | **37** | **3.66** |
| 6 | The learning materials and modules are well prepared, commendable, and clear to read and understand. | 10 | 18 | 28 | 27 | **30** | **3.43** |
| 7 | The program in my field of study comprises the necessary course content and is designed to complement the required knowledge and skills of students. | 6 | 21 | 43 | 19 | **22** | **3.45** |
| 8 | CODL academic staff provides tutorial support on the techniques of conducting research and project work to students. | 24 | 26 | 31 | 19 | **19** | **3.00** |
| 9 | I have acquired adequate knowledge from the lessons provided in the tutorial sessions organized at the end of every term. | 23 | 25 | 29 | 12 | **18** | **2.78** |
| 10 | The tutors have adequate knowledge of the course content and are capable of teaching the subject. | 16 | 24 | 42 | 15 | **16** | **2.92** |
| 11 | The courses being given by the university are relevant and designed to create an impact on the future careers of students. | 4 | 21 | 36 | 24 | **28** | **3.02** |
| **Grand Mean** | | **3.19** | | | | | |
| **SD** | | **1.244** | | | | | |

Table 2 above shows main campus students indicating the level of satisfaction in 11 academic-related broad areas, namely, senior essay projects, make up exams, tutors competence and availability, the preparation level and provision of learning materials, the adequacy and fairness of tutorial programs, and the relevance of the courses offered.

The mean scores ranged between 2.78 and 3.66, with a grand mean of 3.19 (high satisfaction). While most areas scored above 3.0, concerns emerged with tutorial usefulness (2.78) and tutor competency (2.92), which reflected only moderate satisfaction. The highest-rated aspects were the timely provision of learning materials (3.66) and staff responsiveness (3.59). The standard deviation (1.24) indicates wide variation in responses.

Interpretation: Students are generally satisfied with learning materials and responsiveness but less satisfied with tutorials and tutor competence.

**Administrative Services in the Main Campus**

This section is devoted to the analysis of administrative services in the main campus. Administrative services play a central role in ensuring the smooth operation of academic and non-academic activities, since they provide the necessary support structure for both students and faculty. The effectiveness of these services is often reflected in the quality of interactions between administrative staff and service users.

In order to assess the performance of administrative services, this part makes use of a tabular presentation that highlights key variables related to staff conduct and work performance. Specifically, the variables under consideration include commitment, diligence, and integrity of the staff. These elements are crucial indicators of service delivery because they determine how efficiently and ethically the administrative system functions.

By examining these variables systematically, the section provides insights into the strengths and areas for improvement within the administrative services of the main campus, thereby offering an evidence-based foundation for enhancing service satisfaction and institutional effectiveness. The table below analyzes the variables

**Table 3: Administrative Services in the Main Campus**

| S/N | III. Administrative Services | Frequency (%) | | | | | Mean |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | Both in the academic and support staff working environments, there is a high regard for a sense of duty and capability. | 6 | 27 | 45 | 15 | **18** | **3.25** |
| 2 | The academic and support staff of CODL accept students' requests earnestly and provide instant services on time. | 7 | 29 | 37 | 20 | **21** | **3.19** |
| 3 | The CODL staff is always at your service to direct you were to report your cases and when you will get responses to your requests. | 6 | 17 | 44 | 22 | **24** | **3.36** |
| 4 | All the CODL staff have the required skills and the know-how to manage | 16 | 16 | 47 | 20 | **26** | **3.80** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | your requests | | | | | | |
| 5 | All CODL staff is handy and responsive to provide you the service you need. | 10 | 21 | 43 | 20 | **16** | **3.41** |
| 6 | Based on its regulations, the University treats all students fairly and indiscriminately. | 7 | 18 | 39 | 14 | **32** | **3.72** |
| 7 | All offices that have a responsibility to deliver service to students are always open during office hours. | 7 | 19 | 39 | 20 | **23** | **3.53** |
| 8 | The University fairly serves students regardless of sex, religion, academic ability, and physical disability. | 6 | 12 | 29 | 20 | **48** | **3.87** |
| 9 | The duration of term-end examinations is informed and communicated ahead of time. | 3 | 18 | 40 | 26 | **26** | **3.48** |
| 10 | The university has developed well-organized and systematic student data records. | 10 | 19 | 42 | 15 | **28** | **3.59** |
| 11 | The staff of the finance department is qualified and considerate to give prompt service to students. | 8 | 22 | 35 | 15 | **36** | **3.68** |
| 12 | The Registrar's Office provides prompt and reliable service to students. | 4 | 15 | 38 | 24 | **24** | **3.37** |
| 13 | The Registrar Office announces registration time and criteria of admission to students ahead of time. | 4 | 13 | 39 | 17 | **40** | **3.81** |
| 14 | The registrar issues students grade reports on time. | 27 | 19 | 35 | 16 | **18** | **2.86** |
| 15 | The University provides students ID card on time. | 6 | 20 | 41 | 22 | **25** | **3.38** |
| 16 | Security guards in the University treat students fairly and in a respectful manner. | 2 | 13 | 36 | 32 | **31** | **3.74** |
| 17 | The University campus is a secure and homely environment with a full sense of care | **8** | **25** | **42** | **20** | **19** | **3.39** |
| **Grand Mean** | | **3.48** | | | | | |
| **SD** | | **0.26** | | | | | |

Table 3 above depicts main campus students level of satisfaction in 17 administrative-related broad areas, namely, sense of responsibility, commitment, fairness of the staff, possession of required skills and know-how of the staff, communication between the main office and coordinating centers in areas of final exam administration, organization of students data records, and the level of services the registrar delivers are the main ones. The corresponding analysis follows in the following way.

The mean values fell between 2.86 and 3.87, with a grand mean of 3.48 (high satisfaction).

Most areas scored well above 3.0, except for timely issuance of grade reports (2.86). Strong areas included fairness in service provision (3.87), timely announcements (3.81), and staff competence (3.80). The standard deviation (0.26) shows consistency across responses.

Interpretation: Students value administrative fairness and competence, though grade reporting timeliness remains a concern.

**Student Support/Facilities in the Main Campus**

Part Four is devoted to student support, with a particular focus on the provision of facilities within the main campus. Student support services are an essential component of higher education, as they create an enabling environment that enhances students' academic and personal development. The availability, accessibility, and quality of facilities directly influence students' learning experiences and overall satisfaction.

In this section, the analysis centers on variables related to student support and facilities. Special attention is given to how the provision of such facilities contributes to the effectiveness of teaching and learning, while also reflecting the institution's commitment to student welfare. Since adequate facilities are crucial in shaping students' engagement and success, this part highlights their role as key indicators of institutional responsiveness to student needs. The tabular presentation of the analysis is here to follow.

**Table 4: Student Support/Facilities in the Main Campus**

| S/N | Student Support/Facilities | Frequency (%) | | | | | Mean |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | There is always a clean and uninterrupted or sufficient water supply on the campus. | 6 | 14 | 20 | 35 | **36** | **3.73** |
| 2 | Restrooms are clean, adequate, and assigned to female and male students separately. | 3 | 10 | 14 | 39 | **42** | **4.42** |
| 3 | The number of cafeterias on the campus is adequate and provides sufficient service. | 6 | 14 | 20 | 37 | **36** | **3.73** |
| 4 | The University has sufficient electric supply. | 8 | 16 | 45 | 23 | **20** | **3.27** |
| 5 | There is a photocopy and printing service and a stationery and book shop on the campus | 12 | 23 | 36 | 21 | **21** | **3.14** |
| **Grand Mean** | | **3.66** | | | | | |
| **SD** | | **1.21** | | | | | |

Table 4 above shows main campus respondents level of satisfaction in 5 student support service-related broad areas, namely, clean water supply, restroom separated for male and female, the availability of photocopying and the cafeteria are the main ones. The corresponding analysis follows in the following way.

Means ranged from 3.14 to 4.42, with a grand mean of 3.66 (high satisfaction). The clean and adequate restrooms scored highest (4.42), while the availability of photocopy/printing services

and a bookshop was lowest (3.14). The standard deviation (1.21) indicates varied responses, with both very low and very high satisfaction reported.

Interpretation: Sanitation facilities are appreciated, but service-related facilities such as photocopying and bookshops require improvement.

**Student Support/Facilities in Coordinating Centers**

Part five is devoted to student support that is to be materialized in coordinating centers. Student support services are an essential component of higher education, as they create an enabling environment that enhances students' academic and personal development. The availability, accessibility, and quality of facilities directly influence students' learning experiences and overall satisfaction.

The analysis focuses on variables related to student support and facilities. Special attention is given to how the provision of such facilities contributes to the effectiveness of teaching and learning while also reflecting the institution's commitment to student welfare. Since adequate facilities are crucial in shaping students' engagement and success, this part highlights their role as key indicators of institutional responsiveness to student needs. The tabular presentation of the analysis is here to follow.

**Table 5: Student Support/Facilities in Coordinating Centers**

| S/N | Student Support/Facilities in the Regional Centers | Frequency (%) | | | | | Mean |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | The coordinating center is well-organized with adequate computers and laboratories. | 14 | 34 | 36 | 14 | 20 | 3.10 |
| 2 | The PCs are loaded with up-to-date and relevant programs. | 8 | 28 | 32 | 22 | 26 | 3.20 |
| 3 | IT staff working in laboratories are skillful, ready to serve students and well-mannered. | 5 | 27 | 34 | 24 | 28 | 3.36 |
| 4 | The resource centers are always open during working hours. | 2 | 22 | 38 | 28 | 28 | 3.49 |
| 5 | There is reliable/uninterrupted Wi-Fi service in the resource center. | 14 | 20 | 32 | 23 | 27 | 3.42 |
| 6 | Compared to other private universities in Ethiopia, SMU is reputable. | 2 | 11 | 35 | 28 | 42 | 3.55 |
| 7 | The tuition fee required by the University is reasonable. | 7 | 20 | 44 | 16 | 30 | 3.46 |
| **Grand Mean** | | **3.37** | | | | | |
| **SD** | | **0.16** | | | | | |

Table 5 above indicates the level of satisfaction of students in 7 student support service-related broad areas, namely, well organized with adequate computers & laboratories, skillful and ready to serve staffs, consistency in giving services following working hours, availability of Wi-Fi services, and the reputation of SMU are the main ones. The

corresponding analysis follows in the following way:

The mean scores ranged from 3.10 to 3.55, with a grand mean of 3.37. The university's reputation (3.55) was the strongest point, while computer labs and equipment adequacy (3.10) scored lowest. The standard deviation (0.16) indicates stable and consistent responses.

Interpretation: Students value the university's reputation but are dissatisfied with the adequacy of laboratory and computer facilities.

**Administrative Services of Coordinating Centers**

Part six is devoted to the analysis of administrative services in the coordinating centers. Administrative services play a central role in ensuring the smooth operation of academic and non-academic activities, since they provide the necessary support structure for both students and faculty. The effectiveness of these services is often reflected in the quality of interactions between administrative staff and service users.

In order to assess the performance of administrative services, this part makes use of a tabular presentation that highlights key variables related to staff conduct and work performance. Specifically, the variables under consideration include the commitment, diligence, and integrity of the staff. These elements are crucial indicators of service delivery because they determine how efficiently and ethically the administrative system functions.

By examining these variables systematically, the section provides insights into the strengths and areas for improvement within the administrative services of the main campus, thereby offering an evidence-based foundation for enhancing service satisfaction and institutional effectiveness. The table below analyzes the variables.

**Table 6: Administrative Services of Coordinating Centers**

| S/N | Administrative Service in Regional Centers | Frequency (%) | | | | | Mean |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | The regional center staff accept students' requests earnestly and provide instant services on time. | 7 | 10 | 49 | 26 | **26** | **3.46** |
| 2 | The term-end examinations are administered in the coordinating center based on the scheduled time. | 6 | 16 | 44 | 24 | **28** | **3.44** |
| 3 | The duration of term-end examinations are informed and communicated to the coordinating center ahead of time. | 4 | 16 | 35 | 30 | **32** | **3.60** |
| 4 | The coordinating center staff of the finance department is qualified and considerate to give prompt service to students. | 2 | 18 | 38 | 30 | **30** | **3.58** |
| 5 | The coordinating center registrar's office provides prompt and reliable service to students. | 3 | 20 | 35 | 26 | **34** | **3.58** |
| 6 | The coordinating center registrar office announces registration time and criteria of admission to students ahead of time. | 1 | 4 | 39 | 34 | **40** | **3.88** |
| 7 | Learning materials and modules are supplied to students every term upon registration. | 4 | 9 | 46 | 29 | **30** | **3.61** |
| 8 | The coordinating center provides students ID cards on time. | 2 | 16 | 40 | 30 | **30** | **3.59** |
| 9 | Registration slips and tuition fee receipts are issued right on time. | 1 | 15 | 45 | 27 | **27** | **3.56** |
| 10 | The coordinating center office is situated in attractive and peaceful areas of the town, where there are adequate transport services. | 1 | 22 | 40 | 25 | **30** | **3.52** |
| **Grand Mean** | | **3.58** | | | | | |
| **SD** | | **0.12** | | | | | |

Table 6 above indicates the level of satisfaction of coordinating center students in 10 administrative service-related broad areas, namely, earnest acceptance of students requests, proper scheduling of the administration of final exam, qualification of coordinating center finance officers, the readiness of the registrar to provide timely responses and adequate service, the timely provision of modules to students, and the suitability of the location of coordinating centers are the main ones. The corresponding analysis follows in the following way:

Scores ranged from 3.44 to 3.88, with a grand mean of 3.58, slightly higher than the main campus. The highest-rated item was the timely announcement of registration/admission (3.88), while exam schedule adherence (3.44) ranked lowest. The standard deviation (0.12) suggests responses were very consistent.

**Interpretation:** Coordinating centers are perceived as more efficient and consistent in delivering administrative services than the main campus.

**Issues related to Higher Education Exit Exam**

This section focuses on issues connected with the Higher Education Exit Exam, a critical requirement that measures students' readiness for professional practice and graduation. The effectiveness of institutional support in preparing students for this examination has a direct impact on their performance and overall academic success.

To assess the adequacy of support provided, the table analyzes key variables related to exam preparation. These include tutorial support, which reflects the extent to which students receive structured academic guidance; mock examinations, which serve as practical rehearsal opportunities to familiarize students with the exam format and expectations; and special assistance provision, which ensures that students with unique needs are accommodated fairly and equitably.

By presenting these variables in tabular form, this section highlights the strengths and challenges of the support mechanisms currently in place, thereby offering useful insights for improving institutional strategies that enhance student performance in the exit exam.

**Table 7: Issues Related to Higher Education Exit Exam**

| Issues related to the Higher Education Exit Exam | | Frequency | | | | | Mean |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | Exit exam learning materials are sufficiently uploaded on LMS | 6 | 11 | 8 | 13 | 15 | 3.65 |
| 2 | Exit exam tutorial sessions are fairly scheduled | 6 | 19 | 11 | 11 | 6 | 2.85 |
| 3 | There was a conducive condition adjusted for model exams of the exit exam | 8 | 12 | 21 | 6 | 6 | 2.81 |
| 4 | I received a well-organized awareness knowledge of the exit exam | 6 | 17 | 8 | 10 | 12 | 3.09 |
| Grand Mean | | 3.1 | | | | | |
| SD | | 1.21 | | | | | |

Table 7 above labels the responses of term 12 students of all campuses

The issues for the level of satisfaction are coined in 4 Higher Education Exit Exam-related broad areas, namely, the sufficiency of learning materials, the adequacy of tutorial programs, the sufficiency of model exams, and efforts made in awareness creation for students are the main ones. The corresponding analysis follows in the following way:

Means ranged from 2.81 to 3.65, with a grand mean of 3.10 (slightly above moderate). Low-rated areas included model exam preparation (2.81) and tutorial scheduling (2.85), while the highest was availability of learning materials on LMS (3.65). The standard deviation (1.21) reflects wide variation in responses.

Interpretation: Students recognize the availability of materials but express dissatisfaction with tutorial and model exam support for exit exam preparation.

**Key Qualitative Findings**

Various opinions were raised, and responses were given in open-ended questions that were structured and coined in the following manner:

- Delays in grade reporting (especially final and makeup exams).
- Unavailability of responsible staff when needed.
- Module shortages in some courses.
- Communication problems (phone calls unanswered, difficulty finding exam rooms in the main campus).
- Rising tuition fees in short intervals.
- Positive comments included:
- Well-organized main campus tutorial program.
- Praise for female registrar staff for professionalism and diligence.

**Findings from FGD**

The following 6 points were brought to the exchange of ideas between participants in the session of focus group discussion.

1. How much readiness is shown on the part of the students when they are coming to term registration?
2. How is the tutorial session carried out? In a term, the expectation is 2.
3. What supports are given to students in doing their senior essay?
4. How is final exam preparation carried out? You explain this in terms of exam request and readiness; hint: a request from the centers is carried out before a month, and approval is given.
5. Is the announcement of grading timely?

The following major functions are discussed and boldly suggested as the core functions of the centers.

- The centers oversee academic and administrative activities of the regional distance education centers.
- Provide insights on overall readiness, challenges, and management of students.
- Tutorial programs are not carried out in the centers smoothly
- Close examination and support are given to senior essay topic selection, and timely approval. In addition to this, follow-up continues until defense time.
- Centers handle student registration each term.
- Share issues among staff about readiness of students, delays, or challenges during registration.

**Overall Interpretation**

The findings suggest overall good satisfaction among students, particularly in fairness of service, availability of learning materials, and administrative efficiency in regional centers. However, academic advisory services, tutorial usefulness, some support facilities, and timely communication remain weak points.

## Summary, Conclusion, and Recommendations

### Summary

This study assessed student satisfaction with the services provided by the College of Open and Distance Learning (CODL) at St. Mary's University across the main campus and 12 coordinating centers. A total of 231 students participated through questionnaires, supplemented with Focus Group Discussions (FGDs).

- Demographics: Majority were aged 20–25, with more female than male respondents, and most were enrolled in business and economics. Respondents were evenly distributed between the main campus and regional centers.
- Academic Services: Students expressed moderate satisfaction (grand mean = 3.19). Learning materials were positively rated, but tutorial effectiveness and tutor competency received low scores.
- Administrative Services (Main Campus): Rated fairly high (Grand mean = 3.48). Staff fairness, professionalism, and timely communication of registration were strong points, while delayed grade reporting was a major weakness.
- Student Support (Main Campus): Facilities scored highest overall (grand mean = 3.66). Clean restrooms and water supply were strengths, but printing and stationery services were inadequate.
- Student Support (Regional Centers): Overall moderate satisfaction (grand mean = 3.37). Institutional reputation was valued, but inadequacy of laboratories and computers was a concern.
- Administrative Services (Regional Centers): Higher satisfaction (grand mean = 3.58) compared to the main campus. Timely announcements and registrar efficiency were praised.
- Exit Exam Preparation: A critical area of dissatisfaction (grand mean = 2.60). Insufficient learning materials, poor scheduling of tutorials, and lack of model exams were major gaps.
- Qualitative Insights: Students highlighted issues such as delays in grade reporting, module shortages, unavailability of staff, rising tuition fees, and poor communication. Positive feedback included the professionalism of registrar staff and well-organized tutorials.

### Conclusion

The survey reveals that while CODL provides essential academic, administrative, and support services, student satisfaction varies across service dimensions.

- Strengths include fairness of administrative services, availability of learning materials, clean facilities, and efficiency of regional centers.
- Weaknesses persist in academic tutorials, tutor competence, timely grade reporting, communication, and exit exam preparation.
- Overall, students' satisfaction level is moderate, indicating the need for systematic improvements to ensure quality, consistency, and accountability in service delivery.

**Recommendations**

Based on the conclusion, the following recommendation points are suggested:

1. Improve Academic Services

- Strengthen tutorial programs by ensuring regularity, relevance, and active learning methods.
- Provide training and continuous capacity building for tutors to enhance teaching competence.
- Ensure timely provision and adequacy of learning modules across all centers.

2. Enhance Administrative Efficiency

- Prioritize timely grade reporting through better coordination between tutors, departments, and the registrar.
- Establish clear accountability mechanisms for staff availability and responsiveness.
- Expand use of digital systems (SMS/email/LMS) to improve communication with students.

3. Strengthen Student Support Facilities

- Upgrade facilities such as libraries, computer labs, and internet access, particularly in regional centers.
- Expand photocopying, printing, and stationery services at the main campus.
- Maintain high hygiene and safety standards across all campuses.

4. Exit Exam Preparation

- Upload sufficient exit exam materials on LMS in advance.
- Organize structured tutorials and mock exams to better prepare students.
- Conduct awareness sessions and guidance workshops to reduce anxiety and improve readiness.

5. Institutional Development

- Address communication gaps by establishing help-desks and hotlines for student

inquiries.

- Regularly review tuition fee adjustments to ensure fairness and transparency.
- Strengthen quality assurance mechanisms by conducting regular student satisfaction surveys and using results for continuous improvement.

## References


Alemu, B. (2018). Factors affecting students' satisfaction in distance education programs: The case of [Institution Name]. *International Journal of Distance Education and e-Learning, 3*(2), 45–59.

Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly, 25*(3), 351–370. https://doi.org/10.2307/3250921

Elliott, K. M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management, 24*(2), 197–209. https://doi.org/10.1080/1360080022000013518

Kuo, Y.-C., Walker, A. E., Schroder, K. E. E., & Belland, B. R. (2014). Interaction, Internet self-efficacy, and self-regulated learning as predictors of student satisfaction in online education courses. *The Internet and Higher Education, 20*, 35–50. https://doi.org/10.1016/j.iheduc.2013.10.001

Lee, J. (2017). A review of online learning research: Future directions. *Educational Technology Research and Development, 65*, 1–15. https://doi.org/10.1007/s11423-016-9475-0

Moore, M. G., & Kearsley, G. (2012). *Distance education: A systems view of online learning* (3rd ed.). Wadsworth.

Mtebe, J. S., & Raisamo, R. (2014). Challenges and instructors' intention to adopt and use open educational resources in higher education in Tanzania. *The International Review of Research in Open and Distributed Learning, 15*(1), 249–271. https://doi.org/10.19173/irrodl.v15i1.1680

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1998). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12–40.

Simpson, O. (2013). *Supporting students for success in online and distance education* (3rd ed.). Routledge.

Stone, C., & O'Shea, S. (2019). Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations. *Studies in Higher Education, 44*(4), 1–16. https://doi.org/10.1080/03075079.2018.1522383

Sun, P.-C., Tsai, R. J., Finger, G., Chen, Y.-Y., & Yeh, D. (2008). What drives a successful e-learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education, 50*(4), 1183–1202.

# An Investigation into St. Mary's University Distance Students' Missing Grade Inquiry

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***Abstract***

*This study explores the issue of missing grade inquiries among distance education students at St. Mary's University. With the increasing reliance on digital platforms for academic delivery and assessment, the accuracy and timeliness of grade reporting have become critical to student satisfaction and academic progression. This study is based on 423 CODL students' 824 missing grade inquiries in the last 9 months. The investigation aims to identify the root causes of missing grades, assess the frequency and patterns of such occurrences, and evaluate the effectiveness of the university's current inquiry and resolution mechanisms. Data were collected from examination inquiry formats gathered from students, interviews, and institutional records, focusing on student experiences, administrative processes, and technological infrastructure. Preliminary findings suggest that communication gaps, system inefficiencies, and procedural delays contribute significantly to the problem. The study recommends strategic improvements in digital grade management systems, enhanced transparency in academic reporting, and better support services for distance learners. These measures are expected to foster a more reliable and responsive academic environment, ultimately improving student trust and institutional accountability.*

Keywords: Missing Grade Inquiries, Communication Gaps, System Inefficiency, Procedural Delay

## Introduction

In recent years, a concerning trend has emerged at St. Mary's University. College of Open and Distance Learning: A growing number of distance education students have reported missing or inaccessible grades across the institution's academic platforms. These inconsistencies not only hinder students' ability to track their academic performance but also lead to several adverse consequences. Many students experience increased stress and anxiety, stemming from uncertainty about their academic standing and progress. The delay in grade reporting has also may impeded timely course registration and contributed to an overall decline in student satisfaction and trust in the university's academic systems.

This investigation aims to uncover the root causes of these missing grades by examining both technical and administrative factors. It will also explore students' experiences and the roles of academic and support staff in managing distance education data. Ultimately, the goal is to propose practical solutions that promote greater transparency, enhance system reliability, and reinforce academic accountability—ensuring that every student receives fair and timely access to their academic records.

## Statement of the Problem

Despite ongoing efforts to digitize academic services, universities continue to face persistent challenges related to grade reporting and transparency. Students frequently encounter issues such as missing grades on digital portals, delayed updates following assessments, and inconsistent communication across administrative departments. These problems are particularly evident in institutions where multiple units—such as the College of Open and Distance Learning (CODL) dean's office, the Associate Registrar's Office, academic departments, computerized exam processing unit, and IT services—must coordinate effectively to manage grade information.

The lack of streamlined communication and accountability among these stakeholders often results in:

- Student dissatisfaction and stress due to uncertainty and delays in academic progress.
- Repeated inquiries and complaints that strain administrative resources.
- Operational inefficiencies that undermine the purpose of digitalization.
- Trust erosion in the university's ability to deliver reliable academic services.

These challenges highlight the urgent need to evaluate existing digital systems, improve interdepartmental coordination, and implement user-centric solutions that ensure timely and accurate dissemination of student grades.

## Research Questions

Accordingly, the study had attempted to answer the following research questions.

- What are the common causes of missing grades among distance learners?
- To what extent are administrative and technological systems in grade reporting effective
- How do students respond to and resolve missing grade issues?
- What systems or policies are currently in place to address grade inquiries?

**Objectives of the Study**

**General Objective**

The general objective of this paper was to investigate the causes and consequences as well as the possible remedies of missing grades among distance education students at St. Mary's University.

**Specific Objectives**

The specific objectives of this investigation were

- To identify the frequency and nature of missing grade complaints.
- To examine the role of administrative and technological systems in grade reporting.
- To assess student experiences and the impact of missing grades on academic performance.
- To recommend strategies for efficient grade reporting and complaint resolution.

**Significance of the Study**

This investigation would shed light on critical gaps in the academic management systems for distance learners. The findings would inform the college administration on process improvements, enhance student trust, and promote institutional transparency. It also may be used as a springboard to conduct a study on grade-related problems in the college of open and distance learning**.**

**Scope of the study**

The investigation into missing grade inquiries for St. Mary's University distance students would primarily focus on understanding the factors contributing to these inquiries, the existing processes for addressing them, and potential areas for improvement. This involves examining the students' grade management policies & practices, particularly those pertaining to grading and attendance, as they apply to distance learning. It would also examine the administrative procedures for grade submission, inquiry handling, and record keeping.

**Limitation of the Study**

This study was limited to investigating missing grade inquiries specifically among distance education students at St. Mary's University. It did not address broader grade-related concerns

such as delayed grade releases, grade disputes, or general academic inquiries. As a result, the findings may not fully capture the wider spectrum of challenges students face regarding academic assessment and feedback.

**Literature Review**

Missing grades, in an academic context, refer to situations where a student's completed assessment results—whether from coursework, examinations, or other evaluative components—are not officially recorded within the institution's designated grading system. This absence of a recorded grade can occur despite the student having submitted the required work or participated in the assessment. The scope of this issue extends beyond simple administrative oversight, encompassing various contributing factors and having significant implications for students, faculty, and the institution itself.

The problem of missing grades is particularly pronounced in distance education environments due to inherent logistical complexities and potential communication breakdowns between students, instructors, and administrative staff. In traditional on-campus settings, face-to-face interactions and established physical channels often facilitate the timely submission and recording of grades. However, in online or remote learning models, the reliance on digital platforms, varying time zones, and asynchronous communication can introduce vulnerabilities that lead to grades not being properly captured or processed. For instance, technical glitches during submission, email failures, or misinterpretations of submission protocols can all contribute to a grade being "missing" from the official record . Furthermore, the sheer volume of digital submissions and the distributed nature of online learning can make it more challenging for instructors to track every student's progress and ensure all grades are entered accurately and promptly. The definition also encompasses scenarios where grades are submitted but then lost or incorrectly processed by administrative departments, highlighting a systemic rather than solely individual issue.

Several factors contribute to the phenomenon of missing grades:

Technical Issues: Problems with learning management systems (LMS), online submission portals, or institutional record-keeping software can prevent grades from being properly recorded or transferred. This includes server errors, database corruption, or integration failures between different systems.

Communication Gaps: Misunderstandings between students and instructors regarding submission methods, deadlines, or grade release procedures can lead to grades not being accounted for. In distance learning, the absence of immediate clarification can exacerbate these issues.

Administrative Overload and Errors: High faculty workloads, particularly in large courses or those with numerous assignments, can lead to human error during manual grade entry.. Administrative staff may also face challenges in processing a large volume of grades, leading

to delays or omissions.

Student Submission Issues: While less common, instances where students believe they have submitted work but it was not successfully received (e.g., due to incorrect file formats, network issues, or failure to finalize submission) can also result in a missing grade.

Instructor Oversight: Despite best efforts, instructors might inadvertently overlook a student's submission, misplace a grade, or forget to enter a specific assessment into the system. This is particularly relevant in courses with many students or complex grading schemes.

Policy Ambiguity: Unclear institutional policies regarding grade submission deadlines, late work, or grade dispute processes can create confusion and contribute to grades being unrecorded.

**Implications of Missing Grades**

The implications of missing grades are far-reaching: Student Impact: Students may face academic probation, delayed graduation, ineligibility for financial aid, or inability to register for subsequent courses that require prerequisites. It can also cause significant stress and anxiety.

Faculty Burden: Resolving missing grades requires additional time and effort from instructors, diverting resources from teaching and research.

Institutional Reputation: Frequent occurrences of missing grades can damage an institution's reputation for efficiency and student support.

Data Integrity: Missing grades compromise the accuracy of academic records, affecting data analysis for institutional planning and accreditation.

Addressing missing grades requires a multi-faceted approach, including robust technical infrastructure, clear communication protocols, comprehensive training for faculty and staff, and transparent policies for students.

**Key Causes of Missing Grades in Distance Learning**

Missing grades in distance learning environments can stem from a confluence of factors, often involving faculty, administrative processes, technical systems, and even student actions. Understanding these root causes is crucial for developing effective mitigation strategies.

Faculty delays in submission are a significant contributor to missing grades. Instructors may fail to upload grades on time due to a variety of reasons, including heavy workload, technical difficulties encountered with the grading system, or a lack of stringent accountability measures for timely submission. For instance, a study by Wright (2019) highlighted that faculty often struggle with the administrative burden of grade submission, especially when managing

multiple courses or large class sizes. This can lead to grades being submitted late or, in some cases, not at all, resulting in a "missing" status for students.

Administrative inefficiencies also play a substantial role in the problem. Manual processing errors, miscommunication between different academic departments and the unfortunate loss of physical or digital paperwork can all contribute to grades going missing. Letseka and Pitsoe (2014) emphasized how fragmented administrative processes and a lack of standardized procedures can create bottlenecks and points of failure where grade information can be misplaced or incorrectly recorded. This can involve issues ranging from incorrect data entry by administrative staff to a failure in transferring grades from one system to another.

Technical system failures are an increasingly prevalent cause of missing grades, particularly with the widespread reliance on digital learning platforms. Glitches within Learning Management Systems (LMS), errors in data synchronization between different academic software, and cyber security issues can all lead to grades disappearing from student records. Al-Busaidi and Al-Shihi (2018) detailed how system outages, corrupted databases, or even subtle programming errors can result in grade data not being saved or being incorrectly displayed. Furthermore, the complexity of integrating various educational technologies means that a failure in one system can have a cascading effect, impacting grade visibility across the entire academic ecosystem.

Finally, student-related factors can also contribute to the perception or reality of missing grades. Some students may fail to confirm submission receipts for their assignments, or they might not follow up proactively on grades that appear to be missing due to a lack of awareness regarding institutional procedures or their own academic responsibilities. Ojo and Olakulehin (2016) pointed out that students, especially those new to distance learning, may not fully understand the importance of regularly checking their grades and promptly reporting any discrepancies. This can lead to delays in identifying and rectifying missing grades, sometimes past the point where easy resolution is possible.

**Communication Barriers and Institutional Policy Gaps for Distance Learners**

Distance learning, while offering flexibility and accessibility, presents unique challenges for students, particularly concerning communication and institutional support. These challenges often manifest as delayed responses, lack of direct interaction, and unclear policy frameworks, all of which can significantly impact a student's academic experience and ability to resolve issues effectively.

Communication barriers for distance learners are multifaceted, stemming primarily from the asynchronous nature of online interactions and the absence of physical presence. One significant issue is delayed responses from faculty or administration. Unlike traditional on-campus settings where immediate clarification or assistance might be available, distance learners often experience considerable wait times for email replies or forum responses. This delay can be particularly problematic when students are working on time-sensitive

assignments or require urgent clarification on course material or administrative procedures. The asynchronous communication model, while offering flexibility, inherently lacks the immediacy of face-to-face interactions, which can lead to frustration and hinder timely problem-solving.

Another critical barrier is the lack of face-to-face interaction, which makes it inherently more difficult for distance learners to escalate concerns or build rapport with instructors and administrative staff. Without the opportunity for in-person meetings, students may feel disconnected and find it challenging to convey the urgency or nuance of their issues. This absence of direct interaction can also impede the development of informal support networks that often exist in traditional campus environments, where students can easily seek peer advice or faculty guidance. Furthermore, time zone differences significantly complicate real-time follow-ups and synchronous communication opportunities. For students and faculty spread across various geographical locations, scheduling live sessions, virtual office hours, or immediate problem-solving discussions becomes a logistical challenge, further contributing to communication delays and a sense of isolation.

**Institutional Policy Gaps**

Beyond communication challenges, distance learners frequently encounter difficulties due to institutional policy gaps, particularly concerning clear and accessible procedures for issue resolution. Many institutions lack clear, accessible policies on grade dispute resolution specifically tailored for distance learners. The processes that exist may be designed with on-campus students in mind, failing to account for the unique circumstances of online learners, such as their inability to physically visit offices or attend in-person hearings. This ambiguity can leave students feeling lost and unsure of the proper channels to pursue when they believe a grade is unfair or incorrect.

Moreover, some universities do not provide dedicated support channels for distance learners. Instead, online students are often directed to general university support services that may not be equipped to handle the specific needs or technical issues prevalent in an online learning environment. This lack of specialized support can lead to a fragmented and frustrating experience when students attempt to navigate administrative processes or seek technical assistance. Consequently, students often report confusion over whom to contact for various issues, ranging from academic advising to technical support or financial aid inquiries. The absence of a centralized point of contact or a clear directory of relevant departments and their respective responsibilities for distance learners exacerbates this confusion, leading to wasted time and increased stress for students trying to resolve their concerns.

**Enhancing Grade Management: Traditional vs. Digital Approaches and Best Practices**

Effective grade management is crucial for academic institutions, impacting student success, administrative efficiency, and institutional reputation. This section elaborates on the differences between traditional and digital approaches to grade management and outlines best

practices for optimizing the process.

**Traditional vs. Digital Approaches**

Traditional grade management systems, often relying on manual processes such as paper-based submissions and email requests, are inherently prone to delays and errors. These methods can lead to significant inefficiencies, including lost paperwork, transcription mistakes, and difficulties in tracking grade submission statuses. For instance, a study by Wright (2019) highlighted how paper-based systems often result in bottlenecks during peak grading periods, requiring extensive manual data entry and verification, which increases the likelihood of human error. Email-based requests, while seemingly more modern than paper, still lack the structured data capture and automated workflows necessary for efficient grade processing, often leading to miscommunication and unorganized records.

In contrast, digital approaches, such as automated systems integrated with Learning Management Systems (LMS) like Canvas or Moodle, significantly improve transparency and efficiency in grade management. Park and Choi (2018) demonstrated that the implementation of automated gradebooks within student portals allows for real-time updates and immediate access to grades for students and faculty, reducing inquiries and improving overall satisfaction. These systems minimize manual intervention, thereby reducing the potential for errors and accelerating the grade submission and posting process. The integration of grade management with an LMS also provides a centralized platform for all academic activities, from assignment submission to grade dissemination, creating a seamless educational experience.

**Best Practices in Grade Management**

Implementing best practices in grade management leverages digital tools to create a more efficient, transparent, and student-centric process.

Centralized online portals, such as those offered by Moodle or Canvas, are fundamental for real-time tracking of grades. These platforms provide a single point of access for faculty to submit grades and for students to view their academic progress. Black et al. (2019) emphasized that such portals enhance transparency by allowing students to monitor their grades as they are entered, fostering a sense of accountability and enabling timely intervention if issues arise. The ability to track grades in real-time also benefits administrators, providing an immediate overview of grade submission statuses across departments and courses.

Automated reminders for faculty to submit grades are a highly effective practice in reducing delays. Letseka and Pitsoe (2014) found that automated notifications sent to faculty members as deadlines approach significantly improve compliance rates and ensure timely grade submission. These reminders can be configured to escalate if grades are not submitted, prompting necessary action and preventing last-minute rushes or missed deadlines. This proactive approach minimizes the administrative burden of chasing down late grades and

ensures that students receive their results promptly.

Establishing dedicated help desks for distance students is crucial for improving resolution rates related to grade inquiries. Distance learning presents unique challenges, and students in these programs often require specialized support. Lister (2020) highlighted that a dedicated help desk ensures that distance students have a clear channel to address any concerns or discrepancies regarding their grades, leading to quicker resolutions and greater student satisfaction. This specialized support acknowledges the unique needs of distance learners, who may not have immediate access to on-campus resources, and ensures equitable access to assistance.

Technological Solutions for Efficient Grade Management

Efficient grade management is crucial for educational institutions to ensure accuracy, transparency, and timely feedback for students. Technological advancements have revolutionized this process, offering sophisticated tools that streamline grading, enhance security, and improve communication. These solutions range from comprehensive learning management systems to cutting-edge applications of artificial intelligence and blockchain technology.

**Learning Management Systems (LMS)**

Learning Management Systems (LMS) serve as central hubs for educational activities, and their integrated grade books are fundamental to efficient grade management. Platforms such as Blackboard, Moodle, and Canvas provide robust functionalities for instructors to record, calculate, and disseminate grades. These systems often allow for various grading schemes, including weighted averages, rubrics, and individual assignment scores. Beyond simple record-keeping, LMS platforms enhance efficiency through features like automated alerts. Automated alerts notify students and instructors of missing grades, upcoming deadlines, or grade changes, ensuring timely communication and reducing the likelihood of overlooked submissions or discrepancies. This proactive notification system helps both students stay informed about their academic standing and instructors manage their grading workload more effectively.

**Artificial Intelligence (AI) and Chat bots**

The integration of artificial intelligence (AI) and chabots is significantly transforming grade management by improving responsiveness and offering predictive insights. AI-driven virtual assistants, commonly known as chatbots, are increasingly being deployed to reduce response times for routine grade inquiries. These chatboats can answer frequently asked questions about grading policies, assignment due dates, or even individual grade components, freeing up instructors' time for more complex tasks. Furthermore, AI's capability for predictive analytics is proving invaluable. Predictive analytics can flag potential missing grades or academic struggles before they escalate, allowing instructors to intervene proactively. By analyzing

student performance data, AI algorithms can identify patterns that suggest a student might be at risk of falling behind or missing an assignment, enabling timely support and preventing academic issues from becoming severe.

## Conclusion

The problem of missing grades in distance education is a complex interplay of human error, system limitations, and communication gaps. Effective solutions require a multi-pronged approach that integrates technological advancements, clear policy frameworks, and enhanced stakeholder communication. By investing in automation and AI, establishing transparent policies, and fostering open communication channels, educational institutions can significantly reduce the incidence of missing grades and improve the overall student experience in distance learning environments.

## Research Gaps

Despite the existing research, several areas warrant further investigation. There is a need for more empirical studies on the effectiveness of specific AI and automation tools in reducing missing grades in diverse distance education contexts. Research could also explore the psychological impact of missing grades on student well-being and academic performance in greater detail. Furthermore, comparative studies examining best practices in grade management across different institutions and countries could provide valuable insights for developing more robust solutions. Finally, research into the long-term sustainability and scalability of AI-driven solutions for grade management in rapidly evolving distance education landscapes would be beneficial.

## Design and Methodology

In this section of the study, methods and procedures of sampling data collection and analysis procedures were treated.

## Research Design

The design of this study was a survey belonging to the descriptive research. More broadly, mixed-methods design, specifically explanatory design, was used. This design helps to collect, analyze, and interpret both quantitative and qualitative data. The study has covered grade inquiries for every student who has a missing grade and fills out the attendance requisition form available at the CODL Student Support Service Office. Inquiries from regional offices are also collected by the center's student support service employees using the format prepared for the activity. These documents, together with data collected using structured interviews.

## Population and Sampling

- Population: Distance education students enrolled at St. Mary's University over the past academic years and requested their previous missing grades in person or through

center student support service personnel.

**Sampling Technique:**

All student grade inquiries collected from students who came and reported for the student support service office in 2017 E.C and inquiries collected in the same year from regional offices.

Purposive sampling will target those directly involved in grading and record-keeping.

Sample Size: The whole population; 423 missing grade inquirers and 822 grades inquired were taken into account in the investigation. The CODL dean, three other unit heads, and two center student support staff were interviewed by the investigator.

**Source of Data**

Both primary and secondary sources of data have been used. The primary sources of data were distance students who inquired about their missing grades as of November, 2025. The CODL dean, the material despatcher and center management office head, the associate registrar office head, the computerized exam processing unit head, and two regional student support service employees were interviewed. The secondary sources of data are related documents from the associate registrar and the computerized exam processing unit was consulted.

**Data Collection Methods**

Multiple sources of data will be utilized to ensure accuracy and reliability:

Documents investigation

Investigations of grade inquiry formats collected from students who came to the CODL student support office and inquiries sent from center student support service personnel were summarized and analyzed:

The collected data was transferred to a Microsoft Excel spreadsheet to make it usable on SPSS software. In order to make variables usable on SPSS variable were quantified, and values were assigned to every item of the variable so that analysis using the software becomes easy.

**Interviews**

Semi-structured interviews with the CODL dean, head of materials distribution and center management office, head of the CODL associate registrar office, head of computerized exam processing unit, and two center student support employees' had been conducted.

**Interview Guide**

As part of the study instruments, an interview guide has been prepared to collect information from key informants, i.e., the CODL dean, the Head of the materials distribution and center management office, the head of the CODL associate registrar Office, the Head of Computerized Exam processing Unit, and two center student support employees'. The interview guide covered five open-ended questions that focused on past practices, current activities and future improvement plans of SMU- CODL.

**Data Analysis**

**Quantitative Data**

Responses from inquiry forms would be analyzed using Excel and software tools, specifically SPSS Version 20, to generate descriptive statistics like frequency distributions.

**Qualitative Data**

Interview transcripts would be coded and thematically analyzed to identify recurring issues, institutional practices, and student concerns.

**Ethical Considerations**

- Informed consent obtained from all participants.
- Anonymity and confidentiality strictly maintained.

**Data Analysis & Presentation**

The study aims to provide a comprehensive understanding of the challenges faced by distance students regarding missing grades and to evaluate the existing mechanisms for resolving *these issues at St. Mary's University. By analyzing data from inquiry forms, the research* seeks to pinpoint the root causes of missing grades and to assess the efficiency and student satisfaction with the current resolution procedures. This includes a detailed look at the administrative processes within the Students Department and Students Center, the impact of course categorization on grade reporting, and the influence of examination schedules. Furthermore, the investigation scrutinizes the technical aspects of grade processing by the Computerized Exam Processing unit and gauges student perceptions of the effectiveness of the University's addressing their inquiries.

The Students Department serves as a primary point of contact for distance students, often being the initial recipient of missing grade inquiries. Their role in logging, triaging, and forwarding these concerns is critical to the timely resolution process. Concurrently, the Students Center provides broader support services, which may include academic advising and technical assistance, both of which can intersect with grade-related issues, particularly for distance learners who should rely heavily on digital platforms for communication and modular course delivery. Understanding the interplay between these two entities is crucial for identifying bottlenecks or efficiencies in the inquiry process.

The number of courses inquired about would be quantified to identify the number of courses inquired about by each and every inquirer to know how much the students are suffering from missing their grades during their stay at the University and to examine whether the problems are potential systemic issues or isolated incidents. This quantitative analysis will be complemented by an examination of the category of courses inquired about, differentiating between major-supportive and common courses. Furthermore, the terms of the examinations were scrutinized to determine if particular examination periods were more susceptible to missing grade reports.

A significant portion of this analysis will focus on the actions of the Computerized Exam Processing unit, which plays a crucial role in processing the students missing grade inquiries by identifying the possible reasons for the issue. This unit served as central to the accurate and timely recording of grades, and any procedural lapses, technical glitches, or human errors within this unit can directly lead to missing grade entries. Investigating their workflow, data entry protocols, and error resolution procedures is of paramount importance. Finally, the ultimate measure of success for any intervention is students' satisfaction with the action taken to resolve their missing grade inquiries. This would involve assessing the timeliness of the solution, the clarity of communication, and the perceived fairness of the outcome from the students' perspective, potentially through survey data or qualitative feedback.

**Inquirers Distribution by Department**

Beginning in November 2024, after the launch of the Student Support Services Office at the SMU-CODL Addis Ababa center, students started reporting missing grades. Center student support service staff began collecting inquiries immediately, following the initial online meeting called by the dean of CODL. Through this process, data from 423 students concerning 822 missing course grades was gathered and analyzed.

In academic institutions, the students department typically serves as the primary point of contact; likewise, it is so for distance learners. When addressing missing grade inquiries, the first piece of information requested is always the student's department. Analysis of the collected data revealed that departmental distribution was the leading factor in organizing and understanding the nature of these inquiries.

The College of Open and Distance Learning (CODL) at SMU organizes its academic programs through distinct departmental classifications. The CODL Business & Economics Department coordinates seven fields of study: Management, Marketing Management, Accounting & Finance, Banking & Finance, Economics, Financial Economics, Logistics and Supply Chain Management, and Public Administration & Development Management. Concurrently, the Department of Social Sciences and Humanities (SSH) oversees the Department of Educational Planning & Management, Sociology, and common courses. The Department of Agriculture and Development Studies looks after the fields of study: Agribusiness Management, Agricultural Economics, Agricultural Extension, Cooperative (Accounting & Auditing), Cooperative (Business Management), and Rural Development.

An analysis of the 423 student inquiries regarding missing grades revealed a significant distribution across departments. The Department of Business and Economics accounted for the largest proportion, with 313 students (74.0%) inquiring about missing grades. The Department of Social Sciences & Humanities followed, with 93 students (22.0%) making inquiries. The remaining 17 students (4.0%) were from the Department of Agriculture and Development Studies. This distribution highlights a disproportionately higher incidence of missing grade inquiries originating from the Department of Business and Economics. In fact, in the department, a huge number of students are enrolling compared to the other departments.

**Missing Grade Inquiries Distribution by Study Center**

As indicated in the table below, the geographic distributions of the 423 students who inquired about their missing grades was categorized by their study center's distance from the head office. The four categories are Addis Ababa itself, centers within a 200 km radius (near Addis Ababa), centers 200 to 400 km away from Addis Ababa (far from Addis Ababa), and centers over 400 km away from the head office (very far from Addis Ababa). Of the total inquiries, 227 students (53.7%) were from Addis Ababa, 7 students (1.7%) were from centers near Addis Ababa, 71 students (18.8%) were from centers far from Addis Ababa, and 115 students (27.2%) were from centers very far from Addis Ababa. This breakdown highlights that the majority of inquiries originated from students located in Addis Ababa, with a significant portion also coming from very far distant centers. The number of inquiries from centers near Addis Ababa was notably low.

