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About the Journal

Αρετή (Arete) Journal of Excellence in Global Leadership offers a platform that encourages theory development, theory-related discussion, and action projects from multiple disciplines with the aspiration of generating commentary and debate. Besides regular full-length submissions, Αρετή publishes teaching case studies, perspective-taking essays, posters and critical essays that contribute to the conversation regarding a problem or issue.

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Current Issue

Vol. 3 No. 2 (2025): ἀρετή (Arete) Journal of Excellence in Global Leadership

Αρετή: A fundamental principle for Greek culture is ἀρετή (Arete). Arete is an ancient Greek word meaning excellence or virtue. To Greeks, Arete means excellence in reaching one's full potential.

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News about Submission Types

Instructional Teaching Cases

In 2023, Saint Mary-of-the-Woods College (SMWC) received a \$49,590 grant from the U.S. Embassy in Greece to launch the Greek and American Gender Equality (GAGE) Program. Partnering with the University of West Attica, SMWC developed instructional case studies addressing gender equality in Greek organizations. The initiative included workshops, study abroad experiences, cross-cultural collaboration, mentorship, and publication opportunities, aiming to improve Greece's EU gender equality ranking.

In 2024, SMWC was awarded a grant from the U.S. Embassy in Paraguay for the Paraguayan and American Gender Equality (PAGE) Program, in collaboration with Universidad Americana. Students from both Paraguay and SMWC participated in a virtual case study workshop. Although the Trump administration later rescinded the grant, the program left a lasting impact, and several case studies were submitted for publication.

It is important to differentiate between 'case study as a teaching methodology and case study as an approach, genre, or method in educational research. When used as a teaching method, case studies leverage their core attributes—such as the richness of real-world data and lived experiences—to provide learners with valuable insights into diverse perspectives and make the learning process more engaging and dynamic.

Understanding the difference between a case study as a 'teaching methodology' and a case study as an approach or method in educational research is an important distinction as it serves different purposes. When used for teaching, the focus is to engage individuals in real world situations and lived experiences, cultivate curiosity, problem-solving, decision-making, critical thinking and practical application (BU Center for Teaching and Learning, n.d.; Oxford University Press, n.d.). Case studies in educational research, however, are designed to generate knowledge and contribute to generating theory (Oxford University Press, n.d.).

More about Posters

In 2024, the Arete Editorial Board expanded submissions to include peer-reviewed posters that clearly elaborate on how the contribution impacts globally and are assessed for clarity, rigor, analysis, validity, and of course, Global Leadership. The posters require a 5-7 minute video.

References:

Boston University Center for Teaching and Learning. (2025). *Using case studies to teach. Using Case Studies to Teach*. <https://www.bu.edu/ctl/resources/teaching-resources/using-case-studies-to-teach/>

Oxford University Press. (2025). *Case study in education research*. Oxford Bibliographies. <https://www.oxfordbibliographies.com/display/document/obo-9780199756810/obo-9780199756810-0201.xml>



Perception of Success Factors of Women in Leadership Roles: An Exploratory Study of Gender and Glass Ceiling in China

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Abstract

Background: This study explores the enduring issue of the glass ceiling in China—a metaphor for the invisible barriers that hinder women’s career advancement. Despite progress in gender equality, a significant gap remains in leadership representation.

Objectives: The research investigates how individual, organizational, and socio-cultural factors influence perceptions of the glass ceiling among 548 professional women across various industries and job titles.

Methods/Approach: The study employs a comprehensive analytical framework to examine perceptions through the lens of personal attributes, workplace dynamics, and sociocultural norms. It compares responses between women in leadership roles and those who are not, highlighting differences in their experiences and viewpoints.

Results: The findings emphasize the empowering role of individual traits, such as strong networking, self-efficacy, and work-life balance skills. Organizational factors—primarily support systems and belief in women’s advancement—are pivotal. Sociocultural influences, including gender role expectations, also shape perceptions. Women in leadership positions view organizational factors as more critical to career progression than individual or cultural ones. The study identifies six essential skills for women aspiring to leadership, offering practical strategies for advancement.

Conclusions: The research highlights the multifaceted nature of the glass ceiling and provides a strategic framework for women seeking to overcome it. By contrasting the paths of those who have attained leadership with those still facing barriers, the study provides insights into workplace gender dynamics in contemporary Chinese society. It contributes to the broader pursuit of gender equity.

Keywords: Barriers to Leadership, Success Factors in Leadership, Sociocultural Factors, Organizational Factors, Individual Factors, Gender Roles, Glass Ceiling, Leadership Positions, Leadership Development

Paper type: Research article

Introduction

Women, who make up more than half of most societies, have made significant strides in social and professional life. According to the 2023 World Gender Gap Report, women have been (re-) entering the workforce slightly higher than men, resulting in a modest recovery from the 2022 low (World Economic Forum, 2023). Social and economic developments have encouraged the expansion of women's roles in social and professional life. Today, women are not just potential but significant contributors to the scientific, educational, social, and cultural development of most countries. Their work experience, particularly regarding gender issues related to inclusiveness, diversity, and equality, especially in the promotion process to leadership roles, highlights progress. However, despite these advancements, the glass ceiling persists, an issue that deserves special attention (Ajewumi, 2025; Appelbaum et al., 2019; Ellingrud et al., 2025). The glass ceiling, a metaphor for the intangible barriers that hinder women's career progression and leadership positions in organizations, is an ongoing and global issue that women have experienced in the past and present. The issues and perceptions of the glass ceiling in the American workplace and other Western societies have been widely discussed over the last few decades (Catalyst, 2022; Deane et al., 2015). However, empirical studies of barriers to women in leadership positions in government and corporations in China are scarce.

The present study employed a comprehensive framework to investigate the individual, organizational, and sociocultural factors that shape the perception of the glass ceiling among a diverse sample of 548 professional women across various industries and job titles in China. The study examined how Chinese professional women broke the glass ceiling and identified the factors that contributed to the barriers they faced in doing so. Three pertinent factors were analyzed: structural, cultural, and organizational barriers that prevent Chinese women from achieving senior and leadership positions in different industries and geographic areas in China. The findings underscore the empowering role of individual attributes such as robust networking, self-efficacy, and work-life balance competence in overcoming the glass ceiling. Organizational factors, including support systems and the organization's commitment to women's advancement, are also crucial. Sociocultural factors such as gender role perceptions further mold the reality of the glass ceiling. This study distinguishes between the experiences of women in leadership positions and those who are not, confirming differences in their perceptions of the glass ceiling. Organizational factors are deemed more influential for career progression than individual or sociocultural factors by those in leadership roles. The research also identifies six critical skills for women aspiring to leadership positions. These findings underscore the multifaceted nature of the glass ceiling and provide a strategic guide for women seeking to shatter it. By comparing the trajectories of those who have achieved some degree of success and those who continue to encounter obstacles, this research offers insights into the glass ceiling in contemporary Chinese society, laying the groundwork for progress toward greater gender equality in the workplace.

Definitions

The following definitions were used for essential terms in this study:

- **Career/Professional women:** Successful career women are those who have achieved reasonable financial stability while also enjoying their work. However,

it goes beyond just financial stability. They are people who are happy and fulfilled with their lives, both professionally and personally.

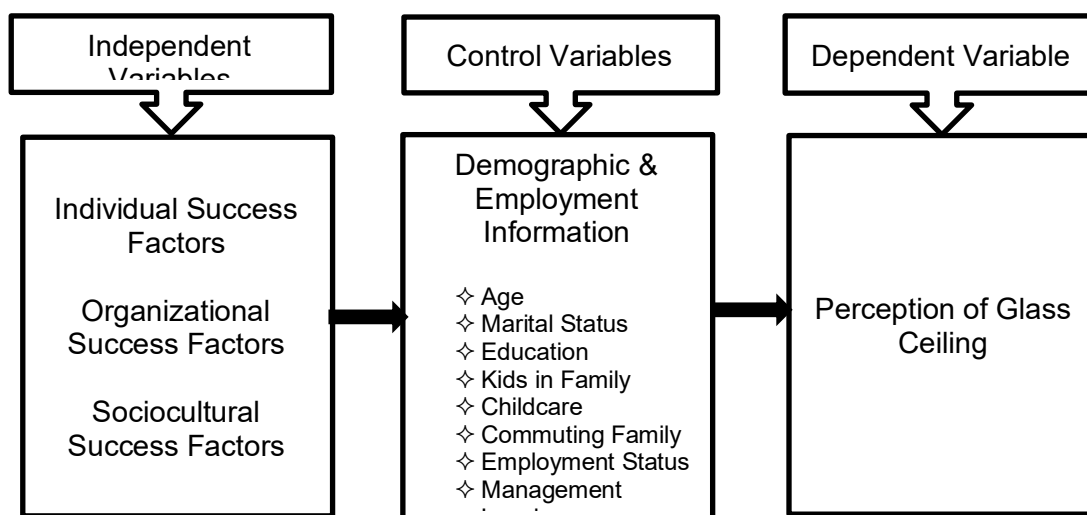
- Gender roles: Gender roles are standards denoting the behaviours (ascribed social roles and status), activities, and positions considered suitable for each gender in both Western and Eastern societies (Choroszewicz & Adams, 2019; Saleem et al., 2017). Gender roles and gender biases are social constructs unique to different cultures assigned to individuals when their sex is identified.
- Glass ceiling: An invisible barrier hindering women and minorities from progressing to leadership or managerial positions within an organization or industry (Bloch et al., 2021; Citil, 2022; Hull & Umansku, 1997; Maume, 1999). The term initially and primarily refers to women and individuals from other historically underrepresented groups who are often held back by deeply ingrained cultural biases within organizations.
- Glass Ceiling Commission: In 1991, the U.S. Department of Labor defined glass ceiling as “those artificial barriers based on attitudinal or organizational bias that prevent qualified individuals from advancing upward in their organization into management-level positions.” (Report on the Glass Ceiling Initiative. U.S. Department of Labor, 1991. Available in the Catherwood Library at HD 4903.5 U6 U585.) The department’s Glass Ceiling Commission (1991-1996) studied these barriers not only as they apply to women but also to minorities (Glass Ceiling Commission, 1991-1996). The final report of the Glass Ceiling Commission was issued in November 1995. Title II of the Civil Rights Act of 1991 created the 21-member, bipartisan Federal Glass Ceiling Commission.
- Leadership position: An individual filling a senior or top-level management position in an organization or company. The term is synonymous with executives, senior leadership, and/or leadership and managerial positions.
- Work-life balance: Balancing the demands of work with the responsibilities of home requires compromises in both areas (Lee & Koo, 2013).

Conceptual Framework

The following conceptual framework guided the research design based on the literature review.

Figure 1

Conceptual Framework



This study proposes three hypotheses:

Hypothesis 1 (H1): There is a descriptive difference in the perception of the glass ceiling between individuals in leadership positions and those who are not.

Hypothesis 2 (H2): Success factors (individual, organizational, and sociocultural) predict respondents' perceptions of women's glass ceilings in their workplaces.

Hypothesis 3 (H3): Those in leadership positions consider *organizational* factors more salient than individual or sociocultural ones for career women to break the glass ceiling.

This study aims to shed light on these issues and pave the way for a more equitable future.

Literature Review

The term “glass ceiling” exemplifies the barriers and challenges women have met in their quest to become leaders in senior management roles in the corporate world (Bloch 2021 et al.; Citil, 2022; De Neve et al., 2023; Field et al., 2023; Glass & Cook, 2016; John, 2013; Punnett, 2016; Sandeep et al., 2023). The “glass ceiling” also refers to an invisible upper limit in corporations and other organizations, above which it is difficult or impossible for women to rise in the ranks. It is not an explicit practice of discriminating against women, although specific policies, procedures, and attitudes may inadvertently create this barrier without the intention to do so. In 1978, as a panellist at the Women's Exposition in New York, Marilyn Loden coined the term “glass ceiling” to describe the invisible barriers that women face when aspiring to advance to prominent leadership levels within their career fields (Melamed, 1995). This metaphor represents the invisible barriers that hinder not only women but also other highly qualified minorities in their career progression and access to positions of higher authority within organizations (Hideg & Krstic, 2021; Hideg & Wilson, 2020; Saleem et al., 2017). Studies acknowledge that the advancement of women is hindered by patriarchal social norms, organizational policies and cultures, and collective structures (Williams, 2021).

Several multidimensional studies have revealed that women remain underrepresented in leadership positions across various fields, including business, finance, marketing, psychology, higher education, healthcare, banking, and law, compared to men (Martínez-Fierro & Sancho, 2021). The most recent data showed that the share of women in senior management is increasing. In 2021, the proportion of women in senior management globally grew to 31%, the highest number ever recorded. As of 2021, ninety percent of companies worldwide have at least one woman in a senior management role (Grant Thornton International, 2021).

However, recent studies have persistently indicated the unyielding presence of the glass ceiling. A McKinsey & Company and LeanIn.org report (Field et al, 2023) reveals that women possess an 18 percent lower probability of promotion than their male counterparts. Geographical disparities in the proportion of women in senior management were noted in 2021, with figures varying across regions (Catalyst, 2022). In Europe, a meagre 23.3 percent of board members and 5.1 percent of CEOs in major publicly listed companies are women, despite their 45 percent share of the labor force (European Union, 2016). As *The Wall Street Journal* reported, the number of female CEOs among Fortune 500 companies declined to 5.4% (27 out of 500) in 2017

(Zuckerman Law Group, 2017). This statistic alone helps illustrate the presence of glass ceiling/promotion discrimination within corporate America. However, certain Asia-Pacific countries, such as Japan (15%), India (10%), and Pakistan (4%), exhibit alarmingly low female representation in management. Workplace inequality is evident in Zimbabwe, as seen in the legal profession (Maunganidze et al., 2021). The glass ceiling, deeply rooted in gender discrimination and other factors, has historically restricted women's access to leadership across sectors and countries. It not only reflects gender discrimination but also embodies the challenges women face in attaining leadership roles. Therefore, further research and proactive measures are needed to address this complex and persistent issue.