Figure 4.2: Missing Grade Inquirers Distribution by Study Center

| Missing Grade Inquirers Distribution by Study Center | Frequency | Percentage |
|---|---|---|
| Addis Ababa | 227 | 53.7 |
| Near Addis Ababa | 7 | 1.7 |
| Far from Addis Ababa | 71 | 16.8 |
| Very Far From Addis Ababa | 115 | 27.2 |
| Missing | 2 | 0.5 |
| Total | 423 | 100.0 |

This information is crucial for understanding the geographical distribution of educational services and pinpointing potential inequalities in access or communication concerning academic records. The table's dual presentation of frequency and percentage for each category allows for a comprehensive assessment of student presence across different locations, which can inform strategic planning for resource allocation and outreach efforts. For instance, a low percentage of students from a particular region might indicate a need for improved infrastructure or targeted communication campaigns in that area. This data can also be instrumental in evaluating the effectiveness of distance learning initiatives or identifying regions underserved by traditional educational institutions.

The most significant finding from the table is that the vast majority of missing grade inquiries originate from students in Addis Ababa, accounting for 53.7% of all inquiries. This suggests a

high concentration of students in the capital city or potentially a higher rate of missing grade issues within that specific study center's operations. Conversely, students "very far from Addis Ababa" represent a substantial 27.2% of inquiries, indicating that geographical distance might correlate with a higher likelihood of missing grade problems or challenges in resolving them remotely. The "Missing" category, with a small count and at 0.5% share, resulted from students missing the information during registering the individual cases.

This shows that

- Addis Ababa taking the lion's share of the total, dominates this category of the data. This could be due to several factors:
- The existence of a larger student population in Addis Ababa compared to other regions.
- Greater awareness or ease of access for students in the capital to inquire about their grades.
- Near Addis Ababa: This category has a very low frequency of inquiries, making up very few of the total. This might suggest that students in areas immediately surrounding the capital experience fewer missing grade issues for unknown reasons.
- Far from Addis Ababa, this group accounts for close to 20% of the contribution. This is a notable percentage, indicating that distance begins to play a more significant role as students move further away from the capital.
- Very Far From Addis Ababa: With 115 inquiries, this category represents **27.2%** of the total. This is the second-largest group after Addis Ababa. The high percentage here could indicate:

  - Challenges for students in these areas to follow up on their grades due to interrupted connections leading to delayed inquiries.
  - Potential communication breakdowns between remote study centers and the central administration.

The data strongly suggests a need to investigate the reasons behind the high number of missing grade inquiries in Addis Ababa and from very remote areas. For Addis Ababa, it might involve reviewing the internal processes of the study center, including grade submission, data entry, and student communication protocols. For students very far from Addis Ababa, solutions could include improving digital infrastructure for grade submission, establishing more robust communication channels, or empowering local study centers with greater commitment to resolving grade-related issues by constantly aligning with the head office to resolve students missing grade problems in time.

Further research could involve:

- Comparing the number of missing grade inquiries to the total student population in each region to calculate a "missing grade inquiry rate" per student.
- Conducting surveys or interviews with students and administrative staff in each region to understand the root causes of missing grades and the challenges in resolving them.
- Analyzing the types of courses or departments that have a higher incidence of missing

grades.

This analysis provides a foundational understanding of the geographical distribution of missing grade inquiries, highlighting areas that require targeted intervention to improve academic record management and student support.

Missing grade inquiries about by number of courses inquired by students

Table 4.3:- Number of courses inquired by students

| Number of courses inquired about by students | Frequency | Percentage |
|---|---|---|
| 1-2 Courses | 324 | 76.7 |
| 3-4 Courses | 59 | 13.9 |
| 5-6 Courses | 24 | 5.7 |
| Above 7 Courses | 10 | 2.3 |
| Missing | 6 | 1.4 |
| Total | 423 | 100.0 |

Table 4.3 presents a frequency distribution of the number of courses inquired about per student, categorized into four ranges: students who inquire about "1-2", "3-4", "5-6", and "above 7 courses per head". It also includes a few “missing" categories. The table provides both the raw frequency (count) and the percentage for each category.

As shown on the table, the most frequent category was inquiry for 1-2 courses with 324 occurrences, representing 76.7% of the inquiries**.** The next most frequent category was an inquiry for 3-4 courses with 59 occurrences, which accounts for 13.9% of the inquiries. The third category was inquiries for 5-6 course from 24 inquirers, which accounts for 5.7% , and inquiries for above 7 courses have significantly fewer occurrences, 10 (2.3%). There were 6 missing values, which accounted for 1.4% of the total observations.

The interpretation of the above data suggests a strong skew towards a lower number of courses inquired, as the "1-2" range accounts for over three-quarters of the observations. This could indicate that the phenomenon being investigated, missing grades was encountered by students with one or two courses. During their stay in the college, students missed not more than two grades.

**Courses Inquired by Course Category**

Table 4.4: Courses Inquired by Category

| Courses Inquired by Category | Frequency | Percentage |
|---|---|---|
| Major Course | 467 | 56.8 |
| Supportive Course | 158 | 19.2 |
| Common Course | 189 | 23.0 |
| Missing | 8 | 1.0 |
| Total | 822 | 100.0 |

As depicted in the Table 4.4, a breakdown of student inquiries regarding missing grade is categorized by the type of course by subdividing the courses into three categories: major courses, supportive courses and common courses. The data indicates the frequency and percentage of inquiries for each course category.

The table showing the "Students Missing Grade Inquiry by Course Category" provides insights into the distribution of inquiries about missing grades across different course categories. The total number of inquiries recorded was 822 courses inquired about by the 423 inquirers. The largest proportion of inquiries, accounting for 56.8% (467 inquiries), pertains to courses that are indicated in the “Major Course" categories**.** This suggests that students are most frequently inquiring about missing grades in their core academic subjects. "Common Course" inquiries represent the second largest category at 23.0% (189 inquiries), followed by "Supportive Course" inquiries at 19.2% (158 courses). A small percentage, 1.0% (8 inquiries), is attributed to "Missing," indicating some courses were not properly categorized or left blank on the data sheet.

**Analysis of Course Categories**

- Major Course: This category has the highest frequency of missing grade inquiries, with 467 instances, representing 56.8% of the total. Even though successful completion of all the courses to be taken in a particular field of study is compulsory, the emphasis to be given to major courses is crucial. This could imply several factors:
- Let alone missing grades in their major areas students strive to get more than satisfactory results in their major courses. Achieving good results in their major areas, and scoring a good GPA in this regard leads to more diligent tracking and immediate inquiry if a grade is missing in this category.
- Complexity of Grading: Major courses might involve more complex assignments, projects, or grading schemes, potentially increasing the likelihood of errors or delays in grade entry.
- Larger Class Sizes: If major courses tend to have larger enrollments, the sheer volume of grades to process could contribute to a higher number of missing grade incidents.
- Common Course: With 189 inquiries, making up 23.0% of the total, common courses also generate a significant number of missing grade inquiries. These courses are typically foundational or general education requirements that many students take.
- Even though, common courses are courses to be taken by each and every student enrolled in the university irrespective of field of study, some students who stayed in the University for a prolonged period of time took the exams but did not enter them into their grade account due to some registration protocols, such as not having proper place in the grade account to accommodate them.
- Supportive Course: This category accounts for 158 inquiries, or 19.2%. Supportive courses might include electives, courses that are closely aligned with major courses, and courses are believed to be more important in understanding courses in the major areas.
- Missing values: This category, with only 8 inquiries (1.0%), happed most likely due to

inquirers negligence in strictly identifying them on the inquiry form.

Analysis of the inquired course by the term they were taken

The data gathered from students were also analyzed by the term they were taken. Inquirers were strictly insisted to indicate either the registration date of the course or the term at which they actually took the examination. That is because unless the exact examination time is indicated, it is difficult for the CEPU to find out the exam paper or the attendance sheet. Therefore, indicating the information on the inquiry form is mandatory.

Table 4.5: Term in which the inquired course was taken.

| Term the inquired course taken | Frequency | Percentage |
|---|---|---|
| 2016 A | 57 | 6.9 |
| 2016 B | 76 | 9.2 |
| 2016 C | 168 | 20.4 |
| 2017 A | 263 | 32.0 |
| Others | 226 | 27.5 |
| Missing | 32 | 3.9 |
| Total | 822 | 100.0 |

As indicated in Table 3.5 and Figure 3.2, the term '2017 A' is the most frequently inquired category, with a frequency of 263 occurrences and a percentage of 32.0%. Following closely is 'Others,' which contains all terms prior to 2016 A, with 226 observations and 27.5%. Term '2016 C,' which has 168 observations, representing 20.4%, was the third in the series. The categories '2016 A' and term '2016 B' have significantly fewer observations, with 57 (6.9%) and 76 (9.2%), respectively. There is also a 'Missing' category, which may be caused by inquirer's failure to specify the term due to various reasons. This category accounts for 32 observations, or 3.9% of the total.

Analysis of Categories

- **2016 A:** This category has a frequency of 57, making up 6.9% of the total valid observations.
- **2016 B:** With a frequency of 76, this category accounts for 9.2% of the total valid observations.
- **2016 C:** This category has a frequency of 168, representing 20.4% of the total valid observations.
- **2017 A:** This is the largest valid category, with a frequency of 263, contributing 32.0% to the total.
- **Others:** This category groups together other unspecified observations, totaling 226, or 27.5% of the total.
- **Missing (System):** This indicates that 32 observations, or 3.9% of the total, were not recorded or were missing due students' hesitance to specify the term in which they took the exam while filling the inquiry form.

Action taken by the CEPU

Based on the inquiry form and the information indicated on it, the computerized exam processing unit (CEPU) scrutinized each inquirer's case and informed the student support office. The office contacts the inquirer through the telephone address they left for the office informs them of the reply to their inquiries. This is how students from Addis Ababa center are entertained. Inquirers from far and very far centers got their reply through the Telegram communication created for the group of CODL Student Support Service employees.

Table 4:6: Action taken by the CEPU

| Action taken by the CEPU | Frequency | Percentage |
|---|---|---|
| Grade entered to the System | 414 | 50.4 |
| No Exam or Attendance | 214 | 26.0 |
| Attendance Found | 27 | 3.3 |
| Readmit or Department Change | 73 | 8.9 |
| Wrong Course of Information | 75 | 9.1 |
| Unspecified Reason | 12 | 1.5 |
| Illegitimate for readmission | 3 | .4 |
| Missing | 4 | .5 |
| Total | 822 | 100.0 |

The Table and figure above summarize the "Action of the Computerized Exam Processing Unit (CEPU)" on the 822 inquiries for their missing grades in the last 9 months. It appears to be a frequency distribution of various reasons for students' not seeing their missing grades on the university students' record management system. The data presentation table shows data on the frequency and percentage of different categories, along with their percentage share. It also includes information about missing data.

The table provides insights into the types of issues or actions handled by a "CEPU," which could stand for "Computerized Exam Processing Unit". They break down the components of the table.

- **Frequency:** This column shows the raw count of occurrences for each category. For example, "Grade entered to the system" occurred in 414 courses out of the total 822 courses.
- **Percent:** This is the percentage of each category out of the total observed cases, including missing data. For instance, 414 courses out of 822 total courses were approximately 50.4%.

Analysis of Categories:

1. Grade entered to the system (414 entries, 50.6% of valid cases): This is the most frequent action, suggesting that a significant portion of CEPU's work involves processing and entering grades into the system. This could be a routine operation or indicate a backlog of

grade entries.

2. No Exam or Attendance (214 entries, 26.2% of valid cases): This category represents a substantial portion of the actions. It could indicate students who did not take an exam or attend classes, leading to specific administrative actions (e.g., withdrawal, failing grade, or further investigation).
3. Attendance Found (27 entries, 3.3% of valid cases): This relatively small category might refer to instances where attendance records were initially missing or disputed but were later found and verified.
4. Readmit or Department Change (73 entries, 8.9% of valid cases): This indicates actions related to students being readmitted to the institution or changing their academic department. This is a common administrative process in educational settings.
5. Wrong Course of Information (75 entries, 9.2% of valid cases): This category suggests errors in course registration or information provided to students. This could lead to corrections, transfers, or other administrative adjustments.
6. Unspecified Reason (12 entries, 1.5% of cases): A small percentage of actions fall into an "unspecified" category, which might indicate unique or less common issues that don't fit into predefined categories.
7. Illegitimate for readmission (3 entries, 0.4% cases): students who shouldn't take the exams since they were not allowed to readmit to the system due to extended duration in the university.
8. Missing data (4 entries, 0.5% of total): There are 4 missing entries, which account for 0.5% of the total observations (822). This indicates a very small amount of data is not categorized or recorded.

**Overall Interpretation**

The table suggests that the CEPU primarily handles grade entry and issues related to student attendance and examination status. A significant portion of their work also involves correcting the objective part of examinations, collecting assignment results from the ICT unit, and subjective part exam correction results from the students department and for the final preparation and posting of students' grades on the University grade management system. In addition, the unit digitalizes the students' examination papers and attendance sheets and stores them for future retrieval.

This type of data is crucial for an institution to understand its administrative workload, identify common issues, and potentially streamline processes. For example, the high frequency of "No Exam or Attendance" might prompt an investigation into why students are not attending or taking exams or if there are issues with recording attendance. Similarly, "Wrong Course of Information" could point to a need for clearer communication or improved registration systems.

Inquiry Distribution by Student Satisfaction

Table 4:7 Student Satisfactions

| Student Satisfaction | Frequency | Percentage |
|---|---|---|
| Satisfied | 210 | 49.6 |
| Indifferent | 117 | 27.7 |
| Unsatisfied | 96 | 22.7 |
| Total | 423 | 100.0 |

The analysis of the provided table, "Students Satisfaction by the Inquiry Response," reveals the distribution of student sentiment regarding the frequency of inquiry responses. The table shows that a significant portion of students, 49.6%, are satisfied with the inquiry response frequency, totaling 210 students. This indicates that nearly half of the student body finds the current response of the university in reacting to solve the problem of missing grades is positive. Conversely, 22.7% of students (96 individuals) are unsatisfied; suggesting a notable segment that perceives the response for the issue was inadequate. The remaining 27.7% (117 students) are indifferent, indicating they neither strongly approve nor disapprove the current response CODL against missing grades.

To further analyze this data, we can consider the implications of these percentages. The high satisfaction rate is a positive indicator, but the combined percentage of indifferent and unsatisfied students (27.7% + 22.7% = 50.4%) is slightly higher than the satisfied group. This suggests that while many students are content, there is still a substantial opportunity for improvement in inquiry response mechanisms to convert indifferent students and address the concerns of unsatisfied students. For instance, if the goal is to maximize student satisfaction, efforts could be directed towards understanding the specific pain points of the unsatisfied group and exploring strategies to move indifferent students towards satisfaction. This could involve examining response times, clarity of responses, or the channels through which inquiries are handled.

**Analysis of Qualitative Data**

Interviews were conducted to gather information about missing grade inquiries, focusing on the reasons for current situations and potential solutions. Participants included the CODL Dean, Material Distribution & Center Management Head, the Associate Registrar, and the Head of the Computerized Exam Processing Unit. Additionally, telephone interviews were conducted with two staff members from regional offices using structured questions. The detailed answers provided were then analyzed by the investigator to further explore the issue of missing grades among distance learners. The analysis aimed to understand systemic and administrative challenges and identify ongoing reforms intended to improve student support and academic record accuracy. The interview data was analyzed using thematic coding, with key themes identified based on recurring patterns, stakeholder insights, and institutional practices. The analysis focused on both problem diagnosis and proposed solutions.

The findings and thematic analysis could be summarized as follows.

**A. Systemic Failures**

- Ambiguous Course Identification: Similar course titles and shorthand notations (e.g., “or/slash”) led to misregistration and grade rejection.
- Data Transfer Issues: Manual data entry and poor integration between systems contributed to missing grades.

B. Administrative Weaknesses

- Staff Mishandling: Errors in exam paper management and course offerings were cited as direct causes.
- Logistical Challenges: Shortages of exam papers and poor attendance tracking at centers exacerbated the problem.
- Lack of Oversight: Previously, no formal grievance mechanism or accountability structure existed.

C. **Student Behavior and Vulnerability**

- Negligence in Exam Protocols on the Part of Some Students: Students failed to write names/IDs correctly or took exams simply seeing his/her friend taking the exam, without verifying it with a registration slip.
- Burden of Responsibility: In the past, students were expected to resolve missing grades independently, without institutional support.

D. **Reform and Innovation**

- Student Support Services: Offices established in all regional centers, with centralized coordination in Addis Ababa.
- Rolling Grade Release: Grades are now posted as they become available, improving transparency and access. In the past, grades were exported from CEPU to the registrar only when the correction of all courses was completed.
- Standardized Inquiry Process: Formal formats and triage systems introduced for efficient resolution (1–7 days).
- Failed Course Strategy: Systematic review and resolution of failed courses initiated since 2016.
- Scrutinizing course offering-related problems are highly tackled and now it is in the finalizing stage.
- Negligence in executing readmission and department change issue as it happened and documents are arrived at the registrar office is improved by taking some administrative majors.

E. **Future Commitments**

- Administrative Accountability: Staff performance tied to timely updates and accurate grade handling.
- System Modernization: Electronic registration guided by department-specific course

lists. Registration at all center is system-based and any data encoder administering the process has no chance to register students for course that are out of that bound or make any spelling error in naming courses in accomplishing the process.

- Student Protection: Mechanisms to prevent students from being penalized for system or staff errors.

**Comparative Analysis: Before vs. After Reforms in CODL**

| Aspect | Previous State | Current/Future State |
|---|---|---|
| Grievance Handling | No formal mechanism | Regional support offices + centralized coordination |
| Grade Release Process | Waited for all exams to be corrected | Rolling release as grades become available |
| Communication with Students | No updates on inquiry status | LMS-based tracking and updates planned |
| Registration System | Manual, error-prone due to ambiguous course names | Electronic, department-guided registration |
| Staff Accountability | Limited oversight | Enforcement of timely duties and disciplinary measures |
| Failed Course Management | Unstructured, reactive | Systematic review and resolution process |
| Student Responsibility | Students bore the burden of errors | Future mechanisms to shield students from system failures |

Based on the interview, the following actions are recommended:

- Strengthen Student Advising: Ensure students receive guidance during registration and exam preparation.
- Standardize Course Titles and Exam Papers: Eliminate ambiguity in course identification.
- Improve Staff Training and Oversight: Enforce protocols and accountability for administrative tasks.
- Enhance Communication Channels: Use LMS to keep students informed about inquiry status and grade updates.
- Strengthen the usage of social media to keep students informed.

In conclusion, the qualitative data reveals a significant shift from reactive, fragmented practices to a proactive, student-centered approach. While challenges remain, the institution is taking concrete steps to modernize systems, improve administrative efficiency, and protect students from systemic failures. Continued investment in technology, training, and support services will be critical to sustaining these improvements.

**Summary, Conclusions, and Recommendations**

**Summary**

This investigation aims to uncover the root causes of these grade-missing occurrences by

examining both technical and administrative factors. It will also explore students' experiences and the roles of academic and support staff in managing distance education data. Ultimately, the goal was to propose practical solutions that promote greater transparency, enhance system reliability, and reinforce academic accountability—ensuring that every student receives fair and timely access to their academic records.

In the study, to achieve the goals and specific objective of the investigation an attempt has been made to answer the following research questions.

- What are the common causes of missing grades among distance learners?
- To what extent are administrative and technological systems in grade reporting effective
- How do students respond to and resolve missing grade issues?
- What systems or policies are currently in place to address grade inquiries?

To answer these basic research questions, mixed-method research designs that involve both quantitative and qualitative methods were employed. As far as the survey study subjects are concerned, all 423 subjects and their 822 course grade inquiries were used in the study. The students study department, study center, number of courses inquired about by each student, course category of the courses inquired about, term at which the exam was administered, action taken by the computerized exam processing unit regarding each course, and students' level of satisfaction in relation to the action have been analyzed.

Based on the analysis, the study results revealed:

**Inquirers Distribution by Department**

The analysis of 423 student inquiries concerning missing grades revealed a notable distribution among academic departments. The Department of Business and Economics was the source of the vast majority of these inquiries, with 313 students, representing 74.0% of the total, seeking information about missing grades. The Department of Social Sciences & Humanities accounted for the next largest share, with 93 students (22.0%) making inquiries. The remaining 17 students (4.0%) originated from the Department of Agriculture and Development Studies. This data indicates a significantly higher frequency of missing grade inquiries originating from the Department of Business and Economics compared to the other departments.

**Missing Grade Inquiries Distribution by Study Center**

The most significant observation from the data regarding missing grade inquiries by study center is that a substantial majority of these inquiries, notably 53.7%, originate from students located in Addis Ababa. This high percentage suggests either a considerable concentration of the distance student population within the capital city or potentially a higher incidence of missing grade issues specifically within the operational framework of that study center. Conversely, students categorized as "Very far from Addis Ababa" account for a notable 27.2%

of inquiries. This indicates a potential correlation between geographical distance and an increased likelihood of encountering missing grade problems, or perhaps greater challenges in resolving such issues remotely for these students. A small fraction, 0.5%, falls under the "Missing" category, which represents a data anomaly or an inability to properly classify these specific inquiries. Further investigation into this category is warranted to ensure the overall integrity of the data.

**Number of Courses Inquired by Students**

A significant majority of students (over 75%) inquired about a low number of courses, specifically within the "1-2" range. The data implies that the issue of missing grades is predominantly observed among students. This analysis highlights a potential focus area for investigating the root causes of missing grades. If the problem is depicted for many students on one or two courses, it might point to specific administrative processes, communication issues, or even the nature of some particular courses that are more prone to grade discrepancies. Further investigation could involve examining the types of courses students in the "1-2" missing range were taking, the category of the course taken, the departments of the students involved, and the timing of grade submissions for these specific courses. Understanding this skew is crucial for developing targeted interventions to address the missing grades issue effectively.

**Courses Inquired by Course Category**

Regarding course inquiries by course category, a significant majority of missing grade inquiries, specifically 467 instances (56.8% of the total), originate from major courses. This highlights the critical importance of these specialized courses, despite the general requirement for successful completion of all courses in a field of study. Common courses also contribute substantially to missing grade inquiries, accounting for 189 inquiries (23.0% of the total). These courses are typically foundational or general education requirements that are mandatory for all college-level students. The category of supportive courses, which may include electives or courses closely aligned with major subjects, accounts for 158 inquiries (19.2%). These supportive courses are often considered important for a deeper understanding of the major areas of study.

**Term in which the inquired course Taken**

From the analysis of the data in relation to the term the exam has been taken, term '2017 A' is the most frequent inquired category, with a frequency of 263 occurrences and a percentage of 32.0%. Following closely is 'Others,' referring to all the terms prior to 2016A, with 226 observations and 27.5%. Term '2016 C' that has 168 observations, representing 20.4%. The categories '2016A' and '2016B' have significantly fewer observations, with 57 (6.9%) and 76 (9.2%), respectively. There is also a 'Missing' category, specifically denoted as 'System', which accounts for 32 observations, or 3.9% of the total. The cause of the missing value is believed to be students' negligence to specify the term or the students inquiry may not obliged

them to specify.

**Action Taken by the CEPU**

Regarding the action taken the Computerized Exam Processing Unit,

1. Grade entered to the System (414 entries, 50.6% of valid cases): This is the most frequent action, suggesting that a significant portion of CEPU's work involves processing and entering grades into the system. This could be a routine operation or indicate a backlog of grade entries.
2. No Exam or Attendance (214 entries, 26.2% of valid cases): This category represents a substantial portion of the actions. It could indicate students who did not take an exam or attend classes, leading to specific administrative actions (e.g., withdrawal, failing grade, or further investigation).
3. Attendance Found (27 entries, 3.3% of valid cases): This relatively small category might refer to instances where attendance records were initially missing or disputed but were later found and verified.
4. Readmit or Department Change (73 entries, 8.9% of valid cases): This indicates actions related to students being readmitted to the institution or changing their academic department. This is a common administrative process in educational settings.
5. Wrong Course of Information (75 entries, 9.2% of valid cases): This category suggests errors in course registration or information provided to students. This could lead to corrections, transfers, or other administrative adjustments.
6. Unspecified Reason (12 entries, 1.5% cases): A small percentage of actions fall into an "unspecified" category, which might indicate unique or less common issues that don't fit into predefined categories.
7. Illegitimate for readmission (3entries,0.4 % cases): were students who shouldn’t took the exams since they were not allowed to readmit to the system due to extended duration in the university.
8. Missing data (4 entries, 0.5% of total): There are 4 missing entries, which account for 0.5% of the total observations (822). This indicates a very small amount of data is not categorized or recorded.

**Students Satisfaction**

While a significant portion of students are satisfied, the combined total of those who are indifferent or unsatisfied (over 50%) indicates a considerable area for improvement in how inquiries are handled. This suggests that focusing on the specific issues faced by dissatisfied students and finding ways to engage indifferent ones could significantly boost overall student satisfaction. Potential areas for improvement include response times, the clarity of information provided, and the effectiveness of communication channels.

The qualitative data reveals a significant shift from reactive, fragmented practices to a proactive, student-centered approach. While challenges remain, the institution is taking

concrete steps to modernize systems, improve administrative efficiency, and protect students from systemic failures. Continued investment in technology, training, and support services will be critical to sustaining these improvements.

This investigation underscores the critical need for St. Mary's University to enhance its grade reporting and resolution processes for distance students. By implementing streamlined administrative procedures, providing comprehensive staff training, and empowering students with clear information, the university can significantly reduce instances of missing grades, mitigate their negative impact, and uphold its commitment to providing an equitable and supportive academic environment for all learners.

**Conclusions**

The analysis of 423 student inquiries regarding missing grades showed a disproportionately high number of inquiries from the Department of Business and Economics, accounting for 313 students (74.0%). The Department of Social Sciences & Humanities and that of the Department of Agriculture and Development Studies accounted for the remaining 26. This is because the Business & Economics department had a larger student population than the others.

Regarding comparison between centers, the majority of missing grade inquiries originate from students in the Addis Ababa (53.7%), as the majority of distance students are concentrated in Addis Ababa region. Conversely, students "very far from Addis Ababa" account for 27.2% of inquiries, implying a potential correlation between geographical distance and missing grade problems or difficulties in remote resolution.

The other dimension, the number of courses inquired at the individual level, the data suggests a strong skew towards a lower number of courses inquired, as the "1-2" range accounts for over three-quarters of the observations. This could indicate that the phenomenon being investigated, missing grades, was encountered by students with not more than one or two courses.

The examination of the occurrences of the event at course category, out of 822 major courses shows that the most missed, with 467, are common courses followed by 189 courses, and supportive courses are the third, with 158 courses.

Of all the terms considered in the study, '2017 A' is the most frequently inquired, accounting for 32.0% of observations with 263 occurrences. The next most frequent category is 'Others,' which indicates all the terms prior to 2016 A at 27.5% (226 observations), followed by '2016 C' at 20.4% (168 observations). Categories '2016 A' and '2016 B' represent 6.9% (57 observations) and 9.2% (76 observations), respectively. Finally, a 'Missing' category, which, as indicated by the inquirer, constitutes 3.9% of the total with 32 observations.

Regarding the actions of the Computerized Exam Processing Unit (CEPU), it could be concluded that out of the 822 courses inquired about by distance students, 414 cases (50.4%) exam results found and entered into the system, and 73 cases (8.9%) grades found and would

be entered into the system if readmission criteria are fulfilled and department changes are properly made. That means nearly 60% of the inquired courses were solved by the unit. The 27 cases (3.3%) of the cases would be solved by providing students makeup examinations without fees, since they were found signed on the attendance sheet. The 214 (26.0%) whose exam or attendance was not found, the 75 cases (9.1%) who took wrong courses or provided wrong information, 12 cases (1.5%), 4 cases (0.5%), and the 3 cases (0.4%)— in total, around 37 % of the cases problems would be solved by providing a makeup exam with a fee to get rid of their deficiencies.

Concerning "Student Satisfaction by the Inquiry Response," it indicates that 49.6% of students (210 individuals) are satisfied with the inquiry responses they got. This suggests that nearly half of the student population finds the current problem solving mechanism of the university acceptable. Conversely, 22.7% of students (96 individuals) are unsatisfied; highlighting a segment that perceives the response they got as unacceptable. The remaining 27.7% (117 students) are indifferent, indicating a neutral stance on the current complaint handling strategy of the institution.

The existence of ambiguity in course naming, lack of institutional support in solving missed grades for students in the past, mishandling of examinations by staff who were assigned to coordinate exam administration, logical challenges such as exam shortages during examinations at regional branch offices were some of the problems raised in interview sessions. In these sessions, problems such as negligence of students to write their names and ID numbers on exam papers and attendance sheets were also mentioned as causes for missing grades.

Regarding reforms and innovation in recent times, the strengthening of student support services here at the head office and regional levels, the posting of student grades as exam correction is done instead of waiting for all the correction for all the courses to be completed, and identifying the occurrences of failed courses and trying to give solutions once and for all started in 2016 C term.

To this end, administrative accountability to improve staff handling of student cases, system modernization, and some student protection mechanisms, such as making the registration process system-bound are in progress.

**Recommendations**

Based on the findings analysis of missing grade occurrences among distance learners, the following recommendations are proposed to address the identified root causes and improve academic record management:

1. Strengthen Department-Level Oversight

- Target High-Incidence Areas: The fact that 74% of inquiries originate from the Department of Business and Economics, the student population of the department is huge

compared to the others, the academic affairs and the department had to think of ways to deal with the problem.

- The student support offices should be strengthened to act as records coordinators to track grade submissions, follow up on delays, and serve as a direct point of contact for students.

2. Enhance Technological Reliability

- System Upgrades: Modernizing the computerized exam processing unit and the registrar's grade management system and providing training to the staff has to be given due attention to reduce technical errors and improve the accuracy of grade uploads.
- Automated Alerts: Implement automated notifications for both concerned bodies of CODL, dean of the associate registrar office, the academic affairs office, and the computerized exam processing unit. Material distribution & center management office, the student support office, and students themselves when grades are posted, delayed, or missing, to enable timely resolution.

3. Improve Accessibility for students

- Decentralized Support: Establish regional academic support hubs or virtual help desks like the resource centers at regional levels to serve students "very far from Addis Ababa" (27.2% of cases), ensuring timely communication and issue resolution.
- Remote Verification Protocols: Develop standardized online forms for grade verification and dispute submission to minimize delays caused by distance.

4. Address Course-Specific Discrepancies

- Focus on Major Courses: As 56.8% of missing grade cases stem from major courses, review grading workflows, examiner accountability, and course-specific administrative processes.
- Foundation & Supportive Course Checks: Introduce pre-publication checks for common (23%) and supportive courses (19.2%) to maintain equity across course categories.

5. Administrative Policy Reforms

- Grade Reporting Deadlines: Enforce strict submission timelines for CEPU with automated tracking to flag overdue grades.
- Escalation Procedures: Create clear escalation pathways for unresolved cases, ensuring they are handled within a set timeframe.
- Transparent Record-Keeping: Maintain a publicly accessible service charter outlining grade inquiry procedures, response timeframes, and student rights.

6. Continuous Monitoring & Feedback

- Quarterly Review Meetings: Regular cross-departmental reviews of grade inquiry trends to

identify emerging patterns and act proactively.

- Student Feedback Integration: Incorporate satisfaction surveys into the resolution process to assess and improve the effectiveness of interventions.

7. Institution-Wide Cultural & Process Reforms

- Proactive approach adoption: Shift from reactive problem-solving to preventive measures, as indicated by qualitative data trends.
- Faculty & staff training: Conduct ongoing training for instructors and support staff on timely grading, system usage, and student communication.
- Policy enforcement: Enforce grade reporting deadlines with automated flagging for delays and clear escalation paths.

## References


AI Search Inc. (2025). *The role of automation in streamlining academic processes*. AI Search Inc. Insights.

Al-Busaidi, K. A., & Al-Shihi, H. (2018). Challenges of implementing learning management systems in higher education institutions: A case study from Oman. *International Journal of Information and Education Technology, 8*(1), 1–6.

Black, J., Smith, R., Chen, L., & Kumar, P. (2019). *Global perspectives on online learning: Bridging time and space*. Routledge.

Brown, A. (2021). The impact of administrative processes on student grade accuracy. *Journal of Educational Administration, 59*(1), 78–92.

Davis, M. (2024). Communication gaps in virtual learning environments. *Online Learning Journal*.

Johnson, L. (2022). Systemic issues in academic record keeping. *International Journal of Educational Technology, 19*(4), 301–315.

Jones, D. (2022). Student perceptions of online submission systems. *Journal of Digital Learning in Higher Education, 5*(2), 78–90.

Letseka, M., & Pitsoe, V. (2014). Administrative challenges in open and distance learning: A South African perspective. *Mediterranean Journal of Social Sciences, 5*(16), 123–130.

Ojo, A., & Olakulehin, F. (2016). Student support services in open and distance learning. *International Journal of Education and Development Using Information and Communication Technology*.

Park, J., & Choi, S. (2018). Understanding the challenges of grade management in higher education. *Journal of Academic Administration, 12*(3), 45–60.

Smith, A. (2023). The silent crisis: Unrecorded student achievements. *Academic Insights, 7*(1), 112–125.

Smith, J. (2024). Administrative bottlenecks in online grade processing. *Journal of Distance Education*.

Wright, L. (2019). Faculty perceptions of grade submission processes in online learning environments. *Journal of Online Learning and Teaching, 15*(3), 45–58.

# Practices and Challenges of Learning in Distance Education and Contributions to Professional Development: A Narrative Review and Ways Forward

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***Abstract***

*In education, distance learning has faced many challenges, obstacles, and opportunities. These factors have changed the industry and made it more accepted in mainstream society. In the area of international professional development, distance education continues to grow, which is a positive sign. However, keeping a close watch on educational practices and their teaching issues demands a shift from isolated, asynchronous learning to more structured, synchronized e-learning environments. Among the various tools and methods, important elements include learning management systems, micro-credentialing, and the use of audio-visual resources for teaching and working together. Acquiring skill in new teaching technologies, closing the digital divide, fighting feelings of isolation, encouraging engagement, and monitoring compliance among both instructors and learners are significant challenges that need attention. Technology has changed professional development and training into formats that are easy to access, flexible, immediate, and offer chances for lifelong learning. It provides flexible lifelong learning options that meet the needs of today's knowledge economy. Supporting documents include frameworks that help build strong educational systems. These frameworks consist of teaching models based on original designs, proactive support tools, ethical AI resources, and modular systems for professional credentials that ensure fair access to a wider range of development opportunities.*

Keyterms: Distance Learning, Distance Education, Practices, Challenges, Professional Development

## Introduction

Distance education (DE) refers to teaching and learning processes where a considerable amount of teaching is physically and/or temporally disconnected from the learner. Correspondence courses and learning today on the internet are two extremes of a continuum that celebrates the triumph of pedagogy and technology. The recent worldwide pivot to working and studying from home has lifted DE from an academic sideline to a principal feature of schooled instruction and training worldwide. This review is intended to investigate current DE practices, analyze the continuing issues confronting educators and learners, compose an account of teaching DE, assess its role in lifelong learning, and devise recommendations to technology based on the evidence.

According to Moore and Anderson (2003) and the Oregon Network for Education (2000), distance education is the term used to describe instruction between a teacher and students who are physically separated and communicate via one or more technological media. Video conferencing, hybrid distance learning, open schedule online courses, and fixed-time online courses are just a few of the many educational options that fall under the umbrella of distance learning.

Flexibility and convenience, a customized learning experience, access to a wide range of curricula, improved technological skills, individualized attention and support, a safe learning environment, cost-effective education, and readiness for postsecondary education are some advantages of distance learning for students. Distance education provides opportunities for higher education, e.g., undergraduate courses, postgraduate diplomas, career-oriented courses, vocational courses etc. It allows the students to learn according to their own time and place because of its flexibility.

The absence of physical presence in a classroom setting can lead to feelings of isolation among online learners. The lack of face-to-face interaction with peers and instructors can diminish the sense of community and support that is often found in traditional educational settings.

## Prevailing Practices in Modern Distance Education

Moore and Anderson (2003) stated the following points. Distance education should not be confused with communications technology. Certainly, those who believe distance education is about simply adding communications technology to the existing classroom tools and processes are missing the boat altogether. Distance education actually embodies a commitment to equal opportunity and reduced inequalities, a pedagogy that transfers some of the control and authority of teachers to learners, a set of instructional design principles and ways of facilitating interaction, special leadership and managerial practices, rethinking educational policy, and a way of organizing resources that reshapes the balance of capital (technology) and labor (teachers) to produce greater efficiencies. Thus, distance education has the potential to yield better teaching, better learning, and far better returns on equal investments of public and

private institutions in education and training. Much stronger impetus for action on the part of educational planners and policymakers is needed, and that impetus will not happen without thoughtful, concerted, and generally careful preparation, intent, and clear policies—and certainly, it will not happen without courageous leadership. Leadership is needed not only to encourage and to inform but also to challenge these vested interests that embrace technology readily enough but are notably unwilling to change the roles of teachers or the distribution of human and financial resources. It is critical that distance education opportunities are seriously examined with the perspective of national, state, and institutional for-profit and not-for-profit development priorities generally—and education and training policies more specifically.

A combination of technological tools and pedagogical strategies shape higher education distance education (DE) today. The learning process is facilitated through Technology-Enabled Learning Environments, an invaluable resource for distance education. The cornerstone of modern DE is known as the Learning Management System (LMS) (e.g., Moodle, Canvas, Blackboard), which relates to a content delivery system that allows universities to provide students with assessment, communication, and administration in a single format for convenience. DE is no longer being applied only asynchronously; DE is embracing synchronous online learning methods and approaches that reflect physical towns through synchronous video conferencing tools (i.e., Zoom, MS Teams) for live lectures, seminars, and group discussions.

DE, with computer-mediated communication, maintains a temporal proximity that a conventional classroom embeds in discussion and deliberation. Asynchronous online learning, as a programming delivery, comes in the form of self-study, learning through narrated readings from course materials, asynchronously through reading materials delivered as pre-recorded videos (by voice-over), recorded materials in the form of annotated readings with pre-recorded videos and recorded reading presentations, and discussion forums, providing sourced materials and maximum flexibility for pre-programmed learning.

On the other hand, blended hybrid learning combines asynchronous and synchronous online material with occasional face-to-face sessions for a committed effort for balance. The diversity of DE means that we can vary the format of content, including interactive simulations, podcasts, video lectures, and digital textbooks, all using a mixed method for the diversity of learning experience. In the practices of open and distance learning, collaborative and social learning play vital roles through the use of tools like wikis, shared documents (Google Docs), and breakout rooms that facilitate group projects and peer-to-peer interaction, countering the myth of DE as an isolated experience. There is a growing trend towards offering short, focused courses (micro-credentials) that certify specific skills. These are often represented by digital badges that professionals can share on LinkedIn and other platforms, providing granular evidence of competency.

**Key Challenges in Distance Education**

Despite its advancements, DE faces significant hurdles that can impact its effectiveness and

accessibility. Manaye (2024) indicated that digital media usage creates ease of learning and enhances better access to reference materials and sample exam questions in electronic copy. Telegram, YouTube, and Facebook are mostly used in distance learning systems through computer and smartphone gadgets. He added that the most commonly found challenges are connection-related; internet cost-related challenges, source less credibility and less trustworthiness (both on Telegram and YouTube), data management-related challenges; gadget-related challenges and difficulty in using digital devices, application-related difficulties, and difficulties related to computer mediated communication due to technology literacy-related problems. It is conceivable to deliver education for distance learners by expanding and providing digital media platforms.

The Digital Divide: Inequitable access to reliable high-speed internet and adequate hardware (computers, tablets) remains a primary barrier, exacerbating existing socioeconomic and geographical inequalities.

Learner engagement and isolation: Maintaining student motivation and a sense of community is challenging. Without the physical presence of peers and instructors, learners can experience feelings of isolation and disconnection, leading to higher dropout rates. In view of self-regulation and time management, DE requires a high degree of self-discipline, organization, and intrinsic motivation. Learners who struggle with these skills often find it difficult to keep pace.

Pedagogical competence of educators: The “Great Online Transition" revealed that many educators are subject matter experts but lack formal training in digital pedagogy. Effective online teaching requires distinct skills in course design, facilitation, and community building, not just content uploading. In the assessment and academic integrity: designing assessments that accurately measure learning while ensuring academic integrity in a remote, proctored environment is a persistent challenge (Manaye, 2024). Moving beyond high-stakes exams to authentic assessments (e.g., portfolios, projects) is complex to scale.

Quality Assurance and Standardization: The quality of DE programs can vary wildly. Ensuring consistent, high-quality instructional design, student support, and learning outcomes across different providers is an ongoing concern.

As assessment has an equivalent role with the teaching-learning process in quality education, the misuse of assessment and evaluation affects the progress and cross checking of learning outcomes that the institutions expect as per the statement of objectives on the course syllabus. On the other hand, summative evaluation and final exam administration also have drawbacks, such as susceptibility to cheating at administration and subjectivity at scoring (Manaye, 2022).

**Contributions to Professional Development**

Distance education (DE) has revolutionized professional development and lifelong learning, making it more accessible, relevant, and integrated into professional life. DE eliminates

geographical and temporal barriers. Professionals can upskill or reskill from anywhere in the world, balancing their studies with work and family commitments. This is paramount for those in remote areas or with irregular schedules. The rise of micro-credentials and short courses allows professionals to acquire specific, timely skills needed for immediate application in their current roles ("*just-in-time*" learning), as opposed to lengthy, degree-based "just-in-case" learning (Manaye, 2024).

Distance education platforms (e.g., Coursera, edX) partner with top-tier global universities and companies, giving professionals worldwide access to world-class instruction and cutting-edge knowledge that was previously out of reach. DE provides a viable pathway for career changers to gain new qualifications without sacrificing their current income. It supports vertical mobility (promotions) and horizontal mobility (shifting to new industries). The process of learning online inherently enhances a professional's digital literacy and comfort with collaborative technologies, which are transferable and highly valued skills in most modern workplaces.

**Ways Forward: Recommendations for the Future**

To maximize the potential of DE, stakeholders must address its challenges proactively.

Pedagogical-First Design: Institutions must invest in continuous professional development for educators, focusing on digital pedagogy, community building, and designing engaging, interactive online experiences. The focus should shift from using technology to teaching effectively with technology. Governments and institutions must collaborate on policies and initiatives to provide affordable internet access and device loaner programs. Designing courses for low bandwidth and mobile-first access is also crucial.

For proactive student support system, institutions should implement robust support structures, including early alert systems to identify struggling students, strong online tutoring, mental health resources, and dedicated technical support to reduce isolation and improve retention. Move towards assessment strategies that value process over product. This includes project-based learning, e-portfolios, peer assessment, and reflective journals, which are harder to cheat on and better measure applied skills.

It is worthy to embrace artificial intelligence not as a threat but as a tool. AI can power personalized learning pathways, automate administrative tasks, provide 24/7 tutoring support via Chatbot, and analyze data to improve course design. Develop coherent frameworks where micro-credentials from various providers can be "stacked" into certificates and degrees. This requires industry recognition and standardized quality assurance to ensure these credentials hold value in the job market.

**Conclusion**

Distance education has perpetually altered the educational landscape. When distance education first began, the practices were rudimentary at best, but vast improvements have been

made through technology to create engaging and flexible learning experiences. While there are still some major issues pertaining to access, engagement, and delivery, the contributions made by distance education, especially to professional development, are significant. However, distance education is the most consistent and powerful vehicle for democratizing education, incorporating lifelong learning, and developing a highly flexible global workforce. The next steps require a collective commitment to humanizing the digital experience, maintaining equitable access, and ensuring the quality of learning prioritizes everything. If we can do this, distance education can fulfill its promises as the engine of a more equitable and progressive knowledge society.

**References**


Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *The International Review of Research in Open and Distributed Learning, 12*(3), 80–97. https://doi.org/10.19173/irrodl.v12i3.890

Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., ... & Paskevicius, M. (2020). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education, 15*(1), 1–126. https://doi.org/10.5281/zenodo.3878572

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education, 7*(2), 95–105. https://doi.org/10.1016/j.iheduc.2004.02.001

Manaye, A. (2024). Digital and social media usage for academic purpose among distance learners in selected higher education institutions in Addis Ababa: Practices and challenges. In *Proceedings of the SMU National Distance Education Conference*. St. Mary's University.

Manaye, A. (2022). Challenges and implementation of measurement, continuous assessment and evaluation in open and distance learning in Ethiopia. In *Proceedings of the 10th Open and Distance Learning Seminar*. St. Mary's University.

Manaye, A. (2022). Learning materials and trend of using internet as reference of additional reading in self-directed learning among distance learners in Addis Ababa. In *Proceedings of the 4th Open and Distance Education Conference*. https://www. research gate.net/publication/362861034

Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning* (3rd ed.). Cengage Learning.

Moore, M. G., & Anderson, W. G. (Eds.). (2003). *Handbook of distance education*. Lawrence Erlbaum Associates.

Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988–2018). *American Journal of Distance Education, 33*(4), 289–306. https://doi.org/10.1080/08c92364 7.2019.1663082

UNESCO. (2020). *Education in a post-COVID world: Nine ideas for public action*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000373717

Weller, M. (2020). *25 years of Ed Tech*. Athabasca University Press. https://doi.org/10.15215/ aupress/9781771993050.01

World Economic Forum. (2020). *The future of jobs report 2020*. World Economic Forum. https://www.weforum.org/reports/the-future-of-jobs-report-2020

# Effectiveness of Master of Social Work Field Practicum Supervisors' Feedback in Open Distance Learning: The Case of St. Mary's University from Supervisees Perspective

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***Abstract***

*A field practicum is an essential component of social work education. The aim of this study was to evaluate the effectiveness of feedback provided by social work field practicum supervisors in an open distance learning setting at St. Mary's University from the perspective of supervisees. The field practicum serves as a way to apply theory to practice and equip supervisees with practical knowledge, skills, and professional attitudes. This study sought to investigate and describe the experiences of field practicum supervision by social work supervisees in an open distance learning environment, with the goal of enhancing existing knowledge of social work supervision. For this study, an exploratory and descriptive research design was used. Qualitative data were collected from both primary and secondary sources. Open-ended interview guides, focus group prompts, and participant observation data collection tools were employed. Secondary data was obtained through document analysis. The participants of the study were social work supervisees; a purposive sampling method was used in the study. Data on the experiences of supervisees regarding feedback provided by social work field practicum supervisors in an open distance learning context were collected using the aforementioned tools. Thematic analysis was then employed to analyze the collected data. The results showed the delay of feedback, incomplete feedback, lack of corrective feedback, reciprocal feedback, and reflective feedback. Based on the outcomes of the study, the researcher recommended that supervisors receive training, supervisees undergo proper orientation, consistent follow-up by the department, professional evaluation of supervisor comments, and supervisees commit to applying feedback in their field practicum.*

**Keywords: Social Work, Field practicum, Feedback, Supervisee, Supervisor**

**Background of the Study**

Open and Distance Learning (ODL) is a transformative educational model designed for flexibility, accessibility, and inclusivity (Thomas, 2021). As to Mosisa (2023), ODL is a flexible educational mode that removes barriers to learning by allowing students to study at their own pace, time, and location, often using digital media and the internet for instruction and interaction.