Barriers to the Leadership Position in the Workplace

Based on Title II of the Civil Rights Act of 1991, the U.S. Congress enacted the *Glass Ceiling Act*, establishing the Federal Glass Ceiling Commission, a 21-member, bipartisan commission to study the barriers to the advancement of minorities and women within corporate hierarchies (US Department of Labor, Federal Glass Ceiling Commission, 1995). The commission aimed to study barriers that have prevented women from achieving higher managerial and executive positions in organizations. It included four categories: (1) how businesses fill management and decision-making positions; (2) the developmental and skill-enhancing practices used to foster the necessary qualifications for advancement into such positions; (3) the compensation programs and reward structures currently utilized in the workplace; and (4) the creation of an annual award for excellence in promoting a more diverse skilled workforce at the management and decision-making levels in business. The commission reported societal, governmental, internal business, and business structural barriers to the success of women and minorities in reaching the top echelons held by men (Federal Glass Ceiling Commission, 1995). The Commission's mandate was to study the glass ceiling barriers to the advancement of minorities and women within corporate hierarchies, issue a report on its findings and conclusions, and recommend ways to dismantle it. Societal barriers to opportunity and attainment include gender and race bias and cultural factors.

It is evident that women disproportionately need to attain leadership positions but continue to remain underrepresented at senior management levels in Asia, Europe, and North America (Field et al., 2023). Based on (1) economic participation and opportunity, (2) educational attainment, (3) health and survival, and (4) political empowerment, the Global Gender Gap Report 2023 (pp. 10-12) stated:

The 2023 Global Gender Gap Index showed that no country has yet achieved full gender parity. However, the top nine countries (Iceland, Norway, Finland, New Zealand, Sweden, Germany, Nicaragua, Namibia, and Lithuania) have closed at least 80% of their gap. For the 146 countries covered in the 2023 index, the Health and Survival gender gap has closed by 96%, the Educational Attainment gap by 95.2%, the Economic Participation and Opportunity gap by 60.1%, and the Political Empowerment gap by 22.1%.

Women's advancement into the upper echelons of business management, government, and academia continues to attract attention and provoke ongoing debate. Yet, across different regions, gender disparities remain evident in persistent pay gaps, unequal opportunities for career advancement, and the underrepresentation of women

in leadership roles (Ellingrud et al., 2025). The glass ceiling continues to shape women's professional experiences by reinforcing these inequities. For example, women consistently report lower levels of job satisfaction and encounter disadvantages in areas such as work-life quality and organizational socialization. According to Fernando et al. (2020), the incorporation of distinct female perspectives and leadership styles can equip gender-diverse top management teams with a managerial capability advantage over equally talented yet homogeneous male teams. This link between gender diversity and organizational capability is expected to be more pronounced during times of crisis. Moreover, researchers have also analyzed the motives of women entrepreneurs in sustaining their businesses (Rey-Marti et al., 2015). It is also implied through their research that women who pursue a better work-life balance are less likely to succeed in their professional lives. On the positive side, studies have shown that companies with the best records for promoting women outperform their competitors on every measure of profitability (Field et al., 2023). In addition, a few studies showed that when all leadership contexts are considered, men and women do not differ in perceived leadership effectiveness; in many cases, companies that are best able to hire and maintain a diverse workforce are expected to outperform those who do not (Glass & Cook, 2016; Offermann & Foley, 2020; Yousaf & Schmiede, 2017; Zadoorian, 2018). The government, employers, leaders in every organization, academic institutions, society in general, and women are essential players in breaking down barriers that hold women back. Gender diversity challenges (and therefore opportunities) are global ones.

In short, barriers for women to assume leadership and managerial positions in organizations can be grouped into individual, organizational, and sociocultural factors (Cohen et al., 2018; Fry et al., 2023; Kaur & Mittal, 2022; Manzi & Heilman, 2021; Organization for Economic Cooperation and Development, 2023), consisting of gender bias, unequal access to development opportunities, and exclusion from decision-making networks among others. Women continue to face lower job satisfaction, limited career advancement opportunities, and challenges in balancing work and family life.

Individual Factors in Breaking the Glass Ceiling

Despite extensive legislation outlawing gender-based discrimination, is the glass ceiling a reality or a myth? What are the perceptions of gender inequality in the workplace? What are the gender limitations in workplace promotion? What are the perceptions of women in the leadership role of their success stories of moving to the higher echelon in the corporate hierarchy or to the full-professor rank and administrative roles, e.g., president and provost positions? Breaking the glass ceiling is a complex process that requires action on multiple fronts. What are the success factors of those who have achieved leadership and managerial positions? The research found that the following were the most significant components that best described individual factors that may help women be successful while climbing the career ladder: (1) training; (2) mentoring and coaching; (3) networking; (4) ability to balance careers in leadership and their personal life; (5) organizational policies and practices that assist women; (6) leadership capacity; (7) ability to remember one's self-worth and confidence; (8) motivation and opportunities; and (9) fair hiring and promotion processes (Richards, 2017).

Organizational research suggests that female leaders bring a unique constellation of leadership-related traits, attributes, and behaviours to the workplace that may provide

advantages to their organizations. Organizations, managers, and individual women must make a joint effort to get more women into leadership roles (England et al., 2020; Fry et al., 2023; Hideg & Krstic, 2021; Paustian-Underdahl, 2014; UN Women, 2025).

Professional Women and the Glass Ceiling in China

Family status affects women's career mobility in China and other modern urbanized societies (Bächmann & Gatermann, 2017; He & Wu, 2021; McKinsey & Company, 2023; Moore, et al., 2023; Shen & Jiang, 2020; Sung, 2023; Wang & Yang, 2021; World Economic Forum, 2022; Zhou, 2015). In 2012, China issued the *Regulations on Labor Protection for Female Workers and Employees*, which, for the first time, enshrined the right to maternity leave for female workers in China (State Council of the People's Republic of China, 2012). In 2016, the Chinese government implemented a two-children policy. However, the institutional and family systems have not provided sufficient support for career women in advancing their opportunities (Shen & Jiang, 2020). Moreover, Chinese working women in their traditional patriarchal society are adversely affected by marriage and having dependent children. It is harder for working mothers to maintain a family-work balance due to traditional gender role expectations. They are more likely than men to experience involuntary job exit to fulfil their roles as wives and mothers; thus, motherhood has hindered the career mobility of working mothers (He & Wu, 2021).

According to CGTN (China Global Television Network, 2019), the implicit bias that denies women equal opportunities still exists in the work world in China. For example, it is not uncommon to see companies in banking and many industries list "male-only" in their job advertisements. The latest breakthrough occurred in 2019, when China issued a notice banning employers from inquiring about female applicants' marital and childbearing status. However, no empirical studies were found to support the evidence that companies have fully or partially followed the government's guidelines.

Since China's social and economic reforms in the 1980s, the number of women who have received formal education and attended higher education institutions has significantly increased. Official figures from 2017 showed that female undergraduate students outnumbered male students for nine consecutive years. Women also pursue careers in traditionally male-dominated fields, including science, technology, engineering, and math. Voyles (2014) reported that family pressures and workplace biases mean that women in China have only a one-in-15 chance of reaching the highest management levels in a company. Bain & Company, as cited in Han et al. (2023), recently reported that despite high workforce participation, fewer women advance to the executive level in China than in other countries. The study identified four barriers that prevent women from becoming executives: family responsibilities, hesitation, lack of sponsorship, and unconscious biases. This report examined publicly available data on 486 companies operating in China, including those on the Chinese mainland, Hong Kong, and U.S. companies, as well as multinational organizations with business operations in the Chinese mainland. The researchers surveyed over 30 female Chinese executives and conducted interviews with approximately a dozen female executives and scholars. The study concludes that "China needs more women in executive leadership" (Han et al., 2023, p. 1). Although gender equality at work is gaining popularity in various mass media discussions and special reports, empirical studies are scarce regarding the constellations and interplay of individual, organizational, and sociocultural factors.

The current study examines the potential impediments faced by women seeking to break through the glass ceiling, drawing on the work and life experiences of women who have achieved leadership and management positions versus those who have not. In Chinese culture, women are often expected to be polite, submissive, accommodating, nurturing, and faithful in pursuing family caretaking roles. So, despite their career aspirations, women continue to shoulder the brunt of household chores. Juggling these family responsibilities often stresses women as they attempt to rise to the corporate ranks, competing for jobs with men who do not meet those expectations. According to Field et al. (2023), 18 percent of women in the US are mistaken for more junior workers, and this percentage showed no improvement between 2019 and 2024. These biases make it more challenging for women to attain and succeed in positions of power. Therefore, the research question is: What are the experiences and perceptions of working women regarding their encounters with the glass ceiling in contemporary China?

Methodology

This section outlines the research design, participants, instruments, and procedure employed in the study.

Research Design

This quantitative study employed a cross-sectional survey design to investigate working women's experiences and perceptions regarding their encounters with the glass ceiling and the success factors for women breaking through it in contemporary China. An online survey was conducted through the Wenjuanxing Platform, and a nationwide sample of 548 working women participated in the research.

Participants

The study's sampling frame was a nationwide internet survey targeting a randomly selected respondent cohort. The final 548 survey participants were working women representing over 20 industries and 250 occupational titles across 22 provinces, four autonomous regions, and three municipalities in China. Tables 1 and 2 show detailed information about the participants.

Table 1

Sample Characteristics (N=548)

Variables	Categories	Frequency	Percentage
Gender	Male	0	0
	Female	548	100
	Other	0	0
Age	20-24	28	5.1
	25-34	147	26.8

	35-44	264	48.2
	45-54	80	14.6
	55-64	28	5.1
	> 65	1	0.2
Marital Status	Single	84	15.3
	Married	446	81.4
	Divorced	12	2.2
	Separated	2	0.4
	Engaged	3	0.5
	Widow	1	0.2
Number of Children	0	113	20.6
	1	353	64.4
	2-3	81	14.8
	> 3	1	0.2
Childcare	None	150	27.4
	1	342	62.4
	2-3	56	10.2
Commuting Family	Yes	122	22.3
	No	423	77.2
	Other	3	0.5
Employment Status	Full-time	522	95.3
	Part-time	14	2.6
	Contract/Temporary	6	1.1
	Unemployed	3	0.5
	Other	3	0.5
Management Level	Clerk	333	60.8
	Middle Management	144	26.3

	Executive Management	19	3.5
	Senior Management	41	7.5
	Other	11	2
Leadership Position	Yes	244	44.5
	No	304	55.5
Years at Work	< 1	5	0.9
	1-5	181	33
	6-10	192	35
	> 10	170	31
Education	Secondary School/Ordinary Level	2	0.4
	High School/Advanced Level	15	2.7
	College diploma	56	10.2
	Bachelor's degree	397	72.4
	Post-graduate degree	78	14.2

Table 1 shows that nearly half of the respondents fall into the **35-44** age category (48.2%), followed by those aged **25-34** (26.8%). These women are predominantly **married** (81.4%), with a smaller portion identifying as **single** (15.3%) or in other marital categories, such as **divorced** (2.2%) or **separated** (0.4%). Regarding family structure, 64.4% have **one child**, **20.6%** have no children, and the remainder have **two or more** children. For childcare, **62.4%** have one child that needs care, **27.4%** have no childcare needs, and **10.2%** must look after two or three children.

Employment data indicate that **95.3%** of respondents work **full-time**, with a small proportion working **part-time** (2.6%) or on **contract/temporary** terms (1.1%). Regarding the management level, most respondents are at the **clerk level** (60.8%), while **26.3%** occupy **middle management** positions, and a smaller fraction are in **senior or executive management** roles. Leadership roles are relatively evenly distributed, with **44.5%** of individuals holding leadership positions and **55.5%** not holding such roles.

Regarding work experience, 35% of participants have 6–10 years of professional experience, 33% have 1–5 years, and 31% have over 10 years of experience. Only a tiny proportion (0.9%) have worked for less than one year. Education levels are notably high, with 72.4% of respondents holding a bachelor's degree and 14.2% completing postgraduate studies. The remainder possess a college diploma (10.2%) or a high school education (2.7%).

Table 2

Industrial Sections of the Samples (N=548)

Industrial Section	No. of Samples
Professional, scientific, and technical activities	173
Administrative and support service activities	115
Education	49
Wholesale and retail trade; Repair of motor vehicles and motorcycles	42
Information and communication	37
Manufacturing	17
Accommodation and food service activities	17
Financial and insurance activities	17
Human health and social work activities	14
Public administration and defence; compulsory social security	12
Construction	4
Real estate activities	3
Other services	3
Agriculture, forestry and fishing	2
Transportation and storage	2
Arts, entertainment, and recreation	1
N/A	40
Total	548

Table 2 reveals that the occupations of career women are distributed across various industries, as classified by the International Standard Industrial Classification (ISIC). The largest groups work in professional, scientific, and technical activities (173), followed by administrative and support services (115) and education (49). Other notable sectors include wholesale and retail trade (42), information and communication (37), manufacturing, accommodation and food services, and financial activities (17 each). Fewer women are represented in health and social work (14),

public administration and defence (12), and construction (4). A smaller number are involved in real estate (3), other services (3), agriculture (2), transportation (2), and arts (1). There are also 40 cases where occupation data are unavailable.

Additionally, there is an open-ended question regarding participants' job titles. The data reveal that the participants reported 252 job titles, with 244 (96.4%) indicating leadership responsibilities and 8 (3.2%) without. The leadership roles are predominantly managerial and supervisory, encompassing positions such as manager, director, and supervisor. These span diverse sectors, including finance, education, and administration. Some entrepreneurial roles, such as founder and CEO, are also represented. In contrast, participants without leadership roles occupy a more comprehensive range of operational or specialized roles, such as accountant, nurse, salesperson, programmer, and product designer. Common positions, such as clerk and ordinary employee, also appear frequently, suggesting a concentration in support or junior-level functions.