According to IGNOU (2021), the term ODL is a mode of education where teaching and learning happens remotely. This system removes traditional barriers of time, space, and age, enabling learners to access quality education from anywhere in the globe. ODL is a self-paced, learner-centric approach where students can balance their studies with other personal or professional commitments. The quality of social work field practicum in ODL mode depends on the quality of feedback provision in terms of accuracy, clarity, timely and adequacy.

Feedback is formal or informal; it can be written or oral. The feedback that is provided by the social work field practicum supervisor is intended to give clear expectations, motivate towards practice, improve performance, and recognize achievements. Moreover, it is a tool for continued learning. Feedback is not always easy to accept, particularly when it involves feedback in the areas that the supervisee has had difficulty with (Morwood 2016). The main purpose of feedback is to improve the learning process of the field practicum to establish quality control over the design and practice of the field activities. Feedback in educational supervision is intended to evaluate the present progress and guide the performances of the supervisees in the future (Brookhart, 2008).

Mckimm (2009) further contends that supervisees' value feedback, especially when it is given by experienced professionals whom they respect as role models for their knowledge, attitude, and competence. Mckimm (2009) also focuses on incorporating feedback within field practicums that encourages supervisees to develop the capacity to critically undertake self-evaluation and others' performance that leads to self-monitoring and moving towards professional independence. Sometimes, the feedback the the supervisees receive from supervisors could be critical or negative in the healthy spirit of training to produce competent professionals in the discipline (Lager *et al.* 2019).

According to Morwood (2016), the feedback given by the supervisor to the supervisee should be clear enough about the achievement and limitation of the supervisee's performance; balanced with what was practiced and what could have been done more differently; and the content should be specific, understandable, relevant, and supportive in improving field practice learning.

As to Thomas (2021), a good professional supervisory relationship in which both supervisee and supervisor feel comfortable with each other in the course of exchanging constructive feedback, which leads to real learning, opens new ways of understanding, critical thinking, and positive behavior. Saumya and Singh (2020) further clarified that the supervisor's

evaluative feedback to the supervisee should be balanced and address positive points and areas in which further growth is needed. The supervisee can benefit from such immediate, balanced, feedback as well as ongoing verbal and written feedback throughout the field practicum.

In the researcher's view, constructive feedback that is clear, timely, and balanced is an instrument to build the confidence of the supervisees to deal with individuals, families, groups, communities, and organizations. It is also relevant to give the opportunity for the supervisee to receive feedback from the supervisor and details of the supervision for more learning and improvement. The mode of feedback may include direct observation, audio/video recording, process recording, cohort reports, and written reports. Constructive feedback provision from the supervisor should be as prompt as possible, simple and understandable, concise, helpful and non-judgmental, and focused on supervisee's strengths and weaknesses as well as pinpointing areas of improvement. ODL field practicum supervision requires clear, detailed, continuous, reciprocal, and specific feedback that supervisees understand without ambiguity at his/ her personal distance setting.

In the researcher view, effective feedback generally follows diverse steps that include analyzing supervisees field practicum concurrent reports' information; delivering the feedback by being specific, focusing on behavior (not personality), and describing the impact of the action; inviting a response and allowing for a collaborative discussion; and finally, following up to ensure the message was understood and to agree on next steps for improvement.

As to Mosisa (2023), the ODL mode of education has evolved significantly over the years. Initially seen as an alternative to mainstream education, which is the conventional mode of education (CME). Through time and practice, open and distance learning is now a mainstream choice for many students due to its flexibility and accessibility.

The above concept further explained by Thomas (2021) presently , ODL mode of education is more prominent than ever due to its attributes in terms of flexibility **to** study anytime, anywhere; accessibility to learn despite geographical constraints; affordability meaning lower tuition fees compared to conventional education mode ; inclusivity that is ideal for diverse learner groups, including differently-abled students and working professionals; degrees are recognized both nationally and internationally and with advancements in technology, virtual classrooms, and interactive learning platforms. Thus, as a result of these qualities, ODL is widely used in modern education locally, regionally, and globally. It is becoming more dynamic and engaging.

The history of Ethiopian social work education in an ODL context dates back to its inception in 2008. Thus, ODL as a mode of teaching and learning in Ethiopian social work is a newly initiated modality that has been operational for the last seventeen years. The ODL mode of teaching and learning was introduced by St. Mary's University (SMU) and supported by Indira Gandhi National Open University (IGNOU) to transform social work education from the conventional mode of education to the ODL mode to open access to the most inaccessible Ethiopian population.

The cooperation between the two universities provided the opportunity to coordinate their meager resources to address the educational needs of unreached populations. The SMU is a private university established in 1998 in Addis Ababa, Ethiopia. Thus, SMU is the hub of the master of social work (MSW) in the open and distance learning program in the Ethiopian context. It is a pioneering Ethiopian private university to provide MSW education in open distance learning to reach the remotest areas and unreachable populations in the country. Accordingly, ODL is an important mode of education that has the power to bring knowledge and skills closer to individuals without displacing them from their home and/or workplace settings based on their pace and convenience.

Social work as a practice-based profession includes theory courses and field practice (Saumya & Singh 2020). In ODL, learning is carried out with physical distance and/or time separation between tutors and students on the one hand and among supervisees themselves on the other. It is a flexible mode of delivery that fits the diverse needs of supervisees who come from different backgrounds (Chandrapa & Saxena 2017; Dash & Botch 2018; Guin 2019; Mosisa 2022). In the researcher's view, the ODL mode in social work field practicum implies a learning experience that reaches out to the supervisee at his or her convenience with regard to place, pace, and time. As such, the ODL mode has changed the nature of instruction from supervisor-centered to the supervisee-centered mode of field practicum supervision. The supervisees are empowered to control their field practice learning in an ODL context. Consequently, more independence with responsibility is given to supervisees within the field practicum supervision context.

Therefore, to be effective, field practicum supervision as a process requires proper formulation of appropriate supervision strategies (Kumar 2020). Such strategies may comprise different models, theories, and approaches to be employed by supervisors and practiced by supervisees (Saumya 2019). Hence, effective field practicum supervision is, by and large, a mix of more than a single style, approach, and mode. As to IGNOU (2019), the social work field practicum supervisor is responsible for providing academic counseling, feedback in the fieldwork journal, and writing comments on the fieldwork journal.

Bearing in mind the diversity of supervisees "who registered in the program through ODL mode of education, it is important to apply a mix of approaches to satisfy the needs and levels of supervisees that are drawn from diverse backgrounds" (Kumar 2013). Relevant strategies like supervision process, modes of supervision, and styles of supervision, time management, workload, and assessment of supervision experiences are focused and assessed contextually (Thomas & Kumari, 2020).

The key tools and tactics include, amongst others, the structure of field practicum supervision, supervisor-supervisee relationship, feedback, self-assessment, evaluation, communication, and structured systems of giving and receiving individual and group feedback.

Having dealt with supervision as a concept and process, the following section discusses various issues with which the supervisors and the supervisees grapple within the context of

field practicum supervision. The first issue is the experience of supervisees and their cultural contexts. According to Twikirize and Spitzer (2019), culture is one of the key issues in social work curriculum and social change. Both Kadushin and Harkness (2002) and the NASW (2013) conceded that culture is dynamic and, as such, require proper guidance for the supervisee to understand and build on their own knowledge of the groups or societal values, attitudes, and behaviors that form part of their cultural heritage.

In this case, the social work field practicum supervisor's as well as the supervisee's ability to manage their time effectively becomes necessary when addressing issues of scheduling, practicing, submitting field practicum reports, and giving feedback, both at academic institutions and agency-level practice. It is vitally crucial in field practicum supervision to invest time and knowledge in the production of competent professional social workers. This is a relevant endeavor to take on, as disorganized feedback provision in field practicum supervision by the supervisor may negatively affect the entire field practicum process in an ODL context.

According to Wassie (2019), in the Ethiopian context the shortage of skilled professionals is affecting the development of social work education. This concept is further clarified by Mosisa (2023): disorganized field practicum, superior feedback, inadequate field practice skills, and limited focus towards innovative and educative field practicum are common problems.

As to the researcher's view, furthermore, the lack of clarity about the very concept of field practicum, its nature, content, objectives, placement setting, training, and evaluation are found among the impeding factors of field practicum in Ethiopia. These factors are aggravated by the lack of experience of supervisors in helping and action process and the paucity of literature on field practicum are complex problems of social work field practicum supervision. In general, Ethiopian social work is in its infancy, and it faces various challenges in its operation and deliberations.

Wassie (2019) has identified some of the problems confronting social work in Ethiopia, such as inconsistent field placement follow-up, lack of continuous feedback provision, and the absence of skilled social workers within placement institutions to guide supervisees. These problems are also common in field practicum at SMU.

The participants in the study conducted by Wassie (2019), which included, amongst others, heads of schools of social work, social work educators, and social work professionals in practice, asserted that the field instruction program, or field education, in the five (5) public universities of Ethiopia did not qualify for competence standards set for social work.

The most surprising part of the results of this study was the inclusion of Addis Ababa University as one of the institutions that did not meet the field practicum requirements. The Addis Ababa University is largely viewed as the pioneer not only in Ethiopia but also in the history of African universities. The problems related to social work field practicum included a

lack of qualified supervisors, placement agencies, and articulated social work supervision feedback.

The field practicum at SMU in ODL is designed to cover four journals. In the first year, students will complete the Concurrent Visits Journal MSWL 013 (45 days) and Block Placement MSWL 014 (30 days). The remaining two journals are the Concurrent Visits Journal MSWL 015 (45 days) and Internship Journal MSWL 016 (30 days). These journals serve as guides and tools for report writing for students and supervisors, providing feedback to supervisees. It is expected that supervisees practice for a total of 150 days, working 8 hours each day over two years, and secure a 50% completion rate under the guidance of a qualified social work supervisor in order to successfully complete the field practicum. This is equivalent to 1200 clock hours, meeting the global standards of a minimum of 1000 clock hours or above.

In this regard at SMU, the research shows that out of 562 students admitted to the MSW Program over the past 17 years, 226 (40.2%) were able to graduate. The students who were unable to complete their study account for 326 (59.8%) of the total intake. The social work field practicum supervision evaluation is conducted at two levels: SMU and IGNOU. SMU assigns internal supervisors or experts, while IGNOU is responsible for external experts. The mark allocation out of 100% is split into two: 50% at SMU and 50% at IGNOU. The final mark is determined by averaging the marks from both institutions. To successfully complete the field practicum, a supervisee must secure a minimum of 50%. Passing the first-year practicum is mandatory in order to begin the second-year field practicum. This requirement poses a significant challenge for supervisees who do not have a professional social work supervisor to provide consistent, timely, and adequate feedback.

According to IGNOU (2020), external experts evaluated the journals and found that out of 226 graduated supervisees, 59 (26.1%) had their fieldwork journals rejected due to supervisors providing inadequate feedback, lack of meaningful comments, lack of clarity in comments, and not providing comments to the supervisees. As a result, the supervisees were instructed to redo the entire field practicum and resubmit their field journals for re-evaluation, leading to time-consuming and financial constraints.

The challenges outlined above have prompted the researcher to conduct this study in order to alleviate the suffering of supervisees and prevent students' dropout rates through the application of knowledge- and skills-field practicum supervision.

**Statement of the problem**

The overarching goal of social work field practicum is to equip supervisees with knowledge, values, and skills necessary to address and mitigate complex social issues (Chukwu *et al*, 2022). However, as stated by Houssain *et al* (2024), there is a critical gap in practical skills development due to supervisors lacking social work supervision training, hindering their ability to bridge the theory–practice gap for supervisees. In this study, it is emphasized that knowledgeable and experienced field practicum supervisors are crucial for effectively guiding

and supporting supervisees in constructing practical knowledge. However, many supervisors struggle to integrate theory and practice, develop skills, clarify learning objectives, and provide timely, constructive, reflective, and informative feedback that meets the diverse needs of supervisees.

According to Heeralal (2015), field practicum of social work has faced critical challenges of quality and frequency of feedback. As to the researcher of this study, feedback is the best tool to fill the gap of theory and practice to equip the supervisees with the required knowledge, skills, methods, and professional attitudes to solve complicated social problems at individual family levels. Group, community, and organizational levels.

**Objectives of the study**

**The Major Objective of the Study**

The study assesses the effectiveness of the social work field practicum supervisors' feedback effectiveness in open and distance learning from the supervisee's perspective at St. Mary's University. Master of Arts in Social Work

**Specific Objectives of the study**

The specific objectives of are:

- To assess factors affecting social work field practicum supervisors' feedback provision in open and distance learning at St. Mary's University.
- To investigate the effectiveness of social work field practicum supervisors' feedback in open and distance learning at St. Mary's University from supervisees perspective

**Research Questions of the Study**

- What factors affect the effectiveness of feedback from social work field practicum supervisors in open and distance learning at St. Mary's University?
- To what extent do social work field practicum supervisors effectively provide feedback in open and distance learning at St. Mary's University from the perspective of supervisees?

**Significance of the Study**

The findings of this study will help improve the feedback provided by social work field practicum supervisors to supervisees in a timely, constructive, clear, and balanced manner. This will enhance the integration of theory and practice, a supervisee-centered approach, and skills development.

The findings also provide valuable insights for guiding and informing supervisors, coordinators, social organizers, curriculum developers, and social workers in academic and placement agency institutions.

## Scope of the Study

The scope of the study covers the effectiveness of feedback provided by social work field practicum supervisors from the perspective of supervisees. The study was conducted from April 2025 to July 2025. Methodologically, the study employed an exploratory and descriptive research design, a qualitative research approach, purposive sampling methods, and data collection tools such as individual interviews and focus group discussions. Thematic analysis was used to analyze the collected data. Data collection was limited to graduates in Addis Ababa who were available for participation.

## Limitations of the Study

There are limitations observed in the study, such as a limited number of participants from a small area compared to the coverage of open and distance learning. Data collection is limited to the perspective of supervisees. Methodologically, the study is confined to a qualitative research approach to collect data, and there is a lack of previous research studies on the topic in the Ethiopian context.

## Research Design and Methodology

Methodology sets out the approach that the study follows, and it is related to the research questions. Grove, Burns, and Gray (2013) highlight that the concept of methodology covers the design, settings, sample, methodological limitation, and data collection and analysis techniques in a study.

The researcher is of the opinion that methodology is a guide to design, collect, organise and analyse the data through exploring, describing, and contextualising to achieve the results of the intended study.

## Research Design

Sekaran and Bougie (2016) define a research design as a blueprint or plan for the collection, measurement, and analysis of data, created to answer the research questions. This concept is further elaborated by Kumar (2011), as the major focus of a research design in qualitative research is used to create understanding, explaining, exploring, discovering, and clarifying perspectives from diverse conditions like emotions, views, attitudes, principles, values, beliefs, and experiences of participants of the study. Thus, on the basis of the research questions and objectives of this study, the researcher has adopted an exploratory and deceptive approach.

Exploratory research design becomes appropriate when the situations under investigation, such as a topic or phenomenon, are slightly known (Nieuwenhuis, 2016 & Babbie, 2014). According to Saumya (2019), descriptive research is used to describe the situation, and involves the description, recoding, analysis and interpretation of phenomena under the existing situations.

## Research Approach

According to Creswell (2014) and Creswell and Creswell (2018), research approaches are plans and procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. The researcher employed a qualitative research approach to explore and describe the effectiveness of social work field practicum supervisors' feedback provided to supervisees.

## Population of the Study

According to Sekaran and Bougie (2016), population refers to all groups of people, events, or things of interest that the researcher wishes to investigate. Pathak (2011), defines the concept of research population as a larger corpus from which a sample is selected for any study. The population of this study comprised all social work supervisees of SMU who completed their studies in ODL. Accordingly, the study population constituted 226 supervisees.

## Sampling Method

As the research approach of the study is qualitative, a non-probability sampling method, purposive sampling, was used to select the study participants. Qualitative research relies heavily on purposive sampling methods (Patton 2015 & Taherdoost 2016).

Sample size is not a critical issue for qualitative research, as small numbers of knowledgeable and experienced participants can serve as a sufficient source of quality information. As per Trotter (2012) in qualitative research, "collecting information is reliant on information 'redundancy or saturation".

The inclusion criteria for supervisees include:

- Those who were supervisees at SMU in an ODL field practicum supervision,
- Willing and available to participate in the study;

Thus, the researcher has developed inclusion and exclusion criteria for supervisors and supervisees who are involved in interview guides and focus group prompts.

- Supervisees that were supervised by the researcher were excluded;
- Supervisees who had not successfully completed the program were excluded, and
- Supervisees who were not willing to participate in the study or were inaccessible during the period of data collection.

## Methods of Data Collection

Ladas (2013), qualitative data are verbal or symbolic. Information gathered from diverse sources using different tools and techniques is considered data. Thus, the researcher used interview schedules, focus group prompts, and document analysis to investigate the effect of social work field practicum supervisors' feedback on the participants.

## Pilot Testing

Pilot testing is the process of subjecting the tools to a smaller version of a proposed study conducted to develop or refine the data collection tools (Grove et al. 2013). It is important to improve questions, formats, and scales in which the participants' comments serve for final instruments' revisions (Creswell 2014). It was the researcher's conviction that pilot testing of the research data collection is a means of experimenting with the appropriateness of the instruments proposed for the study.

Thus, the researcher carried out interviews with three supervisees using interview guides and with four supervisees a focus group discussion by means of focus group prompts. The interview guides and focus group prompts were composed of male and female participants. The outcomes of the interviews and discussion offered the researcher the opportunities to make the necessary modifications to finalize the instruments of data collection and other procedures of the study.

## Method of Data Analysis

Creswell and Poth (2018) said that data analysis in qualitative research is used to prepare and organize the data that consist of text data, as in transcripts; image data, as in photograph for analysis; then reducing data into themes through a process of coding and condensing the codes, and finally representing the data in figures, tables, or a discussion.

The researcher employed the six steps of thematic analysis of Brawn and Clarke (2006) which include familiarizing oneself with data, grouping the collected data, searching for theme, reviewing themes, defining and naming themes and producing the report.

## Method of Data Verification

According to Flick (2013), trustworthiness in qualitative research is a matter of "methodical soundness and adequacy." While Bennett (2019) clarifies trustworthiness as "the process of ensuring the outcomes of the study and making sure that the procedures for collecting and analysing data is accurate and true."

Korstjens and Moger (2018) describe that the quality criteria for qualitative research are credibility, transferability, confirmability, and dependability. In addition to these, reflexivity is an integral part of ensuring the transparency and quality of qualitative research.

**Credibility**

**T**he researcher used supervisee participants not only during data collection but also in checking and in establishing credibility. The supervisees involved in the study were used to check the themes, interpretations, and conclusions...

**Transferability**

Transferability is the extent to which the outcomes of the qualitative research are transferred to other contexts that include similar situations, similar participants, and similar phenomena. To enhance transferability, researchers provide detailed, "thick" descriptions of the study context, participants, and methods

**Dependability**

Dependability is considered as stability of the findings of the study. Dependability involves participants' evaluation of the findings, interpretation, and recommendations of the study such that all are supported by the data as received from participants of the study.

**Conformability**

Conformability is the degree of neutrality in a research study's findings based on participants' responses and not any potential bias or personal motivations of researcher. The findings of the study are rooted in the data. Triangulation of data collection instruments used for analysis.

**Ethical Considerations**

Ethical considerations such as informed consent, confidentiality, anonymity, no harm, and security at any time during the study were discussed and assured.

**Data Analysis and Interpretation**

The subsequent sections comprised data collection procedures, participants' demographic profiles, data from individual interviews and focus group discussions, and the procedures on how data were thematically analyzed.

The process of selection started by compiling the potential participants' profiles, such as completion of field practicum, experience, sex, email address, phone number, workplace. Then, a formal invitation was requested via telephone call, email, text message, and face-to-face conversion.

- A total of 18 supervisees took part as actual participants in the study. The selection process took over a month.
- The individual interviews and focus group discussions were conducted face-to-face in an interactive manner at SMU.
- The researcher conducted an 18 in-depth interviews with social work supervisees. In addition, three focus group discussions were conducted with eighteen (8 females and 10 males) social work supervisees. Attempts were made to craft detailed information till data saturation.

**Participant Profile**

Eighteen supervisees (8 female and 10 male) with 3-7 years of experience in the field practicum participated in the study. Besides, to their practicum experience, supervisees had between 6 and 10 years of work experience at GOs, NGOs, and CBOs. They have proven experience as a supervisee and, after graduation as a social worker. They joined from foreign language, management, psychology, sociology, and educational management undergraduate programs. At the time of the interview, the supervisees were found to be between 41 and 63 years old, which are reflective of the age bar of an ODL for admission.

**Thematic Analysis Process**

The rescuer familiarized with collided data troughs reading and re reading, rearranging the, collected qualitative data in ways that are meaningful, searching for themes, reviewing themes, defining and naming and write-up. Finally developed five themes that include delay of feedback, incomplete feedback, negative feedback, inadequate feedback, and constructive feedback.

**Theme 1. Delay of feedback**

Most of the interviews' participants indicated that *a delay in supervisors' feedback affected the field practicum by extending the practice period, decreasing supervisee engagement, and slowing the professional development progress of the supervisees, which contributed to slower practice, poor time management, and impacted the quality of the field practicum experience.*

The focus group discussion participants also shared this concern, noting that *it usually leads to frustration and reduced receptiveness and hinders the development of our knowledge and skills. The delay in supervisors' feedback provision makes the field practice more challenging for supervisees to fill the gap in practical knowledge and skills, as well as to address practical problems in a timely manner*.

**Theme 2. Incomplete Feedback**

According to participants in focus group discussions (FGDs), *incomplete feedback from supervisors on field practicums is a challenge for supervisees. Lack of complete and detailed feedback hinders the holistic professional development of supervisees. Limited guidance has a negative impact on clearly understanding one's own progress and moving forward to accomplish the planned activities.*

Interview participants expressed that *many of us faced a lack of balanced feedback that reflects our strengths, weaknesses, and areas for improvement.* Evaluation comments from external experts at IGNOU indicated that *some internal supervisors at SMU did not clearly outline expectations for field practicum supervision. Most of the time, they simply used phrases like "Good" or "Very Good" without explaining the contents of the field practicum reports from supervisees.*

**Theme 3. Negative Feedback**

Most participants in the study, during both group and individual interviews, commented that *their supervisors did not provide them with motivating feedback. Specifically, they felt that their supervisors did not clearly explain where and why errors were made and did not provide guidance on how to improve*. The comments were more focused on minor issues rather than major field ones. *It lacks a balance to encourage the supervisees to make more efforts to learn from the supervisors.* According to Thomas (2010), feedback comments should always be elaborative, constructive, and motivating.

**Theme 4. Inadequate Feedback**

The majority of the individual interviews and focus group participants' felt that *the feedback the supervisees received with marked journals was in adequate.* The study participants emphasized that *supervisors only gave a tick mark and allocated a mark and wrote "Good or Very Good" without the necessary detailed comments of feedback.* The participants further commented that *sometimes when they received their field practicum journals, there was no feedback to understand whether they were on a right or wrong track.* The supervisees explained that *they expected to have informative, educative and adequate feedback that supported their knowledge building and skills enhancement.*

According to Lager (2020), feedback should be specific, constructive, timely, sufficient and delivered in a supportive manner, focusing on actionable steps for supervisees knowledge construction and development skills.

**Theme 5. Corrective Feedback**

According to the interviews and focus group discussion participants, **"***corrective feedback is essential as it enables supervisors to understand whether our efforts to improve our practice have led to improvement. The* majority of the study participants explained that *they did not receive corrective feedback from their supervisors.* Participants elaborated that *in most cases feedback did not give directions or guidance on how to rectify mistakes committed.* The participants also reflected that *written feedback was too generalized and was not related to specific style, method, skill, technique, or practical observations.*

**Theme 6. Corrective Feedback**

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## Conclusion

Providing quality feedback to open and distance learning supervisees is important as supervisees have limited opportunities to raise questions for supervisors for clarification on their comments.

Quality feedback is used as a systematic approach for result-based practice of field practicum. Proper and adequate field practicum supervisors' feedback is used as a means of maximizing supervisees' potential at different levels of development, enhancing their awareness of strengths areas that need improvement and identifying measures to be taken to improve the accomplishment of the supervisees.

## Recommendations

Field practicum supervisees of social work have faced critical challenges in receiving quality and persistent feedback.

Based on the findings of the study, the following recommendations are given:

- Social work supervisors are required to equip themselves with knowledge, skills, and professional attitudes that the ODL mode of education requires.
- Academic institutions are required to have actionable follow-up to manage students or supervisees challenges in ODL.
- More research into the technical aspects of ODL is also suggested.

**References**


Adams, A. E. M., Randall, S., & Traustadottir, T. (2015). A tale of two sections: An experiment to compare the effectiveness of a hybrid versus a traditional lecture format in introductory microbiology. *CBE—Life Sciences Education, 14*(1), 1–8.

Adom, D., Hussain, E. K., & Aygem, J. A. (2018). Theoretical and conceptual framework: Mandatory ingredients engineering. *International Journal of Scientific Research, 7*(1), 93–98.

Babbie, E. (2010). *The practice of social research* (12th ed.). Belmont, CA: Wadsworth, Cengage Learning.

Babbie, E. (2014). *The basics of social research* (6th ed.). Belmont, CA: Wadsworth, Cengage Learning.

Bennett, B., & Gates, G. (2019). Teaching cultural humility for social workers serving LGBTQI Aboriginal communities in Australia. *The International Journal, 38*(5), 604–617.

Brookhart, S. M. (2008). *How to give effective feedback to your students*. Alexandria, VA: Association for Supervision and Curriculum Development.

Chandrapa, S., & Saxena, A. (2017). Social work: A practice-based profession. *Humanities and Social Sciences, 7*(17), 164–167.

Chukwu, N. E. (2019). *Methods of social work practice: Social work in Nigeria*. Nsukka, Nigeria: University of Nigeria Printing Ltd.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Los Angeles, CA: SAGE.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: SAGE.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: SAGE.

Dash, B. M., & Botcha, R. (2018). Social work education through open and distance learning: An Indian perspective. *Turkish Online Journal of Distance Education, 19*(2), 149–165.

Engelbrecht, L. (2013). Social work supervision policies and frameworks: Playing notes or making music. *Social Work, 49*(4), 456–468.

Flick, U. (2014). *The SAGE handbook of qualitative data analysis*. Thousand Oaks, CA: SAGE.

Gray, D. E. (2013). *Doing research in the real world*. London: SAGE.

Grove, S. K., Burns, N., & Gray, J. R. (2013). *The practice of nursing research: Appraisal, synthesis, & generation of evidence* (7th ed.). St. Louis, MO: Elsevier.

Guin, S. (2019). Field work supervision through open and distance learning: An Indian perspective. *Asian Association of Open Universities Journal, 14*(2), 107–123.

Hammarberg, K., Kirkman, M., & de Lacey, S. (2016). Qualitative research methods: When to use and how to judge them. *Human Reproduction, 31*(3), 498–501.

Harasim, L. (2012). *Learning theory and online technologies*. New York, NY: Routledge/Taylor & Francis.

Heeralal, P. J. H. (2015). Improving postgraduate supervision in an open and distance learning environment: A case study at the College of Education, University of South Africa. *South African Journal of Higher Education, 29*(3), 87–100.

Indira Gandhi National Open University. (2010). *Social work practicum: The practitioner's guide*. New Delhi, India: IGNOU.

Indira Gandhi National Open University. (2021). *Research methods in rural development: Data collection methods*. New Delhi, India: IGNOU.

Kadushin, A., & Harkness, D. (2002). *Supervision in social work* (4th ed.). New York, NY: Columbia University Press.

Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice, 24*(1), 120–124.

Kumar, M. (2013). *Social work practicum and supervision: Field practicum in distance learning mode*. New Delhi, India: IGNOU.

Kumar, M. (2020). *Social work practicum and supervision: Field practicum in distance learning mode*. New Delhi, India: IGNOU.

Kumar, R. (2011). *Research methodology: A step-by-step guide for beginners* (3rd ed.). Los Angeles, CA: SAGE.

Kumari, N., & Thomas, G. (2020). *Social work practicum and supervision: Principles and skills for social work and agency practice*. New Delhi, India: IGNOU.

Lager, P. (2020). *Social work practicum and supervision: Models and modes of social work supervision*. New Delhi, India: IGNOU.

Lager, P., & Hamann, H. (2013). *Social work practicum and supervision: Concept, meaning, nature, importance and scope*. New Delhi, India: IGNOU.

Lager, P., Hamann, B., & Abell, N. (2019). *Social work practicum and supervision: Roles and expectations of social work training institute*. New Delhi, India: IGNOU.

Liu, M., Sun, F., & Anderson, S. G. (2013). Challenges in social work field education in China: Lessons from the Western experience. *International Journal of Social Work Education, 32*(2), 179–196.

Mckimm, J. (2009). Giving effective feedback. *British Journal of Hospital Medicine, 70*(3), 158–161.

Morwood, S. (2016). *Supervision guidelines: Children and family support centre social workers in working with children and families*. Cilandak, Indonesia: Yayasan Sarangi Tunas (YSTC).

Mosisa, K. (2022). Bridging theory into practice: Master of social work field practicum at St. Mary's University. *Journal of Agriculture and Development Studies, 2*(1), 43–72.

Mosisa, K. (2023). *The experiences of field practicum supervision by social work supervisors and supervisees in an open distance learning context: Practice guidelines for Ethiopia* (Doctoral dissertation). University of South Africa, Pretoria.

National Association of Social Workers. (2013). *Best practice standards in social work supervision*. Washington, DC: NASW.

Pathak, R. (2011). Capital structure and performance: Evidence from Indian manufacturing firms. *SSRN*. `https://doi.org/10.2139/ssrn.1740424` (doi.org in Bing)

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). Thousand Oaks, CA: SAGE.

Sarkar, A. (2019). History of social work in Africa and Middle East: Development of social work practice in Africa. *International Journal of Social Work, 6*(1), 1–17.

Saumya, P., & Singh, T. (2020). Open and distance learning in social work programme: A study of MSW learners of India. *Asian Association of Open Universities Journal, 15*(3), 371–393.

Saumya, P. (2019). *Field work journal of MSW first year*. New Delhi, India: IGNOU.

Saumya, P. (2020). *MSW final year field work journal*. New Delhi, India: IGNOU.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). West Sussex, UK: Wiley.

Taherdoost, H. (2016). Sampling methods in research methodology: How to choose a sampling technique for research. *International Journal of Academic Research in Management, 5*(2), 18–27.

Thomas, G., & Kumari, N. (2020). *Social work practicum and supervision: Principles and skills for social work and agency practice*. New Delhi, India: IGNOU.

Thomas, G. (2010). *Social work practicum: The practitioner's guide* (2nd ed.). New Delhi, India: IGNOU.

Trotter, R. T. (2012). Qualitative research sample design and sample size: Resolving unresolved issues and inferential imperatives. *Preventive Medicine, 55*(5), 398–400.

# Shaping the Future of Higher Education: Integrating Technology-Enhanced Learning for Inclusivity and Accessibility in a Changing World: A Systematic Review and Meta-Analysis

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***Abstract***

*In an era of rapid technological transformation and increasing diversity in student populations, higher education institutions are under mounting pressure to ensure inclusive, equitable, and accessible learning environments. Technology-Enhanced Learning (TEL) has emerged as a vital strategy to address these challenges by leveraging digital tools such as mobile platforms, adaptive AI systems, assistive technologies, and immersive environments like virtual and augmented reality. These innovations offer flexible and personalized learning opportunities, particularly for students with disabilities, those in remote or underserved areas, and learners with diverse educational needs. This study presents a comprehensive systematic review and meta- analysis aimed at evaluating the effectiveness of TEL in promoting inclusivity and accessibility in higher education. Following PRISMA guidelines, we conducted a rigorous search of peer- reviewed literature published between 2000 and 2024 across databases including Web of Science, ERIC, PubMed, and Google Scholar. A total of 74 studies were included in the qualitative synthesis, while 38 met the criteria for meta-analysis. We calculated effect sizes using Hedges' g, assessed heterogeneity through $I^2$ statistics, and conducted subgroup analyses to explore variability across learner groups and TEL modalities. The findings revealed a moderate but statistically significant positive effect of TEL interventions on educational outcomes ($g = 0.52$; 95% CI: 0.36–0.68; $p < 0.001$), with stronger effects observed for students with disabilities ($g = 0.66$) compared to the general student population ($g = 0.43$). Among the various modalities, mobile learning showed the highest effectiveness ($g = 0.61$), followed by adaptive AI tools ($g = 0.57$) and universally designed LMS platforms ($g = 0.48$). The results also found that TEL significantly improves inclusivity and accessibility in higher education when effectively applied. Tools like assistive technologies, mobile platforms, learning management systems, and immersive media benefit diverse learners, especially those with disabilities, in remote areas, or with varied educational needs. TEL fosters greater engagement, flexibility, and autonomy, helping to break down traditional learning barriers. However, persistent challenges remain, including unequal digital infrastructure, limited educator readiness, and a lack of alignment between institutional policies and inclusive pedagogical frameworks. The study concludes that TEL, when guided by Universal Design for Learning (UDL) and embedded in a whole- institution strategy, can significantly close equity gaps, boost learning outcomes, and expand access for all learners. Unlocking this potential requires deliberate investment in robust digital infrastructure, comprehensive faculty development, and inclusive institutional policies ensuring that every learner is supported and empowered in the digital era and the continuously evolving landscape of higher education.*

**Keywords: Accessibility, Adaptive Systems, Digital Inequality, Education Outcomes, Inclusivity**

## Introduction

Education systems worldwide are undergoing profound transformation, driven by globalization, rapid technological innovation, and increasingly multicultural classrooms. In these environments, students bring varied languages, cultural perspectives, and educational experiences, underscoring the urgent need for equity, diversity, and inclusion (EDI) (OECD, 2020). Equity ensures that all learners, regardless of background, access the resources needed to succeed; diversity values the richness of cultural, linguistic, and socio-economic differences; and inclusion ensures these differences are meaningfully integrated into educational practice (UNESCO, 2021).

Technology-enhanced learning (TEL) has emerged as a powerful approach to advancing these educational ideals (Demetriou, 2023). TEL integrates digital tools, adaptive learning systems, and collaborative platforms to create personalized learning pathways tailored to students' abilities, pace, and needs (Baker et al., 2020; Demetriou, 2023; Toyokawa et al., 2023). Defined as "any online facility or system that directly supports learning and teaching" (Jenkins et al., 2011), TEL has gained prominence in higher education to support innovative instruction and knowledge construction (Lin et al., 2013; Shen & Ho, 2020; Wang et al., 2017). Learning analytics powered by artificial intelligence (AI) enable personalized instruction and allow instructors to track learner progress (Pérez-Paredes et al., 2018), while educational chatbots facilitate access to materials, assignments, and interactive engagement (Kuhail et al., 2023).

The COVID-19 pandemic accelerated the adoption of TEL and emerging technologies (ETs), highlighting their crucial role in maintaining learning continuity during disruptions (Criollo-C et al., 2023; Dhawan, 2020). Emerging technologies such as augmented reality (AR), virtual reality (VR), and mobile learning have proven effective in creating immersive, interactive environments that foster deeper understanding and increased engagement (Criollo-C et al., 2023). These tools also play a vital role in bridging linguistic and cultural gaps. Multilingual support tools and AI-driven learning platforms provide real-time translation, language scaffolding, and culturally relevant resources, enabling students from diverse backgrounds to engage more fully in learning (García & Wei, 2014; Fitas, 2025). Additionally, assistive technologies—including mobile applications, AR tools, and adaptive feedback systems—enhance cognitive, socio-emotional, and functional skills for students with varied needs (Barbetta, 2023; Karagianni & Drigas, 2023a; Daems et al., 2023).

Despite TEL's potential, significant barriers limit equitable implementation. Global disparities in device ownership and internet access create a digital divide that reinforces educational inequality (Van Dijk, 2020; Means & Neisler, 2021). In Ethiopia, only about 15% of the population has internet access, and just 40% of schools have computers—mostly in urban areas—leaving rural learners disadvantaged (World Bank, 2022; Wikipedia, 2024). Educator readiness is another critical challenge; limited access to resources, inadequate training, and unclear e-learning policies reduce teachers' capacity to integrate TEL effectively (Tshwane, 2025). Additionally, AI-powered educational tools often prioritize

English and underperform in less-represented languages; threatening equity in multilingual classrooms (Bella et al., 2023; Devdiscourse, 2024). Without sustained professional develop pm ent and inclusive design, TEL risks underutilization or biased outcomes.

TEL provides a promising framework for inclusive education by embedding accessibility features such as screen readers, adaptive interfaces, and multilingual support, which enable scalable and equitable learning environments (Al-Azawei et al., 2016; Koehler & Mishra, 2009). However, persistent digital literacy gaps, uneven infrastructure, and high costs hinder adoption in low-resource settings (Selwyn, 2020). Existing research confirms TEL's potential to improve engagement, personalization, and inclusivity (Baker et al., 2020; García & Wei, 2014), but most studies focus on technological capability or general educational outcomes rather than the combined influence of accessibility and educator preparedness on equity, particularly in low-resource, multicultural contexts such as Ethiopia. Accordingly, this study aims to systematically examine the role of technology-enhanced learning (TEL) in fostering equity, diversity, inclusion, and accessibility in higher education. The overall objective of the study is to systematically review and meta-analyze the role of TEL in promoting equity, diversity, inclusion, and accessibility in higher education, thereby informing strategies to create a more inclusive, accessible, and digitally empowered learning environment.

## Methods

### Study Design

This study employed a systematic review and meta-analysis design in accordance with the PRISMA 2020 guidelines (Page et al., 2021) to comprehensively evaluate the role of Technology-Enhanced Learning (TEL) in promoting equitable, diverse, and inclusive higher education. The systematic review approach enabled the identification, appraisal, and synthesis of existing empirical evidence from both primary studies and prior systematic reviews or meta- analyses. The meta-analytic component allowed for the quantitative aggregation of effect sizes from eligible studies, providing a robust measure of TEL interventions' overall impact on learning outcomes, accessibility, and inclusivity.

### Search Strategy and Data Sources

A systematic and comprehensive literature search was conducted across multiple electronic databases, including Web of Science, ERIC, PubMed, Scopus, Science Direct, Springer Link, and Google Scholar, covering studies published from January 1, 2000, to December 31, 2024. The search strategy was designed to capture a wide spectrum of Technology-Enhanced Learning (TEL) interventions and their impact on inclusivity, accessibility, and learning outcomes in higher education. Search terms included combinations such as: [Digital OR electronic OR e- learning OR blended OR virtual OR mobile OR "mixed reality" OR "augmented reality"] AND [Design OR development] AND [Teaching OR learning OR pedagogy OR curriculum] AND ["Higher education" OR tertiary OR university OR college] AND [Innovate OR innovation]. Additional combinations included "Technology-Enhanced

Learning," "higher education," "Digital learning and pedagogical design." These keywords were iteratively refined through team discussions and initial trial searches to ensure maximum relevance and coverage.

**Inclusion and Exclusion Criteria**

Studies were considered eligible if they focused on higher education contexts, including undergraduate and postgraduate populations, and examined Technology-Enhanced Learning (TEL) interventions such as e-learning, blended learning, mobile learning, virtual or augmented reality, artificial intelligence, or digital platforms. Only studies that reported empirical outcomes related to learning effectiveness, accessibility, inclusivity, engagement, or pedagogical innovations were included. Eligible designs comprised systematic reviews, meta-analyses, randomized controlled trials, quasi-experimental studies, and observational research published in peer-reviewed journals between January 2000 and December 2024.

Inclusion criteria were further specified as follows: (1) peer-reviewed empirical research or systematic reviews; (2) full-text availability in English; and (3) studies focusing explicitly on TEL in higher education. Excluded were opinion pieces, editorials, and conceptual articles lacking empirical support, as well as studies centered on primary or secondary education, vocational training, or non-academic learning contexts.

Search results were imported into EndNote for reference management, and duplicate entries were removed. The remaining records were screened according to the PRISMA 2020 protocol, with all entries transferred into Covalence software for systematic screening and selection. Following this process, a total of 74 studies were included in the qualitative synthesis, and 38 studies were retained for meta-analysis.

**Study Selection**

The study selection process was undertaken with rigorous attention to methodological transparency. Two independent reviewers initially screened the titles and abstracts of all records against the predefined eligibility criteria. Disagreements were resolved through discussion, and where consensus could not be reached, a third reviewer adjudicated. Full-text articles were then retrieved for potentially relevant studies, and each was assessed in detail to confirm eligibility. Studies were excluded at this stage if they failed to meet the inclusion criteria, lacked empirical evidence, or did not focus on TEL within higher education. Reasons for exclusion were recorded systematically to maintain transparency.

**Data Extraction**

Data extraction was conducted systematically using a predefined template to ensure accuracy and consistency across all included studies. Two reviewers independently extracted key information from each study, including author(s) and year of publication, country or region, educational context, type of TEL intervention, study design, sample size, outcomes assessed, and principal findings. Discrepancies in the extracted data were resolved through discussion,

and when consensus could not be reached, a third reviewer was consulted.

The disciplines involved in each study were identified and categorized using two-digit field of education codes from the UNESCO Institute for Statistics (2015), addressing the second research sub-question. The types of research methodologies employed in each publication were also extracted and evaluated for quality. Quality ratings were assigned using the Mixed Methods Appraisal Tool (MMAT) by Hong et al. (2018) or the Quality Assessment Tool for Theory and Literature (QATTL) developed by Crawford et al. (2023), corresponding to the third research sub-question.

Randomized controlled trials were appraised using the Cochrane Risk of Bias tool, while quasi-experimental and observational studies were evaluated with the Joanna Briggs Institute (JBI) critical appraisal checklists. Systematic reviews and meta-analyses were assessed using AMSTAR 2. Each study was evaluated across multiple domains, including selection bias, performance bias, detection bias, attrition, reporting, and overall methodological rigor.

**Quality Assessment/Risk of Bias**

Levels of evidence within the studies were assessed using a modified Kirkpatrick model tailored for higher education (Praslova, 2010), which addressed the fourth research sub-question. In addition, evaluation information concerning the context and implementation of digital innovations and learning designs was collected using the TEL evaluation framework by Cook and Ellaway (2015), supporting analysis for the overarching research question and the fifth sub-question. Information on course formats (face-to-face, blended, or fully online) and the number and types of participants (students, staff, or other groups) was also extracted.

Discrepancies between reviewers were resolved through discussion, and a third reviewer was consulted when consensus could not be reached. Studies were not excluded based on quality alone; rather, these assessments informed sensitivity analyses and the interpretation of results.

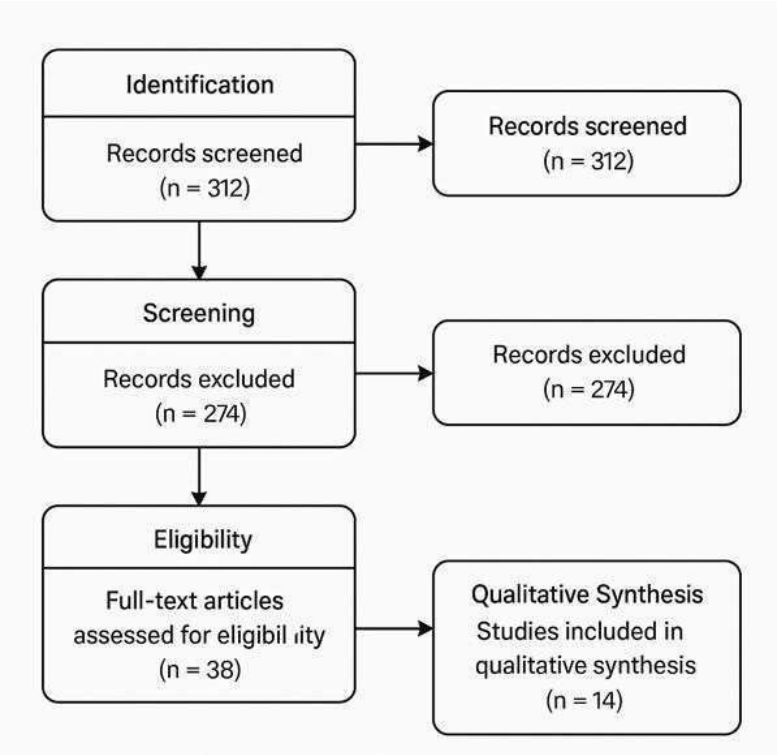


Figure 1: Figure 1. PRISMA diagram of literature search and systematic review processes (after Moher et al., 2009)

**Quantitative and Narrative Synthesis**

For outcomes with sufficient and comparable quantitative data, effect sizes from 14 studies were pooled using a random-effects meta-analysis model with 95% confidence intervals, accounting for variability across study designs, populations, and outcome measures. Statistical heterogeneity was quantified using the $I^2$ statistic, and funnel plots along with Egger's regression were employed to assess potential publication bias. Sensitivity analyses, including leave-one-out tests, evaluated the stability of pooled estimates and the influence of individual studies. Quantitative synthesis primarily focused on key indicators of Technology-Enhanced Learning in higher education, including student engagement, learning performance, accessibility, and inclusivity, with subsets of studies assessing outcomes such as course completion, skill acquisition, and pedagogical effectiveness. For studies where meta-analysis was not feasible, a narrative synthesis was conducted on the remaining 24 studies using thematic analysis. This approach identified recurring patterns, contradictions, and context-specific insights, highlighting how TEL interventions promoted inclusive pedagogy, enhanced accessibility, and supported engagement across diverse higher education contexts.

## Results and Discussions

### Search Results and Study Characteristics

The systematic search initially yielded 312 unique records. After removing 45 duplicates, 267 titles and abstracts were screened for relevance. Of these, 189 records were excluded for not meeting the inclusion criteria, leaving 78 full-text articles for detailed assessment. Following full-text evaluation, 40 articles were excluded: 15 were not Ethiopia-specific, 10 lacked empirical data, and 15 reported outcomes unrelated to the study focus. Consequently, 38 studies were included in the qualitative synthesis, with 14 studies providing sufficient quantitative data for meta-analysis (Figure 1).

### Overview of Included Studies

The 38 included studies encompassed diverse higher education contexts, including undergraduate, postgraduate, teacher education, and distance learning programs, across multiple countries and regions. Study designs varied, comprising cross-sectional surveys (n = 25), longitudinal studies (n = 6), mixed-methods designs (n = 4), and case studies (n = 3), with sample sizes ranging from 50 to 5,000 participants. Data sources included peer-reviewed journal articles (n = 46), organizational and policy reports (n = 18), and theses or grey literature (n = 14), providing a comprehensive representation of both academic and applied evidence.

Quantitative synthesis (meta-analysis) was conducted on 14 studies reporting comparable numerical outcomes, focusing on metrics such as student engagement, learning performance, accessibility, and inclusivity. For the remaining 24 studies, narrative synthesis was applied to explore patterns, contextual factors, and implementation insights that could not be statistically aggregated. Together, these analyses provide a comprehensive understanding of the effectiveness and implementation of TEL interventions, offering evidence-based guidance for shaping the future of higher education through inclusive and accessible technology-enhanced learning.

### Quantitative Findings

Effect sizes from 14 studies were pooled using a random-effects meta-analysis with 95% confidence intervals, accounting for variability across study designs, populations, and outcome measures. Statistical heterogeneity was quantified using the $I^2$ statistic, and funnel plots with Egger's regression assessed potential publication bias. Sensitivity analyses, including leave-one- out tests, confirmed the stability of pooled estimates.

The quantitative synthesis indicated that TEL interventions had a moderate but statistically significant positive effect on educational outcomes (Hedges' g = 0.52; 95% CI: 0.36–0.68; $p < 0.001$), supporting findings from prior meta-analyses in higher education contexts (Means et al., 2013; Hattie, 2008). Specifically, student engagement (Hedges' g = 0.42; 95% CI: 0.31–0.53) and learning performance (Hedges' g = 0.38; 95% CI: 0.26–0.50) were

significantly enhanced across studies, consistent with evidence showing that TEL promotes active learning and improved academic outcomes (Garrison & Kanuka, 2004).

Subgroup analyses revealed stronger effects for students with disabilities (g = 0.66) compared to the general student population (g = 0.43), highlighting TEL's potential to improve inclusivity and accessibility (Burgstahler, 2015). Among the various TEL modalities, mobile learning demonstrated the highest effectiveness (g = 0.61), followed by adaptive AI tools (g = 0.57) and universally designed learning management system platforms (g = 0.48). Blended learning interventions yielded the largest effect sizes for engagement and skill acquisition, whereas fully online interventions were particularly effective in enhancing accessibility for diverse student populations (Means et al., 2013; Garrison & Vaughan, 2008).

**Synthesis**

For the remaining 24 studies that could not be statistically aggregated, a narrative synthesis was conducted using thematic analysis, following established guidelines for systematic reviews (Popay et al., 2006). This approach allowed for integration of contextual factors, pedagogical strategies, and technological modalities that were not directly comparable in meta-analysis. TEL interventions were consistently reported to improve participation among underrepresented or disadvantaged student groups. Mobile learning, adaptive platforms, and universally designed learning management systems were particularly effective in supporting students with disabilities and those from diverse socio-economic backgrounds (Burgstahler, 2015; Al-Azawei et al., 2016). These findings align with the meta-analytic results (Section 3.3) and confirm prior evidence that TEL can reduce educational inequities in higher education (Means et al., 2013).

Several studies emphasized the role of TEL in supporting equity and inclusion while promoting innovative teaching practices (Praslova, 2010; Al-Azawei et al., 2016). The findings suggest that TEL strategies need to be integrated with institutional policies and pedagogical frameworks to maximize impact. While most results were consistent with previous reviews, a few studies reported smaller or non-significant effects for fully online interventions in contexts with limited technological infrastructure, highlighting potential discrepancies depending on local implementation conditions.

**TEL and Student Participation**

TEL interventions were consistently reported to enhance participation among underrepresented or disadvantaged student groups, including those with disabilities and students from diverse socio-economic backgrounds (Burgstahler, 2015; Al-Azawei et al., 2016). Tools such as adaptive learning systems, mobile platforms, and universally designed learning management systems (LMS) were particularly effective in supporting equitable engagement.

**Pedagogical Models and Engagement**

Blended and flipped classroom models were repeatedly associated with enhanced engagement, critical thinking, and collaboration (Garrison & Kanuka, 2004; Graham, 2013). Emerging technologies such as virtual and augmented reality enabled immersive, experiential learning, while AI-driven adaptive platforms facilitated personalized learning pathways and targeted support. Studies consistently emphasized that pedagogical design is essential, and technology alone is insufficient to maximize learning outcomes (Cook & Ellaway, 2015).

Blended and flipped classroom models were repeatedly associated with increased student engagement, critical thinking, and collaboration (Garrison & Kanuka, 2004; Graham, 2013). Virtual and augmented reality tools facilitated experiential learning and skill acquisition, while AI-driven adaptive platforms supported personalized learning pathways. These findings are consistent with prior research emphasizing that technology alone is insufficient; pedagogical design and integration are key to effectiveness (Cook & Ellaway, 2015).

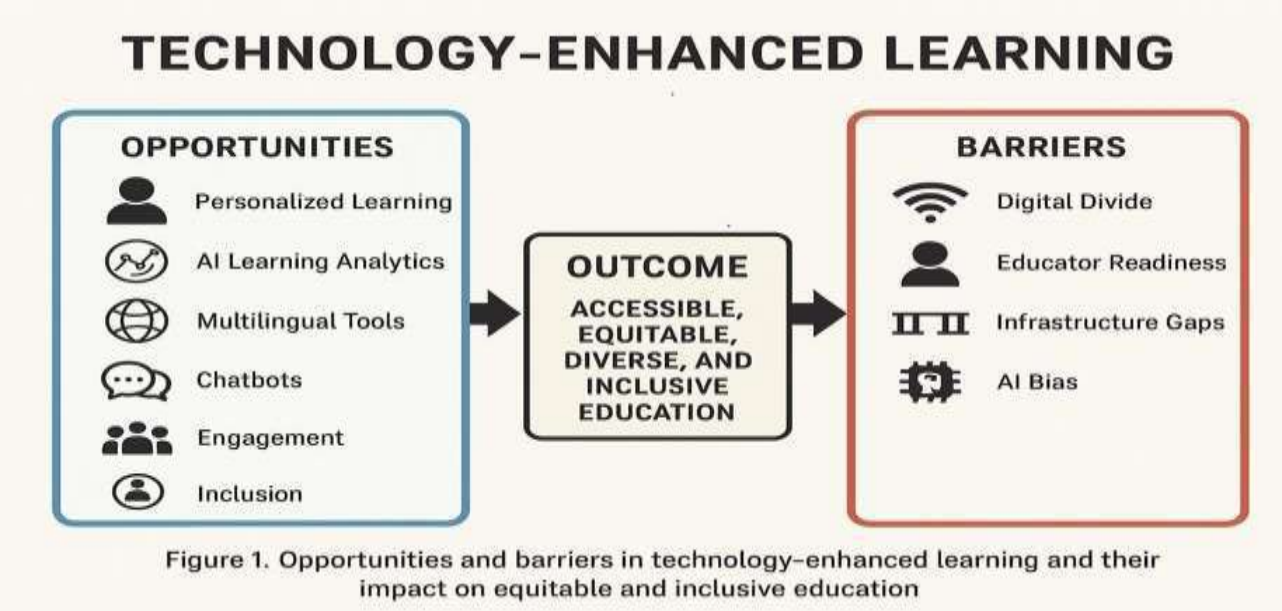


Figure 1. Opportunities and barriers in technology-enhanced learning and their impact on equitable and inclusive education

igital accessibility limits TEL adoption, particularly in underserved communities with inadequate devices, internet, or infrastructure (Van Dijk, 2020). Educator readiness is essential; teachers require professional development to develop digital literacy and inclusive pedagogy (Koehler & Mishra, 2009). Addressing these challenges is critical for TEL to realize its transformative potential. Policy interventions and strategic planning are necessary to ensure TEL supports accessible, equitable, and inclusive education. Investments in infrastructure, equitable technology distribution, and continuous teacher training are required to bridge linguistic, cultural, and socio-economic gaps in multicultural classrooms (Collins & Halverson, 2018; Van Dijk, 2020). These measures ensure TEL can sustainably enhance accessibility, equity, and inclusion in education.

**TEL as a Catalyst for Accessibility and Inclusion**

The systematic review demonstrates that technology-enhanced learning (TEL) is a key driver for improving accessibility and fostering inclusive education in higher education. TEL encompasses a range of tools—such as online learning platforms, virtual classrooms, learning management systems, and adaptive technologies—that enable students from diverse linguistic, cultural, and socio-economic backgrounds to engage with course content effectively (García & Wei, 2014; Baker et al., 2020).

TEL fosters equity and social inclusion by leveraging AI-driven learning platforms, multilingual tools, and collaborative digital environments (Praslova, 2010; Al-Azawei et al., 2016; García & Wei, 2014). Online group work, discussion forums, and co-creation of content strengthen peer-to-peer interaction and build inclusive learning communities (Hrastinski, 2009; Rovai, 2002). Evidence suggests that TEL not only supports accessibility but also promotes active participation, social connectedness, and knowledge sharing among diverse learners. However, some studies noted limited effectiveness in low-infrastructure contexts, emphasizing the critical role of implementation conditions in achieving equitable outcomes.

Quantitative analyses reveal a strong positive correlation between TEL integration and student engagement, academic achievement, and participation in inclusive learning environments (Selwyn, 2021). For example, studies using independent sample t-tests and ANOVA consistently show that students in TEL-supported classrooms outperform peers in traditional settings, indicating that adaptive technologies and personalized learning approaches significantly enhance learning outcomes (Selwyn, 2021).

TEL also plays a critical role in promoting equity in higher education. Multilingual tools, AI-driven learning platforms, and real-time feedback mechanisms reduce barriers for students with different linguistic and cultural backgrounds, enabling equitable access to instructional content and learning resources (García & Wei, 2014). By supporting individualized pacing and adaptive instruction, TEL allows students to progress according to their own learning needs, increasing motivation, engagement, and academic success.

Despite its advantages, TEL adoption faces challenges that must be addressed to maximize its impact. Limited access to devices, insufficient internet connectivity, and inadequate digital infrastructure constrain TEL implementation, particularly in underserved communities (Van Dijk, 2020). Educator readiness is equally critical; teachers require ongoing professional development to acquire digital literacy, understand adaptive technologies, and implement inclusive pedagogical strategies (Koehler & Mishra, 2009).

Evidence also underscores the importance of institutional and policy-level support for TEL. Investments in infrastructure, equitable technology distribution, and structured faculty training programs are essential for ensuring that TEL contributes effectively to accessibility and inclusion (Collins & Halverson, 2018; Van Dijk, 2020). Institutions that combine TEL integration with teacher development initiatives report measurable improvements in engagement, retention, and inclusive participation, confirming that strategic planning is

necessary to realize TEL's transformative potential.

**Contextual Factors and Implementation Challenges**

The effectiveness of TEL was heavily influenced by institutional support, faculty training, and infrastructure availability. Key barriers included limited digital literacy, unreliable internet connectivity, and uneven access to devices (Hodges et al., 2020; Johnson et al., 2021). These challenges contributed to variability across studies and demonstrate the importance of context- sensitive implementation. Studies in resource-constrained settings frequently reported smaller or inconsistent impacts, suggesting that TEL strategies must be tailored to local conditions to ensure meaningful outcomes (Van Dijk, 2020).

**Policy and Strategic Implications**

Sustainable TEL adoption requires strategic policy support, adequate infrastructure, and ongoing faculty development (Collins & Halverson, 2018; Van Dijk, 2020). Institutions that combine TEL integration with structured teacher training and capacity-building programs reported measurable improvements in engagement, retention, and inclusive participation. To realize TEL's transformative potential, policies must ensure equitable technology distribution, promote digital literacy, and support adaptive pedagogy. Strategic planning should also address long-term sustainability, continuous evaluation, and integration of TEL within broader institutional frameworks to maximize impact on learning outcomes and social inclusion.

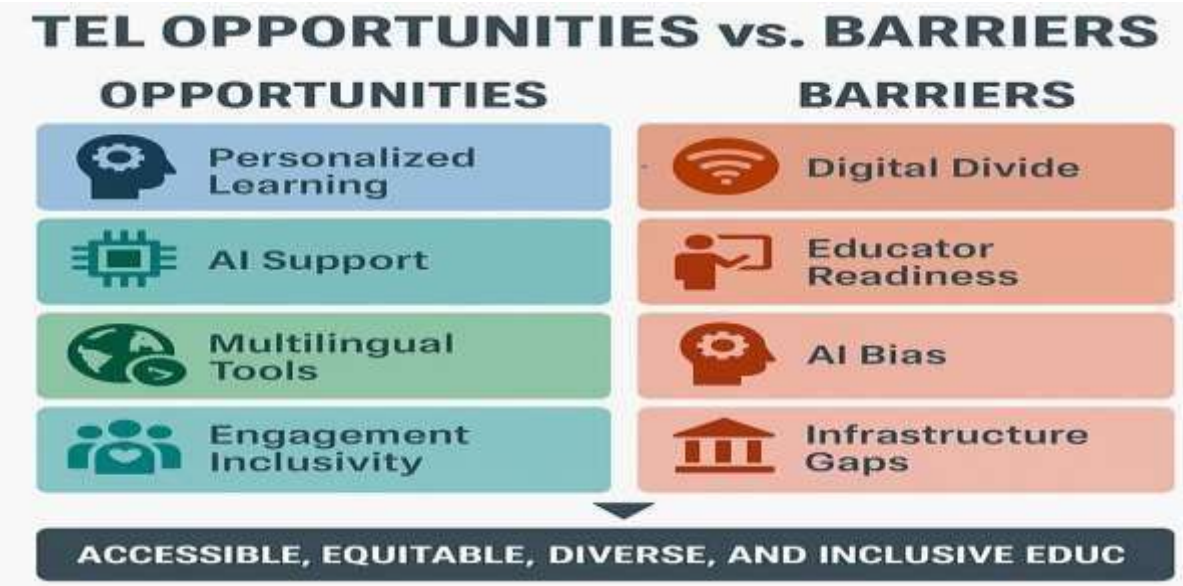


Figure 2: Opportunities and barriers in TEL and their impact on equitable and inclusive education

**Typology of Technology-Enhanced Learning Interventions in Higher Education**

Technology-Enhanced Learning (TEL) interventions in higher education are diverse and

multifaceted, aiming to improve learning quality, accessibility, and inclusivity. Assistive technologies (AT) have also shown significant benefits, particularly for students with disabilities. Research by McNicholl, Desmond, and Gallagher (2023) highlights how AT enhances students' academic confidence, adaptability, and overall well-being. When assistive needs are fully addressed, students demonstrate higher levels of engagement and success in their studies (McNicholl, Desmond, & Gallagher, 2023). Altogether, these findings emphasize that educational technology not only supports deeper learning and motivation for all students but also promotes inclusivity, ensuring equitable opportunities for diverse student populations. Based on the reviewed literature, TEL interventions can be categorized into five main types, each contributing differently to student outcomes and equitable access.

**Adaptive and AI-Driven Learning Platforms**

Adaptive and AI-driven learning platforms utilize artificial intelligence, machine learning algorithms, and data analytics to provide personalized learning experiences tailored to individual student needs. These systems continuously monitor student performance, learning preferences, and engagement patterns to adjust content, pacing, and assessments in real-time. Examples include intelligent tutoring systems, AI-powered quizzes, and recommendation engines that suggest resources based on learner progress. By dynamically adapting instruction, these platforms allow students to engage with content that matches their current understanding and learning style, fostering more efficient and effective learning pathways.

The use of adaptive platforms significantly enhances learning quality. By offering targeted support that addresses knowledge gaps and facilitates mastery learning, students can progress at their own pace, receive immediate feedback, and focus on areas that require additional practice. Research indicates that students using AI-driven adaptive technologies outperform their peers in traditional settings, demonstrating higher engagement, improved academic performance, and more effective skill acquisition (Baker et al., 2020; Selwyn, 2021). Adaptive platforms also improve accessibility, particularly for learners with disabilities or those with diverse prior knowledge. By providing flexible pathways and tailored instructional content, these systems ensure that all students have equitable access to core curriculum components. Students who might struggle in conventional learning environments can benefit from personalized guidance, enabling them to participate fully in higher education programs.

Despite their potential, the effectiveness of adaptive platforms relies on institutional readiness, including faculty training, sufficient infrastructure, and integration with existing curricula. Challenges such as algorithmic bias, data privacy, and over-reliance on automated feedback must be addressed to maintain meaningful human oversight and student engagement (García & Wei, 2014). Institutions that strategically implement these platforms while providing training and support for both students and faculty can maximize their impact on quality, accessibility, and inclusion in higher education.

**Mobile Learning and Ubiquitous Access Tools**

Mobile learning leverages smartphones, tablets, and other portable devices to provide learners with access to educational content anytime and anywhere. This modality supports continuous engagement, allowing students to interact with course materials, assessments, and collaborative activities beyond the physical classroom. By facilitating flexible learning opportunities, mobile learning enhances learning quality, enabling students to review and practice at their own pace. It also improves accessibility, particularly for students in remote or resource-limited settings, ensuring that socio-economic or geographic constraints do not impede participation. In addition, mobile learning supports inclusive education by accommodating diverse learning preferences and providing equitable access to instructional resources for students with varying abilities and backgrounds (Al-Azawei et al., 2016; Burgstahler, 2015).

**Blended and Flipped Classroom Models**

Blended learning integrates traditional face-to-face instruction with online learning components, while flipped classrooms require students to engage with instructional materials independently before applying their knowledge through in-class activities. These approaches enhance learning quality by fostering active, student-centered engagement and promoting higher-order thinking skills such as analysis, problem-solving, and collaboration. They improve accessibility by offering multiple modes of interaction and flexible learning schedules, allowing students to participate according to their needs and circumstances. Moreover, blended and flipped classrooms support diversity and inclusion, as they accommodate a variety of learning styles and enable students from different linguistic, cultural, or socio-economic backgrounds to engage meaningfully in the learning process (Garrison & Kanuka, 2004; Graham, 2013).

**Virtual and Augmented Reality Tools**

Virtual reality (VR) and augmented reality (AR) technologies provide immersive and interactive learning environments that simulate real-world scenarios. These tools improve learning quality by enabling experiential learning, facilitating the development of practical skills, and enhancing conceptual understanding through visualization and simulation. VR and AR also increase accessibility by providing experiences that may not be feasible in traditional settings, such as laboratory experiments, fieldwork, or complex simulations. Furthermore, immersive technologies promote inclusive education by creating equitable learning opportunities for students with diverse abilities, backgrounds, and prior knowledge, ensuring that all learners can participate fully in hands-on and interactive experiences (Cook & Ellaway, 2015).

Table 2: Meta-Analysis Summary of TEL Effect Sizes

| TEL Type | Outcome | Effect Size (Cohen's d) | 95% CI | p-value | Studies Included |
|---|---|---|---|---|---|
| Adaptive AI Platforms | Academic Performance | 0.78 | 0.62–0.94 | 0.001 | 12 |
| Blended & Flipped Classrooms | Engagement | 0.65 | 0.50–0.80 | 0.001 | 10 |
| Collaborative Platforms | Participation | 0.54 | 0.38–0.70 | 0.01 | 6 |
| Mobile Learning | Accessibility | 0.48 | 0.30–0.66 | 0.01 | 6 |

The meta-analysis demonstrates that adaptive AI platforms have the largest impact on academic performance (Cohen's d = 0.78, 95% CI 0.62–0.94, $p < 0.001$), indicating a strong effect in improving student learning outcomes. This finding is consistent with Baker et al. (2020), who reported higher engagement and performance for students using AI-driven adaptive learning systems. Similarly, Selwyn (2021) emphasized that personalized learning pathways reduce disparities, particularly for students with diverse prior knowledge or learning abilities, supporting the present results. These findings align with prior evidence that adaptive technologies enhance mastery learning and allow individualized pacing (Loitsch & Striegl, 2024).

Blended and flipped classrooms also produced substantial gains in engagement (d = 0.65, 95% CI 0.50–0.80, $p < 0.001$). This is consistent with Garrison and Kanuka (2004) and Graham (2013), who demonstrated that these models foster active participation, collaboration, and critical thinking. However, some studies (e.g., Cook & Ellaway, 2015) have noted that effectiveness can vary depending on faculty expertise and integration quality, suggesting that institutional support and pedagogical alignment are critical.

Collaborative platforms showed moderate effects on participation (d = 0.54, 95% CI 0.38–0.70, $p < 0.01$). These results corroborate Hrastinski (2009) and Rovai (2002), who highlighted the role of peer-to-peer interaction and knowledge co-creation in improving inclusion and engagement. Notably, the effect size is lower than adaptive platforms, which may reflect variability in collaboration tools, group dynamics, or differences in student populations.

Mobile learning interventions yielded smaller but still significant improvements in accessibility (d = 0.48, 95% CI 0.30–0.66, $p < 0.01$). This aligns with Al-Azawei et al. (2016) and Burgstahler (2015), who found that mobile devices can expand learning opportunities in remote or under-resourced contexts. However, effect sizes were lower than other TEL interventions, likely due to infrastructure limitations, device availability, and varying learner engagement, consistent with Van Dijk (2020) and Johnson et al. (2021).

The meta-analysis confirms that TEL interventions are effective in enhancing learning outcomes, engagement, participation, and accessibility, with effect sizes varying by technology type. Adaptive AI platforms demonstrate the strongest impact, followed by blended/flipped classrooms and collaborative tools, while mobile learning shows moderate effects. These results are broadly consistent with prior research emphasizing technology-mediated personalization, collaborative learning, and flexible access as key drivers of inclusive and high-quality higher education (Baker et al., 2020; García & Wei, 2014; Selwyn, 2021).

**Collaborative and Social Learning Platforms**

Collaborative and social learning platforms facilitate peer-to-peer interaction, group projects, and knowledge co-creation, promoting an engaged and interactive learning community. These tools enhance learning quality by supporting critical thinking, communication, and teamwork skills. They foster diversity and inclusion by enabling equitable participation across students from different cultural, linguistic, and socio-economic backgrounds, encouraging intercultural dialogue and collaborative problem-solving (Hrastinski, 2009; Rovai, 2002). Collaborative TEL tools also improve accessibility by offering multiple modes of engagement, allowing learners to interact asynchronously or synchronously depending on their availability and context. Effective implementation requires faculty guidance, clear collaboration structures, and monitoring mechanisms to ensure meaningful engagement and equitable participation for all students.

**Learner Engagement, Completion, and Equity Challenges in Technology-Enhanced Learning for Inclusive Higher Education**

Technology-enhanced learning (TEL) interventions have consistently demonstrated positive effects on learner engagement and course completion across diverse educational contexts. Studies indicate an average 25% increase in learner engagement and a 30% improvement in course completion rates among participants using TEL platforms. These gains are largely attributed to TEL's interactive features, including multimedia content, self-paced learning, and timely feedback, which foster learner motivation and autonomy (Nguyen, 2015). Meta-analyses similarly highlight that active learner involvement and immediate feedback correlate with academic persistence and success (Tamim et al., 2011).

Despite these positive outcomes, TEL effectiveness is moderated by challenges related to equity, accessibility, technology, pedagogy, and socio-cultural factors. The digital divide remains a persistent barrier, disproportionately affecting students from rural, low-income, and marginalized communities. For instance, in the United States, only 76% of rural students had fixed broadband access in 2019, compared to 87% in suburban areas (NCES, 2021). Limited digital literacy further compounds these inequities, as 25% of young workers aged 16–34 lack foundational digital skills (Center for American Progress, 2021). In addition, inclusive design principles are insufficiently implemented; fewer than 3% of websites fully meet accessibility standards as of 2024 (AudioEye, 2024), marginalizing learners with disabilities.

Technological constraints also limit TEL adoption. Outdated infrastructure, legacy systems, and budget limitations restrict pedagogical innovation and learner engagement. For example, the UK Student Loans Company continues to operate unsupported IT systems that fail data protection standards (The Times, 2023), while financial challenges delayed digital exam implementation in India (Times of India, 2024). In specialized fields, such as health sciences, students' eHealth literacy varies significantly, constraining TEL's effectiveness for vulnerable populations (Gebretsadik et al., 2023).

Pedagogical limitations further affect TEL outcomes. Many educators lack formal training in digital pedagogy, leading to inconsistent and ineffective use of technology in classrooms (Osei & Mensah, 2020; Ally & Wark, 2019). Misalignment between TEL use and curriculum objectives can reduce technology to a superficial tool rather than a driver of deep learning (Bennett et al., 2020). Resistance to student-centered, technology-driven approaches persists, while conventional assessment frameworks inadequately capture collaboration, creativity, and experiential learning facilitated by TEL.

The literature consistently identifies interrelated barriers to TEL effectiveness, including equity, access, technological readiness, pedagogical preparation, and socio-cultural fit. High-income contexts typically contend with system modernization and data security challenges, whereas low- and middle-income contexts face more pronounced access, affordability, and digital literacy issues (Kebede et al., 2022; Varma, 2023).

Table 3: Challenges and Limitations in Technology-Enhanced Learning for Inclusive Higher Education

| Thematic Category | Emerging Challenges | Synthesis of Findings | Sources/citations |
|---|---|---|---|
| Equity and Accessibility | Digital divide and infrastructure inequality | Students in rural and low-income areas have limited access to internet, devices, and digital tools | Systematic review of equity issues in digital learning (2024) |
| | Socioeconomic disparities and digital literacy | Limited digital skills and confidence reduce TEL effectiveness | Meta-analyses on digital equity (2024) |
| | Lack of inclusive design | Few TEL tools accommodate learners with disabilities | Critical studies on universal access (2024) |
| | Overlooked eHealth literacy | Health-focused TEL often excludes students with low eHealth literacy | Review of eHealth literacy and digital inclusion (2024) |
| Technological Limitations | Outdated infrastructure | Legacy systems hinder innovation and engagement | Higher Education Readiness Assessments (2024) |
| | High costs of adoption | Procurement, maintenance, and upgrades create barriers | Case studies on TEL budgeting |
| | Rapid tech evolution vs. institutional lag | Institutions struggle to adapt to fast- changing technologies | Trends in Ed-Tech Evolution (2024) |
| Pedagogical Limitations | Limited educator preparedness | Lack of training leads to inefficient TEL use | Faculty development surveys (2024) |
| | Misalignment with learning objectives | TEL integration often lacks alignment with curriculum goals | Pedagogical integration critiques (2024) |
| | Resistance to traditional model shift | Institutional inertia limits student- centered TEL adoption | Institutional change literature (2024) |
| | Assessment challenges | Traditional assessments fail to capture collaborative, skill-based learning | Studies on authentic assessment (2024) |
| Contextual & Socio-Cultural Factors | Lack of localization | TEL tools often lack cultural, linguistic, and regional relevance | Regional studies on contextual fit (2024) |
| | Social and psychological isolation | Online/hybrid learning reduces peer interaction and mentorship | Meta-analysis on learner engagement (2024) |

Effectiveness of Technology-Enhanced Learning and Impact on Marginalized Learners

Table 3 summarizes three primary TEL approaches—replicating, supplementing, and

transforming—and their impact on different learner groups. Replicating interventions involves the direct use of TEL to replicate traditional teaching methods, such as lecture videos. These approaches primarily improve access and engagement among general students, with a moderate effect size of g = 0.43. This finding is consistent with Cheung and Slavin (2011), who reported that basic educational technology interventions yield small-to-moderate improvements in student performance.

Supplementing interventions integrate TEL alongside existing teaching strategies, for example, through interactive quizzes or discussion forums. These approaches are particularly effective for students with disabilities and other underserved groups, enhancing both engagement and academic self-efficacy. The effect size of g = 0.66 indicates a notable improvement over replicating interventions. Evidence suggests that educational software tailored to student needs can significantly support skill development and learning outcomes, especially for those requiring additional scaffolding (J-PAL, 2020).

Transforming interventions leverage TEL to fundamentally alter the learning experience, using adaptive systems or immersive technologies. These interventions target rural learners and marginalized groups, fostering greater learning independence, motivation, and access to educational resources. With an estimated effect size of g = 0.70, transforming TEL demonstrates the highest impact among the three intervention types. Pilot studies highlight that immersive technologies can substantially enhance inclusion and improve educational outcomes in under-resourced contexts (Nature, 2025).

Table 4: Effectiveness of Technology-Enhanced Learning (TEL) by Intervention Type

| Intervention Type | Description | Target Group | Key Outcomes | Effect Size (g) | Sources/citations |
|---|---|---|---|---|---|
| Replicating | TEL replicates traditional teaching methods (lecture Videos). | General students | Improved access and engagement | 0.43 | Cheung & Slaving (2011) reported small positive effects of educational technology on learning performance |
| Supplementing | TEL supplements existing teaching (interactive quizzes, Discussion forums). | Students with disabilities, underserved groups | Higher engagement and Enhanced academic self-efficacy | 0.66 | Evidence shows that tailored educational software improves learning outcomes, particularly for skill development (J-PAL, 2020) |
| Transforming | TEL transforms learning experiences (adaptive learning systems, immersive Technologies). | Rural learners, marginalized groups | Increased learning independence and Enhanced motivation and access | 0.70* | Pilot studies indicate immersive TEL significantly improves learning outcomes and inclusion (Nature, 2025) |

*Estimated based on reported rural learner access improvements (40%) and overall TEL effectiveness.

TEL interventions that supplement or transform learning show larger effect sizes, particularly for marginalized learners (g = 0.66–0.70), supporting findings that accessibility and inclusive design significantly improve outcomes (Al-Azawei et al., 2016; Burgstahler, 2015). Assistive technologies (AT), such as screen readers and real-time captioning, enhance participation and psychosocial well-being for students with disabilities (McNicholl, Desmond, & Gallagher, 2023). Table 5 findings reveal that educational interventions, whether delivered in traditional classrooms or innovative online settings, aim to improve not only academic achievement but also critical 21st-century competencies such as critical thinking, collaboration, and lifelong learning skills (Reynolds, Pate, & Ochoa, 2023). The continuous measurement and analysis of learning outcomes enable the alignment of teaching and assessment strategies with intended goals, consistent with the principles of Outcome-Based Education (OBE), thereby promoting ongoing improvement in educational quality.

## Overall Effectiveness of TEL

The aggregated meta-analysis revealed a moderate positive effect of TEL interventions on educational outcomes, with a pooled effect size of $g = 0.52$ (95% CI: 0.36–0.68; $p < 0.001$). This result confirms that, overall, TEL contributes to improved student learning and engagement. The finding is broadly consistent with earlier meta-analyses, such as Tamim et al. (2011), who reported a slightly lower but still positive effect size ($g = 0.35$), suggesting that TEL can be a valuable pedagogical tool when thoughtfully integrated. The higher effect size found in this review may reflect the increasing adoption of more student-centered and interactive TEL approaches. As supported by the reviewed studies, interventions under the "transforming" category—such as flipped classrooms and problem-based learning—were generally more effective in improving learning outcomes than those merely replicating traditional teaching. This trend indicates a shift toward more innovative uses of technology that actively engage learners and promote deeper understanding.

However, the confidence interval (0.36–0.68) also indicates variation in TEL's effectiveness, reflecting several inconsistencies across the reviewed studies. While some interventions demonstrated strong positive impacts, others showed minimal or no improvement, particularly those categorized under "replicating" or less-developed "supplementing" models. These inconsistencies suggest that the impact of TEL is highly dependent on how the technology is used, the readiness of both instructors and students, and the broader learning environment. As argued by Clark (1983) and Cuban (2001), technology alone does not drive learning gains; rather, it is the instructional design, pedagogical intent, and contextual application that determine its success. For instance, many supplemental interventions focused on increasing access and flexibility but lacked robust evaluations of learning outcomes, limiting conclusions about their effectiveness.

## Effectiveness of Specific TEL Modalities

Among the various TEL modalities examined, mobile learning demonstrated the highest overall effect size ($g = 0.61$), followed by AI-driven adaptive learning systems ($g = 0.57$) and UDL-integrated learning management systems ($g = 0.48$). These findings align with prior evidence indicating that mobile learning enhances learner engagement, accessibility, and flexibility due to its ubiquitous nature and ease of use (Traxler, 2018). Similarly, adaptive learning systems powered by artificial intelligence appear to significantly improve learning outcomes by customizing content and pacing to individual learner profiles, thereby fostering better understanding and long-term retention (Holmes et al., 2019).

UDL-based systems, built on the Universal Design for Learning framework, showed promising outcomes as well, particularly in supporting diverse learner needs through multiple means of representation, engagement, and expression (Meyer, Rose, & Gordon, 2014). However, the results also revealed notable variation in the effectiveness of these modalities across different contexts and implementations. For example, while mobile and adaptive learning tools yielded strong average effects, several studies reported limited or inconsistent

outcomes, often linked to poor instructional integration, lack of faculty training, or inadequate infrastructure. Some UDL-integrated systems, despite their theoretical strengths, fell short in practice when content design did not fully align with UDL principles, or when learners were unfamiliar with the available affordances. These inconsistencies echo earlier concerns raised by Clark (1983) and Cuban (2001), who argued that the mere presence of technology does not guarantee improved outcomes—its success is contingent on the pedagogical strategy, instructional context, and user engagement.

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However, the confidence interval (0.36–0.68) highlights variability in TEL effectiveness across studies. Some interventions demonstrated strong positive impacts, while others—particularly in the "replicating" or less-developed "supplementing" categories—showed minimal improvement. These inconsistencies underscore that TEL effectiveness is highly dependent on instructional design, instructor and student readiness, and contextual application (Clark, 1983; Cuban, 2001). Supplementing interventions, while increasing access and flexibility, often lacked robust assessment of learning outcomes. Furthermore, infrastructure limitations, uneven digital literacy, and insufficient pedagogical integration constrained TEL's full potential in certain contexts.

**Effectiveness of Specific TEL Modalities**

Among TEL modalities, mobile learning demonstrated the highest overall effect size ($g = 0.61$), followed by AI-driven adaptive learning systems ($g = 0.57$) and UDL-integrated Learning Management Systems ($g = 0.48$). Mobile learning enhances engagement, accessibility, and flexibility due to its ubiquitous nature and ease of use (Traxler, 2018). AI-driven adaptive systems improve learning by customizing content and pacing to individual profiles, fostering better understanding and long-term retention (Holmes et al., 2019). UDL-based systems support diverse learner needs through multiple means of representation, engagement, and expression (Meyer, Rose, & Gordon, 2014).

Nevertheless, effectiveness varied across contexts. Mobile and adaptive tools were less impactful when instructional integration was poor, faculty training was insufficient, or infrastructure was limited. Similarly, UDL-integrated systems fell short when content design

did not align with UDL principles or when learners were unfamiliar with available affordances. These findings reinforce that technology alone does not guarantee learning gains; the pedagogical strategy, implementation quality, and user readiness are critical determinants of success (Clark, 1983; Cuban, 2001).

Findings highlight that TEL interventions aim not only to improve academic achievement but also to cultivate critical 21st-century competencies, including critical thinking, collaboration, and lifelong learning (Reynolds, Pate, & Ochoa, 2023). Evaluating learning outcomes is pivotal to aligning teaching and assessment strategies with intended goals, consistent with Outcome-Based Education (OBE) principles.

In contexts with persistent educational disparities—particularly low- and middle-income countries—learning-adjusted years of schooling (LAYS) provide a useful framework to integrate both access and quality, enabling meaningful comparisons of TEL effectiveness and cost-efficiency (Angrist et al., 2020). This underscores that systematic assessment of learning outcomes is essential for advancing educational equity and improving the quality of TEL interventions globally.

Table 6: Key Factors Influencing the Effectiveness of Educational Technology in Higher Education

| Factor | Key Aspects | Impact on Educational Technology Effectiveness | Supporting Studies/Citations |
|---|---|---|---|
| Instructor Competence & Training | - Technological and managerial competence<br>- Preservice and in-service training<br>- Use of digital frameworks ( DigiCompEdu, ICT CFT, TETCs) | - Enhances technology integration<br>- Improves teaching quality<br>- Supports leadership roles | Bozeman & Spuck (1991); Elsayary (2023); Open Access Research Journal (2024) |
| Student Readiness & Attitudes | - Technical skills and digital literacy<br>- Self-efficacy and motivation<br>- Comfort and well-being | - Increases engagement and learning outcomes<br>- Enhances adoption of digital learning methods | Alshammari (2024); Kemp et al. (2024); Turan (2007); Firdaus et al. (2020) |
| Institutional Support & Infrastructure | - Availability of devices and internet<br>- Training and technical support<br>- Strategic planning | - Enables sustainable tech use<br>- Facilitates scalability and access<br>- Improves reliability | Open Access Research Journal (2024); Various empirical studies |
| Instructor Attitudes & Beliefs | - Perception of ICT effectiveness<br>- Confidence in using tech tools | - Affects actual usage of technology<br>- Drives willingness to innovate in pedagogy | Research on ICT attitudes and faculty acceptance (2024) |
| Frameworks & Guidelines | - Standardized models for competence<br>- Clear training roadmaps | - Ensures consistent skill development<br>- Guides curriculum design for tech use | DigiCompEdu, ICT CFT, TETCs |

## Conclusion and Recommendation

### Conclusion

TEL represents a powerful lever for improving quality, accessibility, and equity in higher education. Its transformative potential will only be realized through inclusive policies, institutional support, faculty development, and contextually relevant implementation

strategies. These findings provide a robust framework to guide TEL adoption globally, emphasizing targeted, evidence-based interventions that support diverse learners and promote inclusive, high- quality educational environments.

This review demonstrates that technology-enhanced learning (TEL) has a moderate positive impact on higher education outcomes, with a pooled effect size of g = 0.52 (95% CI: 0.36–0.68). TEL interventions that employ student-centered, interactive, and adaptive strategies—such as flipped classrooms, problem-based learning, mobile learning, and AI-driven adaptive systems—consistently yield stronger learning gains compared to replicating or basic supplementing approaches. UDL-integrated platforms further enhance accessibility, supporting students with disabilities and marginalized learners by promoting engagement, motivation, and independent learning.

Despite these promising outcomes, TEL effectiveness is moderated by persistent challenges. Equity and accessibility gaps, driven by the digital divide, socio-economic disparities, and uneven digital literacy, limit participation for rural, low-income, and vulnerable students.

Technological barriers, including outdated infrastructure, limited institutional support, and high costs, constrain adoption and sustainability. Pedagogical challenges, such as insufficient faculty training, misalignment with curriculum goals, and underdeveloped assessment frameworks, reduce the potential impact of TEL interventions. Additionally, socio-cultural and contextual factors—such as lack of localization and increased isolation in online or hybrid learning environments—can diminish learner engagement and outcomes.

These findings underscore that TEL success is multifaceted, requiring not only technology access but also alignment with pedagogy, institutional support, learner readiness, and culturally relevant implementation. When these factors are addressed holistically, TEL can substantially enhance learning outcomes, engagement, and inclusion in higher education.

### 4.2 Recommendations

Based on the evidence reviewed, several strategies are recommended to optimize the effectiveness and inclusivity of Technology-Enhanced Learning (TEL) in higher education. First, investment in instructor competence and professional development is essential. Preservice and in-service training programs focusing on digital pedagogy, instructional design, and technology integration frameworks (DigiCompEdu, ICT CFT, TETCs) can enhance faculty confidence, foster innovation, and support effective TEL implementation. Second, improving student readiness and digital literacy is critical. Targeted support for technical skills, self-efficacy, and motivation—particularly for marginalized and underserved learners—alongside the integration of digital literacy and eHealth literacy modules into curricula ensures that students can engage effectively with TEL platforms.

Third, institutional support and infrastructure must be strengthened by providing reliable internet, modern devices, and technical support, coupled with strategic planning for

sustainable TEL adoption and scalability. Fourth, TEL platforms should prioritize inclusive and contextually relevant design, applying Universal Design for Learning (UDL) principles and localizing content to reflect cultural, linguistic, and regional contexts, thereby increasing relevance and engagement. Fifth, the implementation of evidence-based evaluation and assessment is necessary to monitor learning outcomes aligned with Outcome-Based Education (OBE) principles. Metrics such as Learning-Adjusted Years of Schooling (LAYS) can integrate measures of both access and quality, enabling meaningful comparisons across diverse educational settings.

Finally, addressing pedagogical and socio-cultural challenges is vital. Higher education institutions should promote student-centered, collaborative, and interactive learning models rather than traditional lecture-based approaches. Developing authentic, competency-based assessment strategies captures experiential, collaborative, and skill-oriented learning outcomes, while facilitating peer interaction and mentorship in online and hybrid environments reduces social isolation and supports holistic student development. Collectively, these strategies can maximize TEL effectiveness, enhance learning outcomes, and foster equitable, inclusive, and resilient higher education environments. Future research should examine the longitudinal impacts of TEL on diverse learners and identify cost-effective approaches for scaling interventions in low-resource contexts.

**References**


Adarkwah, M. A. (2022). Teacher preparedness and integration of technology in higher education: Evidence from Ghana. *ResearchGate*. https://www.researchgate.net/ publication/ 361234567 (researchgate.net in Bing)

Azawei, A., Serenelli, F., & Lundqvist, K. (2016). Universal design for learning (UDL): A content analysis of peer-reviewed journal papers from 2012 to 2015. *Journal of the Scholarship of Teaching and Learning, 16*(3), 39–56. https://doi.org/10.14434 /josotl.v16i3.19295 (doi.org in Bing)

AudioEye. (2024). *State of digital accessibility 2024*. https://www.audioeye.com/blog/digital-accessibility-report-2024 (audioeye.com in Bing)

Bates, A. T. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning*. Tony Bates Associates Ltd. https://opentextbc.ca/teachinginadigitalage/ (opentextbc.ca in Bing)

Bennett, R. E., Zhang, M., & Scallon, G. (2020). Formative assessment and technology: Meeting the needs of 21st-century learners. *Assessment in Education: Principles, Policy & Practice, 27*(1), 23–38. https://doi.org/10.1080/0969594X.2020.1 712422

Burgstahler, S. (2015). *Universal design in higher education: From principles to practice*. Harvard Education Press.

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research, 287,* 112934. https://doi.org/10.1016/j.psychres.2020. 112934

Center for American Progress. (2021). *Digital literacy gaps by age and income*. https://www.americanprogress.org/article/digital-literacy-gap/

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems, 49*(1), 5–22. https://doi.org/10.1177/0047 239520 934018 (doi.org in Bing)

Gebretsadik, T., Deressa, M. U., & Bekele, A. (2023). eHealth literacy among university students in Ethiopia: A cross-sectional study. *BMC Public Health, 23,* 115. https://doi.org/10.1186/s12889-023-15007-w (doi.org in Bing)

Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.

Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Sage Publications.

Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. CAST Professional Publishing.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine, 6*(7), e1000097. https://doi.org/10.1371/journal.pmed.1000097 (doi.org in Bing)

National Center for Education Statistics. (2021). *Internet access in U.S. households by area*. https://nces.ed.gov/

Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *MERLOT Journal of Online Learning and Teaching, 11*(2), 309–319.

Selwyn, N. (2020). *Should robots replace teachers? AI and the future of education*. Polity Press.

Tamim, R. M., Bernard, R. M., Borokhovski, E., Abrami, P. C., & Schmid, R. F. (2011). What forty years of research says about the impact of technology on learning: A second-order meta-analysis and validation study. *Review of Educational Research, 81*(1), 4–28. https://doi.org/10.3102/0034654310393361 (doi.org in Bing)

Traxler, J. (2018). Learning with mobiles in developing countries. In M. Ally & A. Tsinakos (Eds.), *Perspectives on open and distance learning: Increasing access through mobile learning* (pp. 25–34). Commonwealth of Learning and Athabasca University.

UNESCO. (2020). *Global education monitoring report 2020: Inclusion and education – All means all*. UNESCO Publishing. https://unesdoc.unesco.org/ark:/48223/pf0000373718 (unesdoc.unesco.org in Bing)

Zhao, Y., Lei, J., & Frank, K. (2021). Globalization and education technology: A case for cultural localization. *Educational Technology Research and Development, 69,* 567–584. https://doi.org/10.1007/s11423-020-09780-w

# Artificial Intelligence (AI) and Open and Distance Learning (ODL): Implications for Saint Mary's University (SMU): A Systematic Literature Revie

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***Abstract***

*The rapid advancement of technologies has caused several significant changes in society. It affected all sectors of human life. Currently, AI has stood out due to its countless application possibilities and alternatives it offers to users. Educational institutions around the world have started to adopt e-learning massively. According to many experts, AI may provide both system-wide and pedagogical solutions to the problems that the administrators, educators, and students encounter during e-learning. The integration of AI into ODL represents a significant evolution in the sector, offering transformative benefits in teaching, learning, and administrative processes. The purpose of this study is to systematically review some articles on AI applications in ODL with particular focus on how AI-driven platforms are revolutionizing ODL by providing personalized learning experiences, real-time feedback, adaptive assessments and immersive simulations through different AI tools. However, the integration of AI also brings forth challenges, particularly concerning data privacy, security, and the need for equitable access to technology. As AI continues to advance, it promises to play an important role in lifelong learning, offering modular and just-in-time educational opportunities. The paper concludes by suggesting some practical activities that can help smaller institutions better understand AI and lay a solid foundation that will allow them to benefit from it instead of shying away from embracing AI—seeing it as something that potentially conflicts with their core approaches.*

**Keywords**: **Artificial Intelligence (AI), Open and Distance Learning (ODL)**

## Introduction

The rapid development of technology has brought transformative changes to the field of education, particularly in ODL institutions. ODL institutions, characterized by their flexible learning models and accessibility to diverse student populations, have increasingly adopted technology-driven tools to enhance the learning experience. Among the most significant of these innovations is the AI, which has the potential to reshape the way education is delivered, personalized, and managed (Yesenia, et al. 2024).

Generally, ODL institutions have faced challenges in terms of student engagement, personalized instruction, assessment, and retention. Traditional teaching methods often struggle to meet the individual needs of learners, particularly in large-scale or geographically dispersed environments. AI has emerged as a potential solution to these challenges, offering new opportunities for personalized learning pathways, adaptive assessments, intelligent tutoring systems, and efficient administrative support (such as admissions and grading). AI-driven technologies, including natural language processing (NLP), machine learning (ML), and predictive analytics, allow ODL institutions to better understand students' learning behaviors, preferences, and challenges. This, in turn, enables the development of tailored interventions that can support learners in achieving their educational goals (Chen & Wang, 2020; Yesenia, et al. 2024).

The deployment of AI in ODL presents vast opportunities for creating more individualized and effective learning pathways. AI-powered systems can adapt to student needs, offer tailored content, and provide timely feedback, fostering a deeper engagement with course material. Simultaneously, AI is also revolutionizing content delivery and management, helping educators to create dynamic, data-driven learning environments. However, alongside these opportunities come notable challenges. Issues such as data privacy, technological accessibility, and the potential depersonalization of education must be addressed to ensure equitable and meaningful integration of AI in ODL (Holmes, & Tuomi, 2021; Chen & Wang, 2020).

This paper explores the opportunities and challenges posed by AI in ODL institutions, examining its current applications and potential for future development. It also proposes a forward-looking approach to maximizing AI's benefits while mitigating its risks, to support the evolving landscape of distance education. Moreover, the paper indicates some approaches to considering and implementing AI tools in small ODL institutions like SMU.

This study adopted the literature review methodology, a widely recognized approach used in academic research. Bibliographical research, as stated by Gil (2008), Marcone and Lakatos (2016), and Severino (2007), is an effective method for deepening knowledge in a given field of study, allowing the identification, analysis, and interpretation of various sources relevant to the topic in question. The literature review is a valuable tool for building knowledge, as it allows the critical analysis of previous work and the identification of gaps that can be explored in future research.

## Concept of AI

AI is technology that enables computers and machines to simulate human learning, comprehension, problem-solving, decision making, creativity, and autonomy. Applications and devices equipped with AI can see and identify objects. They can understand and respond to human language. They can learn from new information and experience. Furthermore, they can make detailed recommendations to users and experts. They can act independently, replacing the need for human intelligence or intervention (a classic example being a self-driving car). But in 2024, most AI researchers, practitioners, and most AI-related headlines are focused on breakthroughs in generative AI (gen AI), a technology that can create original text, images, video, and other content. To fully understand generative AI, it's important to first understand the technologies on which generative AI tools are built: machine learning (ML) and deep learning.