Instrument

The data was collected using a research-developed, self-administered survey. The survey included informed consent statements for the study, procedure, benefits, conflict of interest, confidentiality, voluntary participation, and contact information. The main body of the survey consists of four sections: (1) demographic and employment information; (2) perception of success factors for women in leadership roles; (3) perceptions of the glass ceiling and work experience; and (4) selections for the critical skills or efforts for women to assume leadership roles in the organization.

For this study, the primary constructs examined are Success Factors and Perceptions of the Glass Ceiling, each differentiated into individual, organizational, and sociocultural dimensions. Success Factors are used to evaluate what traits, characteristics, and contexts promote female success within an organization. The construct Perceptions of Glass Ceiling assesses respondents' views and experiences regarding gender-based barriers in professional advancement. Higher scores in this construct reflect stronger perceptions of obstacles related to gender, age, family obligations, and organizational culture that hinder women's career advancement. All items in the construction were measured on a five-point Likert scale, with higher scores indicating agreement with item statements and lower scores representing disagreement with the statement. The meaning of higher and lower scores for each construct and its dimensions is detailed in the subsequent sections.

Success Factors

Individual

The *individual* dimension focuses on personal attributes, beliefs, and skills contributing to leadership attainment. Items assess self-efficacy, confidence, and the ability to balance priorities. For instance, statements like "I am confident that I will be promoted in my organization" and "I can set my priorities in life" demonstrate personal agency and life-management skills. Notably, these items are self-assessed, capturing personal beliefs, perceptions, and experiences in leadership roles. The authors hypothesize that higher scores for these items represent more positive, confident, and optimistic views of one's opportunity and ability to demonstrate leadership capabilities.

Organizational

The *organizational* dimension represents perceptions of workplace support. This includes mentorship, supervisory support, feedback, and retention of talented women. For example, items such as “My male supervisor actively supports me at work” and “I have received helpful feedback and support from my superiors” reflect the role of supportive relationships. Further items, such as “My company has made efforts to keep talented women,” emphasize organizational commitment to promoting gender equity. Higher scores for this dimension indicate that respondents perceive excellent organizational support.

Sociocultural

The *sociocultural* dimension reflects the respondent's perception of the broader societal attitudes and cultural support that impact women's success in and towards leadership roles. Items include “Society is on the right track for changes for gender equality” and “I believe the situation (gender equality) at work will continue to improve in my country.” These items assess the perceived progress and cultural context surrounding gender roles in society and work. Higher scores on these items intuitively represent a more progressive and positive outlook on women's roles in the workforce.

Perceptions of the Glass Ceiling

Individual

In the *individual* dimension, perceptions of the glass ceiling reflect personal beliefs and experiences related to self-confidence, career progression, and internalized limitations due to gender or family responsibilities. Items such as “Lack of self-confidence makes it difficult to let others know my ability” capture the role of self-perception in navigating advancement. Additionally, experiences of discrimination or interruptions in career due to family care, as indicated in items like “I have experienced career interruption by staying home to care for my young children,” highlight how personal experiences can shape individual perceptions of the glass ceiling. Higher scores in this dimension suggest a belief that personal and gender-based factors, such as confidence and caregiving roles, can limit career advancement. In comparison, lower scores reflect fewer perceived personal barriers.

Organizational

The *organizational* dimension captures perceptions of structural and procedural barriers within the workplace that hinder women's progression to leadership roles. Items like “The promotion procedure in my organization is not fair” and “Men are more likely than women to be promoted faster to a higher (or decision-making) position” reflect perceptions of inequity within organizational systems. Higher scores in this dimension suggest a strong belief that organizational policies or practices favor men in leadership roles and present a significant barrier for women. Conversely, lower scores indicate that respondents perceive fewer organizational barriers and may feel that promotions and advancement opportunities are distributed equitably.

Sociocultural

The *sociocultural* dimension examines broader societal and cultural factors influencing the perceived glass ceiling. Items such as “The male perspective in patriarchal culture is rooted in my society” and “Gender pay inequality still exists in my country” reflect beliefs about entrenched cultural attitudes and societal norms that contribute to the

glass ceiling. Higher scores in this dimension suggest that respondents perceive societal norms, patriarchal values, and systemic inequities as persistent barriers to gender equality in the workplace. Lower scores indicate that respondents perceive fewer societal limitations or believe that cultural shifts toward gender equality are occurring, which may reduce the impact of the glass ceiling.

Critical Skills for Women to Assume Leadership Roles

Items related to Critical Skills encompass a range of competencies and support mechanisms that are perceived as essential for women to assume leadership roles within organizations. This construct includes individual skills, such as time management, prioritization, self-confidence, and organizational efforts that foster a supportive environment for female leaders. Items such as “Learn how to develop effectiveness on all fronts” and “Learn how to balance family-work life” imply personal skills that empower women to manage their responsibilities and advance in leadership. Respondents selected five of the skills that they deemed to be most important.

Moreover, this construct encompasses interpersonal and strategic skills, including networking, developing positive communication skills, and addressing discrimination, which are essential for navigating professional environments. These competencies empower women to build influence, advocate for themselves, and foster connections that can facilitate career advancement. Additionally, the presence of role models in leadership and organizational efforts to protect labor rights and provide support for working mothers underscores the importance of external resources and support systems.

To ensure the validity and reliability of this instrument, a pilot survey and an item-objective congruence (IOC) test were conducted. The pilot study yielded a Cronbach’s alpha reliability coefficient of 0.868, while the final formal study achieved a Cronbach’s alpha of 0.808.

Data Analysis

The analysis for this study focused on examining the Success Factors and Perceptions of the Glass Ceiling through individual, organizational, and sociocultural dimensions. A confirmatory factor analysis (CFA) was conducted and then modified to determine items that best fit each dimension of our two constructs. We report the modified model for the CFA to demonstrate an adequate model fit of the dimensional structure.

Once the CFA was completed, the remaining hypotheses were tested using the constructs confirmed by the modified model. Hypothesis 1 states, “There is a descriptive difference in the perception of the glass ceiling between individuals in leadership positions and those who have not.” This was tested with a Mann-Whitney U-test to determine the statistical differences between self-identified leaders and non-leaders in Success Factor (SF) and Perception of Glass Ceiling (PGC) scores. Hypothesis 2 states, “Success factors (individual, organizational, and sociocultural) are predictors of respondents’ perception of women’s glass ceiling in their workplaces.” Multi-linear Regression tested this. Hypothesis 3 states, “Those in leadership positions consider organizational factors more salient than individual or sociocultural ones for career women to break the glass ceiling.” This was also tested using multi-linear regression analysis.

Procedure

After finalizing the survey, a pilot study was conducted to assess the instrument's clarity and relevance. The survey was distributed via WeChat, using a snowball sampling method to recruit participants. One hundred eleven respondents completed the pilot survey, generating a dataset suitable for preliminary analysis. Three scholars reviewed the study by completing an item-objective congruence (IOC) form to establish further validity and reliability, which ultimately refined the instrument to 61 items. Following these steps, formal data collection was conducted on the Wenjuanxing platform, resulting in 548 samples. After data collection, SPSS was employed for data analysis, including the Mann-Whitney U-test, confirmatory factor analysis (CFA), and multiple linear regression.

Results

This section presents the data analysis results in alignment with the hypotheses proposed in this study, as well as a descriptive analysis of the critical skills necessary to encourage women to assume leadership roles.

CFA

CFA was conducted to evaluate the validity of the constructs representing Success Factors at the individual (SFI), organizational (SFO), and sociocultural (SFSC) levels. The results, presented in Table 3, demonstrate mixed model fit. The chi-square to degrees of freedom ratio ($\chi^2/df = 2.562$) and root mean square error of approximation (RMSEA = 0.053) indicate acceptable and excellent fit, respectively, while the comparative fit index (CFI = 0.856) and the Tucker-Lewis index (TLI = 0.846) fall below the ideal threshold of 0.90. Nevertheless, the significant factor loadings of all indicators on their respective latent constructs, as shown in Table 4, confirm the constructs' structural validity. The Cronbach's α value of 0.808 indicates good internal reliability, further supporting the robustness of these measures.

Table 3

CFA Model Fit Index

Fit Index	Evaluation Criteria	Result	Judgment
χ^2/df	< 3	2.562	Reasonable
RMSEA	< 0.08	0.053	Excellent
CFI	> 0.90	0.856	Poor
TLI	> 0.90	0.846	Poor
SRMR	< 0.08		

Table 4

CFA Factor Load and Reliability

Factor	Indicator	Estimate	SE	C.R.	p
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SF Individual	Q16_Row2 2	1.000			
	Q16_Row1 9	1.374	0.126	10.933	< .01
	Q16_Row1 8	0.619	0.095	6.494	< .01
	Q16_Row1 7	0.573	0.096	5.953	< .01
	Q16_Row1 6	1.547	0.162	9.551	< .01
	Q16_Row1 4	1.236	0.119	10.404	< .01
	Q16_Row1 3	1.156	0.108	10.662	< .01
	Q16_Row1 1	0.772	0.099	7.813	< .01
	Q16_Row9	0.787	0.104	7.592	< .01
	Q16_Row8	0.854	0.107	7.996	< .01
	Q16_Row4	1.632	0.147	11.068	< .01
	Q16_Row1	1.388	0.126	11.059	< .01
SF Organizational	Q16_Row2 5	1.000			
	Q16_Row2 4	1.027	0.074	13.809	< .01
	Q16_Row1 5	1.006	0.094	10.747	< .01
	Q16_Row1 0	0.754	0.064	11.735	< .01
	Q16_Row7	0.784	0.064	12.173	< .01
	Q16_Row3	0.823	0.072	11.372	< .01
	Q16_Row2	0.803	0.074	10.808	< .01
SF Sociocultural	Q16_Row2 1	1.000			
	Q16_Row2 0	1.150	0.084	13.762	< .01
	Q16_Row5	1.002	0.083	12.123	< .01
PGC Individual	Q17_Row1	1.000			
	Q17_Row2	1.222	0.063	19.529	< .01
	Q17_Row3	0.983	0.063	15.639	< .01
	Q17_Row1 0	0.770	0.061	12.553	< .01
	Q17_Row1 3	0.655	0.067	9.776	< .01
	Q17_Row2 1	0.569	0.058	9.835	< .01
PGC Organizational	Q17_Row6	1.000			
	Q17_Row7	0.921	0.041	22.252	< .01
	Q17_Row1 4	0.707	0.048	14.788	< .01
	Q17_Row1 6	0.635	0.053	11.946	< .01
	Q17_Row2 0	0.493	0.049	10.100	< .01

PGC Sociocultural	Q17_Row4	1.000			
	Q17_Row5	1.074	0.064	16.889	< .01
	Q17_Row1	0.617	0.057	10.803	< .01
	2				
	Q17_Row1	0.585	0.051	11.543	< .01
	5				
	Q17_Row1	0.962	0.063	15.330	< .01
	7				
	Q17_Row1	0.797	0.056	14.194	< .01
	9				
Cronbach's α		-	-	-	0.808

Mann-Whitney U-Test for H1

H1: There is a descriptive difference in the perception of the glass ceiling between individuals in leadership positions and those who are not.

As the data are not normally distributed, a non-parametric test, Mann-Whitney U-Test, was conducted to assess the differences between the 'Lead' (those in leadership positions) and the 'non-lead' (those in non-leadership positions) groups concerning Success Factors (SF) and the Perceptions of the Glass Ceiling (PGC). Table 5 shows the results.

Table 5

Mann-Whitney U-Test Results

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Asymp. Sig. (2-tailed)
SF	Lead	244	343.31	83767.50	20298.5	0.000
	Nonlead	304	219.27	66658.50		
PGC	Lead	244	247.87	60481.00	30591.000	0.000
	Nonlead	304	295.87	89945.00		

As can be seen in Table 3, the Mann-Whitney U-test for SF revealed a significant difference between the 'Lead' and 'Nonlead' groups ($U = 20298.5$, $p < 0.001$). The 'Lead' group ($N = 244$) had a higher mean rank (343.31) compared to the 'Nonlead' group ($N = 304$) with a mean rank of 219.27. The sum of ranks for the 'Lead' group was 83767.50, while the 'Nonlead' group had a sum of ranks of 66658.50.

Similarly, the Mann-Whitney U-test for PGC indicated a significant difference between the 'Lead' and 'Nonlead' groups ($U = 30591.000$, $p < 0.001$). In this case, the 'Lead' group ($N = 244$) had a mean rank of 247.87, lower than that of the 'Nonlead' group ($N = 304$) with a mean rank of 295.87. The sum of ranks for the 'Lead' group was 60481.00, whereas the sum for the 'Nonlead' group was 89945.00.

Regression Analysis for H2 and H3

H2: Success factors (individual, organizational, and sociocultural) are predictors of respondents' perception of women's glass ceilings in their workplaces.

Regression analysis was performed with Perceptions of the Glass Ceiling (PGC) as the dependent variable and Success Factors (SFI, SFO, and SFSC) as independent

variables. The results, presented in Table 6, support H2. Individual Success Factors (SFI) positively influence PGC ($B=0.286$, $p=0.001$), indicating that more substantial individual-level factors heighten perceptions of the glass ceiling. In contrast, organizational (SFO, $B=-0.374$, $p<0.001$) and sociocultural factors (SFSC, $B=-0.313$, $p<0.001$) negatively impact PGC, suggesting that well-developed organizational and sociocultural success factors reduce perceptions of glass ceiling barriers.

The regression model is statistically significant ($F=35.449$, $p<0.001$), with an adjusted R^2 value of 0.159, indicating that the model explains 15.9% of the variance in PGC. The variance inflation factor (VIF) values are below 3, confirming no multicollinearity issues. These results underscore the differential impacts of success factors, with *organizational factors* emerging as the most influential predictor.