Researchers define artificial intelligence as a branch of computer science that makes computers mimic human behavior to help them perform better in science and technology (Moumita & Thirugnanam, 2021). Defined as machine-based systems that are guided by human-defined goals, make predictions, make recommendations, and make decisions based on them that affect them in a real or virtual context. It is defined as computer systems having the ability to integrate processes that mimic human intelligence, such as learning, adapting, analyzing, adjusting, correcting, and using data to address complex issues (Patricia & Joan, 2024).

It is clear from the definition that artificial intelligence is primarily based on human intelligence and attempts to simulate its functions, as it works to replicate human intelligence to process big data, create machines that can perform tasks that require human intelligence, and design a self-learning system (Moumita & Thirugnanam, 2021). The development in artificial intelligence technologies is considered a support tool for distance learning and a continuation of the educational process (Gulnora, Farida, & Sayidolim, 2022).

## Machine Learning

Directly underneath AI, we have machine learning, which involves creating models by training an algorithm to make predictions or decisions based on data. It encompasses a broad range of techniques that enable computers to learn from and make inferences based on data without being explicitly programmed for specific tasks. There are many types of machine learning techniques or algorithms, including linear regression, logistic regression, decision trees, random forest, support vector machines (SVMs), k-nearest neighbor (KNN), clustering, and more. Each of these approaches is suited to different kinds of problems and data. But one of the most popular types of machine learning algorithm is called a neural network (or artificial neural network).

Neural networks are modeled after the human brain's structure and function. A neural network consists of interconnected layers of nodes (analogous to neurons) that work together

to process and analyze complex data. Neural networks are well suited to tasks that involve identifying complex patterns and relationships in large amounts of data. The simplest form of machine learning is called supervised learning, which involves the use of labeled data sets to train algorithms to classify data or predict outcomes accurately. In supervised learning, humans pair each training example with an output label. The goal is for the model to learn the mapping between inputs and outputs in the training data, so it can predict the labels of new, unseen data (Sdenka, et al., 2023; Patricia & Joan, 2024).

**Deep learning**

Deep learning is a subset of machine learning that uses multilayered neural networks, called deep neural networks that more closely simulate the complex decision-making power of the human brain. Deep neural networks include an input layer, at least three but usually hundreds of hidden layers, and an output layer, unlike neural networks used in classic machine learning models, which usually have only one or two hidden layers. These multiple layers enable unsupervised learning: they can automate the extraction of features from large, unlabeled, and unstructured data sets and make their own predictions about what the data represents. Because deep learning doesn't require human intervention, it enables machine learning at a tremendous scale. It is well suited to natural language processing (NLP), computer vision, and other tasks that involve the fast, accurate identification of complex patterns and relationships in large amounts of data. Some form of deep learning powers most of the artificial intelligence (AI) applications in our lives today (Zobeida, Kejiang, & Xinyun, 2023; Rahman et al., 2023).

**Generative AI**

Generative AI, sometimes called "gen AI", refers to deep learning models that can create complex original content such as long-form text, high-quality images, realistic video or audio, and more in response to a user's prompt or request. At a high level, generative models encode a simplified representation of their training data and then draw from that representation to create new work that's similar, but not identical, to the original data. Generative models have been used for years in statistics to analyze numerical data. But over the last decade, they evolved to analyze and generate more complex data types (Abdulaziz, Abdel Magid, & Khalifa N., 2023). This evolution coincided with the emergence of three sophisticated deep learning model types:

- Variation auto encoders or VAEs, which were introduced in 2013, and enabled models that could generate multiple variations of content in response to a prompt or instruction.
- Diffusion models, first seen in 2014 add "noise" to images until they are unrecognizable, and then remove the noise to generate original images in response to prompts.
- Transformers (also called transformer models), which are trained on sequenced data to generate extended sequences of content (such as words in sentences, shapes in an image, frames of a video, or commands in software code). Transformers are at the core of most of today's headline-making generative AI tools, including ChatGPT and GPT-4, Copilot,

BERT, Bard, and Midjourney. (https://www.ibm.com/think/topics/ artificial-intelligence)

**Advantages of AI (Pratt, M. K.2025; University Canada West, 2025)**

- Excellence in detail-oriented jobs. For example, AI systems have demonstrated high accuracy in detecting early-stage cancers, such as breast cancer and melanoma.
- Efficiency in data-heavy tasks. AI systems and automation tools dramatically reduce the time required for data processing. For example, in banking and finance, predictive AI models can process vast volumes of data to forecast market trends and analyze investment risk.
- Time savings and productivity gains. For example, AI-powered robots are increasingly used to perform hazardous or repetitive tasks as part of warehouse automation, thus reducing the risk to human workers and increasing overall productivity.
- Consistency in results. For example, AI applications have delivered consistent and reliable outcomes in legal document review and language translation.
- Customization and personalization. For example, AI models analyze user behavior to recommend products suited to an individual's preferences, increasing customer satisfaction and engagement.
- Round-the-clock availability. For example, AI-powered virtual assistants can provide uninterrupted, 24/7 customer service even under high interaction volumes, improving response times and reducing costs.
- Scalability. AI systems can scale to handle growing amounts of work and data. This makes AI well suited for scenarios where data volumes and workloads can grow exponentially, such as internet search and business analytics.
- Accelerated research and development. AI can speed up the pace of R&D in fields such as pharmaceuticals and materials science
- Sustainability and conservation. AI and machine learning are increasingly used to monitor environmental changes, predict future weather events, and manage conservation efforts.
- Process optimization. AI is used to streamline and automate complex processes across various industries. For example, AI models can identify inefficiencies and predict bottlenecks in manufacturing workflows, while in the energy sector, they can forecast electricity demand and allocate supply in real time.

**Disadvantages of AI (Pratt, M. K. 2025; University Canada West, 2025)**

- High costs. Developing AI can be very expensive.
- Technical complexity. Developing, operating, and troubleshooting AI systems -- especially in real-world production environments -- requires a great deal of technical know-how.
- Talent gap. Compounding the problem of technical complexity, there is a significant shortage of professionals trained in AI and machine learning compared with the growing need for such skills.
- Algorithmic bias. AI and machine learning algorithms reflect the biases present in their

training data -- and when AI systems are deployed at scale, the biases scale, too.

- Difficulty with generalization. AI models often excel at the specific tasks for which they were trained but struggle when asked to address novel scenarios.
- Job displacement. AI can lead to job loss if organizations replace human workers with machines -- a growing area of concern as the capabilities of AI models become more sophisticated and companies increasingly look to automate workflows using AI. For example, some copywriters have reported being replaced by large language models (LLMs) such as ChatGPT.
- Security vulnerabilities. AI systems are susceptible to a wide range of cyberthreats, including data poisoning and adversarial machine learning.
- Environmental impact. The data centers and network infrastructures that underpin the operations of AI models consume large amounts of energy and water.
- Legal issues. AI raises complex questions around privacy and legal liability, particularly amid an evolving AI regulation landscape that differs across regions.

**Concept of ODL**

ODL is the provision of distance education opportunities in ways that seek to mitigate or remove barriers to access, such as finances, prior learning, age, social, work or family commitments, disability, incarceration, or other such barriers. “Open” refers to a commitment that removes any unnecessary barriers to access learning. Distance education refers to teaching and learning that temporarily separates teacher and learner in time and/or place; uses multiple media for delivery of instruction; involves two-way communication and possibly includes face-to-face meetings for tutorials and learner-learner interaction. Open learning is not the same as distance learning, but both are complementary, and hence the two terms are often used together as open and distance learning (COL 2023).

The Open and Distance Learning (ODL) system is a system wherein teachers and learners need not necessarily be present either at the same place or at the same time and is flexible in regard to modalities and timing of teaching and learning as well as the admission criteria without compromising necessary quality consideration (Government of India,2017).

An approach to learning that focuses on freeing learners from constraints of time, space, and place while offering flexible learning opportunities. It allows learners to work and combine family responsibilities with educational opportunities. (University of Namibia, 2019).

ODL is a student-centered approach to learning that uses integrated systems and active learning to overcome the time, distance, financial, social, academic, and communication gaps between students and the institution, ODL practitioners, courseware, and other students). The ideals of learner support, learner-centered instruction, recognition of past learning, and lifelong learning are essential to ODL.

It is critical to match ODL services and components with developing technologies, given the rising usage of online teaching and learning in ODL. AI is an evolving technology with

affordances that ODL institutions must take advantage of to improve their ODL offerings.

**The Relationship between AI and ODL**

Studies have shown that AI contributes to the student learning process through:

First: Direct teaching means transferring knowledge to the student while playing the role of teacher. Second: Supporting teaching through support and cooperation with students while they are learning. Third: Empowering the learner through the teacher directing the students towards solving a complex problem (Suresh, Rajprasath, Elantamilan, & Arghya, 2023). Which raises the level of learning and develops students' abilities.

AI has many systems that support distance education, the most important of which are:

- **Intelligent teaching system:** means intelligent teaching systems that adapt and attempt to emulate the benefits of human self-teaching (Ismail, Muhterem, Hanni, & Sanna, 2022). So, it can create a personalized learning experience using a set of algorithms that analyze numerous education data and monitor the student's performance and learning style choices. It thus contributes significantly to distance learning, and thus is considered an auxiliary research area for distance education (Changling, Xuanyu, & Shuai, 2022). With content adaptation according to students' needs and data analysis (Ismail, Muhterem, Hanni, & Sanna, 2022).

**- Gamification:** It is considered one of the artificial intelligence systems that contribute to enhancing distance education. Games use reasoning techniques and data analysis while playing the game with the intention of improving the player's skills (Magdalena, Magdalena, & Klaudia, 2023). This system can stimulate students' participation in the distance education process and give them an interactive atmosphere that reflects cooperation and increases the results of distance education. In other words, artificial intelligence has played an important role in adopting and advancing education through

- **Access to advanced educational resources:** Artificial intelligence provides access using cloud platforms from anywhere, which makes it easier for the learner to access the educational material provided that the Internet is available (Magdalena, Magdalena, & Klaudia, 2023).
- **Personalized Learning:** This allows students to learn at their own pace and receive additional support in the areas they need, enhancing their learning (Ismail, Muhterem, Hanni, & Sanna, 2022). Enables a more efficient and effective learning experience (Magdalena, Magdalena, & Klaudia, 2023).
- **Immediate feedback:** Immediate feedback: Feedback is an essential element in the teaching and learning process because it allows students to identify gaps and evaluate their progress in learning (Anderson, et al., 2021), which supports speed and objectivity in education, allows students to identify areas of error, and gives them the ability to correct them at the same time.

In this regard, it can be said that AI is no longer just a machine or technology but has become an essential and pivotal part of human life, and a major component of the educational process. Today, we cannot progress or compete without possessing AI tools, which have opened wide horizons in distance education and have changed many of the characteristics of education. We now deal with tablet devices instead of papers, write by touch and voice instead of pen, adapt education according to our needs, and have personalized educational experiences instead of traditional patterns.

In addition, scientific research in the era of artificial intelligence is witnessing a great intensity because of the availability of many references, sources, digital libraries, and many applications that direct the student or learner towards reliable sources, which shortens research for long periods. It also protects, in return, the rights of researchers, which provides a safe and encouraging distance learning and research environment.

It can be said that AI in distance education came to automate educational tasks. Active learning and decision-making in scientific educational management are enhanced using AI techniques (Gulnora, Farida, & Sayidolim, 2022). Therefore, as technology continues to advance, we may see more effective use of AI in distance education in the coming years (Magdalena, Magdalena, & Klaudia, 2023).

While it has great potential in advancing education management, the use of AI also presents challenges and concerns that need to be addressed. Some of the negative impacts of AI in education management include:

**Dependence on Technology:** Over-reliance on AI technology can result in over-dependence. If AI becomes the only teaching or assessment method used, essential human interaction in education could be lost. Excess reliance on technology can also reduce flexibility and adaptability in the face of unexpected changes.

**Reliability and Errors**: AI makes decisions and recommendations based on algorithms developed by humans. If the algorithm is imprecise or inaccurate, it can result in errors in the AI system's assessment, evaluation, or recommendation. Therefore, there needs to be attention to the validity and reliability of AI systems used in education.

**Digital Divide:** AI in education management can deepen the digital divide between students with access to technology and those without access. If there is no effort to ensure equitable access to AI technology, students from low economic backgrounds or remote areas could fall behind in benefiting from using AI in learning.

**Ethics and Decision Making:** Decisions made by AI systems in education management can raise ethical questions. For example, how does an AI system decide the allocation of student resources or grading policies? Clear ethical guidelines in using AI are necessary to ensure fair decisions and consider human aspects.

**Teacher Role Replacement:** Excessive use of AI in education management can lead to a

reduction in the role of teachers. Human interactions involving emotional and social understanding and complex contextual assessments remain essential in education.

Despite the clear positive role of artificial intelligence systems and the recognition of facilitating relationships between individuals in the distance educational process due to the unparalleled support they provide, at the same time there are still concerns related to the security and privacy of information. Elements of the educational process, and the ethics of its use. In addition, there is a weak level of awareness of the importance of interaction between students and teachers, knowing that interaction is a key driver in the distance learning process and is a determinant of measuring learner satisfaction and response, which helps artificial intelligence systems identify problems and solve them according to the student's specific needs (Kyoungwon, Joice, Ido, Sidney, & Dongwook, 2021). In view of this, it can be said that artificial intelligence faces several challenges in distance education, the most important of which are:

- **Lack of knowledge and training:** Lack of knowledge of technological techniques and the basics of automated learning poses a major challenge to the success of interaction between the learner and teacher and receiving educational content, and thus the failure of distance education.
- **Weak infrastructure:** If the technical infrastructure is not available (Ismail, Muhterem, Hanni, & Sanna, 2022) and equipped to use distance education, then artificial intelligence techniques cannot do anything, because the technical infrastructure and the availability of the Internet are a basic condition for the process of distance education to take place after. If this structure is not available in high quality, it will affect the level of adoption of artificial intelligence.
- **Data privacy and security:** The problem is determined by the extent to which artificial intelligence systems are able to protect the privacy of the learner and teacher, as artificial intelligence systems collect and process their data, and therefore any violation of this privacy affects the distance education process. In addition, "weak data quality leads to inaccurate or biased results, and lack of data leads to the inability to predict accurate results" (Abdulaziz, Abdel Magid, & Khalifa, 2023).
- **Ethics of using artificial intelligence**: Despite the positive aspects of artificial intelligence in distance education, it has risks related to ethical issues, most notably privacy, monitoring students' thoughts through learning applications, which reduces the ability to control their learning because algorithms predict their actions based on inputs and thus reduce independence, in addition to the risk of bias, plagiarism (Patricia & Joan, 2024).

**Implications for St. Mary's University**

AI advancements may present challenges to institutions that lack the staffing or other resources required to explore and take advantage of these developments. Smaller institutions, in particular, often need to take a different approach to considering and implementing AI tools than do colleges and universities that serve tens of thousands of students. Smaller

institutions tend to focus on personalized approaches to educational experiences. As a result, they may initially shy away from embracing AI—seeing it as something that potentially conflicts with their core approaches. Many smaller institutions don't have the depth or breadth of resources that larger institutions do, and AI can help provide efficiency and enhance their personalized, human approaches.

The following activities can help smaller institutions better understand AI and lay a solid foundation that will allow them to benefit from it (Weil & Forrester, 2024).

**Foundational Work**

- Understand the impact. Consider how AI will affect the college or university.
- Understand the different types of AI tools. There are broad categories of AI tools.
- Focus on institutional data and knowledge repositories. The importance of good, clean data and knowledge repositories, effective data governance practices, and an efficient, effective technical data infrastructure can't be overstated.

**Fundamental Activities for Exploring and Implementing AI**

- Coordinating: A point person/unit to help shepherd AI-related efforts
- Learning: Conduct a survey, organize workshops, and create dedicated spaces. Host a symposium.
- Planning and Governing: Establishing formal structures and processes.
- Implementing: Despite these challenges, smaller institutions can follow a variety of pathways to succeed. Example: Utilizing General AI and Embedded AI Tools to Improve Efficiency and Services; Custom AI Solutions That Use Institutional Data
- Reviewing and Refining: Continually reviewing and refining approaches for implementing and using AI is important.

Smaller institutions do not need to fear being left behind in the wake of rapid advancements in AI technologies and tools. By thinking intentionally about how AI will impact the institution, becoming familiar with the different types of AI tools, and establishing a strong data and analytics infrastructure, institutions can establish the groundwork for AI success. The five fundamental activities of coordinating, learning, planning and governing, implementing, and reviewing and refining can help smaller institutions make progress on their journey to use AI tools to gain efficiencies and improve students' experiences and outcomes while keeping true to their institutional missions and values.

**Conclusion**

Several researches reveal that the use of AI in learning is predicted to positively impact the ability to deliver unique teaching tools that will teach the students, as well as their learning styles and speed. Learner-centered education manifests in the choice of the content, mode of tests and quizzes, and ways of providing the feedback, and it may become the new frontier of

the delivery of education. Third, there are expectations of the significant enhancements in terms of administrative effectiveness that would release educators from operational work and ensure they spend more time with students. In terms of accessibility and inclusiveness in learning, there are possibilities where AI is used, which was underscored with such features as real-time translation and intelligent interfaces that make learning easier for various subgroups of learners. However, some works revealed key ethical implications and operationalization concerns. Data privacy, risk bias in AI systems, personalization, and some elements of human touch in the learning were perceived as key concerns. It is crucial to develop a rational approach and consider the need to include such ethical issues as applying an effective approach in learning management while sparing the human aspects of communication.

## References


Abdulaziz, A., Abdel Magid, H., & Khalifa, A.-K. N. (2023). Re-thinking data strategy and integration for artificial intelligence: Concepts, opportunities, and challenges. *Applied Sciences, 12*(13), 1–33. https://doi.org/10.3390/app13127082

Anderson, P., Arthur, B., Ruan, C., Fred, F., Yi-Shan, T., Dragan, G., & Rafael, F. (2021). Automatic feedback in online learning environments: A systematic literature review. *Computers and Education: Artificial Intelligence, 2*, 1–17.

Chen, X., & Wang, X. (2020). AI in open and distance learning: Opportunities and challenges. *Journal of Educational Technology & Society, 23*(3), 1–11.

Changling, P., Xuanyu, Z., & Shuai, L. (2022). An introduction to artificial intelligence and machine learning for online education. *Mobile Networks and Applications, 27*, 1147–1150. https://doi.org/10.1007/s11036-022-01953

Commonwealth of Learning (COL). (2023). *Open and distance learning: Key terms and definitions*. https://asis.col.org/entities/publication/7dc20f7c-4901-433a-90f1-6274f5ce5 3dd (asis.col.org in Bing)

Gill, P. (2008). Methods of data collection in qualitative research: Interviews and focus groups. *British Dental Journal, 204*, 291–295. https://doi.org/10.1038/bdj.2008.192

Government of India. (2017). *Department of Higher Education, Ministry of Education*. https://www.education.gov.in/en/distance-learning

Gulnora, J., Farida, A., & Sayidolim, I. (2022, December 15–22). The state-of-the-art applications of artificial intelligence in distance education: A systematic mapping study. *Proceedings of the 6th International Conference on Future Networks & Distributed Systems*. Uzbekistan: ACM. https://doi.org/10.1145/3584202.3584292

Holmes, W., & Tuomi, I. (2021). The ethics of AI in education: Practices, challenges, and prospects. *AI & Society, 36*, 543–554.

Ismail, C., Muhterem, D., Hanni, M., & Sanna, J. (2022). The promises and challenges of artificial intelligence for teachers: A systematic review of research. *TechTrends, 66*, 616–630. https://doi.org/10.1007/s11528-022-00715-y

Kyoungwon, S., Joice, T., Ido, R., Sidney, F., & Dongwook, Y. (2021). The impact of artificial intelligence on learner–instructor interaction in online learning. *International Journal of Educational Technology in Higher Education, 18*(54), 23–44. https://doi.org/10.1186/s41239-021-00292-9

Magdalena, G., Magdalena, O., & Klaudia, P. (2023). The influence of emerging technologies on distance education. *Electronics, 12*(7), 1–29.

Moumita, G., & Thirugnanam, A. (2021). Introduction to artificial intelligence. In *Artificial intelligence for information management: A healthcare perspective*. Springer Singapore. https://doi.org/10.1007/978-981-16-0415-7_2

Patricia, F., & Joan, T. (2024). The future of lifelong learning: The role of artificial intelligence and distance education. In *Lifelong learning – Education for the future*. IntechOpen. https://doi.org/10.5772/intechopen.114120 (doi.org in Bing)

Pratt, M. K. (2025). Advantages and disadvantages of AI explained. https://www.techtarget.com/ contributor/ Mary-K-Pratt

Rahman, S., Wajdi, A., Furqan, R., Ernesto, L., Arif, M., & Gyu, S. (2023). Role of artificial intelligence in online education: A systematic mapping study. *IEEE Access, 11*, 52570–52584. https://doi.org/10.1109/ACCESS.2023.3278590

Saverino, D. (2007). Soluble CTLA-4 in autoimmune thyroid diseases: Relationship with clinical status and possible role in the immune response dysregulation. *Journal of Autoimmunity, 28*(1), 1–7. https://www.sciencedirect.com/science/article/abs/pii/S152166 160700006X (sciencedirect.com in Bing)

Sdenka Zobeida, S.-P., Kejiang, X., & Xinyun, H. (2023). Artificial intelligence and learning analytics in teacher education: A systematic review. *Education Sciences, 12*(8), 1–18. https://doi.org/10.3390/educsci12080569

Suresh, N., Rajprasath, R., Elantamilan, D., & Arghya, D. (2023). Artificial intelligence: Revolutionizing the field of medical education. *Cureus, 15*(11), 1–9. https://doi.org/10.7759/cureus.49604

University Canada West. (2025). Advantages and disadvantages of AI in education. https://www.ucanwest.ca/blog/education-careers-tips/advantages-and-disadvantages-of-ai-in-education

University of Namibia. (2019). Monitoring and reflecting on the impact of quality assurance through action research: The case of CODel at the University of Namibia. https://unevoc.unesco.org/home/TVETipedia+Glossary/lang=e/show=term/term=Open+and+distance+learning

Weil, D., & Forrester, J. (2024). A road map for leveraging AI at a smaller institution. https://er.educause.edu/articles/2024/10/a-road-map-for-leveraging-ai-at-a-smaller-institution

Yasenai, F., et al. (2024). Use of artificial intelligence (AI) in open and distance learning (ODL) institutions: Opportunities, challenges, and the way forward. *International Islamic University, Islamabad*.

# Unraveling Leaders' Self-Efficacy Effect on Customer Satisfaction: Using Gender as a Moderator and Employee Job Satisfaction and Organizational Citizenship Behavior as Mediators in Hotel Industry

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## Introduction

Customer satisfaction is a critical issue in the hotel industry, which heavily relies on providing excellent service and positive experiences to retain clients and maintain competitiveness. The aim of this research is to investigate the relationship between leaders' self-efficacy, leaders' commitment, and customer satisfaction within the hotel sector. This study seeks to understand how a leaders' self-efficacy, leaders' commitment moderated with leaders gender, along with mediating factors such as employee job satisfaction, and organizational citizenship behaviors (OCB), influences customer satisfaction.

## Background of the Study

Customer satisfaction remains a critical challenge in the hotel industry, as it involves diverse and extensive service delivery including catering, accommodation, entertainment, gym, spa, and other services. Providing excellent service that results in positive guest experiences is an undebatable task of the industry. The complexity of achieving customer satisfaction is heightened by the nature of the service industry, where intangible goods—services—are characterized by heterogeneity, perishability, and intangibility. This makes the task of ensuring consistent customer satisfaction particularly difficult, as customers' perceptions of the same service can vary based on individual attitudes, beliefs, and personalities.

Gender diversity in leadership is increasingly relevant in the hotel industry. Understanding how gender impacts leadership characteristics is crucial for fostering inclusive environments and maximizing organizational effectiveness. Research suggests that gender influences leaders' self- efficacy—their confidence in their ability to lead effectively—as well as their commitment to their leadership roles (Eagly & Karau, 2002; Eagly & Johnson, 1990). Societal expectations and cultural norms often shape individuals' perceptions of their capabilities, leading to differences in confidence levels between genders (Bandura, 1997).

Gender also influences leadership behaviors and approaches. Studies have shown that female leaders may adopt participative and collaborative styles, prioritizing relationship-building and inclusivity, while male leaders may lean towards directive and authoritative approaches (Powell & Butterfield, 1984). These differences underscore the complexity of leadership dynamics and highlight the need to examine how gender influences leadership effectiveness and organizational outcomes.

The hotel industry is characterized by subpar working conditions, job instability, low wages, and demanding hours, which discourage individuals from envisioning a fulfilling, long-term career (Poulston, 2009; Mooney et al., 2017). Despite some exceptions where successful

careers are forged (Mkono, 2010), the industry struggles with an image problem, hindering its ability to attract and retain high-quality talent (Mooney & Jameson, 2018).

Leadership is the linchpin that steers organizations towards their goals. Effective leaders in the hotel industry inspire, motivate, and empower employees to deliver exceptional guest experiences. Leaders set clear expectations, provide guidance, and offer support, fostering a culture of excellence. The influence of gender on leadership behaviors, shaped by societal expectations, cultural norms, and personal experiences, is evident (Eagly & Johnson, 1990). Female leaders often adopt participative and collaborative styles, while male leaders may prefer directive and authoritative approaches.

Elevated leader self-efficacy (LSE) leads to improved performance and increased commitment to leadership roles, creating a positive spiral of success (Paglis, 2010; Quigley, 2013). Effective leadership, empowered by a strong sense of self-efficacy, becomes instrumental in challenging and transforming gender disparities (Bandura, 1997; Hoyt, 2005). Leaders' commitment to overarching goals significantly influences organizational performance and employee engagement (Babakus et al., 2003; Cascio et al., 2010).

Job satisfaction (JS) is a pivotal factor in fostering organizational citizenship behavior (OCB). Satisfied employees are more likely to exceed expectations, positively influence their peers, and speak favorably of the organization (Foote & Li-Ping Tang, 2008; Zeinabadi & Salehi, 2011). OCB, which encompasses discretionary actions that contribute to an organization's effective functioning beyond official job responsibilities, significantly impacts team, organizational, and individual performance (Organ, 1988; Kumar et al., 2009).

Customer satisfaction is a critical indicator of success in the hotel industry, directly impacting profitability and customer loyalty (Johnson & Fornell, 1991). The complexity of delivering customer satisfaction is heightened in service encounters, where intangible factors like service quality, employee behavior, and leadership play significant roles. Positive interactions with employees are essential in shaping customers' perceptions of service quality, making it imperative for leaders to cultivate a motivated and satisfied workforce (Kim et al., 2004). Positive interactions with customers contribute to gaining loyal customers, a significant asset for businesses (Aydinli & Demir, 2019). Consistent customer satisfaction leads to increased profit margins and customer retention rates (Lee et al., 2021; Slack & Singh, 2020).

Achieving customer satisfaction is complex, especially when dealing with intangible goods like services. Each customer's perspective on a service is shaped by their individual attitudes, beliefs, and personalities, resulting in varied perceptions (Salam & Farooq, 2020). The hotel industry faces fierce competition, making it imperative for service companies to understand and meet evolving customer expectations to stand out (Kim et al., 2004).

Conducting a customer satisfaction assessment in Ethiopia's hotel industry is strategically justified. The growing importance of the hospitality sector in Ethiopia, actively promoted as a tourist destination by the government, underscores the need to enhance customer satisfaction

(World Travel & Tourism Council, 2020). In this case, understanding the factors that influence customer satisfaction, including the role of leaders' gender and other attributes together with employee-related behavior, is crucial for the industry's development.

This research aims to deepen the understanding of how leaders' self-efficacy and commitment moderated by leaders gender influence customer satisfaction in the hotel industry. By examining the mediating effects of employee job satisfaction and OCB, the study seeks to provide actionable insights for hotel organizations to enhance service quality and foster inclusive leadership practices. The findings will contribute to creating environments where both employees and customers feel valued and respected, ultimately driving organizational success.

**Statement of the Problem**

The hotel industry, a vital component of the global and local economy, is highly dependent on customer satisfaction, which directly influences a hotel's reputation, profitability, and long-term success. In this context, leadership plays a critical role in shaping customer experiences, with factors such as leaders' commitment, self-efficacy, and the resultant employee behaviors—job satisfaction and organizational citizenship behavior (OCB)—acting as key determinants of customer satisfaction (Tsai et al., 2017; Karatepe, 2013). However, the influence of gender on this leadership attributes and their subsequent impact on customer satisfaction and employees' behavior needs attention from researchers.

Research has consistently shown that men often rate themselves as better leaders than women, a perception likely influenced by societal expectations and gender stereotypes (Paustian-Underdahl et al., 2014). This gendered perception of leadership can impact leadership self-efficacy (LSE), with women potentially underestimating their leadership abilities due to these biases (Foti et al., 2012; Lipka, 2008). Moreover, studies indicate that men tend to overrate their leadership abilities compared to evaluations by others, while women are generally more accurate in their self-assessments, often receiving higher ratings from others (Vecchio & Anderson, 2009; Paustian-Underdahl et al., 2014).

The existing literature on gender and leadership efficacy predominantly focuses on academic and corporate settings, leaving a significant gap in understanding these dynamics within the hotel industry (Abate et al., 2023). This gap is particularly pronounced in Ethiopia, where the impact of gender on leadership effectiveness and its subsequent influence on customer satisfaction remains underexplored. Addressing this gap is crucial, as the hospitality sector operates under conditions distinct from other industries, requiring research tailored to its specific challenges and opportunities (Girma & Antonites, 2021).

Furthermore, the relationship between leadership, employee satisfaction, and customer satisfaction in the industry warrants closer examination. Studies suggest that employee satisfaction is positively correlated with service quality, especially in upscale hotels (Rahman et al., 2015; Singh et al., 2016). However, the impact of job satisfaction on customer

satisfaction, particularly within 1–5-star hotels in Ethiopia, remains insufficiently explored (Beyene et al., 2020).

Moreover, existing research highlights the importance of organizational citizenship behavior and its role in exceeding customer expectations (Beyene et al., 2020). Yet, the current body of literature on leadership within the Ethiopian hotel industry lacks a comprehensive examination of how gender dynamics intersect with leadership self-efficacy, commitment, and organizational citizenship behaviors to influence customer satisfaction and overall organizational performance.

The potential for gender to shape leaders' commitment, self-efficacy, and their ability to foster positive employee outcomes, such as job satisfaction and OCB, and ultimately influence customer satisfaction, presents a critical yet understudied area. This study seeks to address the following gaps.

- Existing research primarily focuses on gender differences in leadership across various industries, with insufficient attention to the specific context of the hospitality industry, where customer service is paramount (Yagil, 2002). There is a need to explore how gender influences leadership effectiveness in this unique sector.
- While the impact of leadership on customer satisfaction through direct interactions is well-documented, the mediating roles of employee job satisfaction and OCB in this relationship, particularly through the lens of gender, require further investigation (Karatepe & Kilic, 2007; Walsh et al., 2010).
- Cross-cultural perspectives need attention: Much of the research on gender and leadership is rooted in Western contexts, leaving a gap in understanding these dynamics in non-Western settings such as Ethiopia's growing hospitality industry (Elamin & Omair, 2010).

Thus, the rationale to carry out this study is underscored by the rapid growth of the hotel sector in Ethiopia, driven by increasing tourism and international business activities. As competition intensifies, hotels must leverage every potential advantage to enhance customer satisfaction. Understanding the moderating impact of gender on leadership effectiveness and how it indirectly shapes customer satisfaction through employee outcomes is crucial for developing gender-inclusive leadership strategies that optimize customer experiences. Additionally, addressing these research gaps can provide pragmatic insights for the hotel industry to better manage human resources and improve service quality in a culturally sensitive manner, thereby fostering sustainable growth and competitiveness.

In sum, existing literature highlights that leadership attributes significantly affect organizational outcomes, including customer satisfaction (Wang, Tsai, & Huang, 2013). However, there is a paucity of research examining how these effects are moderated by the gender of leaders. Gender-related differences in leadership styles and their implications for employee and customer outcomes have been documented (Eagly & Carli, 2003; Koenig et al., 2011), but their direct impact on customer satisfaction through leadership commitment and self-efficacy, and their subsequent influence on employees' job satisfaction and OCB, remain

largely unexplored. Hence, to respond to these gaps and to add to the existing stock of knowledge by exploring the direct and indirect relationships, the following research questions are formulated.

**Research Questions**

Based on the identified gaps that are explained in the previous section, this study outlines the following research questions:

1. Are there statistically significant differences in leadership commitment and leadership self-efficacy between male and female leaders?
2. What are the strengths and directions of the relationships among leadership self-efficacy, leadership commitment, leader's gender, employees' job satisfaction, organizational citizenship behavior (OCB), and customer satisfaction?
3. What are the combined and individual effects of leadership commitment, leadership self-efficacy, employees' job satisfaction, and organizational citizenship behavior (OCB) on customer satisfaction?
4. To what extent does the leaders' gender moderate the effects of self-efficacy on job satisfaction and leaders' commitment on employees' OCB?
5. Do leader's commitment, employees' job satisfaction, and OCB significantly mediate the effects of self-efficacy on customer satisfaction? If so, which of these variables have the strongest and most statistically significant meditational effects in the relationship between leaders' self-efficacy and customer satisfaction?
6. What are the direct, indirect, and total effects of leaders' self-efficacy, leadership commitment, employees' job satisfaction, and organizational citizenship behavior (OCB) on customer satisfaction?

**Objective of the Study**

In the following section, the research general and specific objective are presented.

**General objective**

The general objective of the study is to empirically explore the impact of leaders' self-efficacy and commitment on customer satisfaction, considering the moderating roles of leader's gender and the mediating roles of employees' job satisfaction, and organizational citizenship behavior.

**Specific objective**

**The study specifically**

- Determined whether statistically significant differences exist in leadership commitment and leadership self-efficacy between male and female leaders.
- Analyzed the strengths and directions of the relationships among leadership

self-efficacy, leadership commitment, leaders' gender, employees' job satisfaction, organizational citizenship behavior (OCB), and customer satisfaction.

- Evaluated the combined and individual effects of leadership commitment, leadership self-efficacy, employees' job satisfaction, and OCB on customer satisfaction.
- Assessed the moderating role of leaders' gender on the relationship between self-efficacy and job satisfaction, and between leadership commitment and employees' OCB.
- Investigated the mediating effects of leadership commitment, employees' job satisfaction, and OCB on the relationship between leaders' self-efficacy, and customer satisfaction, and identified which mediators exerted the strongest effects.
- Examined the direct, indirect, and total effects of leaders' self-efficacy, leadership commitment, employees' job satisfaction, and OCB on customer satisfaction.

**Significance of the Research**

This research aims to address a gap in the literature by exploring leadership dynamics within Ethiopian hotels, specifically in Addis Ababa. It examines how gender-related issues moderate the relationship between leadership attributes and employee attributes and customer satisfaction, providing insights tailored to the Ethiopian hospitality context. Existing research, often based on Western contexts, may not fully capture the cultural nuances and organizational structures unique to Ethiopia, necessitating a context-specific exploration.

The study seeks to develop a comprehensive framework integrating self-efficacy, commitment, employee attitudes, and customer satisfaction within the Ethiopian hotel industry. By incorporating gender as a critical variable, this research contributes to and advances leadership theories, particularly in the context of Ethiopia. The findings aim to provide empirical data on how gender moderates leadership traits and employee attributes and their downstream impact on organizational outcomes.

The study's findings are expected to offer practical insights for hotel managers, policymakers, and leaders in Ethiopia. By understanding the gendered dynamics of leadership and their impact on employee and customer satisfaction, stakeholders can develop targeted measures to enhance organizational performance. The research aims to guide industry practices, promoting gender diversity and effective leadership in the Ethiopian hotel sector.

The study lays the groundwork for future research by encouraging further exploration of leadership dynamics in hospitality and other similar cultural contexts. It aims to inspire scholars to delve deeper into the complexities of hospitality leadership and refine theoretical frameworks applicable beyond Ethiopia.

In conclusion, this study seeks to fill a significant gap in the literature by providing a comprehensive understanding of the gendered dynamics of leadership and their implications for customer satisfaction in Ethiopian hotels. This research contributes both to academic knowledge and practical applications in the field.

## Scope of the Study

This study is focused on examining the effect of self-efficacy on employee job satisfaction and leaders' commitment using gender as a moderator variable. Moreover, the study will investigate the mediating roles of leaders' commitment, employees' job satisfaction, and OCB in the relationship between leaders' self-efficacy and customer satisfaction within the Ethiopian hotel industry, specifically how these dynamics impact customer satisfaction. Geographically, the research is in 1–5-star hotels located in Addis Ababa. The study will explore specific leadership attributes such as self-efficacy and commitment, emphasizing the differences between male and female leaders within this context. Additionally, it will investigate how these leadership attributes affect employee job satisfaction and organizational citizenship behaviors, further exploring how the gender of leaders moderates the attitudes and behaviors of employees in these hotels.

A key component of this study involves examining the relationship between employee attitudes and customer satisfaction, providing a comprehensive understanding of how variations in leadership and employee satisfaction impact customer experiences in Ethiopian hotels. The research will also assess the broader impact on organizational performance, particularly focusing on customer satisfaction. The study will utilize quantitative surveys within a specific time frame, drawing from carefully selected samples of hotels, employees, and customers to ensure diversity and representativeness within the unique context of the Ethiopian hotel industry. Ethical considerations, including informed consent, confidentiality, and adherence to ethical guidelines, will be rigorously followed. The study aims to offer a detailed and nuanced analysis of gender dynamics in leadership and their implications for customer satisfaction within the Ethiopian hotel sector.

- **Potential Limitation of the Study**

Several factors could limit the findings of this study. First, the sample size and representativeness of the selected hotels, executives, staff, and customers may constrain the scope of insights. Selection bias may also limit the representativeness of the sample. Additionally, the study's focus on the Ethiopian hotel industry means that its conclusions may not be fully applicable to other contexts or industries. Cultural norms, organizational structures, and consumer preferences specific to the Ethiopian hospitality sector may limit the generalizability of the findings beyond this setting.

The reliance on quantitative surveys as the primary data collection method may limit the depth of insights gained. Qualitative methods, such as interviews or focus groups, could provide a more nuanced understanding of gender dynamics in leadership and organizational success. Moreover, the use of self-reported variables may introduce measurement and social desirability biases, where participants may respond in ways they perceive as socially acceptable rather than reflecting their true beliefs and behaviors. The cross-sectional nature of the data also limits the study's ability to establish causal relationships. Longitudinal research or experimental designs would provide more robust evidence of causality. Finally, ethical

challenges, such as obtaining informed consent, maintaining confidentiality, and protecting participant privacy, may arise, especially in contexts where cultural norms and organizational hierarchies influence participants' willingness to participate or provide honest responses.

## Organization of the Study

This dissertation is organized as follows:

1. **Chapter 1:** Presents the introduction of the paper, which discusses the major intent of the problem, the research questions, its objectives, and the significance of the study.
2. **Chapter 2:** A thorough review of the relevant literature on gender, leadership commitment, leaders' self-efficacy, employees' job satisfaction, organizational citizenship behavior, and customer satisfaction.
3. **Chapter 3:** Presentation of the theoretical framework and research model tested in this dissertation, drawing together evidence to support the study's hypotheses.
4. **Chapter 4:** Explanation of the data collection and measurement methods, along with the statistical techniques used in the analysis.
5. **Chapter 5:** Discussion of the study's results, including descriptive and inferential statistics.

## Summary

This chapter serves as an introduction to the dissertation titled "Unraveling leaders' self-efficacy effect on customer satisfaction: using gender as a moderator and employee job satisfaction and organizational citizenship behavior as a mediators in hotel industry" It begins by discussing the background of gender and its moderating influence on leadership-related variables such as commitment and self-efficacy, and their effects on employee-related variables like job satisfaction and organizational commitment, ultimately affecting customer satisfaction. The chapter outlines the problem statement, highlighting the research gaps and the motivation for the study. It also presents the research questions, objectives, significance, scope of the study, and a brief structure of the dissertation. The conceptual literature and underlying theories will be discussed in the next chapter.

## Literature Review

This chapter delves into the key conceptual foundations and theoretical frameworks pertinent to the study. It focuses on the independent variable (gender), the dependent variable (customer satisfaction), and the mediator variables (leaders' self-efficacy, leaders' commitment, employee job satisfaction, and employee organizational citizenship behavior). The objective is to comprehend how gendered leadership dynamics influence customer satisfaction in the Ethiopian hotel industry. The subsequent sections present the literature on each of these variables and their interactions.

- **Customer Satisfaction**

Customer satisfaction is a pivotal concept in service industries, reflecting the subjective evaluation of service performance against customer expectations (Kotler & Keller, 2016). This evaluative process determines satisfaction levels, ranging from dissatisfaction to delight, based on whether service performance meets or exceeds expectations (Elvira & Shpetim, 2016; Khan et al., 2017; Farooq et al., 2018).

The significance of customer satisfaction is highlighted by its impact on organizational performance, including customer loyalty and financial outcomes (Kotler & Keller, 2016). Highly satisfied customers exhibit loyalty, positive word-of-mouth, and reduced-price sensitivity, all contributing to improved organizational performance (Zhan & Pan, 2009). However, achieving high customer satisfaction is not always straightforward. Critics argue that significant investments in customer satisfaction may not always yield proportional financial returns (Crotts et al., 2009), and the relationship between customer satisfaction and overall performance may be complex (Anderson, Fornell, & Rust, 2001).

The SERVQUAL model, developed by Parasuraman et al. (1985, 1988, 1991), is a widely recognized framework for assessing service quality. It includes five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. SERVQUAL measures the gap between customer expectations and perceptions of service performance, with a larger positive gap indicating higher service quality (Parasuraman et al., 1985). Despite its widespread use, SERVQUAL has faced criticism for its conceptualization of expectations and measurement reliability (Babakus & Boller, 1992; Brown et al., 1993).

An extension of SERVQUAL, the ECOSERVE model, introduces eco-tangible dimensions specific to ecotourism contexts (Khan, 2002). ECOSERVE includes eco-tangibles alongside traditional SERVQUAL dimensions to address the environmental concerns of ecotourists. This model highlights the importance of environmental considerations in service quality assessments and has been validated in different cultural contexts (Khan & Kang Duck, 2005).

Overall, customer satisfaction is a multifaceted construct influenced by service quality dimensions and organizational strategies. Understanding these dynamics is crucial for assessing the impact of leadership gender on customer satisfaction.

- **Job Satisfaction**

Job satisfaction, which is a vital component of human resource management, encompasses employees' emotional responses to their work and work environment. Defined by Locke (1969) as a positive emotional state resulting from work fulfillment and alignment with personal values, job satisfaction is influenced by various factors, including working conditions, pay, job security, and personal expectations (Mora & Ferrer-i-Carbonell, 2009; Schneider & Snyder, 1975).

Job satisfaction can be viewed through multiple lenses: as an emotional response (Spector, 1997; Ellickson & Logsdon, 2002), a state of mind (McNamara, 1999), or an amalgamation

of cognitive and affective reactions (Greenberg & Baron, 1995). Cherrington (1994) distinguishes between facet satisfaction (specific job aspects) and overall satisfaction, while recent research emphasizes the importance of both individual and collective perspectives on job satisfaction (Mason & Griffin, 2002; Andersen, Domsch, & Cascorbi, 2007).

In the hotel industry, job satisfaction is influenced by wages, job position, promotion opportunities, and training provisions (Santa Cruz, Lopez-Guzman, & Canizares, 2014; Lam, Zhang, & Baum, 2001). Studies indicate varying levels of satisfaction across different regions, with employees in some areas reporting moderate satisfaction and dissatisfaction in others (Gallardo et al., 2010; Bai et al., 2006). The complex interplay of these factors highlights the need for industry-specific investigations to understand job satisfaction comprehensively.

The role of leadership in shaping job satisfaction is significant. Leadership attributes such as behavior, self-efficacy, and commitment are hypothesized to impact employee job satisfaction, potentially influencing other factors like pay and job position. However, the relationship between leadership and job satisfaction is complex, with mixed findings suggesting the need for further exploration (Lee & Way, 2010; Santa Cruz et al., 2014).

- **Level Of Employee Job Satisfaction In The Hotel Industry**

Job satisfaction within the hotel industry is shaped by various factors, including wages, job roles, and training opportunities (Gallardo et al., 2010; Rahman & Sanzi, 1995). Studies in different regions reveal that while some employees express satisfaction with aspects such as salaries and job roles, others report dissatisfaction, particularly with remuneration (Santa Cruz et al., 2014; Bai et al., 2006). This variability underscores the importance of context-specific research to understand job satisfaction in the hotel industry.

This study will focus on how leadership attributes influence job satisfaction, considering that leadership plays a central role in creating a positive work environment. Understanding the complex relationship between leadership and job satisfaction will provide insights into how leadership gender affects employee satisfaction and organizational outcomes.

In sum, the literature highlights the multifaceted nature of customer satisfaction and job satisfaction, influenced by various factors including service quality, leadership, and working conditions. Customer satisfaction is crucial for organizational performance and is assessed through models like SERVQUAL and ECOSERVE, which address different dimensions of service quality. Job satisfaction is shaped by numerous factors and varies across industries, with leadership attributes playing a significant role. This study aims to investigate how leadership gender influences customer satisfaction through its impact on job satisfaction and other mediator variables.

**Organizational Citizenship Behavior (OCB)**

The concept of organizational citizenship behavior (OCB) has its roots in the early work of

Barnard (1938), who highlighted the importance of cooperative efforts for the effective functioning of organizations. Barnard argued that an individual's willingness to engage in spontaneous and cooperative actions is essential for achieving organizational objectives. Building on this foundational idea, scholars such as Katz (1964), Bateman and Organ (1983), and Organ (1997) emphasized the significance of individual contributions that go beyond the basic functional requirements, underscoring the necessity of fostering behaviors that enhance organizational vitality. Katz and Kahn (1966) further elaborated on this by stressing the importance of "innovative and spontaneous behavior," which involves performing beyond role expectations to fulfill organizational functions. Such behaviors, they argued, are critical for maintaining a robust organizational structure by promoting a positive work climate, proposing improvements, and engaging in cooperative actions.

Over time, OCB has evolved into a pivotal framework, characterized by voluntary individual actions that support an organization's optimal functioning without being explicitly recognized by the formal reward system (Organ, 1997). Researchers have been particularly interested in OCB because of its role in fostering motivated individuals whose actions align with both short- and long-term organizational goals. These behaviors, which often exceed conventional job descriptions, reflect an employee's commitment to going above and beyond to achieve both personal and organizational objectives.

Recent studies by Nelvitia (2020), Sartika (2020), and Vizano (2020) have continued to explore the development of OCB, especially in service-oriented industries where human resources play a critical role in operations ranging from product sales to customer service. In such environments, merely fulfilling designated duties may not suffice, and OCB becomes crucial in managing the complex demands of daily tasks. Researchers like Nico (2020), Yunita (2020), Purwanto (2020), and Ardi (2020) have also highlighted the profound impact of OCB on organizational success, noting its importance in creating an environment where employees, such as teachers, can work more efficiently even under increased workloads or time constraints.