Table 6

PGC as the Dependent Variable, SFI, SFO, and SFSC as Independent Variables

PGC	Unstandardized Coefficients B	t	Sig.	Tolerance	VIF
(Constant)	4.655	19.740	0.000		
SFI	0.286	3.212	0.001	0.420	2.382
SFO	-0.374	-5.294	0.000	0.432	2.317
SFSC	-0.313	-5.082	0.000	0.533	1.876
F	35.449***				
Adjusted R ²	0.159				
Durbin-Watson	2.047				

*** $p<0.001$

H3: Those in leadership positions consider organizational factors more salient than individual or sociocultural ones for career women to break the glass ceiling.

A subgroup analysis was conducted to examine leadership respondents ($n=244$) and assess their prioritization of success factors. As shown in Table 7, H3 is supported. For this group, individual success factors (SFI) are not significant ($B=0.200$, $p=0.183$), while both organizational ($B=-0.348$, $p=0.001$) and sociocultural factors ($B=-0.328$, $p<0.001$) remain substantial predictors of PGC. The adjusted R^2 for this model is 0.137, explaining 13.7% of the variance.

These findings underscore the importance of systemic and structural factors in influencing leaders' perceptions of the glass ceiling. Organizational factors (SFO) consistently demonstrate the most substantial influence, reinforcing the view that institutional and workplace reforms are pivotal in mitigating career barriers for women.

Table 7

Leadership-position respondents' data (244) as the database

PGC	Unstandardized Coefficients B	t	Sig.	Tolerance	VIF
(Constant)	4.934	10.726	0.000		
SFI	0.200	1.336	0.183	0.510	1.961
SFO	-0.348	-3.283	0.001	0.587	1.704
SFSC	-0.328	-3.872	0.000	0.689	1.452
F	13.819***				
Adjusted R ²	0.137				
Durbin-Watson	1.907				

Critical Skills to Encourage Women to Assume Leadership Roles

To break the glass ceiling, working women must have skills that prepare them to assume leadership roles. The research identified sixteen leadership skills, from which the subjects selected the six most critical skills to assume leadership roles. Table 8 reflects the choices. Of these, the most essential skills for women to take leadership roles in an organization are, in order of importance, “Learn how to develop effectiveness on all fronts,” which was selected by 56% of respondents, followed by “Learn leadership skills”, chosen by 51.3%. “Continuously networking” was also highly ranked, with 48.7% selecting it, indicating the value of building professional relationships. “Learn how to balance family-work life” was identified as crucial by 48.2%, highlighting the need for work-life integration. Rounding out the list, “Learn how to prioritize things and duties” and “Learn time management” were each selected by 42.3% of respondents, emphasizing the significance of organizational and time management abilities for women aiming to advance into leadership positions.

Table 8

Six Most Critical Skills to Encourage Women to Assume Leadership Roles in an Organization

Rank	Items	Selected Frequency	Percent
1	Learn how to develop effectiveness on all fronts.	307	56
2	Learn leadership skills.	281	51.3
3	Continuously networking.	267	48.7
4	Learn how to balance family and work life.	264	48.2
5	Learn how to prioritize things and duties.	232	42.3
6	Learn time management.	232	42.3

Summary

The data analysis confirms that success factors at different levels play specific roles in shaping perceptions of the glass ceiling, with organizational and sociocultural dimensions being notably more influential than individual factors.

However, while less influential, individual factors still play a significant role in shaping women’s intentions to pursue leadership roles. Although women may have limited control over organizational environments, they can enhance their

career prospects by developing critical skills such as leadership, personal effectiveness, networking, work-life balance, prioritization, and time management.

Discussion, Limitations, Recommendations, and Conclusion

Discussion

The results of this study offer valuable insights into the glass ceiling phenomenon affecting working women in China. The findings support all three proposed hypotheses, shedding light on the factors that shape women's perceptions of the glass ceiling and the role of different success factors in overcoming it.

H1 posited that there would be a descriptive difference in the perception of the glass ceiling between individuals in leadership positions and those who were not. The data supported this hypothesis. This suggests that once women break through the glass ceiling, they are more likely to perceive fewer obstacles, possibly due to increased opportunities, support systems, and more significant experience in navigating challenges. These findings align with previous research suggesting that access to leadership positions can alter perceptions of gender bias and organizational limitations (Eagly & Carli, 2007; Ragins & Sundstrom, 1989).

H2 investigated whether individual, organizational, and sociocultural success factors were predictors of respondents' perceptions of women's glass ceilings in their workplaces. The data also supported this hypothesis. The study found that all three success factors contributed to women's perceptions of the workplace glass ceiling. Individual factors such as self-confidence, work-life balance, and networking abilities were identified as critical elements in advancing women's careers. Organizational factors, such as supportive supervisors and gender-inclusive policies, played a key role in shaping women's perceptions of their career prospects. Sociocultural factors, including evolving attitudes towards gender roles and supporting systems, were also influential in determining whether women felt they could overcome the glass ceiling. These findings align with literature on individual resilience, organizational support, and changing societal norms in addressing the glass ceiling (Ely & Meyerson, 2000; Powell, 2018). For example, Ibarra et al. (2013) argued that combining personal agency and supportive organizational cultures was vital for women's career success and ability to shatter the glass ceiling.

H3 hypothesized that women in leadership positions considered organizational factors more salient than individual or sociocultural factors for career women to break the glass ceiling. The data also supported this hypothesis. While individual and sociocultural factors were acknowledged, organizational factors were seen as the most influential in helping women advance to leadership positions. This aligns with previous research highlighting the significance of organizational structures and policies in advancing women's careers (Davidson & Burke, 2011; Ely & Meyerson, 2000; Kanter, 1977; Littman, 2009). For example, Ely & Meyerson (2000) proposed assessing and revising organizational culture to

create changes “from formal policies and procedures to informal patterns of everyday social interaction” (p. 139) to achieve gender equity.

These results reinforce the significance of individual and organizational factors in shaping perceptions of the glass ceiling. However, they also suggest that organizational change may be the most effective approach for breaking the glass ceiling and ensuring that women have equal opportunities to advance to leadership roles. Moreover, it calls for broader societal shifts in gender norms, which, while necessary, may take longer to manifest compared to the more immediate impacts of organizational reforms.

Limitations and Future Research Recommendations

Although the findings supported all three hypotheses, the present study had limitations: (1) The study proposed an integrated conceptual framework highlighting the success factors for overcoming the glass ceiling. However, it did not go one step further to analyze the impact of these factors’ interactions or interplays; (2) This study is only generalizable to the Chinese population. It would be worthwhile to replicate this study in other Asian countries and global contexts. A cross-cultural comparative survey will help readers understand whether the experience of the glass ceiling (i.e., gender equality, diversity, inclusion, and women’s leadership roles at work) is global and culturally universal. Additionally, conducting cross-cultural studies would facilitate a more comprehensive examination of construct validity across various cultural contexts. Future research should also aim to establish discriminant validity, which involves empirically distinguishing between key theoretical constructs and ensuring their conceptual distinctiveness.

We call for a concerted effort to promote global gender equality in the workplace and throughout all aspects of life. Many interrelated themes, such as minority representation in international corporations, the glass escalator, pink-collar occupations, gender equality, diversity and inclusion, overt discrimination, and unconscious bias attitudes (prejudice), can provide a more thorough understanding of the interrelationships between these themes and guide future studies and the policy-making process.

Conclusion

Social and cultural gender biases and stereotypes give rise to individual barriers (e.g., a lack of self-confidence and ambition), organizational obstacles (e.g., discriminatory organizational policies that hinder qualified female workers from obtaining managerial and leadership positions), and sociocultural barriers (e.g., gender role stereotypes and discrimination). The present study highlights contextual variables like level of education, age, marital status, and motherhood status that influence perceptions of the role of different factors in creating a glass ceiling.

Working women continue to aspire to leadership and managerial positions in all industries. However, as the literature has indicated, it has been a persistent challenge. This study examined the perceptions of working women regarding the glass ceiling, specifically those who had reached leadership positions. It explored the factors that they perceived as helping them overcome it. The findings provide valuable insights

into the success factors for women in leadership roles, taking into account the unique individual, organizational, and sociocultural contexts. Moreover, by exploring the experiences of women leaders in China, the study aimed to identify effective strategies and practices that can help overcome the glass ceiling. The findings yield insights into individual factors (e.g., confidence in being promoted, the ability to balance time and set priorities, a robust personal and professional networking system, belief in self-competence, the ability to seize opportunities, maintaining work-life balance, confidence in leadership abilities, and aspirations for promotion, etc.); organizational factors (e.g., support systems from both male and female supervisors, a belief that the organization fosters women's advancement, confidence that the company values and retains talented women, etc.); and sociocultural factors (e.g., belief in the evolving and improving role of women in society). In addition, several critical skills for women to assume leadership roles were identified (e.g., learning to develop effectiveness on all fronts, learning leadership skills, continuously networking, balancing family-work life, prioritizing things and duties, and time management).

This study aimed to shed light on the perception of the glass ceiling among working women in different industries, comparing the experiences of those who have broken through the glass ceiling and those still facing barriers. By delineating working women's perceptions of ways to break the glass ceiling, it offers a roadmap for future progress in overcoming this barrier in contemporary Chinese society.

In conclusion, this study has four implications: (1) to understand the realities and myths of the glass ceiling in contemporary societies; (2) to understand practical positive and negative situations for career development through respondents' perception of the glass ceiling; (3) to suggest to organizational policy change to enhance gender diversity and equality; and (4) to design training programs to assist working women in breaking the glass ceiling and reaching leadership roles. The study's results can help organizations, workplace leaders, and other stakeholders address gender inequality, retain competent female workers, and expand promotion prospects. It also has implications for leadership development. Effective leadership development requires simultaneous efforts at both the individual and organizational levels.

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The Impact of the COVID-19 Pandemic On Parental Involvement of Taiwanese Middle and High School Students' Online Learning Experience

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Abstract

Background: The COVID-19 pandemic led to widespread curfews, lockdowns, and stay-at-home orders, forcing educational institutions globally to shift rapidly to online learning. Overnight, online platforms became the primary mode of instruction, raising questions about the role of parental involvement in student learning outcomes—particularly for middle and high school students. This study was initiated to explore Taiwanese teachers' perspectives on how the pandemic influenced parental engagement in their children's online education. **Objectives:** The research asked: What is the impact of the pandemic on parental involvement in Taiwanese middle and high school students' online learning? It was hypothesized that parental involvement would increase during periods of remote learning. Participants included teachers from a private, faith-based middle and high school in Tainan, Taiwan. **Methods/Approach:** A 17-question researcher-designed survey was distributed electronically to collect data on teacher perceptions of parental involvement before and during the pandemic. The survey aimed to identify trends, shifts, and challenges in parental engagement. **Results/Conclusion:** Findings showed that most parents were involved in their children's learning to some degree prior to the pandemic. This involvement increased moderately during remote learning, suggesting a constructive impact. Teachers reported that most parents would be willing—or more willing—to support future remote learning scenarios. Additional findings highlighted common forms of parental involvement and the challenges parents faced, such as balancing work responsibilities with educational support at home.

Keywords: parental involvement, middle school students, high school students, COVID-19, pandemic, remote learning, virtual learning, Taiwanese schools, academic achievement, student motivation

Paper type: Research article

Introduction

After the COVID-19 pandemic struck, nearly all educational institutions worldwide, at all levels, were compelled to transition to some form of remote learning. As online education became the primary mode of instruction, the question emerged of whether parental involvement would affect learning outcomes differently, particularly for middle and high school students, which served as the catalyst for this study. This researcher is a former middle and high school teacher at the site of this study in Tainan, Taiwan, who has not visited or maintained contact other than occasionally with one former colleague/teacher socially via Facebook. Nevertheless, familiarity with the site (decades ago) is why it was chosen, with the goal of determining whether or not there was a shift in parental attitudes toward involvement because of the pandemic. The purpose of this study was to gather teachers' perspectives on how the pandemic impacted parental involvement in students' remote learning. Middle and high school teachers at a private, faith-based middle and high school in Tainan, participated in the study. A researcher-developed survey was electronically distributed to collect data on the teacher participants' perceptions and insights into how parental involvement impacted their children's in-home learning and to identify any changes that occurred in their involvement as a result of the pandemic. Of interest were parental attitudes towards involvement pre-pandemic, during, and in the event of a future incident that forced migration to virtual learning.

Research Question

What is the impact of the pandemic on parental involvement of Taiwanese middle and high school students' online learning experience?

Research Hypothesis

Parents would become more involved with their children's learning when stay-at-home orders were in place.

Purpose and Significance of the Study

While parental involvement has been extensively studied by researchers, for example Hill and Tyson's (2009) and Jaynes' (2007) meta-analyses, among others, the purpose of the current study was intentionally focused on interpreting the parental involvement of Taiwanese middle and high school students at the onset of the COVID-19 pandemic, as it progressed, and after. When stay-at-home and lockdown orders were instituted, many parents knowingly or unintentionally became 'teaching parents' who were required, practically overnight, to deal with additional responsibilities for their children's learning, for which many were not prepared. These new responsibilities encompassed difficulties with balancing responsibilities (Garbe et al., 2020), exhausted and overwhelmed parents as a result of new and/or additional responsibilities (Rousoulioti, et al., 2022), higher levels of depression (Liu, et al., 2021), and a lack of digital literacy and content knowledge (Garbe, et al., 2020).

It is hoped that the results of this study will provide cogent information and insights into the impact of parental involvement in the event of a future incident that causes a total or near total migration to some form of online learning due to mass school closures. Such findings would be significant to students, parents, teachers, administrators, and other stakeholders involved in the educational process in terms of being better

prepared for dealing with such an event. Additionally, having an overview of the impact of Taiwanese parental involvement also could provide insights and logistical support of such an event to a more global audience.

Literature Review

The purpose of this study was to gather the perspectives of middle and high school teachers at a private, faith-based school in Tainan, Taiwan on how the COVID-19 pandemic impacted parental involvement of students' online learning from home.