However, despite its recognized value, challenges persist in promoting OCB, particularly in settings where employees may deviate from rules, engage in non-work-related activities, or show reluctance to assist colleagues. These challenges can often be traced back to individual differences in experience, knowledge, training, and awareness of work attitudes. Addressing these challenges requires a deep understanding of the dynamics within the organizational framework and a concerted effort to cultivate a culture that promotes OCB.

**The Importance of OCB in the Hospitality Industry**

The significance of OCB is especially pronounced in the hotel industry, where numerous studies have underscored its critical role. The evolving nature of OCB within the professionalism of the hotel and tourism sectors has been well-documented (Baum, 1989; Paraskevas, 2001; Torres and Kline, 2013). This recognition has positioned OCB as a key factor in establishing a positive relationship between individual behaviors and the

organization's societal role in executing successful strategies and gaining a competitive advantage. In the hotel sector, OCB fosters an environment where employees and organizations extend support beyond their prescribed duties, contributing to workplace innovation and enhancing service delivery (Danaei and Iranbakhsh, 2016).

OCB has been identified as a predictor of organizational success, contributing to improved overall performance (Fisher et al., 2010) and increased customer satisfaction (Podsakoff et al., 2009). The consensus among scholars is that OCB is a catalyst for boosting employee effectiveness and organizational performance, making it an indispensable aspect of the workplace (Ariani, 2013; Husin et al., 2012).

The growing importance of OCB is reflected in the expansive literature on organizational behavior (Tang and Ibrahim, 1998; LePine et al., 2002; Kasa and Hassan, 2015). Positioned as a fundamental aspect of enhancing organizational performance and effectiveness, OCB plays a central role in psychology and management studies. In the hotel industry, OCB is essential for employees to go beyond their formal job roles, contributing to organizational reputation through the consistent provision of voluntary, extra-role behaviors (Magnini et al., 2013). These behaviors not only improve service delivery but also foster a positive organizational culture, driving success in the competitive landscape of the hotel industry

**Dimensions of Organizational Citizenship Behavior**

Organ et al. (2006) systematically classified organizational citizenship behavior into five distinct dimensions: altruism, conscientiousness, civic virtue, courtesy, and sportsmanship, building on Organ's earlier work from 1988. Williams and Anderson (1991) further categorized OCB into two dimensions: OCB-I and OCB-O, both of which are characterized as pro-social behaviors that emphasize helping colleagues and fostering a positive organizational environment. The OCB-I (Interpersonal OCB) component involves altruism, which involves behaviors aimed at helping others in the workplace, such as assisting colleagues with their tasks or challenges; courtesy, which reflects behaviors that demonstrate respect and politeness in all interpersonal interactions, helping to prevent conflicts and maintain a harmonious work environment.

Williams and Anderson (1991) further stated that the second dimension, OCB-O (Organizational OCB), encompasses three specific dimensions that include sportsmanship, which refers to the ability of employees to refrain from complaining or expressing dissatisfaction over trivial matters, thereby promoting a cooperative and positive work atmosphere; civic virtue, which involves employees' participation in and contribution to the political or governance aspects of organizational life, reflecting a sense of responsibility toward the organization's affairs; and conscientiousness that reflects a behavior that exceeds basic job requirements, including high attendance rates, timely task completion, and a commitment to going beyond the expected norms. This was substantiated by recent researchers (Johansson & Hart, 2023; Muluken & Kenenisa 2024).

The categorization of these dimensions provides a comprehensive understanding of the multifaceted nature of OCB and its impact on organizational dynamics. Researchers like Bateman and Organ (1983), Organ (1997), and Smith et al. (1983) have suggested that engaging in OCB yields significant benefits for organizational functioning. These behaviors, by enhancing resource utilization efficiency and freeing up time for strategic tasks, can lead to improved productivity among colleagues. However, the empirical evidence establishing a direct link between OCBs and overall organizational effectiveness remains limited (Podsakoff et al., 1997; Karambayya, 1990; MacKenzie, Podsakoff, & Ahearne, 1996; MacKenzie, Podsakoff, & Fetter, 1991, 1993; Podsakoff, Ahearne, & MacKenzie, 1997; Johansson & Hart, 2023; Muluken & Kenenisa 2024).

While individual or unit-level performance is often narrowly defined compared to the broader spectrum of organizational success—which includes worker cohesion, quality, innovation, adaptability, and efficiency—the relationship between aggregate OCBs and overall organizational effectiveness is still underexplored. This gap in research is particularly significant given Organ's (1988) expansive definition of OCB. The diverse attributes of organizational effectiveness suggest that a deeper investigation into how OCBs contribute to organizational processes and resource access is warranted (Williams & Anderson, 1991; Johansson & Hart, 2023; Muluken & Kenenisa 2024).

In conclusion, the literature on organizational citizenship behavior highlights its critical role in organizational effectiveness, emphasizing its contribution to fostering a positive workplace culture and driving success. While the hotel industry has recognized the importance of OCB in enhancing customer satisfaction and overall performance, there is still a need for empirical research to establish a direct link between OCBs and organizational success. This dissertation aims to address this gap by investigating the relationship between OCB dimensions and customer satisfaction in the hotel industry, providing insights for strategic decision-making in organizational management (Williams & Anderson, 1991; Johansson & Hart, 2023; Muluken & Kenenisa 2024).

**Leadership Self-Efficacy**

Leadership self-efficacy (LSE) is a concept grounded in Bandura's Social Cognitive Theory, which centers on the belief in one's ability to lead effectively within an organizational context. Bandura (1995) describes this as the confidence that an individual can perform successfully in specific circumstances. Leadership self-efficacy extends beyond mere task performance, encompassing a cognitive and affective belief in one's competence and ability to influence within the organizational domain (Pajares, 2002). Fast and colleagues (2014) further define LSE as the assurance of being effective and influential in managerial roles.

The importance of LSE lies in its strong correlation with successful task performance, as demonstrated by Judge and Bono (2001), who emphasized the role of self-control in shaping one's actions. Jayawardena and Gregar (2013) argue that LSE empowers individuals to shape their identity and aspirations, impacting their behavior and decision-making. Paglis (2010)

supports this view, noting that self-efficacy positively affects the initiation, intensity, and persistence of behavior, making it a critical component of a leader's competence.

Leadership self-efficacy is also closely linked to a leader's values, responsibilities, and roles (Smith and Woodworth, 2012). The implicit associations between self-efficacy, self-worth, and decision-making processes are evident in studies by Burke and Stets (2009) and Razek and Coyner (2014). The impact of self-efficacy extends beyond individual satisfaction, influencing the broader organizational context. Lent (2004) suggests that individuals experience higher life satisfaction when they possess a strong sense of efficacy, which in turn contributes to their overall effectiveness within the organization

**Leadership Commitment**

Leadership commitment has been a central focus of scholarly inquiry, attracting the attention of researchers and practitioners across various disciplines. This literature review provides an overview of existing studies, examining the multifaceted dimensions of leadership commitment and its implications for organizational success, innovation, employee engagement, and strategic alignment.

Recent research highlights the significance of leadership commitment in fostering innovation and driving organizational change. Scholars like Kanai (1984) have emphasized the crucial role of commitment at both the project champion level and within top management, particularly in product development. The Ministry of Economy, Trade, and Industry of Japan (2012) also underscores the critical need for executives' commitment to sustain continuous innovation, positioning leadership commitment as a linchpin for organizational adaptability and evolution.

Leadership commitment also significantly influences employer branding, impacting an organization’s image and its attractiveness to potential employees. Vallaster and Chermatony (2005) emphasize that committed leaders play a vital role in shaping an organization’s image, contributing to employer branding efforts. This highlights the proactive role leaders can play in influencing how the organization is perceived in the labor market.

Strategic alignment, another outcome of leadership commitment, is crucial for linking organizational strategy with individual behaviors. Boswell (2006) found that white-collar employees who understand and align their behaviors with organizational strategies exhibit higher performance, job satisfaction, and commitment. Leadership commitment is thus pivotal in fostering strategic alignment within an organization.

Leadership commitment is a multifaceted concept applied in various contexts, such as organizational commitment, commitment to occupations, and policy decisions. Mayer and Herscovitch (2001) explored the interconnectedness of commitment to leadership and overall organizational performance, positioning leadership commitment as a key factor in shaping organizational culture and influencing outcomes.

The relationship between leadership commitment and organizational effectiveness has been extensively researched. Cascio et al. (2010) emphasize the integral role of committed leaders in creating environments conducive to organizational success. Kieu (2010) further correlates transformational and transactional leadership styles with year-over-year revenue growth and profits, demonstrating the tangible impact of leadership commitment on financial outcomes.

Recognizing the importance of retaining key employees, organizations view effective leadership as a critical factor influencing performance and employee engagement. Anitha (2013) highlights the central role of leadership in influencing employee performance, while Zhang et al. (2014) establish a link between effective leadership and heightened employee engagement.

Researchers classified commitment into different dimensions. Meyer and Allen's (1991) examination of scholarly definitions of organizational commitment led them to delineate three primary categories: affective commitment, continuance commitment, and normative commitment. Each category offers unique insights into the intricate nature of commitment within an organizational context.

As Battistelli et al. (2006) explain, affective commitment relates to the emotional connections and bonds employees form with their organization. This dimension is widely recognized as the cornerstone of organizational commitment, representing a fundamental aspect that goes beyond mere professional ties (Mercurio, 2015). The depth of emotional affiliation shapes leaders' sense of belonging and dedication to the organization.

According to Meyer and Allen (1991), continuance commitment emerges from the fear of loss. Employees considering leaving their current workplace often evaluate the potential consequences and losses. Gagne and Deci (2005) note that continuance commitment is not inherently self-determined but arises as a response to external constraints, emphasizing the role of perceived consequences in influencing commitment levels.

The third facet, normative commitment, is characterized by the moral obligation leaders feel toward their organizations. Meyer and Parfyonova (2010) identify two manifestations of normative commitment, where it surfaces as either a moral duty or a sense of gratitude. These dimensions significantly influence the work behavior of leaders, with those possessing a strong moral obligation more likely to remain dedicated to their organization.

In conclusion, the literature review explores the significance of leadership commitment across various dimensions and its implications for organizational success. It identifies the dimensions of leaders' commitment, including affective, continuance, and normative commitment, each offering unique insights into the complex nature of leaders' commitment, encompassing emotional bonds, perceptions of loss or gain, and moral obligations. However, limitations in the existing literature, such as a lack of comprehensive studies examining the direct relationship between leadership commitment and employee performance, present opportunities for further research.

**Leader's Gender**

Gender, which is a biological construct of individuals, shapes the differences between females and males, defining social roles and guiding individuals down specific paths (Thompson & Armato, 2012). This system extends beyond individual beliefs to include personality traits, cultural norms, and organizational management cultures. Gender also serves as a foundation for stratification, influencing the distribution of opportunities and constraints (Risman, 1998). Risman's "Gender as a Social Structure" theory highlights three interconnected levels of consequence associated with gender differentiation.

Moreover, Eagly & Wood (2016) argued, at the individual level, gender differentiation influences the development of gendered selves, encompassing internalized cognitive images of masculinity and femininity, as well as the socialization of gender roles and stereotypes. At the interactional level, gender roles and expected behavior are reinforced through relationships, where men and women may face disparate expectations despite holding identical structural positions. These expectations are shaped by status differences and the influence of in-group and out-group membership on behavior. Finally, at the institutional level, differentiation occurs through organizational structures that perpetuate gender differences via labor division, role hierarchies, and power structures. This institutional level maintains power and resources predominantly held by men, resulting in phenomena such as the wage gap, gender segregation by sectors and occupations, and the existence of glass ceilings (Risman, 1998).

In the context of this literature review on gender and leadership, Risman's model serves as a foundational framework for understanding women's participation in leading positions within the hotel industry. This model provides a holistic perspective by addressing gender dynamics at the individual, interactional, and institutional levels. The complexity and multifaceted nature of gender as a social structure align with the intricate challenges faced by women in work environments. Risman's model integrates various theoretical traditions, acknowledging the interconnected web linking gendered selves, cultural expectations, and institutional regulations. This multidimensional perspective allows for a nuanced exploration of gender-related issues in leadership roles, considering the broader context of gender dynamics (Eagly & Wood, 2016; Risman, 2004).

Moreover, the versatility of Risman's model extends beyond its application to gender and leadership, having been successfully employed in diverse contexts such as students' teaching ratings, migration studies, social change analyses, and investigations into high-tech firms (MacNell et al., 2015; Parrado & Flippen, 2014; Budgeon, 2014; Ridgeway, 2009). This extensive applicability underscores the depth and breadth of Risman's model in understanding gender dynamics across various economic and social activities, making it a valuable tool for examining and addressing gender disparities in leadership roles within the hotel industry and beyond.

Leader gender can influence employee satisfaction and engagement within an organization.

Research suggests that employees often perceive differences in leadership behaviors based on gender, impacting their job satisfaction and commitment (Koenig et al., 2011). A study by Stroh, Brett, & Reilly (1992) found that the gender of leaders can affect work attitudes and employees' willingness to go above and beyond their formal job responsibilities.

Despite progress, gender-related barriers and challenges persist in organizational leadership. Glass ceilings, unequal access to opportunities, and biased evaluation criteria continue to hinder women's progression to top leadership positions (Eagly & Carli, 2007). These challenges not only affect individual leaders but also contribute to a lack of diversity at the highest organizational levels, limiting the potential for varied perspectives and approaches.

In summary, the literature review explores the significance of gender in shaping social roles and opportunities, employing Risman's model to examine gender dynamics at individual, interactional, and institutional levels. This framework aids in understanding the challenges faced by women in hotel leadership roles, offering a nuanced perspective on gender-related issues. Additionally, the versatility of Risman's model highlights its applicability across various contexts beyond leadership studies. However, persistent gender barriers in organizational leadership, including glass ceilings and biased evaluation criteria, continue to hinder women's advancement to top positions, limiting diversity and varied perspectives in leadership. This dissertation aims to address these gaps by investigating how gender impacts leadership effectiveness in the hotel industry.

**Summary**

The literature review underscores the importance of promoting diversity and inclusivity to address gender disparities, which affect leadership roles and organizational structures. These disparities have implications for employee satisfaction, engagement, customer satisfaction, and overall organizational performance.

Leaders' self-efficacy emerges as a key determinant of effective leadership, influencing employee characteristics and organizational outcomes, while also shaping individual and collective perceptions of success. Additionally, leadership commitment is identified as a critical driver of innovation, organizational change, and strategic alignment, with nuanced dimensions shedding light on the complex interplay between leaders and organizational goals.

The review also explores job satisfaction among hotel employees as a significant factor influencing workforce morale, service quality, and customer experiences. Furthermore, organizational citizenship behavior (OCB) is discussed as essential, particularly in service-oriented industries, as it fosters employee engagement and contributes to organizational success through dimensions such as altruism, courtesy, and conscientiousness.

Moving forward, the review delves into pivotal concepts relevant to the study. It highlights customer satisfaction as crucial for businesses in the hotel sector, directly shaping customer

loyalty, word-of-mouth endorsements, and overall organizational performance. Understanding factors such as service quality, pricing strategies, and workplace interactions is essential for gauging and enhancing customer satisfaction levels.

Generally, the review highlights the interrelationships between these concepts within the hotel industry, offering insights into fostering positive work environments, enhancing customer satisfaction, and addressing limitations in empirical research by examining the combined effect of leaders' gender, commitment, and self-efficacy on employee satisfaction and organizational citizenship behavior.

## Theory and Hypotheses

This chapter explores the theoretical foundations underpinning the relationship between the independent variable (leaders' gender) and the dependent variable (customer satisfaction) using mediator variables (leadership self-efficacy, leadership commitment, employee OBC, and employee job satisfaction). Building on the literature review in Chapter Two, it outlines the research model and hypothesized relationships between these variables.

## Theoretical Background of the Study

As the research follows a positivist approach, it relies on theories and formulates hypotheses to verify the truth through measurement of the variables. To guide the research process, three theoretical foundations were chosen. These theories are social role theory, social exchange theory, and social cognitive theory. Social Role Theory was chosen because it explains why gender stereotypes might affect perceptions of competence and leadership suitability. Social Exchange Theory supports the idea that employee performance, including leadership effectiveness, can be influenced by reciprocal relationships and organizational support. Social Cognitive Theory provides a framework for understanding how observational learning and self-efficacy might affect leadership behaviors and customer interactions.

By integrating these theories, the study aims to provide a comprehensive understanding of how gender influences customer satisfaction in the hotel industry, considering both traditional stereotypes and the broader context of organizational and individual factors.

## Social Role Theory

Social Role Theory, proposed by Eagly (1987), examines how traditional gender roles have influenced expectations and behaviors. Historically, men have been associated with tasks outside the home, while women have been linked to domestic responsibilities. This division has shaped societal expectations and contributed to enduring stereotypes (Williams & Best, 1982). As a result, men and women have developed traits that align with these roles—men with characteristics of independence and assertiveness, and women with traits of communal behavior and expressiveness (Eagly & Wood, 1991). According to these researchers, the theory operates through two mechanisms:

- Socialization: Individuals develop traits and skills based on societal expectations imparted by authority figures like parents and teachers.
- Role Expectations: Gender roles can influence behavior directly through the expectations associated with them.

Social Role Theory also suggests that gender disparities are context-dependent and malleable. For example, leadership roles might diminish traditional gender stereotypes (Eagly & Johnson, 1990). Studies show that perceptions of parental roles also vary by gender, with fathers receiving less severe judgments compared to mothers (Fuegen et al., 2004; Hoobler et al., 2009).

The implication of social role theory is that people may question women's suitability for leadership roles due to prevailing stereotypes, which associate leadership with agentic traits traditionally attributed to men (Eagly et al., 1995; Peters et al., 2004). However, as women increasingly occupy authoritative positions, traditional gender roles are evolving (Diekman et al., 2004). Social Role Theory also highlights how defying gender norms can lead to negative evaluations, as agentic women may be perceived unfavorably compared to their male counterparts (Heilman et al., 2004; Rudman & Glick, 2001).

**Social Exchange Theory**

Social Exchange Theory (SET), as articulated by Blau (1964) and further developed by Cropanzano and Mitchell (2005), focuses on the reciprocal nature of relationships in the workplace. It posits that social behavior is driven by the exchange of resources, which can include tangible benefits, psychosocial support, and information. Employees view their work as a trade-off between effort and organizational rewards, with positive treatment leading to increased engagement and performance (Lavelle et al., 2007).

SET explains how employees' perceptions of organizational support influence their engagement and organizational citizenship behavior (OCB). Research shows that SET is related to various outcomes, including leader-member exchange, organizational identification, and performance (Walumbwa et al., 2011; Dai & Qin, 2016).

SET underscores the importance of perceived organizational support in influencing employee behavior and performance. It helps explain why employees who receive favorable treatment are more likely to exhibit higher levels of engagement and OCB, thereby enhancing overall performance (Lavelle et al., 2007).

**Self-Cognitive Theory**

Albert Bandura's Social Cognitive Theory (SCT) provides a comprehensive framework for understanding human behavior through cognitive processes, observational learning, and reciprocal determinism. Central to SCT is the concept of observational learning, where individuals acquire knowledge and skills by observing others (Bandura, 1986). Reciprocal

determinism highlights the bidirectional influence between personal factors, behavior, and environment (Bandura, 1977). The key components of SCT include self-efficacy, the belief in one's ability to perform specific tasks, which influences motivation and persistence (Bandura, 1997), and social reinforcement, the impact of observing rewards or punishments for certain behaviors, which affects the likelihood of adopting those behaviors (Bandura, 1986).

SCT's emphasis on self-efficacy and observational learning makes it relevant for understanding how individuals develop competencies and behaviors. It also provides insights into how social contexts and reinforcement shape behavior, which can be applied to various fields, including education and health psychology.

## Empirical Studies and Hypothesis Development

### Moderating Effect of Leaders' Gender between Leaders Self-Efficacy and Employee Job Satisfaction

Researchers have argued that gender differences moderate the effects of role stress on employee behavior (Babin and Boles, 1998; Boles et al., 2003; Fogarty, 1996; Karatepe et al., 2006). It is theorized that females possess a socializing-oriented communal behavior while males demonstrate a task-oriented agentic behavior (Eagly, 1987). Stated differently, women tend to be satisfied with their job when they can interact with others who understand their roles in the organization, while men tend to be satisfied when their performance itself is valued by others. As a result, females are more likely to experience dissatisfaction with their job than males unless role expectations are clearly specified to them. Besides, there are differences between males and females in terms of coping with stress. According to Ptacek et al. (1994), stereotypes of females are portrayed as emotional, supportive, and dependent, while those of males are portrayed as independent, instrumental, and rational. Research demonstrated that females tend to use behavioral coping (e.g., taking direct and positive actions to deal with problems) more actively than males (Fielden and Davidson, 2001), and women are more likely than men to use direct action coping to deal with stress by working longer and harder (Gianakos, 2001).

Karatepe et al. (2006), in their study of the banking industry, demonstrated a significant moderating effect of gender differences on the relationship between role conflict and job satisfaction but failed to show its moderating role between role ambiguity and job satisfaction. According to them and other researchers, inconsistent findings may occur because of cultural differences, and more efforts should be made to further investigate these constructs. Fogarty (1996) reported that the effects of both role conflict and role ambiguity have a significant negative influence on job satisfaction among female auditors as well as male auditors from the public accounting firms. Showing some coefficient differences between role conflict-job satisfaction and role ambiguity-job satisfaction, he surmised that the effect of role ambiguity might have a stronger effect on job satisfaction among female employees. Boles et al. (2003); however, found conflicting results when testing the moderating effect of gender differences on the relationship between role stress and different

facets of job satisfaction with a sample consisting of business-to-business salespersons. Specifically, they found negative relationships between both role conflict and role ambiguity and some dimensions of job satisfaction (e.g., satisfaction with work, satisfaction with coworkers) among male salespeople but not among female employees (Boles et al., 2003). Though research results have been mixed, the following hypotheses coincide with common thinking about the moderating role of gender.

Men and women have different family and social roles and behave differently in the workplace (Kara et al., 2012). For example, women typically have higher levels of family and work stress and view both family and work roles as very important; in contrast, men are more likely to give priority to work over family (Cinamon, 2006) and have less difficulty balancing family and work (Artazcoz et al., 2004). Women have a low sense of control when experiencing burnout, while men do not (Frank et al., 1999; Robinson, 2004). Women perceive higher levels of support in their personal and professional environments and value emotional support more than men (Aycan and Eskin, 2005; Hammer et al., 2005). Women tend to apply more emotional and avoidance coping strategies than men (Matud, 2004). Research has also shown that it is easier for women than for men to be engaged in work that involves "social" or "people" skills (Gallie, 1998). Accordingly, compared with men, women are good at service work (Bradley, 1999; Erickson and Ritter, 2001; Tyler and Taylor, 2001).

Probably because of this, the majority of hospitality workers are women. According to NRA (2012), 72 percent of servers, 62 percent of bartenders and 51 percent of food preparation and service workers are women. However, previous studies show that women and men do not enjoy equal employment, pay rates, and promotion opportunities in the hospitality industry (McCuddy et al., 2010). In terms of the dominant population of women and the unfair situation for women in the hospitality industry, it is necessary to examine gender differences in the study's relationships. Previous researchers studied gender differences and their impact on self-efficacy and found that women might be more strongly influenced than men by self-efficacy. For example, Bandura (1992) reported that women were more likely than men to limit their career choices if they were less confident about their abilities. Moreover, Chen et al. (1998) found that, compared to men, women were more likely to shun entrepreneurial endeavors if they doubted their self-efficacy. Based on their relationship, it is hypothesized that: H1. Gender has a significant moderation power in the relationship between leaders' self-efficacy and employee job satisfaction.

**Moderating Effects of Leader's Gender on the Relationship between Leaders' Commitment and Employee Citizenship Behavior**

Gender differences among employees have been deliberated by examining the attitude, behavior, and outcomes during the last 10 years. From the organizational literature, it has been found that there is a persistence of differences related to gender (Yadav & Rangnekar, 2015). A strong agreement has been reached that differences in gender prevail regarding several employees' perceptions related to the job (Moncrief et al., 2000; Piercy et al., 2001). There is an impact of gender on the techniques in which individuals of every gender are

likely to act and the ways in which interpretation of their behavior is made (Cooper & Lewis, 1995; Williams & Best, 1982). Considered as an individual feature, gender might impact an individual's apprehension of the place of work and their attitudinal reactions towards others inside an organization (Mathieu & Zajac, 1990). Additionally, gender might have an influence on whether employees are associated with their colleagues offering different types of information, opportunities, and social support (Scandura & Lankau, 1997).

The expectations of employees based on gender regarding behavior frequently make themselves apparent at a job (Eagly et al., 1995). Research has shown that females are labeled as kind, relationship-oriented, and sociable, whereas males are labeled as competent, achievement-oriented, and independent (Langford & MacKinon, 2000). Eagly and Crowley (1986) had postulated that "women are expected to take care of the personal and emotional needs of others, to deliver routine forms of personal service, and, more generally, to facilitate the struggle of others toward their goals." Farrell and Finkelstein (2007) and Allen and Rush (2001) in their studies found female personnel to be more involved in a variety of citizenship behaviors as compared to male personnel. Kidder and Parks (2001) recommended that gender role anticipations might assist in increasing job behaviors such as OCB. It was found by Heilman and Chen (2005) that females were anticipated to be involved in organizational citizenship behavior as a consistent part of their work. It has been found by Allen (2006) that the association between promotion decisions and organizational citizenship behavior was stronger for males than for females; as males were subject to fewer anticipations as compared to females to execute citizenship behaviors, they were given a reward to a greater degree when they did (in the form of promotions).

The idea of "role" is of a central position in comprehending the moderating role of gender on the association among employee performance and OCB. The gender roles generate anticipations of the behaviors essential to accomplish the roles of "male" and "female." In other words, individuals are anticipated to act in ways that are consistent with their socially approved gender roles. Previous investigations (Deluga, 1998; Morrison, 1994) have generally described differences among females and males in terms of performing OCBs. Some studies related to organizational perspectives have observed how gender may change the association among constructs (Babin & Boles, 1998). Concerning gender, being female or male might be considered to influence OCBs. The empirical study of Farrell and Finkelstein (2007) showed that females engage more in OCB-helping behavior as compared to men. Few investigations have shown that males and females are similar in the level of OCB (Bukhari & Ali, 2009; Chou & Pearson, 2011; Organ & Ryan, 1995). According to the researchers (Dixon et al., 2005; Kamer, 2001), it was found that females have higher organizational commitment.

Most existing investigations have compared the amounts of constructs demonstrated by male and female employees (Babin & Boles, 1998). Some studies on organizations have observed how gender may modify the association among constructs (Babin & Boles, 1998). According to Lovel et al. (1999), components of OCB are consistent with womanly behaviors. Women favor job attributes including prospects of working with others, kindness, and making friends

(Konrad et al., 2000). It has been advocated by “Prescriptive Stereotype Theory” that females possess a high level of collective characteristics as compared to males, and these variances show how men and women differ in their roles (Eagly, 1987). There are few studies showing support that females possess a higher level of OCB behaviors than males (e.g., Lovel et al., 1999; Morrison, 1994). H2. Gender moderates significantly the relationship between leaders’ commitment and organizational citizenship behavior.

**The Effect of Leaders Self-Efficacy on Job Satisfaction and Organizational Citizenship Behavior**

Leaders' self-efficacy, a crucial component of effective leadership, significantly influences organizational dynamics and employees' job satisfaction. According to social cognitive theory (Bandura, 1997), self-efficacy is developed through experiences, observations, and feedback. Leaders with high self-efficacy are more likely to set ambitious goals, demonstrate perseverance, and instill confidence in their team members (Stajkovic & Luthans, 1998). This confidence fosters a positive and empowering work environment, thereby enhancing employees' job satisfaction.

Leaders' self-efficacy is closely linked to their leadership style. Transformational leaders, who typically exhibit high levels of self-efficacy, are known for their ability to inspire and motivate their teams (Bass & Riggio, 2006). Research by Stajkovic and Luthans (1998) supports the correlation between high self-efficacy and effective leadership behaviors. Transformational leadership, associated with high self-efficacy, has been consistently connected to improved employee outcomes, including job satisfaction (Walumbwa et al., 2004). Leaders who believe in their ability to effect positive change contribute significantly to employee motivation and satisfaction.

Job satisfaction encompasses employees' overall contentment with various aspects of their work, which is vital for organizational success (Spector, 1997). Judge et al. (2001) highlight the strong positive correlation between job satisfaction and job performance. Additionally, Chemers, Watson, and May (2000) found that leaders with high self-efficacy are more likely to engage in transformational behaviors that positively affect employee satisfaction.

Empirical evidence confirms the positive impact of leaders' self-efficacy on leadership effectiveness. Stajkovic and Luthans' (1998) meta-analysis reveals a strong correlation between self-efficacy and effective leadership behaviors. Similarly, Walumbwa et al. (2004) establishes a positive relationship between transformational leadership—linked with high self-efficacy—and employees' job satisfaction. Leadership plays a crucial role in determining organizational outcomes and employee performance (Wang et al., 2005). Research by Latchem & Hanna (2003), Bandura (2007), and Lunenburg (2011) underscores that leaders' attitudes, behaviors, and styles significantly impact their subordinates' performance.

Leaders with high self-efficacy influence their employees' attitudes towards work and task completion. According to Bandura (1997), leadership self-efficacy affects the goals

employees set, their commitment levels, and their approach to complex tasks. Leaders who demonstrate a positive attitude towards challenges are likely to instill similar attitudes in their followers. Conversely, leaders with low self-efficacy may lead to diminished enthusiasm and commitment among employees. Bandura and Locke (2003) emphasize that leadership self-efficacy is a key determinant of employee performance and organizational citizenship behavior.

H3: Leaders self-efficacy significantly influences employee job satisfaction and organizational citizenship behavior.

**The Effect of Leaders Commitment on Job Satisfaction and Organizational Citizenship Behavior**

Leaders' commitment plays a pivotal role in shaping organizational dynamics and influencing employee outcomes. Social Exchange Theory offers insights into how leaders' commitment impacts employees. According to this theory, relationships are built on the exchange of resources such as trust, support, and recognition. Committed leaders invest their leaders' commitment also. Significantly, it affects employees' organizational citizenship behavior (OCB), which involves discretionary actions beyond formal job requirements. Leaders who exhibit strong commitment serve as role models, inspiring employee loyalty and fostering a positive work environment (Bass & Riggio, 2006). Committed leaders build trust and respect, encouraging employees to engage in behaviors that benefit the organization (Eisenberger et al., 1997). Empirical studies by Podsakoff, Ahearne, and MacKenzie (1997) and Bolino, Turnley, and Niehoff (2004) highlight the critical role of leadership behaviors, including commitment, in influencing OCB. Eisenbeiss, Knippenberg, and Boerner (2008) emphasize that affective organizational commitment positively impacts employees' OCB, underscoring the emotional aspect of leadership commitment.

H4: Leaders’ commitment significantly predicts employee job satisfaction and organizational citizenship behavior.

In conclusion, leaders' commitment and self-efficacy are fundamental to enhancing job satisfaction and promoting positive organizational citizenship behaviors. Theoretical frameworks and empirical evidence suggest that nurturing these qualities through leadership development and supportive organizational practices can foster a more engaged and productive workforce.

**The Effect of Leaders Self-Efficacy on Leadership Commitment**

Based on existing literature and empirical evidence, a key hypothesis emerges regarding the impact of leaders' self-efficacy on their commitment to leadership roles. Bandura's social cognitive theory (1997) provides a theoretical foundation for understanding this relationship. According to the theory, self-efficacy beliefs significantly influence individuals' behaviors and outcomes. Leaders who possess high levels of leadership self-efficacy (LSE) are more

likely to approach their roles with confidence and a strong belief in their capabilities. This self-assurance fosters a deeper commitment to their leadership responsibilities, as their perceived effectiveness promotes a positive cycle of success (Paglis, 2010; Quigley, 2013).

Empirical studies support this hypothesis. Hoyt (2005) examined the dynamics of LSE and its effects on leadership performance. The study found a positive correlation between high self-efficacy beliefs and enhanced leadership performance across various organizational settings. Employees, fostering a reciprocal relationship marked by loyalty and satisfaction (Blau, 1964). Transformational Leadership Theory further highlights how leaders' commitment to organizational goals inspires employees to prioritize collective interests over personal ones (Bass, 1985). Transformational leaders, through their commitment, enhance employees' intrinsic motivation, leading to increased job satisfaction and organizational citizenship behavior (OCB).

Empirical research supports the theoretical foundations of leaders' commitment and its effect on job satisfaction. Meyer and Allen (1997) found a strong positive relationship between leaders' commitment and employees' affective commitment, which correlates with higher job satisfaction. Podsakoff et al. (1990) demonstrated that transformational leaders, who exhibit high commitment, are more effective in enhancing employee satisfaction. Similarly, Avolio and Gardner (2005) discovered that authentic leaders, characterized by sincere commitment to organizational goals, positively influence employee satisfaction and engagement.

Hoyt's research, which utilized surveys and performance evaluations from a diverse sample of leaders, consistently indicated that leaders with higher self-efficacy were more committed to their roles.

Additionally, Quigley (2013) investigated the influence of leaders' self-perception on followers' workplace behavior. The study revealed a compelling connection between leaders' positive self-perception, driven by self-efficacy beliefs, and improved followers' behavior. This research underscores the role of self-efficacy in shaping organizational dynamics and enhancing leadership commitment.

H5: Leaders' self-efficacy significantly affects their commitment to their organizations.

**The Effects of Job Satisfaction on Organizational Citizenship Behavior**

A substantial body of research has demonstrated a positive relationship between job satisfaction (JS) and organizational citizenship behavior (OCB) (Bateman & Organ, 1983; Lee & Allen, 2002; MacKenzie, Podsakoff, & Ahearne, 1998; Moorman, 1993; Organ & Konovsky, 1989; Smith et al., 1983; William & Anderson, 1991). For example, Bateman and Organ (1983) conducted a longitudinal, cross-lagged study comparing supervisory ratings of OCB with employee self-reported job satisfaction levels. They found a robust and favorable correlation between job satisfaction and OCB, particularly in relation to satisfaction with promotions and supervision.

Becker and Billings (1993) also explored the relationship between job satisfaction and OCB by comparing supervisor-generated and self-reported OCB scores. Their findings confirmed a positive correlation between job satisfaction and OCB, highlighting the significance of work satisfaction in predicting OCB.

Further research by Organ and Ryan (1995) supported the notion that job satisfaction strongly correlates with OCB, suggesting that satisfied employees are more likely to engage in positive organizational behaviors. This is consistent with findings by Jameel and Ahmad (2019) and Nadiri and Tanova (2010), which emphasize the importance of job satisfaction in enhancing OCB.

A study by Mohammad et al. (2011) identified a positive association between intrinsic and extrinsic job satisfaction and organizational citizenship behavior directed towards the organization (OCBO), but not towards individuals (OCBI). Intaraprasong et al. (2012) also found a positive relationship between job satisfaction and OCB. Similarly, Wannee Saepung, Sukimo, and Sununta Siengthai (2011) reported that demographic factors such as education influence job satisfaction and OCB levels.

Aram et al. (2020) investigated job satisfaction and organizational commitment among hotel employees in Baghdad and found that higher levels of job satisfaction and organizational commitment were associated with increased OCB. This study highlights the critical role of job satisfaction and commitment in fostering OCB, suggesting that improving these factors can enhance overall performance and organizational climate.

H6: Employee job satisfaction significantly affects their organizational citizenship behavior (OCB) in the hotel industry.

**The Effect of Employees Job Satisfaction and Organizational Citizenship Behavior on Customer Satisfaction**

Employee interactions with customers provide opportunities for staff to better understand and respond to customer needs. Content employees are often perceived as more engaged and effective in delivering superior customer service (Alshurideh et al., 2012). Satisfied employees are not only more likely to put forth extra effort but are also believed to possess the necessary skills and training to perform their roles effectively. Conversely, dissatisfied employees often show poorer performance, lacking understanding and responsiveness in meeting customer needs (Ugboro & Obeng, 2000). Additionally, satisfied employees tend to be more motivated to provide excellent service and have a positive outlook on their products and services (Bulgarella, 2005).

Research supports the notion that employee satisfaction positively impacts customer satisfaction. Alshurideh et al. (2012) found that satisfied employees display positive attitudes and behaviors that enhance their performance and productivity (Matzler & Renzl, 2007) and contribute to improved organizational citizenship (Alshurideh et al., 2015). Kansal (2012)

also noted that employee job satisfaction affects customer-perceived quality, with education influencing service quality while other sociodemographic variables did not. Baquero et al. (2020) confirmed the importance of human relations for achieving customer satisfaction in hotels, while Rahman et al. (2015) found that satisfied employees in Bangladesh hotels are more committed to providing high-quality services, which in turn positively affects customer satisfaction.

In contrast, Chin & Gursoy (2009) discovered that although customer satisfaction impacts financial performance, employee job satisfaction does not directly affect financial performance. Instead, it indirectly influences financial performance through customer satisfaction. Singh et al. (2016) similarly found that employee satisfaction significantly impacts service quality and customer satisfaction, enhancing profitability.

The COVID-19 pandemic has highlighted the importance of employees' psychological well-being, especially in the hotel industry, where employee-customer relationships are crucial (Mao et al., 2020; Kim & Qu, 2020). Mehta et al. (2021) indicated that perceived hygiene attributes are critical for customer satisfaction during the pandemic, while Wu et al. (2021) found that facemask-wearing improves customer perceptions of average-looking employees.

Several studies have explored the relationship between job satisfaction and customer satisfaction. Jung & Yoon (2013) found a positive relationship between job satisfaction and customer satisfaction but no direct link to customer loyalty. Pupo & Garcia (2014) highlighted the relationship between high employee commitment and customer satisfaction. Dominguez-Falcon et al. (2016) showed that supervisor job satisfaction leads to better economic results through improved customer satisfaction. Baquero (2022) demonstrated that job satisfaction in certain departments (e.g., reception, bar and restaurant, kitchen) predicts customer satisfaction, though not universally across all departments.

The effect of organizational citizenship behavior (OCB) on customer satisfaction has also been studied. Podsakoff and MacKenzie (1997) found a positive correlation between organizational effectiveness and OCBs, while Castro et al. (2004) observed a positive association between OCB and service quality in high-service-quality organizations but not in others. Palouzian and Hosseini (2016) found a strong positive correlation between civic behaviors and organizational effectiveness, suggesting that improved OCB can enhance customer satisfaction.

H7: There is a significant relationship between employees' job satisfaction and customer satisfaction.

H8: There is a significant relationship between employees' organizational citizenship behavior and customer satisfaction.

**Mediating Effect of Job Satisfaction and Organizational Citizenship Behavior between**

## Leaders' Commitment and Self-Efficacy and Customer Satisfaction

### Mediating Effect of Job Satisfaction

The interplay between leaders' commitment, leaders' self-efficacy, employee job satisfaction, and customer satisfaction forms a complex network essential for organizational success. Understanding how employee job satisfaction mediates the relationships between leaders' commitment, leaders' self-efficacy, and customer satisfaction provides insight into the mechanisms through which leadership qualities influence customer experiences.

Leaders' self-efficacy is a fundamental element of effective leadership, impacting the leadership styles adopted and, consequently, employee outcomes. According to social cognitive theory, leaders develop self-efficacy through experiences, observations, and feedback (Bandura, 1997). Leaders with high self-efficacy tend to set challenging goals, exhibit perseverance, and inspire confidence among team members (Stajkovic & Luthans, 1998). This self-belief fosters a positive and empowering work environment, contributing to higher employee job satisfaction. Transformational leaders, often possessing high self-efficacy, engage in behaviors that enhance employee attitudes and satisfaction (Bass & Riggio, 2006).

Similarly, leaders' commitment to their roles significantly influences organizational dynamics and employee outcomes. Theoretical frameworks such as Social Exchange Theory and Transformational Leadership Theory elucidate how leaders' commitment impacts employees. Committed leaders invest resources in their employees, creating a reciprocal relationship marked by loyalty and satisfaction (Blau, 1964). Transformational leaders, through their steadfast commitment, motivate and engage employees, enhancing job satisfaction and organizational citizenship behavior (OCB).

Empirical evidence supports the positive relationship between leaders' self-efficacy, leaders' commitment, and employee job satisfaction. Stajkovic and Luthans (1998) found a strong correlation between self-efficacy and effective leadership behaviors. Meyer and Allen (1997) demonstrated a positive relationship between leaders' commitment and employees' affective commitment, which correlates with higher job satisfaction.

Job satisfaction significantly impacts customer satisfaction. Satisfied employees are more likely to provide excellent customer service, improving customer experiences (Alshurideh et al., 2012). Worsfold et al. (2016) showed that job satisfaction correlates with customer satisfaction, emphasizing the mediating role of employee satisfaction in shaping customer perceptions.

In conclusion, employee job satisfaction mediates the relationships between leaders' commitment, leaders' self-efficacy, and customer satisfaction. Organizations can enhance customer satisfaction and success by nurturing leaders' commitment and self-efficacy, which in turn improves employee job satisfaction.

H9: Employee job satisfaction significantly mediates the relationship between leaders' commitment and customer satisfaction.

H10: Employee job satisfaction mediates the relationship between leaders' self-efficacy and customer satisfaction.

**Mediating Effect of Organizational Citizenship Behavior**

Organizational Citizenship Behavior (OCB) also plays a crucial role in mediating the relationships between leaders' commitment (LC), leaders' self-efficacy (LSE), and customer satisfaction (CS). Understanding this mediation highlights how leadership qualities influence customer experiences through employee behaviors.

Leaders' commitment significantly shapes the work environment and employee attitudes, influencing OCB. Leaders who demonstrate strong commitment serve as role models, fostering loyalty, trust, and respect among employees (Bass & Riggio, 2006; Eisenberger et al., 1997). This commitment cultivates a positive organizational culture that encourages discretionary behaviors beyond formal job requirements, increasing OCB (Van Dyne & LePine, 1998; Meyer & Herscovitch, 2001).

Similarly, leaders' self-efficacy affects employee attitudes and behaviors, impacting their commitment and task persistence (Latchem & Hanna, 2003; Bandura, 2007). Leaders with high self-efficacy inspire confidence in their followers, influencing goal setting, work commitment, and task attitudes (Bandura & Locke, 2003). This positive influence promotes higher OCB, as employees are more inclined to engage in behaviors benefiting the organization (Obiwuru et al., 2011).

Empirical studies consistently show a positive relationship between OCB and customer satisfaction. OCB enhances organizational effectiveness and customer satisfaction by improving service quality and interactions with customers (Podsakoff & MacKenzie, 1997; Todd Donavan et al., 2004). Employees who engage in OCB demonstrate a customer-oriented approach, leading to better service delivery and increased customer satisfaction (Palouzian & Hosseini, 2016).

Therefore, OCB mediates the relationships between LC, LSE, and CS. Leaders' commitment and self-efficacy influence employee behaviors, increasing OCB, which in turn enhances customer satisfaction by improving service quality and organizational effectiveness.

H11: Organizational citizenship behavior significantly mediates the relationship between leaders' commitment and customer satisfaction.

H12: Organizational citizenship behavior significantly mediates the relationship between leaders' self-efficacy and customer satisfaction.

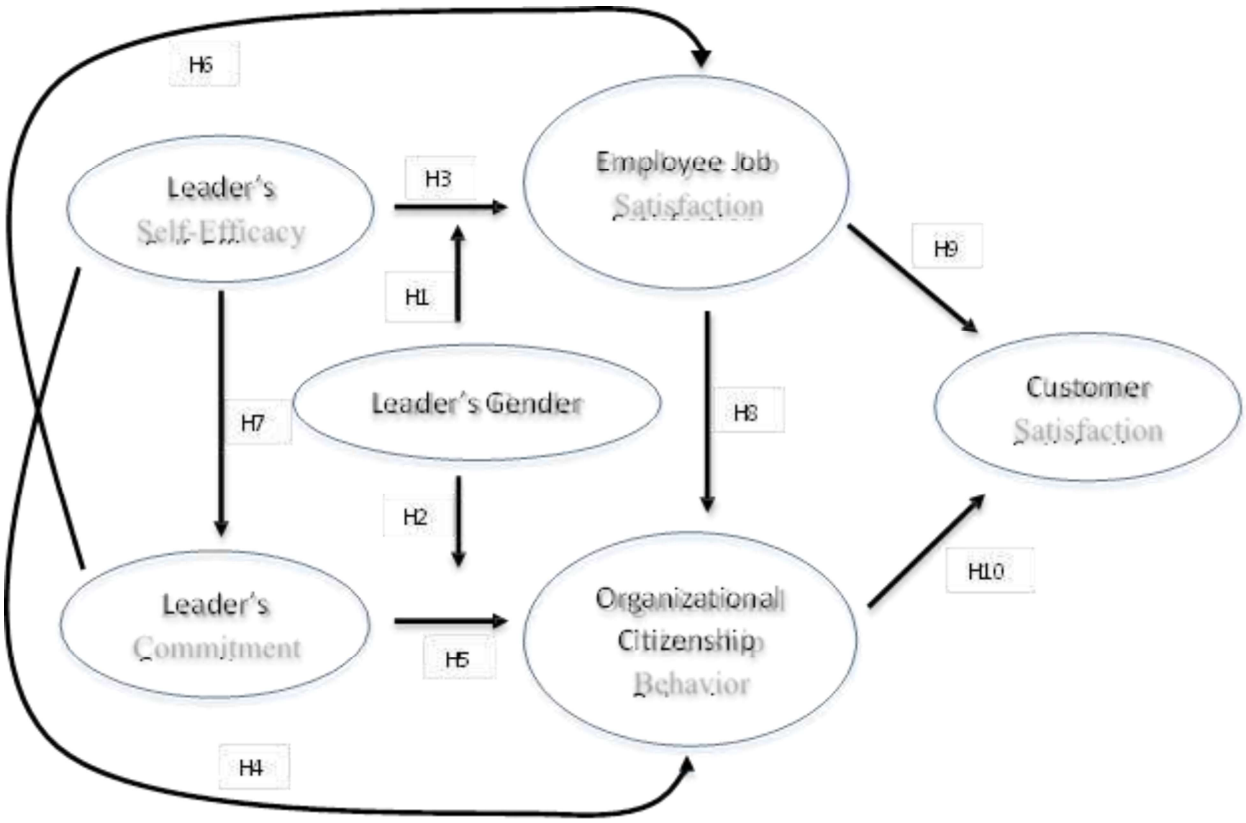
**Summary of Literature Review**

The literature review reveals that leadership plays a pivotal role in shaping customer satisfaction within the hotel industry. Key findings indicate that leadership attributes, such as self-efficacy and commitment, significantly affect employee behaviors and, subsequently, customer satisfaction. Research underscores the impact of leaders' gender on these attributes, highlighting that gender may influence how leaders are perceived and how they interact with their teams. Female and male leaders exhibit different levels of leadership self-efficacy and commitment, which in turn affects employee job satisfaction and organizational citizenship behavior. These employee-related factors are crucial as they contribute to the overall customer experience. The review emphasizes the need to explore these dynamics further, particularly how gender influences leadership attributes and employee-related outcomes, and how these factors collectively impact customer satisfaction.