Defining Parental Involvement

While parental involvement has been widely studied by educational and social science researchers (Fan & Chen, 2001; Sujarwo & Herwin, 2023), there is a lack of consensus concerning a universally agreed upon definition of the term (Fan & Chen, 2001; Jeynes, 2007). One of the more widely adopted definitions is that of Hill and Tyson (2009) which involves three dimensions of parental involvement including home-based involvement, school-based involvement, and academic socialization. Those researchers state that home-based involvement consists of communication between parents and their children; school-based involvement is the communication between parents and their children's teachers; academic socialization involves parents' aspirations for their children's education. While most Taiwanese parents have high aspirations for their children's education, (based on this researcher's professional observations as a teacher and native of Taiwan), Hill and Tyson's third dimension—academic socialization—is beyond the scope of this study.

Jeynes (2007) defined parental involvement as “parental participation in the educational processes and experiences of their children” (p. 89). Expanding upon Jeynes' definition, and as a working definition for this study and its specific population, parental involvement is defined as Taiwanese parents' participation in the home-based educational activities and experiences of their middle and high school children to assist with (and possibly raise) their children's academic achievements during the time the stay-at-home orders were in place (2020 and later) in Tainan.

Overview of the Impact of Parental Involvement

Parental involvement pertaining to students' academic success is a widely studied topic across various fields, including education, psychology, and sociology. Research on this subject spans several decades and covers numerous aspects, such as the impact of parental involvement on student academic achievement (Sujarwo & Herwin, 2023), motivation (Barger, et al., 2019), self-esteem (Luo, et al, 2022) and overall academic development. What follows are some key findings from the body of research on parental involvement.

Positive Correlation with Academic Achievement

Numerous studies including the meta-analyses by Hill and Tyson (2009), Jeynes (2007), and Sujarwo and Herwin (2023), have shown that students whose parents are involved in their education tend to perform better academically. Parental involvement has been linked to higher grades and test scores. Consistent engagement with homework, school activities, and communication with teachers correlates with better student performance. Additionally, active parental involvement also has been linked to improved classroom behavior in face-to-face learning environments, improved

attendance, and fostering positive attitudes towards school (Henderson & Mapp, 2002).

Jeynes (2007) conducted a meta-analysis of 52 studies on secondary school children that found a strong positive association between parental involvement and student academic achievement. The study reviewed a wide range of parental behaviors, including setting high expectations and consistent engagement with students.

Varied Forms of Involvement

The ways in which parents engage with their children's education vary widely. Home-based involvement, the focus of the current study, involves helping with homework, setting academic expectations, and providing learning resources, among other forms of involvement. Interestingly however, Hill and Tyson's (2009) study found that parents helping with homework had the "strongest negative association with achievement" (p. 757) among middle school students. So helping with homework, which would intuitively seem to be a primary function of parental involvement, may not be a focal part of the process. Moreover, research has indicated that other types of home-based involvement, such as providing a conducive learning environment, can be just as crucial as direct involvement in school-related activities (Epstein, 2011). This is corroborated by the meta-analysis conducted by Erdem and Kaya (2020) who found in their study that parental expectations had the largest effect on academic achievement.

School-based involvement concerns attending parent-teacher conferences, volunteering at school, and engaging with school staff. During school closures, this type of educational support and communication would involve maintaining regular online/digital-only discussions about school progress and academic goals, holding web-based conferences in lieu of face-to-face conferences, and foregoing volunteering in a physical location.

Impact on Different Age Groups

Research indicates that parental involvement has different effects depending on a child's age. Studies of elementary school children suggests that parental involvement is especially impactful in early education, where parents' direct influence on learning habits and attitudes is more pronounced (El Nokali, et al., 2010).

Research involving middle and high school students, the focus of the current study, indicate that although parental involvement tends to decline in adolescence, studies show that continued engagement—through discussions about education and future goals—can still boost academic outcomes and help with navigating complex school environments. In any case, Henderson and Mapp (2002) found that regardless of age, students overall, do better when parents stay involved in their education.

Socioeconomic and Cultural Context

Research also has explored how socioeconomic status and cultural backgrounds influence the nature and extent of parental involvement. Research of socioeconomic factors indicate that lower-income families may face barriers such as time constraints, and/or limited resources, often referred to as the digital divide. Even so, interventions

and support programs specifically designed to engage this parent population have been shown to increase student achievement (Fan & Chen, 2001).

Cultural differences regarding the way parental involvement is expressed vary across cultural groups. For instance, in some cultures, parental involvement may not manifest through direct engagement in school activities. Reese et al., (2000) discussed how cultural differences shape parental involvement practices, such as in Latino communities, where home-based activities and high expectations may serve as the primary modes of involvement. Overall, studies indicate that, while the form of involvement may differ, the effect of parental engagement remains positive across cultural and socioeconomic groups (Fan & Chen, 2001).

Barriers to Parental Involvement

Research on parental involvement has also examined barriers that prevent parents from engaging fully in their children's education (El Nokali, et al., 2010). Nyanamba et al., (2022) found that parents were more vulnerable to parental burnout during the pandemic trying to supervise their children's remote learning in addition to their vocational commitments and other responsibilities. Time constraints, where working parents and those with multiple jobs often find it difficult to attend school functions or help with homework after work hours, also can be a significant barrier.

Educational background can also impact parental involvement. Some parents, especially those with limited education, may feel unqualified to assist with their child's academic needs. Also, language barriers for non-native English-speaking parents often result in struggles to communicate with teachers or understand school systems (Hornby & Lafaele, 2011). Other barriers mentioned by Garbe, et al., (2020) include the lack of digital resources (the digital divide), having learners at multiple grade levels at home, a lack of learner motivation, having special needs learners at home, and the lack of parental content knowledge. Addressing barriers through policy, school programs, and community support is a focus of much recent research, emphasizing the need for schools to engage all parents more effectively (see e.g., Walter, 2023).

Role of Technology in Parental Involvement

Parent-teacher communication via digital platforms such as school portals, email, and apps has made it easier for parents to track their children's progress and communicate with teachers (Hsu & Chen, 2023). Additionally, online resources can allow parents to access online educational resources to support learning at home, especially when direct school engagement is difficult or impossible such as during a pandemic. Moreover, technology has changed the dynamic of parental involvement, and digital tools like those mentioned, are improving parent-teacher communication and helping parents stay engaged in their children's academic progress (Thompson, et al., 2015). Of course, these technology-based tools require that the parents have the digital resources at home to access them.

Role of Policy and School Programs

Many educational policies and school-based programs have been developed to enhance parental involvement, reflecting the growing body of research on its importance (Hsu & Chen, 2023; Thompson, et al., 2015). Also, federal programs such as Title I in the United States mandate parent engagement initiatives as well as

financial assistance, and schools in compliance facilitate involvement by providing workshops, parent-teacher associations (PTAs), and other resources (Title I, 2008). While there have been a number of educational reform movements in Taiwan (Peng, et al., 2011), this researcher has not found Taiwanese educational reforms specific to parental involvement in the literature.

Literature Review Summary

Several studies have not established positive results from parental involvement e.g., Mattingly, et al (2002), who found parental involvement programs demonstrated virtually no influence on student educational outcomes. However overall, parental involvement in students' academic success is a well-researched area, with consistent findings that parental engagement positively influences academic performance. Meta-analyses by Fan and Chen (2001), Hill and Tyson (2009), and Jeynes (2007) among others mentioned above, examining the effects of parental involvement on various student populations all concluded that parental involvement positively influences educational outcomes.

Studies continue to explore new dimensions, such as the impact of digital tools and how different cultural and socioeconomic contexts affect the nature of involvement. Policymakers, educators, and researchers (see e.g., Alharthi, 2023) agree on the need for sustained parental involvement throughout a child's educational journey, and this area remains a crucial focus for education research and practice.

What follows is the methodology utilized in the current study.

Methodology

The focus of this study was to gather the perspectives and insights of middle and high school teachers in Taiwan on how the COVID-19 pandemic impacted parental involvement in students' at-home online learning experiences in that specific online environment.

Research Design

This study utilized a quantitative cross-sectional survey research design. "A cross-sectional survey is one in which data are collected from selected individuals at a single point in time" (Mills & Gay, 2019, p. 200). Additionally, "Cross-sectional designs are effective for providing a snapshot of the current behaviors, attitudes, and beliefs in a population" (Mills & Gay, 2019, p. 200). This study met these criteria.

Limitations

There is a possibility that responses from any self-reported, survey-based study could be affected by the social desirability bias, a type of response bias. This happens when participants give answers they believe will be perceived positively by the researcher or others, rather than expressing their true opinions or experiences (Nikolopoulou, 2023). To mitigate this, the survey was conducted anonymously, contained no leading questions, and used forced-choice questions, which, according to Nikolopoulou, are among the ways to help reduce the likelihood of this type of bias.

Given that this study employed convenience sampling at a single private school in Taiwan (see following section), the findings are not intended to be statistically generalizable. Rather, they offer context-specific insights that may be analytically transferable to similar educational settings in diverse international contexts, particularly those globally that share comparable structural or cultural characteristics. While this study provides meaningful insights into parental involvement during the COVID-19 pandemic in Taiwan, the findings are drawn from a specific population and may not be generalizable to countries with different educational systems, cultural expectations, or digital learning infrastructures.

Given that the current study captures a specific moment in time during an unprecedented global crisis, the extent to which the parental involvement behaviors observed during the pandemic will persist in a post-pandemic context remains uncertain. The unique educational disruptions brought about by COVID-19 may have temporarily amplified certain parental practices that are not necessarily indicative of long-term patterns which justifies further investigation through longitudinal research.

Participants

Convenience sampling was utilized to recruit the participants in this study. Convenience sampling is a non-probability sampling method where a researcher “selects individuals because they are available, convenient, and represent some characteristic the investigator seeks to study” (Creswell, 2005, p. 149). The participants in this study consisted of teachers at a private middle and high school in Taiwan. The teacher participants all have both pre- and post-pandemic teaching experience, which is necessary in order to provide valid responses to the survey questions.

Setting

This study took place at a private, Catholic, co-educational (formerly girls only) middle and high school in Tainan, Taiwan. The grade levels at the site are 7-9 i.e., three years middle school, and 10-12 i.e., three years high school. There were approximately 1,315 middle school students and 1,113 high school students enrolled at the time of the study. There are 108 teachers and 26 staff members on this campus. The campus consists of three buildings containing classrooms and administrative offices, and a library-auditorium complex. The school is located in central Tainan, a major metropolitan area of approximately 1.8 million people.

Assessment Instrument and Data Collection

Prior to the recruiting of participants, the electronic distribution and collection of the voluntary informed consent forms and the survey, and before any data was collected, Institutional Review Board approval (IRB-FY2025-56) was received.

A researcher-developed survey instrument created in Qualtrics titled “The Impact of the COVID-19 Pandemic on Parental Involvement of Taiwanese Middle and High School Students’ Online Learning Experience” (see Appendix A) was utilized to collect data for this study. The survey consists of seven demographic questions, followed by seven 4-point and five 5-point Likert scale questions, and two open-ended questions, which addressed the research question “What is the impact of the pandemic on

parental involvement of Taiwanese middle and high school students' online learning experience?"

In order to maintain anonymity and privacy, at no point in this study were individual participants identified. No names or other identifying information was requested on the survey. Any data displayed or published will be in aggregate, so no individual participant will be identifiable.

As a former middle and high school English teacher at the site of this study in Taiwan, this researcher has made occasional social contact with one former colleague/teacher who was asked, and fortunately agreed to distribute the survey to all the teachers in the building.

Although the researcher was previously employed at the study site, this affiliation ended over 27 years ago. There have been no ongoing professional connections with the school since that time. This substantial time gap mitigates potential bias, and the study was conducted with a commitment to research integrity and reflexivity.

For the recipients who chose to participate, the recruitment email contained a link to the web-based survey in Qualtrics. The first page of the survey was the voluntary informed consent form which also provided an overview of the research. Potential participants were required to give their voluntary consent to participate by selecting YES before they could access the actual questionnaire portion of the survey.

One of the demographic questions asked how many years each participant has been teaching. Any teacher who checked the box "1-4 years" of teaching experience was eliminated from the results as that would mean they had not been teaching long enough to have teaching experience both pre-pandemic i.e., taught in 2019 and earlier, and have taught since the onset i.e., 2020 to present, which is necessary to provide valid answers to the questionnaire.

The survey, which included the embedded voluntary informed consent form, was provided in both Chinese and English by this researcher. Data collection took place during the last half of the Fall 2024 semester and into the Spring 2025 semester. Participants were given two weeks to complete and submit the survey, with a reminder email giving another two weeks to non-responders. There were no incentives offered for participating. Of the 101 surveys distributed, there were 44 valid submissions, however, several participants omitted some questions.

Descriptive statistics were utilized to analyze the data. The results of the data analysis are discussed in detail in the following section.

Data Analysis and Results

This study aimed to gather teachers' perspectives on how the COVID-19 pandemic affected parental involvement in the at-home online learning experiences of students at a middle and high school in Taiwan. A 17-question researcher-generated survey was electronically distributed to collect data concerning the teacher participants' perceptions about parental involvement with their children's learning, and to ascertain any trends or shifts that occurred in their involvement as a result of the pandemic. The

survey consists of seven demographic questions followed by seven 4-point and five 5-point Likert scale questions. What follows is a detailed description of the demographic and survey data and the results.

Demographic Data Section

There are seven demographic data questions included with the survey. Results of the first demographic question, shown in Figure 1 below, indicated that the teacher participants included 25 females and 19 males. There were no responses to the “non-binary” or “prefer not to say” response options.