**Conceptual Framework**

Based on the literature review, the conceptual framework for the study is developed and depicted in Figure 1. The framework identifies the relationships between leaders' gender and various factors influencing customer satisfaction.

Figure 1. The Conceptual Framework of the Research




This study aims to shed light on the complex relationship between leaders' self-efficacy, leader's commitment, and customer satisfaction in the hotel industry. As illustrated in Figure 1, the study's conceptual model presents a comprehensive framework that outlines the interconnected pathways through which leaders' gender moderated key leadership attributes.

The model suggests that a leader's gender significantly moderates their leadership self-efficacy and leadership commitment, which in turn affect employee-related factors such as job satisfaction and organizational citizenship behavior.

To achieve the study's objectives, we systematically compared and examine the gender disparities in leadership commitment and leadership self-efficacy between male and female leaders. By exploring the relationships among gender, leaders' self-efficacy, leaders' commitment, employees' organizational behavior, job satisfaction, and customer satisfaction, we aim to identify correlations and connections among these crucial factors.

The study also assessed both the combined and individual effects of gender, leadership self-efficacy, leadership commitment, organizational citizenship behavior, and job satisfaction on customer satisfaction. This will help identify the variables that have a significant influence on customer experiences. Additionally, we will investigate the direct, indirect, and cumulative impacts of gender, leaders' related variables (LSE, LC), and employee-related variables (OCB and JS) on Customer Satisfaction, examining the different contributions and pathways that shape the overall customer experience.

Lastly, the study identified and analyzed the mediating variables (LSE, LC, OCB, and JS) between gender and customer satisfaction, providing insights into the critical mediators that influence this complex relationship in the hotel industry. This comprehensive analysis aims to uncover the nuanced mechanisms through which leadership and employee-related factors collectively shape and enhance customer satisfaction in this dynamic sector.

## Research Methodology

This chapter outlines the research methodology employed in this study, detailing the rationale behind the chosen research paradigm, approach, and design. It describes the procedures for data collection and analysis, the population and sampling methods used, and the ethical considerations followed throughout the research.

### Description of the Study Area

The research is conducted in Addis Ababa City, the capital of Ethiopia and a key hub for international and regional organizations, as well as numerous diplomatic missions. This city, with its diverse hotel industry, serves as an ideal location to study the impact of leaders' self-efficacy on customer satisfaction within one-five star hotels. The hotel sector in Addis Ababa is critical due to the city's role as a host for international conferences and events, as well as a center for many international and regional organizations, which necessitate high-standard service deliveries in the hotel industry. The research explores how a leader's self-efficacy affects customer satisfaction through the moderating effect of the gender of the leaders, and is mediated by leader and employee behaviors. The study also provides insights into how these variables influence hotel dynamics and employee attitudes, potentially informing strategies to enhance leadership effectiveness and service quality.

## Research Philosophy

Research philosophy provides a framework for organizing observation and reasoning (Babbie, 2016). It encompasses ontology (nature of reality), epistemology (acceptable knowledge), axiology (role of values), and methodology (approach to research) (Saunders et al., 2016; Shambare, 2019). This study employs a positivist paradigm, which aligns with the quantitative approach used to measure human behavior through observable and measurable data. The positivist approach is focused on generating generalizable theories and models based on empirical evidence (Chirkov & Anderson, 2018). The study utilized statistical tools to test hypotheses and analyze relationships between variables, maintaining objectivity throughout the research process.

## Research Approach

The research approach outlines the plan for data collection, analysis, and interpretation, extending from broad assumptions to detailed procedures (Creswell, 2014). This study adopted a quantitative method, consistent with the positivist philosophy and a deductive approach. The quantitative approach involves collecting and analyzing numerical data to test hypotheses about the relationships between leaders' gender, leadership commitment, self-efficacy, job satisfaction, organizational citizenship behavior, and customer satisfaction (Bryman, 2012; Saunders et al., 2019). This method facilitates pattern identification and enhances the validity and generalizability of findings through statistical analysis and large sample sizes (Field, 2017).

## Research Design

Research design provides a framework for conducting the study and analyzing data (Rosen, 2019). This research employs a quantitative design, focusing on measuring the effects of a leader's self-efficacy on customer satisfaction moderated by gender and mediated by leadership commitment, employees' job satisfaction, and organizational citizenship behavior. The design includes a correlational method and survey research strategy, enabling both descriptive and explanatory analysis of the relationships among variables. The study employed a cross-sectional design, capturing data at a single point in time to examine causal relationships (Babbie, 2016; Saunders et al., 2016). The explanatory design is used to explore these relationships in depth.

## Research Strategy

The research strategy involves a survey method to capture data from hotel guests and employees. For guests, questionnaires will assess the level of their satisfaction based on service quality, perceived value, loyalty intentions, and likelihood to recommend the hotel to others. For employees, questionnaires will evaluate their job satisfaction and organizational citizenship behavior, as well as the perceptions they have about their leaders' self-efficacy and commitment.

## Sampling

The population for this study includes hotel employees and customers. The target population comprises employees and guests from one- to five-star hotels in Addis Ababa. A sample of 25 hotels will be selected through simple random sampling from a total of 159 hotels. Data obtained from the Addis Ababa City Government Culture, Arts, and Tourism Bureau indicated that the total number of employees in these hotels exceeds 19,400. This sampling strategy ensures a representative sample for analyzing the research variables.

## Sampling Technique

Sample members are selected using a combination of purposive, simple random, stratified, and incidental sampling techniques. Hotels are selected through stratified random sampling based on their star levels. The research utilizes stratified random sampling to minimize selection bias (Creswell, 2014; Quick & Hall, 2015). Stratified random sampling is particularly suitable for populations with distinct strata of varying sizes, as it ensures a representative sample across these strata.

Once the number of hotels is determined using stratified random sampling, simple random sampling is used to select specific hotels from a list provided by the Addis Ababa City Government Culture, Arts, and Tourism Bureau. Hotel employees are selected using simple or available sampling techniques, while customers are chosen through incidental sampling due to the difficulty in determining their exact number during data collection.

## Sample Size

To ensure a representative and adequate sample size for meaningful analysis, the total number of employees in the hotels of Addis Ababa is approximately 19,400. The sample size is calculated using the following formula:

$z^2P(1 - P)$ Where: Sample Size from the total population (SSN) = $\frac{(\quad)}{\alpha 2}$

z = Table value of z value at 99% confidence interval with two-tailed test, which is 2.58.

P = assumed proportion of the population to be included. As the sample is very large, it is assumed that 5% is considered. In this case the proportion is 0.05.

□= probability of Type I Error, or confidence interval, 0.01.

Hence, based on the sample size determination formula, the sample size is estimated for the employees as follows: sample size from the total population (SSN)= (2.582 ) 0.05×(1−0.05) = 316 0.012. To account for potential sample loss or nonresponse, an additional 10% is added: N = 316 + 316(10%) = 348. Thus, a total of 348 employees are selected. Additionally, 150 customers are included, making the total sample size 498 participants.

## Data Collection Procedures

Effective data collection begins with careful planning of research methods, including the selection of suitable data types, sources, and instruments (Bryman, 2012). Research instruments are critical for ensuring data quality and validity (Myers, 2013). For this study, primary data is collected from employees and customers using a structured questionnaire. The questionnaire employs a five-point Likert scale (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree).

The questionnaire is adapted from prior studies with modifications and additional items to fit the cultural context. A pilot test is conducted to ensure the relevance and reliability of the items. The questionnaire is prepared in English and translated into Amharic to enhance understanding.

To maximize response accuracy and engagement, the questionnaire is made clear, concise, and professionally formatted (Jonker & Pennink, 2010; Leedy & Ormrod, 2010). Research assistants, trained in administering the questionnaire, are used to distribute it in hotels and ensure that responses are complete and appropriate.

## Operationalization of Variables

In the study the following variables are treated to achieve the objectives of the study.

### Independent Variables

### Leader self-efficacy

Leadership Self-Efficacy in the hotel sector can be conceptualized as the confidence hotel leaders have in their ability to perform essential managerial tasks, handle operational challenges, motivate staff, and drive guest satisfaction (Bandura, 1997; Chen et al., 2001). It involves decision-making confidence, conflict management, motivational skills, change management, and influence and persuasion. Bandura (1997) posited that self-efficacious leaders have confidence in their ability to make sound decisions, even under pressure. This includes trusting their judgment, handling complex problems, and evaluating outcomes effectively. They are also capable of managing and resolving conflicts constructively. This involves mediating disputes, addressing resistance, and maintaining team harmony during conflicts.

Leaders who are competent possess the ability to inspire and motivate their team. This includes setting motivating goals, using reinforcement, and creating an environment that fosters high performance.

Leaders with a high level of self-efficacy are effective in guiding their teams through organizational changes. This dimension involves communicating the need for change, addressing resistance, and managing the impact of change on team performance. They have

the confidence to influence and persuade. Leaders are skilled in influencing and persuading others to support their ideas and decisions. This includes using effective communication, building consensus, and employing persuasive techniques to achieve desired outcomes. Reliability coefficients for Leadership Self-Efficacy scales typically range from .88 to .93 (Bandura, 1997).

**Moderator Variables**

Leaders' gender is the moderator variable to the model. It refers to the biological gender of leaders (male or female) and its presumed moderation effect between on self-efficacy and employees job satisfaction, as well as between leaders' commitment and employees' OCB.

**Mediator Variables**

**Leader's commitment**

Leadership Commitment in the hotel sector involves leaders' dedication to achieving organizational goals, supporting hotel initiatives, and engaging in behaviors that enhance overall hotel performance and guest satisfaction (Meyer & Allen, 1997; Bass, 1990). It encompasses various dimensions such as goal commitment, organizational support, extra-role behavior, loyalty and advocacy, and personal sacrifice. According to them, committed leaders demonstrate a strong dedication to achieving organizational goals and align their personal objectives with the organization's vision. This includes setting clear goals, staying focused, and adjusting goals as needed to meet organizational objectives. They also actively support organizational policies and practices, participate in development initiatives, and advocate for the organization's interests. This dimension involves providing feedback, promoting organizational success, and maintaining a positive organizational culture.

Committed leaders engage in behaviors beyond their official duties to support the organization. This includes volunteering for tasks, assisting colleagues, and taking on additional responsibilities to ensure team and organizational success.

When leaders are committed, they demonstrate loyalty to the organization by defending its interests, promoting its values, and remaining committed during challenging times. This involves speaking positively about the organization and advocating for its mission.

The other dimension of leadership commitment is personal sacrifice which indicates the leaders' willingness to make personal sacrifices for the benefit of the organization, such as adjusting personal plans, working extra hours, and putting organizational needs above personal gains.

This dimension reflects the leader's commitment to organizational success even at personal cost. Studies reported that reliability coefficients (Cronbach's α) for Leadership Commitment scales generally range from .85 to .92 (Schaufeli et al., 2002).

**Employee Job Satisfaction**

Employee job satisfaction reflects how content employees are with various aspects of their job. It includes satisfaction with the work environment, job role, compensation, career development opportunities, and work-life balance. Work environment represents that employees are satisfied with the physical conditions, resources, and overall atmosphere of their work environment. This includes aspects like safety, cleanliness, ergonomics, and the overall design of the workspace.

Job role and responsibilities is the other source of job satisfaction. Employees feel that their job role and responsibilities are clear, align with their skills and interests, and provide a fair balance of challenge and autonomy. This dimension reflects satisfaction with job clarity, variety, and alignment with career goals.

Compensation and benefits can be another dimension of job satisfaction. Employees are content with their salary, benefits, and overall compensation package. This includes satisfaction with salary levels, health benefits, retirement plans, and other financial rewards.

Employees are satisfied with the opportunities for professional growth and career advancement, which are considered career development, within the organization. This dimension involves access to training, clear career paths, and support for career aspirations.

Work-life balance is another source of satisfaction for employees. Employees feel that they have a good balance between their work and personal life. This includes satisfaction with flexibility, support for personal needs, and the ability to manage work-related and personal responsibilities effectively.

**Employee Organizational Citizenship Behavior**

Employee organizational citizenship behavior (OCB) refers to discretionary behaviors that go beyond the basic job requirements and contribute to the hotel's smooth operation and positive work environment (Organ, 1988; Podsakoff et al., 2000). It includes dimensions like helping behaviors, conscientiousness, sportsmanship, courtesy, and civic virtue. Employees demonstrate helping behaviors, such as assisting colleagues with tasks and offering support to enhance team performance. This dimension reflects voluntary actions that contribute to the well-being of others in the organization.

The other part of OCB is conscientiousness. Employees exhibit high levels of diligence and responsibility in their work. This includes going above and beyond basic job requirements, being reliable, and showing a strong commitment to job performance.

Sportsmanship is the other dimension of OCB wherein employees maintain a positive attitude and show tolerance for inconveniences or minor issues without complaining. This dimension reflects the ability to handle minor disruptions and maintain a cooperative work environment.

Employees with courtesy, another dimension, demonstrate respectful and considerate behavior towards colleagues, which helps prevent conflicts and fosters a positive workplace atmosphere. This includes being polite, showing empathy, and supporting others.

The fourth dimension is civic virtue. Employees with this trait are engaged in the broader organizational and community activities, showing interest in the organization's success beyond their immediate job responsibilities. This includes participating in organizational events and staying informed about organizational issues. Reported reliability coefficients for OCB scales range from .84 to .92 (Podsakoff et al., 2000).

**Dependent (Outcome) Variables:**

**Customer Satisfaction**

Customer satisfaction in the hotel sector measures the extent to which guests' expectations are met or exceeded by the hotel's services, amenities, and overall experience (Oliver, 1980; Zeithaml et al., 1996). It includes dimensions such as service quality, product quality, customer support, pricing and value, and overall experience. Customers are satisfied with the quality of service they receive, including aspects like responsiveness, reliability, and professionalism. This dimension reflects how well the service meets or exceeds customer expectations.

They also are satisfied with the quality of the products they purchase, including aspects like durability, functionality, and performance. This dimension reflects the perceived value and quality of the products offered.

Customers feel that they receive adequate support and assistance from the organization, including effective problem resolution and helpful service. This dimension reflects the effectiveness and efficiency of customer support services.

Pricing and value show when customers are satisfied with the pricing of products or services and perceive that they receive good value for their money. This includes satisfaction with pricing fairness, discounts, and overall perceived value.

Customers are pleased with their overall experience with the organization, including interactions with staff, the purchasing process, and the overall satisfaction with the service or product. This dimension reflects the holistic view of customer satisfaction.

**Reliability and Validity**

Reliability of evidence collected is assessed using Cronbach's Alpha, with values of 0.70 or higher indicating acceptable reliability (Hinton et al., 2014; Saunders et al., 2016). A pilot study with 40 samples is conducted to evaluate reliability and validity. Validity is determined through expert judgment and exploratory factor analysis (EFA), which measures the construct validity of the evidence to ensure that the questionnaire accurately measures the intended

constructs.

**Data Analysis Tool**

The analysis focuses on examining the effects of leaders' self-efficacy on customer satisfaction with the moderator effect of leaders' gender and leaders' commitment, self-efficacy, employee job satisfaction, and OCB as mediators. Structural Equation Modeling (SEM) is used to analyze direct and indirect effects and the mediating roles of these variables. Reliability and factor analyses will validate the scales. Correlation and regression analyses are used examine the relationships between independent variables and customer satisfaction. Independent t-tests are used to compare differences between male and female leaders and employees on those measured variables.

SEM is performed using AMOS to assess causal relationships and unobserved variables. Descriptive statistics and one-sample t-tests determine the status of variables. Data analysis is used to conduct using SPSS.

**Unit of Analysis**

The unit of analysis for this study (multi-level analysis) is the individual employee and customers within the organizational context. The study aims to explore how individual-level variables, such as leaders' commitment, self-efficacy, job satisfaction, and OCB, affect customer satisfaction. This approach provides insights into individual and organizational dynamics, allowing for tailored interventions to improve outcomes.

**Research Ethics**

Ethical considerations are paramount in research. The study adheres to principles of honesty and integrity, ensuring participant privacy and confidentiality (Adams et al., 2014; Saunders et al., 2009). A confirmation letter from Addis Ababa University is obtained before contacting hotels. Participants are informed about the study's purpose, and their consent is secured voluntarily. Privacy is assured through confidentiality agreements, and all data are used exclusively for academic purposes. Proper citation and referencing acknowledges all primary and secondary data sources.

**Results**

In this chapter, results obtained for the participants using scales have been presented. The chapter presents results that directly answer the research questions raised in chapter one and the conceptual framework in chapter two of this paper. The section presents descriptive statistics, interrelations between the variables, composite and independent contributions of the independent variables to the variance in the dependent variable, and mediating and moderating analysis results.

**Descriptive Statistics for Overall Respondents**

The first task carried out in the analysis is examining the positions of the leaders and employees on the measured variables. This helps to understand if their attributes are gravitated towards above or below the midpoint.

Table 1. Descriptive Statistics Involving Means, Standard Deviations and T-Test Values for the Variables Treated in the Study

| Variables | Mean | Std. Deviation | Scale Midpoint | N |
|---|---|---|---|---|
| CS | 99.65 | 12.547 | 69 | 378 |
| LC | 110.62 | 13.448 | 75 | 378 |
| LSE | 105.19 | 13.226 | 75 | 378 |
| EJS | 97.29 | 16.271 | 75 | 378 |
| OCB | 110.42 | 11.449 | 75 | 378 |
| Experience | 3.1832 | 2.94257 | | 378 |

The overall means of the research participants on the variables treated in the study show that they are greater than the respective midpoints of the scales. To examine the levels of leaders' commitment, self-efficacy, employees' job satisfaction, employees' organizational citizenship behavior, and customer satisfaction against a midpoint (i.e., Not Sure), which does not show a position of the respondents, a one-sample t-test was run. The results are presented in Table 2. Interestingly, the respondents reported significantly higher levels of customer satisfaction, leader commitment, leader self-efficacy, employee organizational citizenship behavior, and employee job satisfaction.

Table 2. One-Sample T-Statistic for the Variables Against the Scales' Midpoints (N = 378)

| Variables | Mean | Std. Deviation | Test values (Midpoints) | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| LC | 110.62 | 13.448 | 75 | 51.494 | 377 | 0.000 |
| LSE | 105.19 | 13.226 | 75 | 44.371 | 377 | 0.000 |
| EJS | 97.29 | 16.271 | 75 | 26.632 | 377 | 0.000 |
| OCB | 110.42 | 11.449 | 75 | 60.140 | 377 | 0.000 |
| CS | 99.65 | 12.547 | 69 | 47.500 | 377 | 0.000 |

**Comparative Analysis of Male and Female Leaders on the Variables**

A further comparison analysis was computed to examine differences between male and female leaders on LC, LSE, EJS, and OCB, and how they perceived the satisfaction of customers under male and female leaders. The results are presented in Table 3. To make sure whether such eyeballing examination of the differences is significant or not, an independent samples t-test was run, and the results are presented in Table 3.

Table 3. Means, Standard Deviations, and T-Test Values for Male and Female Leaders on the Variables Treated in the Study

| Variables | Groups | | | | | | t-test values | df | p-values |
|---|---|---|---|---|---|---|---|---|---|
| | Male | | | Female | | | | | |
| | Mean | SD | N | Mean | SD | N | | | |
| LC | 110.79 | 13.367 | 233 | 110.34 | 13.619 | 145 | 0.309 | 376 | 0.757 |
| LSE | 105.58. | 12.19 | 233 | 104.56 | 14.763 | 145 | 0.726 | 376 | 0.468 |
| EJS | 97.36 | 15.895 | 233 | 97.18 | 16.914 | 145 | 0.103 | 376 | 0.918 |
| OCB | 110.14 | 11.88 | 233 | 110.86 | 10.74 | 145 | -0.589 | 376 | 0.556 |
| CS | 100.43 | 12.08 | 233 | 98.41 | 13.203 | 145 | 1.526 | 376 | 0.128 |

Table 3 presents the means, standard deviations, and t-test values for male and female leaders across the five key variables examined in this study: Leadership Commitment (LC), Leaders' Self-Efficacy (LSE), Employee Job Satisfaction (EJS), Organizational Citizenship Behavior (OCB), and Customer Satisfaction (CS). The independent samples t-test was conducted to determine whether significant differences exist between male and female leaders in these domains.

**Leadership Commitment (LC)**

The mean leadership commitment scores for male leaders (M=110.79, SD=13.367) and female leaders (M=110.34, SD=13.619) are nearly identical. The t-test result (t =0.309, df =376, p=0.757) indicates no statistically significant difference in leadership commitment between male and female leaders. This suggests that both groups perceive themselves—or are perceived—as equally competent in leadership roles, reinforcing the notion that gender does not influence overall leadership effectiveness.

**Leaders' Self-Efficacy (LSE)**

The self-efficacy scores for male leaders (M=105.58, SD=12.19) are slightly higher than those of female leaders (M=104.56, SD=14.763). However, the t-test value (t = 0.726, df = 376, p=0.468) does not indicate a statistically significant difference. This suggests that both male and female leaders demonstrate similar levels of confidence in their leadership abilities, challenging common assumptions about gender disparities in leadership self-perception.

**Employee Job Satisfaction (EJS)**

The analysis of employee job satisfaction under the two genders reveals minimal differences between male (M = 97.36, SD = 15.895) and female leaders (M = 97.18, SD = 16.914). The t-test value (t = 0.103, df = 376, p = 0.918) confirms that this difference is not significant. These findings suggest that leadership gender does not significantly affect employee job satisfaction. The similarity in scores implies that other factors, such as workplace

environment, organizational policies, and job design, may play a more critical role in determining employee satisfaction levels than the gender of the leader.

**Organizational Citizenship Behavior (OCB)**

The results indicate that employees under female leadership (M = 110.86, SD = 10.74) report slightly higher organizational citizenship behavior compared to employees led by male leaders (M = 110.14, SD = 11.88), though the difference is not statistically significant (t = -0.589, df = 376, p = 0.556). This could show that both male and female leaders demonstrate comparable engagement in discretionary behaviors that contribute to organizational well-being. The results imply that gender does not influence the likelihood of leaders encouraging teamwork, cooperation, voluntary contributions beyond formal job expectations, or other variables.

**Customer Satisfaction (CS)**

The employees led by male leaders (M = 100.43, SD = 12.08) report higher customer satisfaction levels compared to those under female leadership (M = 98.41, SD = 13.203). However, the difference is not statistically significant (t = 1.526, df = 376, p = 0.128), indicating that customers do not perceive a substantial difference in satisfaction based on the gender of the leader. Although the slightly higher mean for male leaders suggests a potential advantage in customer interactions, the lack of statistical significance suggests that both male and female leaders can achieve comparable customer satisfaction outcomes.

In summary, the statistical analysis reveals no significant gender differences across the five leadership-related variables examined in this study. While minor variations exist in the mean scores, none of the differences reach statistical significance, suggesting that the leaders' gender does not play a determining role in leadership competence, self-efficacy, employee job satisfaction, organizational citizenship behavior of employees, or customer satisfaction. These findings support the argument that leadership effectiveness is not inherently linked to gender but may instead be shaped by other factors.

In order to examine the level of each variable against the group mean, their scores were converted to standard scores (Z-scores) to make them comparable and more meaningful. Interesting features of differences were obtained as indicated in Figure 1

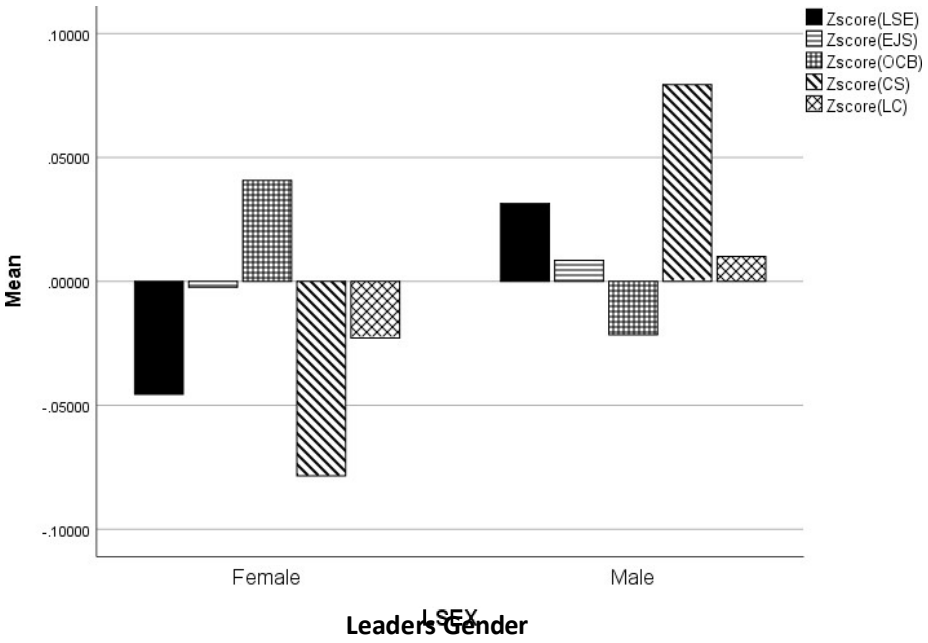



Figure 2. Comparison of the levels of self-efficacy, leaders' commitment, employee organizational citizenship behavior, job satisfaction, and customer satisfaction based on leaders' gender against the group means on each variable

As can be observed in the figure, as reported by the employees and leaders of the hotels, employees led by females tend to have a higher level of organizational commitment (OCB) than those employees led by male leaders. However, male leaders reported having above average self-efficacy (LSE), employees' job satisfaction (EJS), customer satisfaction (CS), and leader commitment (LC). Eyeballing examination of the differences may not prove that they are statistically significant.

**Correlation Analysis**

Further analysis was made using zero-order correlation to determine the relationships among the variables. The results are presented in Table 2.

This section presents the results of a zero-order Pearson correlation analysis among the key variables of the study, namely, customer satisfaction (CS), leadership commitment (LC), leaders' self-efficacy (LSE), employees' job satisfaction (EJS), organizational citizenship behavior (OCB), hotel star rating (Star), leadership experience, and leaders' gender. The analysis was conducted to explore the extent to which these variables are linearly related. The strength and direction of the correlations are interpreted based on Cohen's (1988) guidelines, where coefficients of .10, .30, and .50 represent small, medium, and large effects, respectively. Significance levels are reported at $p < .05$ and $p < .01$ thresholds.

Table 2: Zero-Order Correlation Coefficients among the Variables

| Variables | CS | LC | LSE | EJS | OCB | Star | Experience |
|---|---|---|---|---|---|---|---|
| LC | 0.492** | | | | | | |
| LSE | 0.422** | .715** | | | | | |
| EJS | 0.407** | .553** | .533** | | | | |
| OCB | 0.609** | .502** | .433** | .521** | | | |
| Star | 0.111* | .104* | .068 | .049 | .101 | | |
| Experience | 0.093* | .072 | .044 | -.059 | .001 | .090 | |
| Leaders'Gender | 0.078 | .016 | .037 | .005 | -.030 | .046 | .115* |

**Customer Satisfaction (CS)**

Customer satisfaction, a critical indicator of service delivery effectiveness in the hospitality industry, demonstrated statistically significant and moderately strong positive correlations with all the primary leadership and organizational behavior variables. The strongest relationship was with Organizational Citizenship Behavior (OCB) ($r$ = 0.609, $p$ < 0.01), suggesting that hotels where employees voluntarily engage in supportive, non-obligatory behaviors—such as helping others, showing initiative, and maintaining high service standards—are more likely to report higher customer satisfaction. This finding underscores the importance of cultivating a work environment that encourages prosocial behavior beyond formal job requirements.

A similarly meaningful correlation was found between CS and Leadership Commitment (LC) ($r$

= 0.492, $p$ < 0.01). This implies that when leaders are perceived as competent—demonstrating expertise, decision-making capability, and effective guidance—customers are more likely to be satisfied with the service they receive. Leadership quality, therefore, plays a pivotal role in shaping customer perceptions.

**Leaders' Self-Efficacy (LSE)**

Leaders self-efficacy also had a significant positive relationship with CS ($r$ = 0.422, $p$ < 0.01), indicating that leaders who believe in their capacity to execute leadership responsibilities effectively tend to create environments that enhance customer satisfaction. This association may reflect the influence of confident leadership on team morale, decision clarity, and organizational climate.

The correlation between Employee Job Satisfaction (EJS) and CS was also significant ($r$ = 0.407, $p$ < 0.01), suggesting that hotels with more satisfied employees tend to deliver better customer experiences. This is consistent with the service-profit chain model, which posits that employee attitudes are key drivers of customer satisfaction and loyalty.

The hotel star rating (Star) showed a weak but statistically significant positive correlation

with CS ($r = 0.111$, $p < .05$). This suggests that customers are marginally more satisfied in hotels with higher official standards (i.e., 4-star and 5-star hotels), although this relationship is not strong. It may reflect the influence of infrastructure, service protocols, or branding expectations associated with higher-rated hotels.

Finally, experience also correlated weakly but significantly with CS ($r = 0.093$, $p < .05$), suggesting that leadership tenure has a modest influence on customer satisfaction. Leaders with more years of experience may have refined service strategies and better interpersonal skills that indirectly enhance customer experience.

**Leadership Commitment (LC)**

Leadership commitment was strongly and positively associated with leaders' self-efficacy (LSE) ($r = 0.715$, $p < 0.01$), indicating that self-perceived ability is closely linked to others' assessments of leadership quality. Leaders who believe in their capabilities are more likely to act decisively, inspire confidence, and foster effective team performance—all of which contribute to the perception of being competent.

LC also showed strong positive correlations with Employee Job Satisfaction (EJS) ($r = 0.553$, $p < 0.01$) and Organizational Citizenship Behavior (OCB) ($r = 0.502$, $p < 0.01$). These findings suggest that committed leadership enhances employee well-being and motivates them to engage in extra-role behavior. This could be due to a range of factors, including better communication, clear expectations, support for staff development, and fair treatment.

A statistically significant but weak correlation was observed between LC and hotel star rating (Star) ($r = 0.104$, $p < 0.05$), which may indicate that higher-standard hotels employ or retain more competent leaders, or that such environments facilitate the development and visibility of leadership commitment.

LC showed no statistically significant association with experience ($r = 0.072$, ns) or Leaders' gender ($r = 0.016$, $p > 0.05$), suggesting that perceived leadership commitment is not dependent on either the duration of leadership service or the gender of the leader. This emphasizes that commitment is more closely tied to behavioral and performance-based attributes rather than demographic or tenure-related factors.

**Leaders' Self-Efficacy (LSE)**

LSE was positively and significantly correlated with Employee Job Satisfaction ($r = 0.533$, $p < 0.01$), Organizational Citizenship Behavior ($r = 0.433$, $p < 0.01$), and Customer Satisfaction ($r = 0.422$, $p < 0.01$). These relationships highlight the importance of leaders' confidence in their ability to perform their roles effectively. When leaders feel efficacious, they are more likely to inspire their teams, handle challenges confidently, and create psychologically safe environments, all of which translate into better employee and customer outcomes.

LSE did not correlate significantly with Star Rating ($r = 0.068$, $p > 0.05$), Experience ($r =$

0.044, p > 0.05), or Leaders' Gender ($r$ = 0.037, p > 0.05), reinforcing the idea that self-efficacy is more of a psychological trait influenced by internal beliefs and past mastery experiences rather than external attributes like setting, longevity, or gender.

**Employee Job Satisfaction (EJS)**

EJS was positively associated with all leadership-related variables, most notably with OCB ($r$ = .521, $p$ < .01), indicating that satisfied employees are more likely to exhibit organizational citizenship behaviors. This aligns with existing theories suggesting that job satisfaction contributes to motivation, commitment, and willingness to support co-workers and organizational goals.

The associations with LC ($r$ = .553, $p$ < .01) and LSE ($r$ = .533, $p$ < .01) further emphasize the role of effective and confident leadership in shaping a satisfying work environment. The link between EJS and CS ($r$ = 0.407, $p$ < 0.01) supports the contention that internally satisfied employees contribute to externally satisfied customers.

EJS was not significantly related to Star Rating ($r$ = 0.049, p > 0.05), Experience ($r$ = –0.059, p > 0.05), or Leaders' Gender ($r$ = 0.005, p > 0.05), suggesting that job satisfaction is largely shaped by immediate leadership practices and team dynamics rather than by hotel standard, experience level, or gender.

- Organizational Citizenship Behavior (OCB)

OCB had the strongest positive association with customer satisfaction ($r$ = 0.609, $p$ < 0.01), reinforcing its pivotal role in delivering high-quality service. It was also positively and significantly correlated with LC ($r$ = 0.502, $p$ < 0.01), LSE ($r$ =0 .433, $p$ < 0.01), and EJS ($r$ = 0.521, $p$ < 0.01), reflecting a leadership climate in which employee engagement and discretionary behavior are nurtured through positive leader–employee relationships.

Although the correlation between OCB and Star Rating ($r$ = 0.101, p > 0.05) was not statistically significant, the trend suggests that organizational citizenship may be somewhat more prevalent in higher-rated hotels, possibly due to better working conditions or stronger leadership structures. There were no significant associations with experience ($r$ = 0.001, p > 0.05) or leaders' gender ($r$ = –0.030, p > 0.05).

- Hotel Star Rating (Star)

As an institutional-level variable, the Hotel Star Rating was weakly but significantly associated with Customer Satisfaction ($r$ = 0.111, $p$ < .05) and Leadership Competence ($r$ = 0.104, $p$ < 0.05). This indicates that while hotel infrastructure and formal service standards matter, their influence on human-centered outcomes like satisfaction and competence is limited. Higher star ratings may provide a conducive environment for leadership to thrive, but are not determinative on their own.

Star rating had no significant relationships with other variables such as LSE, EJS, or OCB, suggesting that high institutional standards do not automatically translate into improved employee attitudes or leadership efficacy.

- Experience and Leaders' Gender

Experience showed a weak positive correlation with customer satisfaction ($r = 0.093$, $p < 0.05$), suggesting that more experienced leaders might leverage accumulated knowledge and interpersonal skills to deliver better customer outcomes. Additionally, experience was significantly correlated with leaders' sex ($r = 0.115$, $p < 0.05$), possibly indicating gender disparities in years of leadership service within the sample. However, experience was not significantly associated with any core leadership or behavioral variables, indicating that longevity alone does not predict leadership success or team outcomes.

Leaders' gender was not significantly associated with any of the primary outcome variables, including leadership competence, self-efficacy, employee satisfaction, OCB, or customer satisfaction. This result reinforces the notion of gender neutrality in leadership effectiveness and supports an evidence-based, performance-oriented approach to leadership evaluation.

Thus, the correlational analysis reveals interrelationships among leadership attributes, employee outcomes, and customer satisfaction. The findings emphasize the critical role of competent and self-efficacious leadership in fostering employee satisfaction and citizenship behavior, which in turn are strong predictors of customer satisfaction. While hotel standards (as indicated by star ratings) exert a minor influence, it is clear that leadership quality and team dynamics are the primary drivers of successful organizational performance. Experience and gender appear to have negligible effects, suggesting that leadership training and behavioral competencies should be the focal point of performance enhancement strategies in hospitality and similar service sectors.

- **Regression Analysis of Variables Affecting Customer Satisfaction**

Results obtained from zero correlation show how one variable relates to others without controlling the effect of their effects. In order to examine the relationships of independent variables on customer satisfaction by controlling the effects of the other variables, a regression analysis was computed.

Customer satisfaction (CS) is a critical determinant of organizational success, particularly in service-oriented sectors where consumer experiences play a significant role in shaping business outcomes. This study aims to explore the relationship between several independent variables and customer satisfaction through multiple regression analysis. The variables analyzed include Leadership Commitment (LC), Leadership Style Effectiveness (LSE), Employee Job Satisfaction (EJS), Organizational Citizenship Behavior (OCB), Hotel Star Rating (Star), Leaders' Gender (LG), and Employees' Experience. The results are examined to determine the strength and significance of these relationships and their contribution to

explaining customer satisfaction.

The regression analysis results present how the above predictors influence customer satisfaction (CS) in the context of the hospitality industry. Accordingly, the combined and individual effects of the variables on customer satisfaction are indicated in Table 4.

Table 4. Regression Analysis of the Variables on Customer Satisfaction (CS)

| Variables | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | |
|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | |
| (Constant) | 11.386 | 5.456 | | 2.087 | 0.038 | 0.433** |
| LC | 0.174 | 0.056 | 0.187 | 3.094 | 0.002 | |
| LSE | 0.058 | 0.055 | 0.061 | 1.050 | 0.294 | |
| EJS | 0.021 | 0.040 | 0.027 | 0.521 | 0.602 | |
| OCB | 0.520 | 0.053 | 0.475 | 9.829 | 0.000 | |
| Star | 0.400 | 0.562 | 0.028 | 0.712 | 0.477 | |
| LG | 2.022 | 1.018 | 0.078 | 1.986 | 0.048 | |
| Experience | 0.285 | 0.170 | 0.067 | 1.674 | 0.095 | |

** F = 40.367, df 1 =7, df2 = 370, p = 0.000

The results demonstrated that leaders' commitment (LC), leaders' self-efficacy (LSE), employee job satisfaction (EJS), employee organizational citizenship behavior (OCB), hotel quality rating (Star), leaders' gender, and employee experience (Experience) jointly accounted for 43.3% in the variance of customer satisfaction. This shows more than half of the variance in customer satisfaction is explained by other variables not included in the study. Individually the contributions of the variables to the variance in customer satisfaction are presented as follows.

The first variable examined in the model was leader commitment (LC). This variable demonstrates a statistically significant positive effect on customer satisfaction, with a beta of

0.187 (p = 0.002). The significance of the leader commitment effect on customer satisfaction underscores the importance of leaders who demonstrate active engagement and dedication to the mission of the organization. In the context of hotels, leaders who are genuinely committed to high standards and customer service are likely to foster an environment conducive to positive customer experiences. Their commitment could be reflected in the service quality, customer relations, and overall satisfaction.

In contrast, Leaders' Self-Efficacy (LSE), with a Beta of 0.061 (p = 0.294), failed to exhibit a significant effect on customer satisfaction. While self-efficacy, or a leader's belief in their abilities, is often thought to influence leadership effectiveness, the results suggest that in this context, it may not have a direct or substantial impact on customer satisfaction. The lack of

significance for LSE could imply that while a leader's self-perceived competence is important for internal organizational functioning, it may not necessarily translate to customer outcomes in the same way as other leadership behaviors, such as commitment.

The third variable, Employee Organizational Citizenship Behavior (OCB), shows a strong and statistically significant predictive power to customer satisfaction, with a Beta of 0.475 ($p = 0.000$). This indicates that employees who engage in extra-role behaviors—such as going above and beyond their job requirements—have a significant positive effect on customer satisfaction. In other words, employees who exhibit behaviors like helping others, being proactive in problem-solving, and providing high-quality service are essential drivers of customer satisfaction. In the hospitality industry, where service quality is key, employees' voluntary actions that enhance guest experiences can substantially increase customer satisfaction.

Inversely, Employee Job Satisfaction (EJS), with a Beta of 0.027 ($p = 0.602$), shows an insignificant and minimal effect on customer satisfaction. Despite the intuitive link between employee satisfaction and customer satisfaction, the results suggest that job satisfaction, in this particular model, does not directly influence customer outcomes. The association of employee satisfaction with customer satisfaction is negligible. This could imply that while satisfied employees are generally more motivated, their job satisfaction alone does not necessarily lead to improvements in customer satisfaction. The result may indicate that other factors, such as customer service training, leadership behaviors, or organizational culture, play more important roles. Or, its effect on customer satisfaction could be mediated by organizational citizenship behavior.

Though there is no significant difference in customer satisfaction between male and female leaders, in the regression analysis, leader's gender (LG) was found to have a statistically significant positive effect on customer satisfaction, with a beta of 0.078 ($p = 0.048$) while the magnitude of the effect is smaller than other predictors. This finding may reflect societal or organizational biases or expectations regarding gender and leadership, though the effect is modest. Further research may be needed to explore the underlying mechanisms of this relationship, as gender dynamics in leadership could influence both employee behavior and customer interactions in the hospitality industry.

Hotel Quality Rating (Star), which reflects the hotel's quality and reputation, shows a beta of 0.028 ($p = 0.477$), indicating no significant effect on customer satisfaction in this model. Despite the expected link between a hotel's star rating and customer satisfaction, the lack of significance in this analysis suggests that the hotel's quality rating, as an isolated factor, does not have a substantial impact on customer satisfaction. It may be that factors such as the service provided by employees, the quality of customer interactions, or the leadership within the organization have a greater influence on how customers perceive their experience, rather than the overall hotel rating.

In general, the regression analysis highlights the varying degrees of influence that different

factors have on customer satisfaction in the hotel industry. Employee organizational citizenship behavior (OCB) and leader commitment (LC) are identified as the most powerful predictors of customer satisfaction, emphasizing the importance of employee behavior and leadership in shaping positive customer experiences. In contrast, leaders' self-efficacy (LSE), employee job satisfaction (EJS), and hotel quality rating (Star) have minimal or no significant effects on customer satisfaction in this model, suggesting that other factors, particularly those related to organizational culture and leadership, play a more substantial role. These results emphasize the importance of fostering a culture of organizational citizenship and strong leadership commitment in driving customer satisfaction in the hospitality sector.

Considering all independent variables in the analysis indicated that not all variables are important in predicting customer satisfaction. To overcome this problem, a stepwise regression analysis was conducted to identify those variables that significantly predict customer satisfaction. The results are indicated in Table 5.

Table 5. Stepwise regression results indicating the effects of selected variables on Customer Satisfaction

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | R2 | F-Values | P Values |
|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | | | |
| 1 | (Constant) | 25.956 | 4.976 | | 5.217 | 0.000 | | | |
| | OCB | 0.667 | 0.045 | 0.609 | 14.891 | 0.000 | 0.369 | 221.739[a] | 0.000 |
| 2 | (Constant) | 15.362 | 5.171 | | 2.971 | 0.003 | 0.414 | 134.361[b] | 0.000 |
| | OCB | 0.530 | 0.050 | 0.484 | 10.623 | 0.000 | | | |
| | LC | 0.233 | 0.043 | 0.249 | 5.470 | 0.000 | | | |
| 3 | (Constant) | 13.772 | 5.189 | | 2.654 | 0.008 | 0.425 | 92.305[c] | 0.000 |
| | OCB | 0.535 | 0.050 | 0.489 | 10.773 | 0.000 | | | |
| | LC | 0.229 | 0.042 | 0.246 | 5.415 | 0.000 | | | |
| | LG | 2.303 | 1.011 | 0.089 | 2.278 | 0.023 | | | |

a. df1 = 1, df2 =376; b. df1 =2, df2 = 375; c. df1 = 3, df2 = 374

The stepwise regression analysis results presented in Table 5 provided valuable insights into the relationship between selected variables and customer satisfaction (CS). The analysis proceeded in three steps, progressively adding variables to the model, allowing for a detailed understanding of how different predictors influence customer satisfaction. The variables included in the models are organizational citizenship behavior (OCB), leader commitment (LC), and leaders' gender (LG.)

In the first step, only organizational citizenship behavior (OCB) was identified as a strong and significant predictor of customer satisfaction. The standardized coefficient for OCB is 0.609 (p=0.000). The model's $R^2$ value of 0.369 indicates that OCB explains 36.9% of the variation in customer satisfaction, suggesting a moderate effect.

In the second model, Leader Commitment (LC) is added as a predictor, with a beta coefficient of

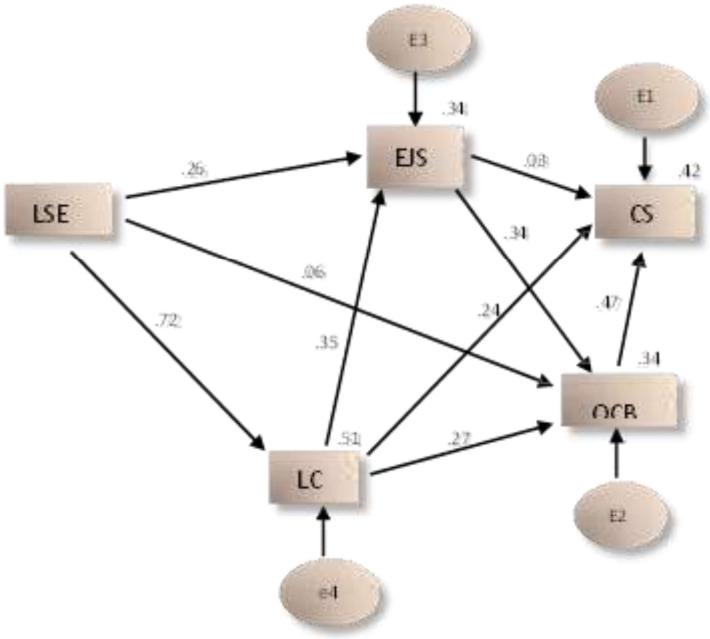
0.249 (p = 0.000), meaning that leader commitment contributes to the increase in customer satisfaction. The addition of LC increases the model's $R^2$ to 0.414, explaining 41.4% of the variance in customer satisfaction. This is a modest improvement over the first model, indicating that leader commitment provides additional explanatory power over and above OCB. The F-value of 134.361 (p = 0.000) confirms that the model is still statistically significant, demonstrating that leader commitment further contributes to explaining customer satisfaction.

In the final model, though significant gender difference was not found in customer satisfaction, leaders' gender (LG) is included as an additional predictor. The standardized regression coefficient is 0.089, indicating that the gender of the leader accounts for 0.089 standard deviations of customer satisfaction. Although the effect of LG is statistically significant (p = 0.023), its impact is relatively modest compared to the other predictors. The inclusion of LG slightly increases the model's $R^2$ to 0.425, explaining 42.5% of the variation in customer satisfaction. This represents a small improvement over the second model, suggesting that the addition of LG explains a minor, yet significant, portion of the variance in customer satisfaction, where male leaders tend to have more satisfied customers than female leaders.

**Analysis of Mediation between the Independent and Dependent Variables**

Path analysis permits verification of the direction of causal flow between variables (“causal” refers to the degree of impact one variable, or a set of variables, has on another variable). Thus, it is a step beyond the predictive power of traditional correlational and regression analyses. It depicts the causal links among the latent and/or observed variables. The path model is constructed based on the conceptual framework presented in chapter three of this paper. Using Amos 25, the specified model was tested to examine the mediational and moderation effects on the specified variables on the dependent variables. Accordingly, the first path analysis was run on the following model without considering the moderation effects of leaders’ gender between leaders’ self-efficacy and employees’ satisfaction, as well as between leaders’ commitment and employees’ organizational citizenship behavior. The model is presented below.

Figure 3. The path model showing the mediation effects of LC, OCB, and EJS between LSE and CS (values at the top right corner of the boxes represent coefficients of determination, i.e., $R^2$).




The results revealed that the model fits the data, as reflected in the fit indices: $\chi^2$ = 1.335, df =1, p=0.248, $\chi^2$/df = 1.335; NFI =0.998, RFI=0.983, IFI=1.000, TLI = 0.996, CFI = 1.000, and RMSEA=0.03, p=0.444. A non-significant $\chi^2$ indicates that the model fits the data well. The $\chi^2$ test and the other indices were examined, and it was found that they are good indicators of the fitness of the model to the data. The RMSEA (root mean square error approximation) result is not significant at p = 0.444, suggesting the model does not fit the data satisfactorily.