Figure 1

Gender of Participants

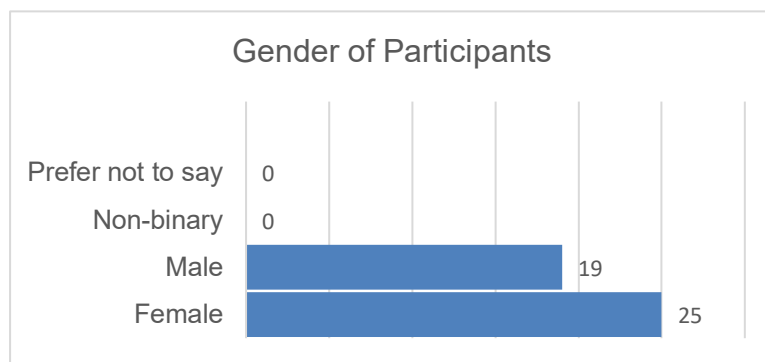


Table 1

Age Range of the Teacher Participants

Range	N	Percentage
22 – 27	1	2.27%
28 – 32	2	4.55%
33 – 40	7	15.91%
41 – 50	16	36.36%
51 – 60	17	38.64%
> 60	1	2.27%
Prefer not to say	0	0.00%

Demographic Question 2, the age range of the participants, varied from 23 to over 60 years old, as indicated in Table 1 above. Seventy-five percent of the teachers were 41 – 60 years old with far fewer young teachers in the study population.

Table 2

Highest Level of Education of the Teacher Participants

Level	N	Percentage
Bachelor's	9	20.93%
Master's	29	67.44%
Post-Master's	5	11.63%

The highest level of education earned by the teacher participants is shown in Table 2 above. Over three-quarters of the participants (79.07%) hold an advanced degree.

Table 3

Years of Teaching Experience of the Teacher Participants

Range	N	Percentage
1 – 4	3	6.82%
5 – 6	2	4.55%
7 – 8	2	4.55%
9 – 10	6	13.64%
11 or more	31	70.45%

Table 3 above indicates the years of teaching experience of the participants. As mentioned, any teacher who checked the box “1-4 years” of teaching experience was eliminated from the results as that indicates they had not been teaching long enough to have teaching experience both pre-pandemic i.e., taught in 2019 and earlier, and have taught since the onset i.e., 2020 to present, which is necessary to provide valid answers to the questionnaire.

Table 4

Grade Level the Participants Currently Teach

Grade Level	N	Percentage
Middle School (7 – 9)	11	6.82%
High School (10 – 12)	15	4.55%
Both	8	4.55%

The fifth demographic question asked the teacher participants what grade level(s) they currently teach. The results are shown in Table 4. At this point, for reasons this researcher was not able to determine, ten of the participants stopped responding to the survey, resulting in N = 34 valid responses. This question was in the multiple-choice format, so selecting more than one answer was not possible, thus not a possible explanation.

Table 5

Number of Courses Taught that Utilize a Web-Conferencing Platform such as Zoom, Skype, Google Meet, Microsoft Teams, etc.

Range	N	Percentage
none	1	2.86%
1	8	22.86%
2 – 4	19	54.29%
5 or more	7	20.00%

The number of courses taught utilizing some form of online content delivery varied, as indicated in Table 5 above. All but one of the teachers have used or are currently using a web-based platform to facilitate online content delivery. The one participant answering “none” indicates that they have no online teaching experience and was eliminated from the responses.

Table 6

Preferred Course Delivery Method of the Teacher Participants

Method	N	Percentage
Traditional – in a face-to-face classroom	20	57.14%
Fully online – with a LMS (Blackboard, Canvas, etc.)	5	14.29%
Virtual – with a web conferencing system (Zoom, Skype, etc.)	2	5.71%
Blended/hybrid – both in-person and online components	8	22.86%

The last demographic question asked the participants to indicate their preferred choice of course delivery method. While all of the teachers were required to migrate to some form of online content delivery platform during the pandemic, their preferred choice of content delivery clearly is the traditional, face-to-face classroom setting as indicated in Table 6 above. Regardless, this researcher does not believe this fact biased the participants’ responses.

Survey Data Section

The survey also consists of seven 4-point and five 5-point Likert scale questions, and two open-ended questions. What follows next is a detailed description of the survey data and the results.

The survey data section of the questionnaire begins with Question 8, “To what extent do you believe parents were involved in their children’s learning before the pandemic (2019 and earlier)?”

Table 7

The Extent Teachers Believe the Parents were Involved in their Children’s Learning from Home Pre-pandemic (2019 and earlier)

Involvement	N	Percentage
Not Involved	0	0.00%
Slightly Involved	12	36.36%
Involved	17	51.52%
Very Involved	4	12.12%

Over half of the teacher participants believe the parents were involved to some extent in their children’s learning from home prior to the pandemic, as indicated in Table 7. The teachers’ perceptions of the extent of parental involvement are based on their level of communication with the parents, conference attendance, student comments, and each student’s required and graded weekly journal entries. None of the teachers believed there were parents who were completely uninvolved in their children’s learning from home. Half (51.52%) of the study participants believe the parents were “Involved” pre-pandemic, while only a few teachers (12.12%) believed the parents were “Very Involved” pre-pandemic.

Question 9 asked, “To what extent do you believe parents were involved in their children’s learning from home because of the onset of the COVID-19 pandemic (2020 and later)?”

Table 8

The Extent Teachers Believe the Parents were Involved in their Children’s Learning from Home Because of the Onset of the COVID-19 Pandemic (2020 and later)

Involvement	N	Percentage
Significant Decrease	2	6.06%
Moderate Decrease	2	6.06%
No Change	5	15.15%
Moderate Increase	17	51.52%
Significant Increase	7	21.21%

A small percentage of the teachers believe that there was a decrease in parental involvement because of the onset of the pandemic. The findings indicate a high probability that this is due to the teachers' awareness of some or all of the issues listed in the Barriers to Parental Involvement section above. Be that as it may, almost three-quarters of the participants (72.73%) believe that parental involvement increased at some level once the pandemic struck as indicated in Table 8. It is argued that this finding is due to the fact that the students, at that point (once the onset occurred), were all home-bound and forced to complete all learning activities from home, which could have instinctively triggered more participation by the parents.

Question 10 in the Survey Data section of the questionnaire asked the participants, "In your experience, how did parental involvement (e.g., monitoring assignments, setting schedules, etc.) impact students' motivation to engage in learning from home during the pandemic?" The focus here was to determine the teachers' perceptions concerning to what extent the pandemic might have caused the parents to get more (or less) involved in terms of motivating their children.

Table 9

How Parental Involvement (e.g., monitoring assignments, setting schedules, etc.) Impacted Students' Motivation to Engage in Learning from Home During the Pandemic

Impact	N	Percentage
Very Negative Impact	0	0.00%
Negative Impact	2	6.06%
No Impact	3	9.09%
Positive Impact	20	60.61%
Very Positive Impact	8	24.24%

As indicated in Table 9, well over half (60.61%) of the teachers believe the onset of the pandemic contributed to progress in terms of the parents being more involved in motivating their home-bound children's learning. For the purposes of this study, "motivating" was defined as monitoring assignments, setting schedules, checking grades, and generally providing additional reminders to keep their children on track and to encourage them to be more engaged with their online assignments.

Question 11 asked the teachers to rank order five common forms of parental involvement they observed in supporting students' learning from home during the pandemic. The provided list of forms of parental involvement included: communicating with their children, communicating with teachers, setting schedules, supervising assignments, and providing technological support.

Table 10

Ranking the Five Most Common Forms of Parental Involvement

Field	1 most common	2	3	4	5 least common
Communicating with their children	5	4	9	11	3
Communicating with teachers	4	15	1	6	6
Setting schedules	3	5	11	13	0
Supervising assignments	14	3	9	1	5
Providing technological support	6	5	2	1	18

As indicated in Table 10, the results of the teachers' submissions varied. "Supervising assignments" was clearly the form of parental involvement most often ranked number one i.e., the most often noticed. Also, "Communicating with teachers" was the form of parental involvement most often ranked second. The form of parental support noticeably noticed the least often was "Providing technological support". This study contends that the variations in the rankings are due to the grade level of the students for any individual teacher. And further, that the low ranking of technical support is due to the fact that very often the students are more tech-savvy than their parents (researcher's personal teaching experience).

Question 12 asked, "To what extent do you believe the involvement of parents during the pandemic affected students' ability to manage time and complete assignments independently?"

Table 11

The Extent Teachers Believe the Involvement of Parents During the Pandemic Affected Students' Ability to Independently Manage Time and Complete Assignments

Impact	N	Percentage
No Impact	0	0.00%
Very Little Impact	3	9.38%
Some Impact	12	37.50%
Significant Impact	17	53.13%

As indicated in Table 11, most teachers (90.63%) clearly believed that parent involvement had some, or significant impact on their students' time management and ability to complete assignments independently. Very few (less than 10%) believed the pandemic had very little or no impact.

The goal of Question 13 which asked "Compared to pre-pandemic (2019 and earlier), how would you rate the academic performance of students who you know had active

parental involvement during the pandemic?” was to determine if teachers thought the pandemic resulted in any changes in the academic performance of students whose parents were actively involved pre-pandemic.

Table 12

How Teachers Rated the Academic Performance of Students Who They Know had Active Parental Involvement During the Pandemic as Compared to Pre-pandemic, (2019 and earlier)

Academic Performance	N	Percentage
Lower	1	3.13%
Somewhat Lower	2	6.25%
Unchanged	7	21.88%
Somewhat Better	12	37.50%
Much Better	10	31.25%

As indicated in Table 12, only a few teachers (slightly over 9%) believed academic achievement decreased during the pandemic. This differs from the U.S. where academic gaps, particularly in reading and math, still exist (Ross, 2024; Schwartz, 2023). However, in Taiwan at the site of the current study, well over half (68.75%) believed that academic achievement improved. The evidence suggests that the improvement in academic performance was due to an increase in parental involvement once stay-at-home orders were in place and all student work was done from home and overseen by the parents.

Interestingly almost 22% of the teacher participants in this study did not believe there was any change in academic achievement compared to pre-pandemic scores. This is possibly because the only results teachers saw during that time period in all probability were grades. With everything online, there was no in-person interaction or other ways of assessing achievement.

The goal of the next-to-the-last survey question was to determine what challenges the teachers believe parents face in supporting their children’s online learning. Question 14, a multiple-select format (resulting in the much higher total N), asked, “What challenges do you believe parents face in supporting their children’s online learning? (Choose all that apply.)” and provided four common challenges from which to select.

Table 13

Causes of Challenges the Teachers Believe the Parents Faced in Supporting Their Children's Online Learning and Their Frequency

Parental Challenges	N	Percentage
Lack of technological knowledge	18	19.15%
Lack of understanding the content	24	25.53%
Time constraints	27	28.72%
Balancing work and home responsibilities	25	26.60%

Nearly 29% of the teachers believe that time constraints are the most frequently faced challenge by the parents in supporting their children's online learning. As mentioned in the *Barriers to Parental Involvement* section, working parents and parents with more than one job have additional time constraints and often find it difficult to attend school functions or help with homework after work hours. While this researcher intuitively expected to see more of a variance, there was less than a 10% difference between the range of the four challenges listed, as indicated in Table 13 above. In this researcher's experience, the educational background of the parents can vary widely i.e., the parents typically are not a heterogeneous group. This leads to some of the items listed not necessarily being a significant challenge for some parents, depending upon the education level, SES, and other factors. Also, when the pandemic forced the migration to online learning, the majority of Taiwanese K-12 schools utilized Google Meet, a web-based conferencing platform rather than a learning management system (P.-E. Wu, personal communication, August 2024). Students, most of whom are tech-savvy, were given a link and knew that link took them to their daily assignments, so technical support by the parents in many cases was mostly not needed, thus the least challenging and with the lowest percentage as Table 13 shows.

The last closed-ended question in the Survey Data Section, Question 15, asked, "Now that parents have experienced dealing with home-based learning for their children, how willing do you believe that parents today would be to become involved in their student's learning in the event of being forced into a remote learning environment again e.g., because of a predicted typhoon?"

Table 14

How Willing the Teachers Believe the Parents Would Be to Becoming Involved with Their Children's Learning at Home in the Event of Being Forced Into Another Remote Learning Environment

Parental Challenges	N	Percentage
Less willing than before	4	12.12%
Somewhat willing	12	36.36%
More willing	17	51.52%

A little over half (51.52%) of the teacher participants believe the parents would be more willing to become involved in their student's learning from home in the event of a forced remote learning environment such as another pandemic or a predicted typhoon in the future. The evidence suggests this is because the parents now are more aware, as a result of the COVID-19 pandemic, of the need for parental oversight of their children's work from home. A little over a third (36.36%) of the teachers believe the parents would be somewhat willing, but not necessarily more willing to become involved in their student's learning from home in the event of another forced remote learning environment.

A plausible interpretation is that the response is based on the fact that, post-pandemic, the parents are perhaps even more aware of the realities and time commitments associated with overseeing their children's work from home, while still recognizing the need for parental oversight. Once again, because of some of the challenges mentioned in the Barriers to Parental Involvement section above, those teachers who suspect that some parents (12.12%) would be less willing to become involved in their children's learning from home probably believe this because of conversations with parents during the pandemic, and the frustrations and stress the parents experienced and expressed to their children's teachers.

Open-ended Questions

Two optional open-ended questions completed the Survey Data Section of the questionnaire. A text box was provided for participant responses. All open-ended responses (translated from Chinese) are listed below.

Question 16 asked, "In your opinion, what strategies could schools implement to better involve parents in their children's online learning experience from now on?" The following responses were provided:

- Self-study or self-learning
- Provide the necessary hardware equipment, internet access, and a complete instructional video explaining the implementation process.
- None or N/A (Not Applicable)
- None or N/A (Not Applicable)
- Emphasize the impact of parental involvement on a child's learning.
- Parents can also participate simultaneously in online classes to observe the teaching situation.
- Regularly hold online parent meetings to share the school's learning plans and progress.
- Provide a user manual for the online learning platform to help parents understand how to support their children.
- Regularly send surveys to parents to understand their needs and opinions in order to improve the school's strategies.
- Directly ask parents to accompany their children to class.
- Use the parent guide to provide instructions.
- Use parent-child activities to collaboratively create solutions.
- Record instructional videos on setting up remote teaching to assist parents in guiding their children.