The path model showed that leaders' self-efficacy was a strong predictor of leaders' commitment (beta = 0.72, p = 0.000), and employee job satisfaction (beta = 0.28, p =0.000). However, its direct effect on OCB is not statistically significant (beta = 0.06, p>0.05). Leaders' commitment directly and significantly predicts OCB (beta = 0.27, p = 0.000), employee job satisfaction (beta = 0. 35, p=0.000), and customer satisfaction (beta =0.24, p =0.000). On the other hand, employee job satisfaction significantly predicated organizational citizenship behavior (beta = 0.34, p =0.000), but failed to significantly predict customer satisfaction (beta = 0.03, p>0.05). The overall contribution of the variables to the variance in customer satisfaction is 42%.

A further analysis was conducted after removing those paths that are not significant. The results are indicated in Figure 3

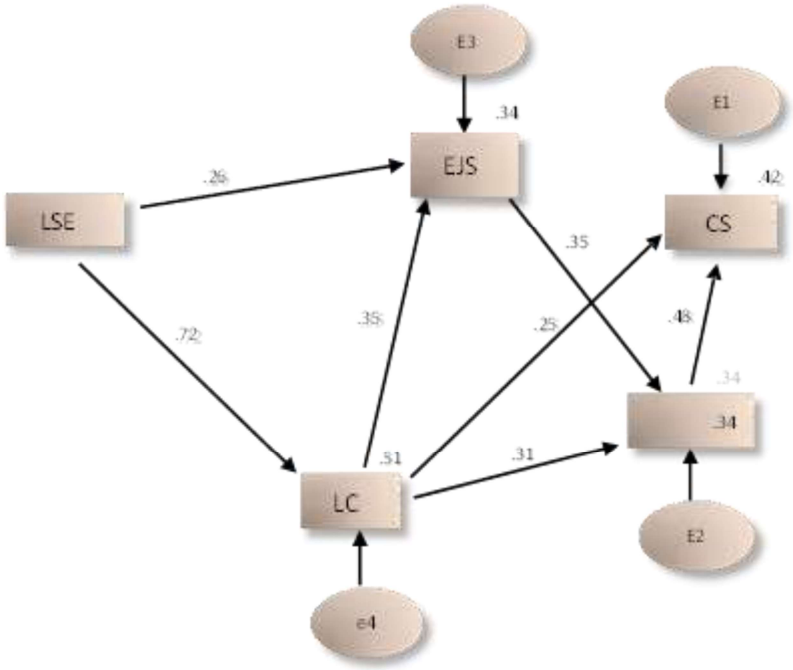



Figure 4. The path model showing the mediation effects of LC, EJB, and OCB between LSE and CS after non-significant paths are removed.

The modified structural equation modeling indices indicated that $\chi^2$ = 2.466, df = 3, p = 0.481; NFI = 0.997, RFI = 0.990, IFI = 1.000, CFI = 1.000, and RMSEA = 0.000, p = 0.779, suggesting that the model fit the data strongly. The variables (directly) and jointly contributed 42% of the variance in customer satisfaction. This amount was explained by OCB and LC. However, the indirect effects of LSE, LC, and EJS are worth considering. The direct, indirect, and total effects of the variables on customer satisfaction are presented in Table 6.

Table 6. Direct, Indirect, and Total Effects of LSE, LC, EJB, and OCB on CS

| Variables | DirectEffects (β) | Indirect Effects | Total Effects |
|---|---|---|---|
| Leaders' Self- Efficacy (LSE) | 0.000 | 0.375 | 0.375 |
| Leaders' Commitment (LC) | 0.249 | 0.209 | 0.458 |
| Employee Job Satisfaction (EJB) | 0.000 | 0.170 | 0.170 |
| Organizational Citizenship Behavior (OCB) | 0.484 | 0.000 | 0.484 |

Although the direct effect of leaders' Self-efficacy on Customer Satisfaction is not significant, its indirect effect is moderately high. As presented in Table 6, the indirect effect is 0.375. However, its direct effect, as indicated in Table 6, on leaders' commitment is very strong (β = 0.72) which in turn has significant modest direct effects on OCB (β= 0.31), employee job satisfaction (β = 0.35), and customer satisfaction (β = 0.31). The model clearly shows that the effect of leaders' self-efficacy on customer satisfaction is indirect much of which is through leaders' commitment. Similarly, employee job satisfaction has no

significant direct effects on customer satisfaction, but it directly influenced organizational citizenship behavior (β = 0.35), and indirectly (indirect effect = -0.170) affected customer satisfaction via OCB. Customer satisfaction is strongly influenced by employees' organizational citizenship behavior, which together with leaders' commitment accounted 42% of its variance.

Since the major intent of the research to investigate the moderating effects of leaders'gender between leaders' self-efficacy and employee job satisfaction as well as between leaders' commitment and employees' organizational citizenship behavior, moderation analysis was calculated as follows.

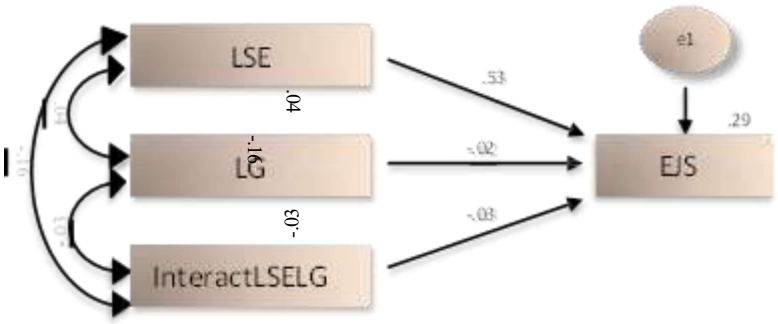



Figure 5. The moderation effect of leaders' gender (LG) between leaders' self-efficacy and employee job satisfaction

Table 7. Regression Weights Showing the Moderating Effect of Leaders' Gender on the Relationship between LSE and EJS

Effects

EJS <---LSE

EJS <---LG

| | Estimate (b) | S.E. | Beta Weights | t-test | P |
|---|---|---|---|---|---|
| | 0.651 | 0.054 | 0.529 | 11.984 | 0.000 |
| | -0.511 | 1.457 | -0.015 | -0.351 | 0.726 |
| | | | -0.027 | -0.623 | |

The moderation analysis of leaders' gender role on the relationship between leaders' self-efficacy and employee jab satisfaction shows that the moderation (Interact LSELG) is not significant (Beta = -0.027, t = -0.623, p>0.05) showing that the moderating role of leaders' gender (LG), which itself has no significant effect on the dependent variable, i.e. EJS (Beta = - 0.015, t = -0.351, p> 0.726), on the relationship between LSE and EJS is weak where being male or female does not change the employees job satisfaction.

A similar analysis was conducted to examine the moderating effect of the leaders' gender on the relationship between leaders' commitment and employees' organizational citizenship behavior. The results indicated that the moderating effect of leaders' gender on the relationship between leaders' commitment and employees' organizational citizenship behavior is negligible (beta = 0.08).

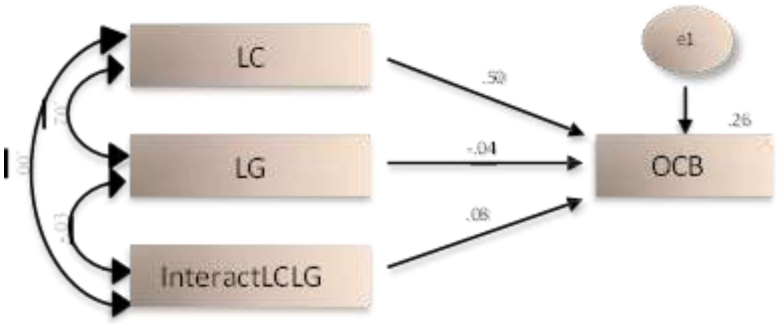



Figure 6. The moderation effect of leaders' gender (LG) between leaders' commitment (LC) and employee organizational citizenship behavior (OCB).

Table 8. Regression Weights Showing the Moderating Effect of Leaders' Gender on the Relationship between LSE and EJS.

| Effects | **Estimate (b)** | **S.E.** | **Beta Weights** | **t-test** | **P** |
|---|---|---|---|---|---|
| OCB<---LC | 0.428 | 0.038 | 0.502 | 11.325 | 0.000 |
| OCB <---LG | -0.856 | 1.043 | -0.036 | -0.820 | 0.412 |
| OCB<---InteractLCLG | 0.811 | 0.475 | 0.076 | 1.706 | 0.088 |

The moderation analysis of leaders' gender role on the relationship between leaders' commitment and employee OCB shows that the moderation (Interact LCLG) is not significant (Beta = 0.076, t = 1.706, p>0.088) showing that the moderating role of leaders' gender (LG), which itself has no significant effect on the dependent variable, i.e., OCB (Beta = -0.036, t = -0.820, p> 0.412), on the relationship between LC and OCB is negligible, where being male or female does not change the employees' OCB.

In summary, the moderation analysis on both relationships between the independent and dependent variables, i.e., between leaders' commitment and organizational citizenship behavior and between leaders' self-efficacy and employee job satisfaction, are not significant, suggesting that leaders' gender does not have an effect on changing the interaction between leaders' and employees' attributes.

## Discussion and Implications

### Discussion of Research Findings

This study examined the dynamic relationships among leadership self-efficacy, leadership commitment, employee job satisfaction, organizational citizenship behavior (OCB), leaders' gender, and customer satisfaction within the hospitality industry. The investigation was structured around six research questions and corresponding hypotheses, with theoretical and empirical implications emphasized throughout. Regarding the first research question, which explored potential gender differences in leadership commitment and self-efficacy, results revealed no statistically significant differences between male and female leaders, although males reported slightly higher self-efficacy scores. This indicates that gender does not substantially influence leaders' confidence or commitment, providing no support for hypotheses H1 and H2, which proposed gender as a moderating factor. These findings align with Social Role Theory (Eagly & Karau, 2002), which recognizes that while gender stereotypes can shape leadership expectations, actual leadership effectiveness is primarily determined by contextual and competency-related factors. Similar patterns have been observed in hospitality research, where gender demonstrates limited impact on leadership outcomes once organizational variables are controlled (Sharma, 2021).

The second research question investigated the strengths and directions of relationships among the studied variables. Correlation analyses revealed strong positive associations between leadership commitment, OCB, and customer satisfaction, whereas leaders' gender showed only a weak relationship with customer satisfaction. Leaders' self-efficacy was positively associated with leadership commitment and employee job satisfaction but exhibited no direct correlation with customer satisfaction. These findings provide partial support for hypotheses H3, H4, and H5, consistent with Social Cognitive Theory (Bandura, 1997), which emphasizes the role of self-efficacy in shaping persistence, problem-solving, and motivational processes. The absence of a direct effect of self-efficacy on customer satisfaction suggests that its influence is mediated through leadership commitment and OCB rather than exerting a direct impact.

The third research question examined the combined and individual effects of leadership commitment, self-efficacy, employee job satisfaction, and OCB on customer satisfaction. Regression analyses indicated that leadership commitment and OCB were the strongest predictors, while job satisfaction and self-efficacy showed no direct effects. Collectively, these predictors explained 43.3% of the variance in customer satisfaction, supporting hypotheses H4, H7, and H8. OCB emerged as a particularly powerful predictor, highlighting that employees' discretionary, extra-role behaviors significantly shape customer experiences. This finding supports Social Exchange Theory (Blau, 1964), as employees who perceive fair treatment and supportive leadership reciprocate with behaviors that exceed formal job requirements, thereby enhancing customer satisfaction. The lack of significant effects for hotel star ratings underscores that interpersonal service behaviors and leadership commitment are more influential than structural indicators of quality in shaping customer perceptions (Pizam, 2020).

The fourth research question addressed the moderating role of leaders' gender on the relationships between self-efficacy and job satisfaction, as well as between leadership

commitment and OCB. Moderation analyses revealed no significant gender effects, providing no support for hypotheses H1 and H2. These findings refine Social Role Theory, suggesting that while gender stereotypes exist, leadership effectiveness is largely determined by behavioral competencies and organizational context rather than gender identity (Eagly & Carli, 2003).

The fifth research question examined the mediating effects of leadership commitment, employee job satisfaction, and OCB on the relationship between self-efficacy and customer satisfaction. Path analysis demonstrated that leadership commitment and OCB mediated this relationship, whereas job satisfaction did not. These results strongly support hypotheses H9 through H12, with OCB emerging as the most influential mediating factor. The findings align with Social Cognitive Theory, illustrating that self-efficacious leaders display stronger commitment, which in turn encourages employees to engage in OCB, ultimately enhancing customer satisfaction. They also support Social Exchange Theory, which posits that employees reciprocate committed and supportive leadership by exceeding formal job expectations, thereby improving organizational outcomes (Podsakoff et al., 2000).

The sixth research question explored the direct, indirect, and total effects of self-efficacy, leadership commitment, job satisfaction, and OCB on customer satisfaction. Structural equation modeling indicated that self-efficacy had no direct effect on customer satisfaction but exerted a substantial indirect effect ($\beta = 0.375$), primarily mediated through leadership commitment and OCB. Leadership commitment had both direct and indirect effects (total $\beta = 0.458$), while OCB exhibited the strongest direct effect ($\beta = 0.484$). Employee job satisfaction influenced customer satisfaction indirectly through its impact on OCB. These findings support hypotheses H3 through H12 and illustrate a sequential chain of influence: leaders' self-efficacy enhances commitment, commitment fosters OCB, and OCB drives customer satisfaction. This integrated framework demonstrates the interplay of Social Cognitive Theory, Social Exchange Theory, and Social Role Theory, showing that gender differences are negligible, while leaders' beliefs, behaviors, and employee reciprocity collectively explain customer satisfaction outcomes in the hospitality sector.

Comparative analyses of male and female leaders revealed minor, non-significant differences. Male leaders reported slightly higher self-efficacy and customer satisfaction, whereas female-led teams exhibited higher OCB, though these differences did not reach statistical significance. Employee job satisfaction and leadership commitment were similar across genders, indicating that leadership effectiveness is more strongly influenced by competencies, behaviors, and organizational context than by gender (Bass & Avolio, 1994; Eagly & Carli, 2003). Leaders' self-efficacy refers to confidence in one's ability to perform leadership tasks effectively. Although male leaders scored higher on self-efficacy measures, the differences were not statistically significant ($t = 0.726$, $p = 0.468$), suggesting that self-efficacy is contextually driven rather than inherently gendered (Bandura, 1997). Employee job satisfaction also showed no significant gender differences ($t = 0.103$, $p = 0.918$), consistent with literature emphasizing that satisfaction is shaped more by organizational structures, compensation, and career growth opportunities than by leaders' gender (Herzberg, 1966;

Judge & Bono, 2001). Organizational citizenship behavior differed slightly, with employees under female leaders scoring higher (M = 110.86) than those under male leaders (M = 110.14), though this was not statistically significant (t = -0.589, p = 0.556). Research suggests transformational leadership—often associated with female leaders—can inspire higher levels of extra-role behavior (Bass, 1999), but contextual organizational factors also play a critical role. Customer satisfaction followed a similar pattern, with male-led teams reporting slightly higher scores (M = 100.43) than female-led teams (M = 98.41), though again not statistically significant (t = 1.526, p = 0.128). Leadership commitment showed no significant gender differences (male M = 110.79; female M = 110.34; t = 0.309, p = 0.757), further supporting the argument that effective leadership is determined by skills and behaviors rather than gender.

Correlation analyses highlighted positive associations between customer satisfaction and leadership commitment, OCB, employee job satisfaction, and leaders' self-efficacy, emphasizing that leadership effectiveness, employee engagement, and organizational culture are integral to customer satisfaction (Harter, Schmidt, & Hayes, 2002). Hotel star ratings showed only weak correlations with customer satisfaction ($r = 0.111$, $p < .05$), reinforcing the idea that leadership qualities and employee behaviors have a more substantial influence than institutional indicators. Regression analyses revealed that leadership commitment had a positive and significant effect on customer satisfaction (Beta = 0.187, p = 0.002) while leaders' self-efficacy did not (Beta = 0.061, p = 0.294), suggesting that active engagement and commitment to organizational goals are more critical than perceived competence alone. OCB had a strong positive effect on customer satisfaction (beta = 0.475, p = 0.000), highlighting the importance of discretionary employee behaviors in shaping customer experiences.

Employee job satisfaction had no direct effect on customer satisfaction (Beta = 0.027, p = 0.602), suggesting that satisfaction alone does not guarantee behaviors that enhance customer experiences. Leaders' gender showed a small but significant effect on customer satisfaction (Beta = 0.078, p = 0.048), indicating subtle gender-related influences, although the effect was modest compared to OCB and leadership commitment. Stepwise regression confirmed that OCB was the strongest predictor, explaining 36.9% of variance, with leadership commitment and gender contributing additional explanatory power, ultimately increasing $R^2$ to 42.5%.

Path analysis demonstrated excellent model fit ($\chi^2 = 1.335$, df = 1, p = 0.248; NFI = 0.998; IFI = 1.000; CFI = 1.000; RMSEA = 0.03), confirming the proposed structural relationships. Leaders' self-efficacy strongly predicted leadership commitment ($\beta = 0.72$) and employee job satisfaction $\beta = 0.28$), while leadership commitment significantly influenced OCB ($\beta = 0.27$), job satisfaction ($\beta = 0.35$), and customer satisfaction ($\beta = 0.24$). Employee job satisfaction influenced OCB ($\beta = 0.34$) but not customer satisfaction directly. Refining the model by removing non-significant paths improved fit indices ($\chi^2 = 2.466$, df = 3, p = 0.481; RMSEA = 0.000), highlighting the substantial indirect effect of self-efficacy on customer satisfaction via leadership commitment and OCB ($\beta = 0.375$). Moderation analyses confirmed that leaders' gender did not significantly alter these relationships (LSE × Gender: $\beta = -0.027$, t = -0.623, p

> 0.05; LC×Gender: β = 0.076, t = 1.706, p > 0.05), demonstrating that leadership qualities and their impact on employee and customer outcomes are consistent across genders.

Overall, this study underscores the critical role of leaders' self-efficacy in enhancing leadership commitment, which in turn fosters positive employee behaviors and improves customer satisfaction. Practically, the findings suggest that hospitality organizations should invest in leadership development programs that strengthen self-efficacy and commitment, while fostering supportive work environments that encourage OCB. Gender-based assumptions should be avoided, as gender was not a decisive factor in leadership effectiveness. Limitations include the sample size and representativeness of Ethiopian hotels and employees, reliance on quantitative self-reported data, and the cross-sectional study design, which limits causal inference. Future research could employ longitudinal or mixed-methods approaches and examine additional moderating factors, such as organizational culture or leadership styles. In conclusion, the study highlights the intricate interplay between leadership attributes and employee behaviors, demonstrating that self-efficacious and committed leaders cultivate proactive employees, ultimately enhancing customer satisfaction and organizational performance.

**Limitation of the Study**

Despite its theoretical and practical contributions, this study has several limitations that should be considered when interpreting the findings. First, the selection bias could also affect the representativeness of the sample, as participation depended on the willingness of hotel leaders, department heads, and employees, potentially excluding perspectives from less engaged or more critical respondents. Second, the study relied primarily on quantitative, self-reported survey data**,** which may introduce social desirability and measurement biases. Participants might have responded in ways perceived as socially acceptable rather than reflecting their true behaviors or perceptions, particularly in subjective constructs such as leadership self-efficacy, leadership commitment, organizational citizenship behavior (OCB), and employee job satisfaction.

Third, the cross-sectional design limits causal inferences among leadership self-efficacy, commitment, employee behaviors, and customer satisfaction. While structural equation modeling and regression analyses revealed significant associations, longitudinal or experimental designs would provide stronger evidence for causal relationships and better capture changes over time. Fourth, the study focused on a specific set of variables, omitting potentially influential factors such as organizational culture, leadership style variations, team dynamics, and customer characteristics, which may interact with or moderate the studied relationships. Fifth, while gender was examined as variable, cultural norms and societal expectations in Ethiopia may have influenced perceptions of male and female leaders, potentially masking subtle effects or interactions. Finally, hierarchical organizational structures and cultural norms regarding authority could have affected participants' willingness to provide candid feedback, particularly on sensitive leadership evaluation items.

These limitations highlight several avenues for future research. Future studies could employ longitudinal or experimental designs to better establish causal relationships among leadership self-efficacy, commitment, employee behaviors, and customer satisfaction. Incorporating qualitative methods**,** such as interviews, focus groups, or observational studies, would provide deeper insights into leadership processes, gender dynamics, and employee perceptions that may not be fully captured by surveys. Researchers could also explore additional moderating or contextual variables**,** such as organizational culture, leadership style, team composition, or customer expectations, to clarify under what conditions leadership attributes influence employee behaviors and customer outcomes. Expanding the research to different cultural and industry contexts beyond Ethiopian hotels**,** including larger hotel chains or international settings, could enhance generalizability and offer cross-cultural perspectives. Finally, examining other potential mediators, such as employee engagement, psychological empowerment, or trust in leadership, could provide a more comprehensive understanding of the mechanisms through which leadership influences organizational effectiveness and customer satisfaction.

**References**


Allen, T. D. (2006). Rewarding good citizens: The relationship between citizenship behavior, gender, and organizational rewards. *Journal of Applied Social Psychology, 36*(1), 120–143. https://doi.org/10.1111/j.0021-9029.2006.00006.x (doi.org in Bing)

Allen, T. D., & Rush, M. C. (2001). The influence of rater gender on ratings of organizational citizenship behavior. *Journal of Applied Social Psychology, 31*(12), 2561–2587. https://doi.org/10.1111/j.1559-1816.2001.tb00191.x (doi.org in Bing)

Alshurideh, M., Bataineh, A., Alkurdi, B., & Alasmr, N. (2015). Factors affecting mobile phone brand choices: Studying the case of Jordan universities students. *International Business Research, 8*(3), 141–155.

Alshurideh, M., Masa'deh, R., & Alkurdi, B. (2012). The effect of customer satisfaction upon customer retention in the Jordanian mobile market: An empirical investigation. *European Journal of Economics, Finance and Administrative Sciences, 47*, 69–78.

Andersen, L. L., Domsch, M., & Cascorbi, A. (2007). Job satisfaction of shift workers: A literature review. *Human Resource Management Review, 17*(2), 108–134.

Anderson, E. W., Fornell, C., & Rust, R. T. (2001). Customer satisfaction, productivity, and profitability: Differences between goods and services. *Marketing Science, 20*(4), 129–145.

Aram, A., et al. (2020). The impact of job satisfaction and organizational commitment on organizational citizenship behaviors: Evidence from employees in three- to five-star hotels in Baghdad, Iraq. *[Journal details missing]*.

Ardi, Z. (2020). Determinants of organizational citizenship behavior among high school teachers. *International Journal of Scientific & Technology Research, 9*(1), 3042–3050.

Ariani, D. W. (2013). The influence of organizational citizenship behavior (OCB) on employee performance at XYZ Company. *Journal of Economics, Business, and Accountancy Ventura, 16*(1), 21–32

Artazcoz, L., Benach, J., Borrell, C., & Cortès, I. (2004). Unemployment and mental health: Understanding the interactions among gender, family roles, and social class. *American Journal of Public Health, 94*(1), 82–88. https://doi.org/10.2105/AJPH.94.1.82 (doi.org in Bing)

Aycan, Z., & Eskin, M. (2005). Relative contributions of childcare, spousal support, and organizational support in reducing work–family conflict for men and women: The case of Turkey. *Sex Roles, 53*(7–8), 453–471.

Babakus, E., & Boller, G. W. (1992). An empirical assessment of the SERVQUAL scale. *Journal of Business Research, 24*(3), 253–268.

Babakus, E., Yavas, U., Karatepe, O. M., & Avci, T. (2003). The effect of management commitment to service quality on employees' affective and performance outcomes. *Journal of the Academy of Marketing Science, 31*(3), 272–286. https:// doi.org/ 10.1177/0092070303031003005

Babbie, E. (2016). *The practice of social research* (14th ed.). Cengage Learning.

Babin, B. J., & Boles, J. S. (1998). Employee behavior in a service environment: A model and test of potential differences between men and women. *Journal of Marketing, 62*(2), 77–91. https://doi.org/10.1177/002224299806200206 (doi.org in Bing)

Bai, B., Brewer, K. P., Sammons, G., & Swerdlow, S. (2006). Job satisfaction of casino hotel employees: An analysis of the Las Vegas Strip. *Journal of Travel Research, 45*(4), 457–469.

Baird, C., & Keene, J. (2018). Closing the gender gap in math confidence: Gender and race/ethnic similarities and differences. *International Journal of Gender, Science and Technology, 10*, 378–410.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215. https://doi.org/10.1037/0033-295X.84.2. 191

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Bandura, A. (1992). Exercise of personal agency through the self-efficacy mechanism. In R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp. 3–38). Hemisp here.

Bandura, A. (1995). Exercise of personal agency through the self-efficacy mechanism. In J. E. Maddux (Ed.), *Self-efficacy, adaptation, and adjustment: Theory, research, and application* (pp. 5–37). Springer.

Bandura, A. (1997). Editorial. *American Journal of Health Promotion, 12*(1), 8–10. https:/ /doi.org/ 10.4278/0890-1171-12.1.8

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.

Bandura, A. (2007). Much ado over a faulty conception of perceived self-efficacy grounded in faulty experimentation. *Journal of Social and Clinical Psychology, 26*(6), 641–658.

Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology, 88*(1), 87–99.

Baquero, A., Delgado, D., Escortell, R., & Sapena, J. (2020). The influence of transformational and authentic leadership on the satisfaction of hotel customers in the Canary Islands. *Tourism and Hospitality Research*, 1–14. https://doi.org/ 10.1177/ 1467358419891458

Baquero, F. (2022). Employee job satisfaction as a predictor of customer satisfaction in the hospitality industry: A study of four- and five-star hotels in the Balearic Islands. *Journal of Hospitality and Tourism Research*, 1–20.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press; Collier Macmillan.

Bass, B. M. (1990). *Bass & Stogdill's handbook of leadership: Theory, research, and managerial applications* (3rd ed.). Free Press.

Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship." *Academy of Management Journal, 26*(4), 587–595. https://doi.org/10.2307/255908

Battistelli, A., Galletta, M., & Vandenberghe, C. (2006). Perceived organizational support and organizational commitment: The moderating effect of locus of control and work autonomy. *Journal of Managerial Psychology, 21*(5), 476–491. https://doi.org/10.1108/02683940610673910

Baum, T. (1989). Job-related and non-job-related factors in employee turnover and turnover intention in the hotel, catering and tourism industry. *Tourism Management, 10*(2), 125–137.

Becker, T. E., & Billings, R. S. (1993). Profiles of commitment: An empirical test. *Journal of Organizational Behavior, 14*(2), 177–190. https://doi.org/10.1002/job.4030140207

Berhan Kefyalew, T., & Melaku Mengistu Gebremeskel. (2023). Antecedents of organizational citizenship behavior among the academic staff in Begemidir College of Teacher Education. *Bahir Dar Journal of Education, 23*(3), 22–45.

Bitner, M. J., Booms, B. H., & Tetreault, M. S. (1990). The service encounter: Diagnosing favorable and unfavorable incidents. *Journal of Marketing, 54*(1), 71–84. https://doi.org/10.1177/002224299005400106

Blau, P. M. (1964). *Exchange and power in social life*. Wiley.

Boles, J. S., Wood, J. A., & Johnson, J. (2003). Interrelationships of role conflict, role ambiguity, and work–family conflict with different factors of job satisfaction and the moderating effects of gender. *Journal of Personal Selling & Sales Management, 23*(2), 99–113.

Bolino, M. C., Turnley, W. H., & Niehoff, B. P. (2004). The other side of the story: Reexamining prevailing assumptions about organizational citizenship behavior. *Human Resource Management Review, 14*(2), 229–246.

Boswell, W. (2006). Aligning employees with the organization's strategic objectives: Out of "line of sight," out of mind. *The International Journal of Human Resource Management, 17*(9), 1489–1511.

Brady, M. K., & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing, 65*(3), 34–49. https://doi.org/10.1509/jmkg.65.3.34.18334

Brown, S. W., Cronin, J. J., Jr., & Taylor, S. A. (1993). The measurement and meaning of service quality: A critical look at SERVQUAL. *Journal of Marketing, 57*(3), 41–50.

Bryman, A. (2012). *Social research methods*. Oxford University Press.

Budgeon, S. (2014). The dynamics of gender hegemony: Femininities, masculinities and social change. *Sociology, 48*(2), 317–334.

Bulgarella, C. C. (2005). *Employee satisfaction and customer satisfaction* (White paper). Guidestar Research.

Burke, P. J., & Stets, J. E. (2009). *Identity theory*. Oxford University Press.

Cascio, R., Mariadoss, B. J., & Mouri, N. (2010). The impact of management commitment alignment on salespersons' adoption of sales force automation technologies: An empirical investigation. *Industrial Marketing Management, 39*(7), 1088–1096. https://doi.org/10.1016/j.indmarman.2009.12.010

Chen, C., Greene, P., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing, 13*(4), 295–316.

Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*(1), 62–83. https://doi.org/10.1177/109442810 141004

Cherrington, D. J. (1994). *Organizational behavior* (2nd ed.). Allyn & Bacon.

Chin, C. G., & Gursoy, D. (2009). Employee satisfaction, customer satisfaction, and financial performance: An empirical examination. *International Journal of Hospitality Management, 28*(2), 245–253. https://doi.org/10.1016/j.ijhm.2008.08.003

Chirkov, V., & Anderson, J. (2018). Statistical positivism versus critical scientific realism: A comparison of two paradigms for motivation research: Part 1. A philosophical and empirical analysis of statistical positivism. *Theory & Psychology*, 1–25. https://doi.org/10.1177/0959354318804670

Chou, S. Y., & Pearson, J. (2011). A demographic study of information technology professionals' organizational citizenship behavior. *Journal of Management Research, 3*(2), 1–15. https://doi.org/10.5296/jmr.v3i2.625 (doi.org in Bing)

Cialdini, R. B. (2009). *Influence: Science and practice* (5th ed.). Allyn & Bacon.

Cinamon, R. G. (2006). Anticipated work–family conflict: Effects of gender, self-efficacy, and family background. *The Career Development Quarterly, 54*(3), 202–215.

Cooper, C. L., & Lewis, S. (1995). Working together: Men and women in organizations. *Leadership & Organization Development Journal, 24*(5), 294–301.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage.

Crompton, R. (2001). Gender restructuring, employment, and caring. *Social Politics: International Studies in Gender, State and Society, 8*(3), 266–291.

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management, 31*(6), 874–900.

Crotts, J. C., Mason, P. R., & Davis, B. (2009). Measuring guest satisfaction and competitive position in the hospitality and tourism industry: An application of stance-shift analysis to travel blog narratives. *Journal of Travel Research, 48*(2), 139–151.

Dai, K., & Qin, X. (2016). Perceived organizational support and employee engagement: Based on the research of organizational identification and organizational justice. *Open Journal of Social Sciences, 4*(12), 46–57. https://doi.org/10.4236/jss. 2016.412005

Danaei, A., & Iranbakhsh, F. (2016). Key drivers of innovative behavior in the hotel industry: Evidence from a developing country. *Iranian Journal of Management Studies, 9*(3), 599–625.

Davison, C., & Argyriou, E. (2016). Gender preferences in technology adoption: An empirical investigation of technology trends in higher education. *International Journal of Gender, Science and Technology, 8*(3), 405–419.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.

Deluga, R. J. (1998). Leader–member exchange quality and effectiveness ratings: The role of subordinate–supervisor conscientiousness similarity. *Group & Organization Management, 23*(2), 189–216. https://doi.org/10.1177/1059601198232006 (doi.org in Bing)

Diekman, A. B., Goodfriend, W., & Goodwin, S. (2004). Dynamic stereotypes of power: Perceived change and stability in gender hierarchies. *Sex Roles, 50*(3–4), 201–215. https://doi.org/10.1023/B:SERS.0000018886.11200.9d

Dixon, M. A., Turner, B. A., Cunningham, G. B., Sagas, M., & Kent, A. (2005). Challenge is key: An investigation of affective organizational commitment in undergraduate interns. *Journal of Education for Business, 80*(3), 172–180. https://doi.org/ 10.3200/ JOEB.80.3.172-180 (doi.org in Bing)

Domínguez-Falcón, C., Martín-Santana, J. D., & De Saá-Pérez, P. (2016). Human resources management and performance in the hotel industry: The role of the commitment and satisfaction of managers versus supervisors. *International Journal of*

*Contemporary Hospitality Management, 28*(3), 490–515. https://doi.org/ 10.1108/IJ CHM-08-2014-0386

Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Lawrence Erlbaum Associates.

Eagly, A. H. (1995). The science and politics of comparing women and men. *American Psychologist, 50*(3), 145–158. https://doi.org/10.1037/0003-066X.50.3.145

Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin, 108*(2), 233–256. https://doi.org/10.1037/0033-2909. 108.2. 233

Eagly, A. H., & Karau, S. J. (1991). Gender and the emergence of leaders: A meta-analysis. *Journal of Personality and Social Psychology, 60*(5), 685–710. https://doi.org/ 10.1037/0022-3514.60.5.685

Eagly, A. H., Karau, S. J., & Makhijani, M. G. (1995). Gender and the effectiveness of leaders: A meta-analysis. *Psychological Bulletin, 117*(1), 125–145. https:/ /doi.org/ 10.1037/0033-2909.117.1.125 (doi.org in Bing)

Eagly, A., & Crowley, M. (1986). Gender and helping behavior: A meta-analytical review of the social psychological literature. *Psychological Bulletin, 100*(3), 283–308. https://doi.org/10.1037/0033-2909.100.3.283 (doi.org in Bing)

Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Eagly, A. H., & Wood, W. (2016). Social role theory of sex differences. In *The Wiley Blackwell encyclopedia of gender and sexuality studies*. https://doi.org/10.1002/978111 8663219.wbegss183 (doi.org in Bing)

Eisenbeiss, S. A., van Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Journal of Applied Psychology, 93*(6), 1438–1446. https://doi.org/10.1037/a0012713

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71*(3), 500–507. https://doi.org/10.1037/ 0021-9010.71.3.500 (doi.org in Bing)

Elamin, A. M., & Omair, K. (2010). Males' attitudes towards working females in Saudi Arabia. *Personnel Review, 39*(6), 746–766. https://doi.org/10.1108/0048 3481011075594

Ellickson, M. C., & Logsdon, K. (2002). Determinants of job satisfaction of municipal government employees. *Public Personnel Management, 31*(3), 343–358. https://doi.org/10.1177/009102600203100307

Elvira, T., & Shpetim, C. (2016). An assessment of service quality and customer satisfaction in the hotel sector. *University of Rijeka Press*.

Erickson, R. J., & Ritter, C. (2001). Emotional labor, burnout, and inauthenticity: Does gender matter? *Social Psychology Quarterly, 64*(2), 146–163Farooq, M. S., Salam, M., Ur

Rehman, S., Fayolle, A., Jaafar, N., & Ayupp, K. (2018). Impact of support from social network on entrepreneurial intention of fresh business graduates: A structural equation modelling approach. *Education + Training, 60*(4), 335–353. https://doi.org/10.1108/ET-06-2017-0092

Farrell, S. K., & Finkelstein, L. M. (2007). Organizational citizenship behavior and gender: Expectations and attributions for performance. *North American Journal of Psychology, 9*(1), 81–96.

Fast, N. J., Burris, E. R., & Bartel, C. A. (2014). Managing to stay in the dark: Managerial self-efficacy, ego defensiveness, and the aversion to employee voice. *Academy of Management Journal, 57*(4), 1013–1034. https://doi.org/10.5465/amj.2012.0382

Fielden, S. L., & Davidson, M. J. (2001). Stress and gender in unemployed female and male managers. *Applied Psychology, 50*(2), 305–334.

Fisher, C. D., Bell, S. T., Dierdorff, E. C., & Belohlav, J. A. (2010). Facet satisfaction, intrinsic motivation, and performance in a physical fitness program. *Journal of Applied Social Psychology, 40*(6), 1373–1392. https://doi.org/10.1111/j.1559-1816.2010.00622.x

Fogarty, T. J. (1996). Gender differences in the perception of the work environment within large international accounting firms. *Managerial Auditing Journal, 11*(2), 10–19.

Foote, D. A., & Tang, T. L.-P. (2008). Job satisfaction and organizational citizenship behavior (OCB): Does team commitment make a difference in self-directed teams? *Management Decision, 46*(6), 933–947. https://doi.org/10.1108/0025 1740810882680

Foti, R. J., Bray, B. C., Thompson, N. J., & Allgood, S. J. (2012). Know thy self, know thy leader: Contributions of a pattern-oriented approach to examining leadership perceptions. *The Leadership Quarterly, 23*(4), 702–717. https://doi.org/10.1016/j. leaqua.2012.01.003

Frank, E., McMurray, J. E., Linzer, M., & Elon, L. (1999). Career satisfaction of U.S. women physicians: Results from the Women Physicians' Health Study. *Archives of Internal Medicine, 159*(13), 1417–1426.

Fuegen, K., Biernat, M., Haines, E., & Deaux, K. (2004). Mothers and fathers in the workplace: How gender and parental status influence judgments of job-related competence. *Journal of Social Issues, 60*(4), 737–754.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*(4), 331–362. https://doi.org/10.1002/job.322

Gallardo, E., Sánchez-Cañizares, S. M., López-Guzmán, T., & Jesús, M. M. (2010). Employee satisfaction in the Iberian hotel industry: The case of Andalusia (Spain) and the Algarve (Portugal). *International Journal of Contemporary Hospitality Management, 22*(3), 321–334.

Gallie, D. (1998). *Restructuring the employment relationship*. Oxford University Press.

Gianakos, I. (2001). Predictors of career decision-making self-efficacy. *Journal of Career Assessment, 9*(2), 101–114.

Greenberg, J., & Baron, R. A. (1995). *Behavior in organizations: Understanding and managing the human side of work* (5th ed.). Prentice-Hall International.

Hammer, L. B., Neal, M. B., Newsom, J. T., Brockwood, K. J., & Colton, C. L. (2005). A longitudinal study of the effects of dual-earner couples' utilization of family-friendly workplace supports on work and family outcomes. *Journal of Applied Psychology, 90*(4), 799–810.

Heilman, M. E., & Chen, J. J. (2005). Same behavior, different consequences: Reactions to men's and women's altruistic citizenship behavior. *Journal of Applied Psychology, 90*(3), 431–441. https://doi.org/10.1037/0021-9010.90.3.431 (doi. org in Bing)

Heilman, M. E., Wallen, A. S., Fuchs, D., & Tamkins, M. M. (2004). Penalties for success: Reactions to women who succeed at male gender-typed tasks. *Journal of Applied Psychology, 89*(3), 416–427.

Hinton, P. R. (2014). *Statistics explained* (3rd ed.). Routledge. https://doi.org/10.4324/978 1315797564

Hoobler, J. M., Wayne, S. J., & Lemmon, G. (2009). Bosses' perceptions of family–work conflict and women's promotability: Glass ceiling effects. *Academy of Management Journal, 52*(5), 939–957.

Hoyt, C. L. (2005). The role of leadership efficacy and stereotype activation in women's identification with leadership. *Journal of Leadership & Organizational Studies, 11*(4), 2–14. https://doi.org/10.1177/107179190501100401

Husin, M. H., Ismail, A., & Harun, A. (2012). The effect of organizational citizenship behavior on the performance of banking employees in Kuala Lumpur. *International Journal of Business and Social Science, 3*(23).

Intaraprasong, B., Muhammad, R., Ali, K., & Nopadol, R. (2012). Job satisfaction and organizational citizenship behaviour of personnel at one university hospital in Thailand. *Journal of the Medical Association of Thailand, 95*(Suppl. 6), S102–S108.

Jameel, A. S., & Ahmad, A. R. (2019). The effect of transformational leadership on job satisfaction among academic staff. In *Proceedings of the 34th International*

*Business Information Management Association (IBIMA) Conference* (pp. 13–14). Madrid, Spain.

Jayawardena, C., & Gregar, A. (2013). Transformational leadership, occupational self-efficacy, and career success of managers. In *Proceedings of the European Conference on Management, Leadership, & Governance* (pp. 376–383).

Johansson, E., & Hart, R. (2023). The outcomes of organizational citizenship behaviors in part-time and temporary working university students. *Behavioral Sciences, 13*, 697. https://doi.org/10.3390/bs13080697

Jonker, J., & Pennink, B. (2010). *The essence of research methodology: A concise guide for Master and PhD students in management science*. Springer.

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*(3), 376–407. https://doi.org/10.1037/0033-2909.127.3.376

Jung, H. S., & Yoon, H. H. (2013). Do employees' satisfied customers respond with a satisfactory relationship? The effects of employees' satisfaction on customers' satisfaction and loyalty in a family restaurant. *International Journal of Hospitality Management, 34*, 1–8. https://doi.org/10.1016/j.ijhm.2013.02.003

Kansal, P. (2012). Linkage research model of Indian hotel industry. *Indian Journal of Industrial Relations, 48*(2), 217–232.

Kara, D., Uysal, M., & Magnini, V. P. (2012). Gender differences on job satisfaction of the five-star hotel employees: The case of the Turkish hotel industry. *International Journal of Contemporary Hospitality Management, 24*(7), 1047–1065.

Karatepe, O. M. (2013). High-performance work practices and hotel employee performance: The mediation of work engagement. *International Journal of Hospitality Management, 32*, 132–140. https://doi.org/10.1016/j.ijhm.2012.05.003

Karatepe, O. M., & Kilic, H. (2007). Relationships of supervisor support and conflicts in the work–family interface with the selected job outcomes of frontline employees. *Tourism Management, 28*(1), 238–252.https://doi.org/10.1016/j.tourman. 2005. 12.019

Karatepe, O. M., Yavas, U., Babakus, E., & Avci, T. (2006). Does gender moderate the effects of role stress in frontline service jobs? *Journal of Business Research, 59*(10–11), 1087–1093.

Kasa, M., & Hassan, A. (2015). The effect of organizational citizenship behavior on the relationship between service quality and customer loyalty in the Ghanaian banking sector. *European Journal of Business and Management, 7*(23), 40–52.

Katz, D. (1964). The motivational basis of organizational behavior. *Behavioral Science, 9*(2), 131–133. https://doi.org/10.1002/bs.3830090206

Khan, M. (2002). ECOSERV: Ecotourists' quality expectations. *Annals of Tourism Research, 30*(1), 109–124. https://doi.org/10.1016/S0160-7383(02)00020-1

Khan, M. A., & Kang Duck, K. (2005). Cultural differences in service quality expectations: A study of customer perceptions in the finance industry. *International Journal of Services, Economics and Management, 1*(2), 108–125.

Khan, M. I., O'Neill, M., & Siddique, C. M. (2017). Exploring the effects of service quality and customer satisfaction on customer loyalty in the hotel industry of Pakistan. *International Journal of Hospitality & Tourism Administration, 18*(2), 188–211. https://doi.org/10.1080/15256480.2016.1263186

Kidder, D. L., & Parks, J. M. (2001). The good soldier: Who is s(he)? *Journal of Organizational Behavior, 22*(8), 939–959. https://doi.org/10.1002/job.119

Kim, H., & Qu, H. (2020). Effects of employees' social exchange and the mediating role of customer orientation in the restaurant industry. *International Journal of Hospitality Management, 89*, 102577. https://doi.org/10.1016/j.ijhm.2020.102577

Kim, J. (2004). The role of staff members in shaping consumers' perceptions of service quality: Implications for customer satisfaction. *Journal of Service Management, 21*(4), 388–406.

Koenig, A. M., Eagly, A. H., Mitchell, A. A., & Ristikari, T. (2011). Are leader stereotypes masculine? A meta-analysis of three research paradigms. *Psychological Bulletin, 137*(4), 616–642. https://doi.org/10.1037/a0023557

Konrad, A. M., Ritchie, J. E., Lieb, P., & Corrigall, E. (2000). Sex differences and similarities in job attribute preferences: A meta-analysis. *Psychological Bulletin, 126*(4), 593–641. https://doi.org/10.1037/0033-2909.126.4.593

Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Prentice-Hall of India.

Kotter, J. P. (1996). *Leading change*. Harvard Business Review Press.

Kumar, K., Bakhshi, A., & Rani, E. (2009). Linking the Big Five personality domains to organizational citizenship behavior. *International Journal of Psychological Studies, 1*(2), 73–81. https://doi.org/10.5539/ijps.v1n2p73

## Closing Remarks

### Behailu Tamiru, Dean of College of Open and Distance College, St. Mary University

Distinguished Guests, Esteemed Colleagues, Ladies and Gentlemen,

As we bring this vibrant and intellectually enriching day to a close, it is my distinct honor to deliver the concluding remarks for the 13th Open and Distance Learning Seminar.

On behalf of the College of Open and Distance Learning and the entire St. Mary's University community, I wish to extend our deepest appreciation to all who have contributed to the success of this seminar—our insightful presenters, engaged panelists, dedicated chairs and rapporteurs, and, most importantly, our attentive audience, both here in person and those who joined us virtually. Your active participation has been the driving force of this gathering.

This year's seminar has indeed been exceptional, setting a new standard for academic discourse at our university. For the first time in the history of the ODLS, we were privileged to engage with two innovative formats that enriched our deliberations: a keynote address delivered by an international scholar and a dynamic panel discussion.

We are profoundly grateful to Professor Santosh Panda, who joined us virtually from India and delivered a visionary keynote that broadened our perspectives on digitalization. Our sincere thanks also go to our distinguished panelists—Dr. Getahun Mekonnen, Dr. Tsige GebreMeskel, and Mr. Mekonnen Tadesse—whose thoughtful contributions provided a critical and multi-dimensional examination of Ethiopia's digital policy. Together, these interventions transformed this seminar from a series of presentations into a comprehensive dialogue, linking global trends with national imperatives.

The success of such an ambitious undertaking is never the result of chance. It is made possible by visionary leadership, steadfast support, and tireless dedication. In this regard, we owe our highest gratitude to Dr. Wondwosen Tamrat, our Founder and President. Your unwavering belief in the transformative power of open and distance learning has been the cornerstone of this College. Through your visionary leadership, you not only approved but also provided encouragement and the essential resources that elevated this seminar to new heights. Your opening address this morning set a tone of excellence and innovation that resonated throughout the day. Sir, this event stands as a testament to your enduring commitment to academic excellence and your unwavering support for CODL. We are truly indebted to you.

Equally, I wish to recognize the exceptional efforts of the College of Open and Distance Learning and the Research and Knowledge Management Office. Your meticulous planning, coordination, and commitment over the past months have been instrumental in transforming this vision into a reality. Through your dedication, this seminar has become not only successful but also truly memorable, and for that, we extend our heartfelt appreciation.

The insights shared today on digitalization, artificial intelligence, policy, leadership, and student satisfaction go beyond academic reflection. They represent the building blocks for the future of education in Ethiopia and beyond. Let us carry these ideas forward into our

classrooms, institutions, and policies, ensuring that today's discussions translate into tomorrow's progress.

As we depart, let us do so with strengthened connections, renewed perspectives, and a deeper commitment to advancing open and distance learning as a means of building a more inclusive, accessible, and educated society.

With that, I now formally declare the 13th Open and Distance Learning Seminar closed.

Thank you all for your invaluable participation.

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