Question 17 asked, “If you have any other information or experiences concerning parental involvement in your students’ learning that was not mentioned above, please share your views.” The following responses were provided.

- None or N/A (Not Applicable)
- None or N/A (Not Applicable)
- None or N/A (Not Applicable)
- None or N/A (Not Applicable)
- In addition to academic support, emotional encouragement, and understanding are also very important. Parents should be attentive to their children's emotional needs and help them cope with stress and challenges
- None or N/A (Not Applicable)
- Parents hope their children can return to school as soon as possible, as they will be overwhelmed trying to balance work and supporting their children at home.
- What follows next is a discussion of the results of this study, possible areas of future research, and conclusions.

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Discussion, Future Research, and Conclusions

To reiterate, the goal of this study was to gather teachers’ insights and perspectives into how the COVID-19 pandemic impacted parental involvement in the at-home online learning experiences of students at a middle and high school in Tainan, Taiwan.

Discussion

The analysis indicates that the findings from this study provide valuable insights into teachers' perceptions of how parental involvement in students' at-home online learning experiences at a middle and high school in Taiwan was impacted by the COVID-19 pandemic. The results reveal several key trends and shifts in parental involvement due to the pandemic, and how this involvement impacted students' learning experiences.

Prior to the pandemic, the majority of teachers believed that parents were involved in their children’s learning to varying degrees. This suggests that even before the pandemic, a significant portion of parents were engaged in supporting their children’s education at home, though the level of involvement was not universally high. The evidence suggests that this baseline of involvement set the stage for the increased parental engagement observed during the pandemic.

When the pandemic forced a migration to an entirely online learning format, nearly three-quarters of the teacher participants reported an increase in parental involvement, with some observing a significant increase. It is reasonable to infer that this move to at-home learning, where students were no longer physically attending school prompted many parents to take a more hands-on approach, as they became increasingly more directly responsible for overseeing their children's learning. This increased involvement could also reflect the teachers’ awareness of parents’ need to monitor and support students in the absence of face-to-face classroom instruction.

The effect of parental involvement on students' motivation was overwhelmingly positive, with most teachers believing it had a positive or very positive impact. This suggests that the more parents engaged in activities such as monitoring assignments, setting schedules, and checking progress, the more motivated students were to complete their tasks. Evidence suggests that the increased motivation could be attributed to a more structured environment that parents helped create, as well as the reassurance and encouragement parents provided during the pandemic – a time of significant uncertainty.

When asked about the academic performance of students with active parental involvement during the pandemic, the majority of teachers reported that this population of students performed better or much better compared to pre-pandemic times. This is a noteworthy finding, especially when compared to reports from other countries, such as the United States, where academic achievement, particularly reading and math, generally declined in the wake of the pandemic. In Taiwan, it appears that the increase in parental involvement during the pandemic may have positively affected students' academic outcomes, possibly due to better time management, more structured learning environments, and closer monitoring of assignments and academic progress. While the study is situated in Taiwan, as mentioned above, it intentionally included an international comparison—with the U.S.—to situate the findings within broader educational responses to the COVID-19 pandemic. To that end, and in order to draw more explicit parallels between the study's themes and broader global shifts in parental involvement and remote learning during the pandemic, a more in-depth global analysis is provided here connecting the findings of the current study more clearly to international educational trends.

A study by Karabanov, et al., (2023) of 2-8 year old children in Bulgaria, Israel, and Spain during the pandemic found differences between the cultures including, Spanish and Bulgarian parents were more involved in their children's literacy and digital activities than Israeli parents. Spanish children had more independent screen time than Bulgarian and Israeli children. We found that parents of larger families were less involved in literacy and digital activities with their children. Educated parents were more involved in book-reading activities and selecting digital content, and their children were less exposed to screens. Finally, controlling for the children's age, we found a general association between parent-child literacy and digital activity measures. (p. 1027).

Doll, et al., (2022) examined how parental involvement of children enrolled in 12 international schools in Korea, China, and Southeast Asia were impacted by the pandemic. This group of researchers found that parents struggled with challenges related to balancing competing priorities such as employment demands of the parents. Parents reported increased levels of stress and anxiety in their child/ren during this time, largely attributed to increased isolation, uncertainty about learning tasks, low levels of motivation and engagement, as well as lack of feedback about their learning progress. They concluded the need for further research on the topic of parents as co-educators.

In a study focused on Portuguese parents' perceptions of their involvement in their children's learning during the pandemic by Ribeiro, et al., (2021) it was found that parents reported involvement in their children's online work for at least 30 minutes a

day. The findings also indicated that parental involvement was based on a number of factors including level of education, the number of children at home, the children's age, and the children's gender.

As mentioned earlier, parents of first-graders in Greece were exhausted and overwhelmed as a result of the new and/or additional responsibilities of parental involvement created by COVID-19 (Rousoulioti, et al., 2022). Additionally, these researchers found that Greek parents tend to view helping with homework as the only meaningful form of parental involvement, considering their participation in other aspects of their children's school activities to be relatively unimportant.

In a qualitative phenomenological study of six Saudi Arabian mothers' involvement in their children's learning during the pandemic, it was found that they preferred to "keep their chosen role rather than fulfil the teaching role imposed on them by COVID-19": (Alharthi, 2022, p. 345). This researcher also found that external circumstances i.e., the closing of schools due to the pandemic, contributed to an extra level of involvement, but this was temporary. As schools reopened, parental involvement was resumed at previous, pre-pandemic levels.

A study of 15 middle-class Canadian families focused primarily on the impact of economic inequities and middle-class privilege on parental engagement during the pandemic (Anthony-Newman, et al., 2023). The researchers defined middle-class as parents who have a university education and jobs with a sizable level of autonomy.

Thus, social class of the participants played a role in the Canadian parents' ability for parental engagement. At the time of the pandemic, the Canadian education system had a lack of available computers and inconsistent broadband internet coverage, particularly in rural areas and among low income families, which impaired parental involvement. This study was corroborated by Reimers's (2022) research, which found that in higher income countries such as Finland, Japan, and Singapore the socio-economically privileged students had access to higher quality online learning opportunities, while less privileged students were forced to depend on a mix of online platforms, printed materials, or phone-based resources used to relay content.

Thus, the findings of the current study reflect global educational trends regarding parental involvement during the pandemic. The current study also identified several challenges that parents faced in supporting their children's online learning. The most frequently cited difficulties selected from a provided list included time constraints, balancing work and home responsibilities, and a lack of content knowledge. It is plausible that these challenges limited the extent to which some parents could provide consistent support. Furthermore, despite the increase in involvement, the least common form of support reported was providing technological assistance (with the lowest percentage in the rankings among the choices listed in the previous section), suggesting that students were generally more adept at using technology than their parents, thus reducing the need for parental intervention in this context.

Finally, when asked about future parental involvement in the event of a future forced remote learning situation, half of teachers believed that parents would be more willing to become involved. This is an encouraging sign, indicating that many parents now recognize the importance of their involvement in their children's learning, especially in

remote learning environments. However, a small portion of teachers believed that parents would be less willing to engage, due to the stresses and challenges experienced during the initial shift to online learning during COVID-19.

Future Research

There are multiple opportunities for future research concerning this important issue. Further research could explore how different parental engagement strategies contribute to student success by investigating specific methods of involvement that lead to the most positive educational outcomes. For example, studies could examine whether more structured forms of support, such as parents setting daily schedules, supervising assignments, or facilitating discussions about course content, result in higher levels of student engagement and academic achievement compared to less structured forms, such as general encouragement or providing emotional support.

Additionally, exploring how different types of parental involvement affect various student demographics (e.g., grade level, academic ability, and socio-economic background) could offer a deeper understanding of which strategies are most effective in different contexts. Also, exploring how individual teacher demographics (e.g., age, number of years of teaching experience, online teaching experience, grade level taught) might impact findings could also be useful data to possibly predict outcomes concerning parent involvement and/or student success based on teacher characteristics.

Research could also identify best practices for supporting both parents and students in future online learning environments. For instance, determining the most effective ways to equip parents with the necessary tools and resources to help their children succeed in online educational environments, such as providing training on a school's technology platform or guidance on how to assist with academic content, could prove very beneficial. Further, investigating the role of teachers in fostering parental involvement—through communication channels, feedback mechanisms, or virtual office hours—could provide valuable insights into how educators can better collaborate with parents to ensure consistent support for students.

Additionally, future research also might explore how schools and communities can build stronger support systems that reduce the barriers to parental involvement, such as time constraints and a lack of technological knowledge. By identifying the factors that help parents overcome these challenges, future educational policies and strategies can be tailored to ensure that parents as well as students are adequately supported in an online learning environment. Such research could ultimately contribute to the development of more effective models of parental involvement in education, particularly in times of crisis, ensuring that students have the resources and support they need to succeed academically in virtual learning settings as well as in traditional classroom settings.

While the current study was intentionally designed to explore parental involvement as perceived by teachers, whose insights offer a valuable and practice-informed lens into patterns of parental involvement, a future study that incorporated the voices of parents, could provide additional multi-perspective view of this important issue.

Another possibility for future research would be to replicate the current study but examining other cultural groups to determine the extent to which the findings of this

study hold true across more diverse or international populations. This could help situate the current study within a larger global framework. Future research could expand upon this work by using longitudinal designs and cross-cultural comparisons to better understand the dynamics of parental involvement in diverse contexts.

Lastly, while this study does not explicitly adopt a cross-disciplinary framework, it does lay a foundation for future research to build on its findings, using interdisciplinary approaches, in areas such as public health, technology ethics, or comparative cultural analysis.

Conclusion

The COVID-19 pandemic significantly increased parental involvement in students' at-home online learning in Taiwan, which in turn reflected an improvement in student motivation and academic performance. While many parents faced challenges such as time constraints and a lack of content knowledge, their increased involvement during the pandemic helped mitigate some of the learning disruptions caused by the unexpected shift to online education. Teachers' perceptions suggest that the pandemic may have led to more consistent and effective parental support, which improved students' ability to manage their time and complete assignments.

Looking forward, there appears to be a growing awareness among parents of the importance of their role in supporting their children's education, and a willingness to engage in future remote learning scenarios. The findings of this study highlight the importance of fostering a strong partnership between parents and teachers, particularly in times of crisis, to ensure the continued academic success and well-being of students.

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Appendix A

The Impact of the COVID-9 Pandemic on Parental Involvement of Taiwanese Middle and High School Students' Online Learning Experience

Demographic Section

1. Please indicate your gender:
☐ female ☐ male ☐ non-binary ☐ prefer not to say
 2. What is your age?
☐ 23-27 ☐ 28-32 ☐ 33-40 ☐ 41-50 ☐ 51-60 ☐ over 60 ☐ prefer not to say
 3. What is your highest level of education?
☐ Bachelors ☐ Bachelor's plus graduate hours ☐ Master's ☐ Post-Master's
 4. How many years of teaching experience do you have?
☐ 1-3 ☐ 4-5 ☐ 6-8 ☐ 9-11 ☐ 12 or more
 5. What grade level do you currently teach? ☐ Middle School ☐ High School ☐ Both
 6. How many courses have you taught that utilize a web-conferencing platform such as Zoom, Skype, Google Meet, Microsoft Teams, etc.?

☐ none ☐ one ☐ 2-4 ☐ 5 or more
 7. If you had a choice, what is *your* preferred course delivery method?
☐ traditional – in a face-to-face classroom
☐ fully online – with a Learning Management System (Blackboard, Canvas, etc.)
☐ virtual – with a web conferencing system (Zoom, Skype, Google Meet, Microsoft Teams, etc.)
☐ blended/hybrid – both in-person and online components
-

The following questionnaire aims to gather teachers' insights into how parental involvement has influenced students' online learning and any shifts from pre- to post-pandemic.

Survey Section

8. To what extent do you believe parents were involved in their children's learning *before* the pandemic (2019 and earlier)?
☐ Not involved ☐ Slightly involved ☐ Involved ☐ Very involved
9. To what extent do you believe parents were involved in their children's learning *from home* because of the onset of the COVID-19 pandemic (2020 and later)?
☐ Significant Decrease ☐ Moderate Decrease ☐ No Change ☐ Moderate Increase

☐ Significant Increase

10. In your experience, how did parental involvement (e.g., monitoring assignments, setting schedules, etc.) impact students' *motivation* to engage in learning from home during the pandemic?

☐ Very Negative Impact ☐ Negative Impact ☐ No Impact ☐ Positive Impact

☐ Very Positive Impact

11. What were the most common forms of parental involvement you observed in supporting students' learning from home during the pandemic? Rank order the following from 1 (least often) to 5 (most often).

___ Communicating with their children ___ Communicating with teachers

___ Setting schedules ___ Supervising assignments ___ Providing technological support

12. To what extent do you believe the involvement of parents during the pandemic affected students' ability to manage time and complete assignments independently?

☐ No impact ☐ Very little impact ☐ Some impact ☐ Significant impact

13. Compared to pre-pandemic (2019 and earlier), how would you rate the academic performance of students who you know had active parental involvement during the pandemic?

☐ Lower ☐ Somewhat lower ☐ Unchanged ☐ Somewhat better ☐ Much better

14. What challenges do you believe parents face in supporting their children's online learning? (Choose all that apply.)

☐ Lack of technological knowledge ☐ Lack of understanding the content

☐ Time constraints ☐ Balancing work and home responsibilities

15. Now that parents have experienced dealing with home-based learning for their children, how willing do you believe that parents today would be to become involved in their student's learning in the event of again being forced into a remote learning environment e.g., because of a predicted typhoon?

☐ Less willing than before ☐ Somewhat willing ☐ More willing

Open-ended Questions (optional)

16. In your opinion, what strategies could schools implement to better involve parents in their children's online learning experience from now on? (Please use the space below to respond.)

17. If you have any other information or experiences concerning parental involvement in your students' learning that was not mentioned above, please share your views. (Please use the space below to respond.)



Universal Designs in Education: A review of the literature to inform higher education quality course development

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Abstract

Background: The principles of Universal Design (UD) have been adopted and adapted in educational settings using various frameworks over the years, including Universal Design for Learning, Universal Design for Instruction, Quality Matters, Universal Instructional Design, and Integrated Multicultural Design. Each model has nuanced differences while simultaneously complementing each other in principle and purpose for continuous improvement in collegial environments. This article examines and compares the existing literature on universal design in higher education settings.

Objectives: This article analyzes and synthesizes multiple universal design models used in education, identifies common themes, and assesses their relevance to the field of higher education. It examines their application in diverse instructional settings such as online classrooms, graduate programs, and globally diverse cultures.

Approach: The review is guided by Universal Design as its theoretical framework. A thematic analysis of peer-reviewed articles, scholarly works, and professional resources using targeted keywords, including "Universal Design," UD Models, and "Universal Design in Education," were identified and reviewed. **Results:** Results of the research contrast elements of multiple models in the context of higher education and provide insight for future research globally. **Conclusions:** Universal Design principles continue to evolve as viable frameworks for improving student outcomes in higher education. The most prominent models share similar characteristics and continue to show promise in helping all learners in various ways.

Keywords: universal design, online learning, quality course development, higher education

Paper type: Critical Essay & Perspective

Introduction

College and university campuses have experienced a dynamic metamorphosis in student composition as they welcomed increasingly diverse students from differing cultures, socioeconomic backgrounds, ages, and abilities (Cumming & Rose, 2022). As the world continues to globalize through the transfer of knowledge, higher education continues to serve as an opportunity for individuals to continue their education and increase their skills without barriers such as geographical location, work schedule, or mental health support. While educational opportunities have expanded as technology has advanced, access to education has widened but it does not always equate to success. Higher education institutions can still struggle with student engagement and retention (Tani et al., 2021). The increasingly diverse student body necessitates the examination of creative strategies, practices, and pedagogies that provide nuanced flexibility in supporting a wide range of students virtually and in person, such as the student-athlete, a student with low vision, a mother working full-time and taking graduate courses online, or a young professional whose primary language is not English. Higher education institutions have adapted to the needs of the student body and continue to keep diversity and inclusion at the forefront of everyday practice to maintain equitable learning environments (Ramachandran & Sujathamalini, 2024). The wide-ranging needs of the student body in the 21st century, combined with increasing pressure in assessment, retention, and student success for faculty and administrators, resulting in a need for frameworks and solutions that serve many students while providing flexibility for specialized student segments. Multiple frameworks have been developed to enhance support for diverse student needs and provide a basis for continual improvement in instructional methods and course design (Higbee, 2008; Robinson & Wizer, 2016; Rose & Meyer, 2002); Shaw et al., 2001; Silver et al., 1998). The frameworks are commonly rooted in the principles of universal design.

While many of the elements of the universal design frameworks used in education seemingly overlap, their focus and lenses are quite different. The overview of multiple universal design models provided here demonstrates that the concept of universal design in education is far from settled. The findings provided open the door to continued discussions about Universal Design (UD) models in education and their role in reimagining the learning environment alongside the shifting demographics of the modern student.

Methodology

This research utilizes a qualitative, thematic analysis approach to review the existing scholarly work focusing on universal design principles in education. Looking at 28 sources on various universal design approaches, researchers analysed existing research to observe themes related to universal design in education. This research approach allows for an in-depth look at the complex patterns each universal design strategy poses and is appropriate for understanding the nuances of selecting, implementing, and maintaining various universal design approaches.

Researchers gathered data for this article to review necessary and relevant materials associated with each UD approach. These sources were gathered from various education and assessment-focused databases and/or academic journals, along with

general databases that house multidisciplinary approaches to education, including K-12 and higher education. The sources span from 2008 to 2024. Themes were compiled and reviewed for this article over a span of approximately six months. A global lens was applied to highlight the implications of global universal design, the complexities it may pose to the future of education, and what practitioners can do to prepare for an increasingly globalized world.

Qualitative research offers an opportunity to understand nuances associated with the approaches to universal design in the United States and world (Ostroff, 2011). While there is likely no one-size-fits-all-approach, employing a qualitative thematic analysis of universal design strategies may offer the best avenue to a better understanding which quality approach(es) to UD may best serve various student populations around the world without prescribing a single approach as the best way universally.

Background

Universal Design

Universal Design (UD) began as an architectural view and approach that emerged in the 1950s (Roberts et al., 2011). The origins of UDL are rooted in the concept of UD, an architectural view and approach that began to emerge in the 1950s (Roberts et al., 2011). UD created an entirely new design paradigm at the time that shifted focus to the users' needs and their individual experience. The term universal design (UD) was developed by Ronald Mace of North Carolina State University whose design philosophy was inclusive and forward-thinking. His vision of UD is best expressed as "Universal design is design that's usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Ostroff, 2011, p. 34). The framework spread beyond architecture in the 1970s into other areas and industries and was eventually embraced as an alternative to the medical disability model in many areas of design (Fovet, 2021; Ostroff, 2011). In essence, designers across the world and a broad range of industries shifted their perspective in thinking from a finite medical disability model needing fixing or "accommodation", to a socially constructed model recognizing a wide range of differing experiences between environments and users. The design objective was to reduce friction and increase accessibility to an optimal "experience" versus accommodating a disability. The UD design lens began to develop improvements that reduced "friction" not just for a few users, but for many. Education, particularly higher education, is one of the practice areas that has gained popularity in applying UD.

Universal Design in Education

The application and growth of UD in education mimics its application in the field of architecture, with its beginnings grounded in accommodating the physical and mental abilities of students through tailored instructional design (Silver et al., 1998). The number of students confronting physical, mental, and learning challenges continues to grow, especially in the post COVID-19 crises years (Griful-Freixenet et al., 2017; Sokal, 2016; Wu et al., 2024). Determining the fairest and best way to meet the needs of all students can be difficult for institutions and instructors in colleges and universities. Research demonstrates that instructors have a significant impact on the educational experience of students in diverse settings and levels, emphasizing the need for

attention to instructional methods in an increasingly diverse classroom (Zhong et al., 2022). While institutions of higher education recognize some of the limitations perpetuated through historical biases such as ableism, it is often difficult for instructors to balance the needs of the students with the constraints of time and budgets (Fleet & Kondrashov, 2019; Sokal, 2016). Much of the tension between student needs and instructional methods is created through the historical adoption of an “accommodation” approach in the classroom. Most instruction still operates in a manner that centers on a medical model that requires the student to self-proclaim themselves as a “disabled” student to receive classroom accommodations that can optimize their learning experience and simplify accessibility (Fleet & Kondrashov, 2019).

The growing diversity in the modern higher education classroom demands instructors plan for varied abilities, backgrounds, along with life and learning styles. Models of UD in education can improve access and engagement for a wide range of students by proactively and strategically enhancing materials and feedback to support a diverse student population across campus and online environments. According to Martin and Bolliger (2023), “Design is critical in online learning” (p. 1218). Students who are enrolled in virtual classes need to know where to find the syllabus, modules, and various content with ease and have those expectations met similarly for each course.

Models of Universal Design in Higher Education

In recent decades, educators have embraced the value of universal design in improving accessibility and usability in the educational ecosystem (Rogers-Shaw et al., 2018). Modern educators use a wide range of models to guide the development of courses through universal design practices. The models employ a range of lenses to view instruction and develop curricula, from identity and continuous collegial collaboration and improvement to learner-centric and instructor-focused approaches. Some of the most prevalent and distinctive frameworks currently used by higher education professionals are described in the following sections.

Universal Instructional Design (UID)

Introduced in the years immediately following the passage of the Americans with Disabilities Act (ADA) of 1990, Universal Instructional Design (UID) was first explored through the eight principles of good practice and conceptualized by Silver, Bourke, and Strehorn (1998). UID was one of the first frameworks of UD to be applied in the context of higher education. UID focuses on accessibility, emphasizing universally designed materials that allow students with special needs and disabilities equal access to the curriculum. It is a simple instructional approach that improves efficiency and accessibility by anticipating common accommodational requests and making those tools readily available to all students who could benefit from their usage. The eight principles outlined in this framework, as noted in Table 1 (see Appendix A), establish a common theme of universal instructional design, recognizing the equitable potential of all students, despite learning differences, and the necessity of maintaining high academic standards while providing flexible access to content and assessment.

The model introduced by Silver et al. (1998) noted the importance of instructional training, strategies, and tools in student success. Their work pointed to an interesting barrier in the integration of UD principles in pedagogical practices by noting that most

faculty members are experts in their field, but not in pedagogy. These researchers found that instructors of K-12 classrooms receive significantly more formal pedagogical training to prepare them for the diversity of student barriers in learning than their counterparts in college and university settings. Their study highlighted the wide benefit of flexible instructional methods such as cooperative and contextual learning, scaffolding, pre-prepared materials, extended time allowances and interactive online content. Importantly, Silver et al. (1998) were early internet proponents who recognized the potential of technology in transforming the classroom experience for individuals with disabilities. Additionally, their work introduced the idea that the institutional culture and community must undergo a cultural transformation to bring integral and inclusive practices in instruction.

Today, the principles of UID are utilized individually as well as interwoven with other UD practices in higher education. For example, Goulden et al., (2023) emphasized UID as a method for modelling social work educational values in situ while students are in the classroom. They stress the use of UID in integrating instructional design and personalizing the learning experience for students with diverse needs in social work education. Additionally, Goulden and associates underscore the collective nature of the adoption and implementation of UID and advocate for leveraging communities of practice across countries and institutions to harness the benefits of UID and advance research on its efficacy, which still remains limited. Still, UID continues to be integrated and overlaid with other UD frameworks like Quality Matters (QM). Best (2019) recommended UID principles to develop QM standard 8, which addresses accessibility and usability, highlighting the potential of multiple UD frameworks and models used in tandem for the betterment of a broad array of educational contexts.

Quality Matters

As technology became more ubiquitous in distance learning, institutions began to recognize the need for strategic approaches to monitor the design and assess the outcomes in shared online learning environments. A consortium of colleagues wrestling with quality assurance in online courses eventually gave rise to the Quality Matters process. Quality Matters (QM) provides a “collaborative and collegial process that centers on continuous improvement” (Quality Matters, 2025a, para. 1).

Quality Matters began in the early 2000s with a Fund for the Improvement of Postsecondary Education (FIPSE) grant to Maryland Online (MOL), and eventually became an internationally recognized, subscription-based organization focused on the evaluation and continuous improvement goals on online courses in K-12 and Higher Education (Quality Matters, 2025b). While evaluating course design, a team of evaluators utilizes a rubric for intentionally designing courses to best fit the needs of both students and institutions. Throughout this process, as changes are made towards progress, it would not be uncommon for faculty members to resubmit their revised courses for additional evaluation, thus emphasizing the importance of providing the best assessment opportunities for all involved. It is certain that effectively supporting the online learning environment takes a wide array of institutional partners, and in doing so, leaders of these institutions are paving the way for sustainable course design and outcomes-focused approaches to learning (Watson, Piña, & Small, 2024).

At the core of Quality Matters is the Higher Education Rubric Standards, currently in its seventh edition (Quality Matters, 2025c), which consists of eight general standards and 40+ specific review standards that are used to evaluate the design of online and blended courses. These standards provide a foundational and comprehensive framework that aims to address every angle of course design. They are as follows:

1. Course Overview and Introduction
2. Learning Objectives (Competencies)
3. Assessment and Measurement
4. Instructional Materials
5. Learning Activities and Learner Interaction
6. Course Technology (specifically incorporates technology)
7. Learner Support
8. Accessibility and Usability (para. 2)

Much of the QM certification framework complements principles found in other universal higher education approaches, while at the same time taking a more prescriptive stance requiring the use of specific rubrics and peer review processes. For example, QM encourages the use of technology, a variety of course materials, significant instructor-student interaction, and accessibility of images within the course. At the same time, the QM rubric differs somewhat from other educational UD models that support the "differentness" of learners such as tolerance for error, flexibility and attention to instructional climate, instead focusing on consistency of course design (Ligon, 2015). Still, QM shares the common educational goal of increasing the student rate of course completion.

The QM process can be emphasized via the notion of continuous improvement, the vehicle of which are four principles: continuous, centered, collegial, and collaborative (Quality Matters, 2025a). Each of these principles works to ensure that a smooth, sustainable approach to development and learning can be prioritized. While the principles seem to be general, one thing is certain about this structure: it allows for a greater degree of inclusion, and as a result, strengthens the notion that all students deserve to have a learning environment that is going to serve them well (Brooks & Grady, 2022).

Universal Design for Instruction (UDI)

The Universal Design for Instruction (UDI) model developed by Shaw, Scott, and McGuire (2001), was one of the first educational frameworks to recognize the unique nuances of instruction in higher education when compared to K-12 environments. The underlying assumption of the framework rests on the premise that it is the responsibility of the college instructor to teach all students as effectively as possible without compromising academic standards and overall expectations. UD in education can contrast sharply with some traditional classroom practices that intentionally or unintentionally affect accessibility for students. For example, Friedensen (2018) emphasizes the use of UD principles in reconsidering "weed-out courses" and their impact on the diversity of STEM students. ←

The application of UDI is instruction-centric, guiding the instructor to create an inclusive environment for diverse learners. It emphasizes the functional integration of instructional strategies and planning methods that anticipate diverse student needs rather than waiting to develop accommodations on a case-by-case basis. The UDI framework anticipates “diverse abilities” rather than providing reactive solutions for “disabilities”. The proactive nature of UDI encourages instructors to engage in continuous self-reflection and improvement. Its nine principles are tied to seminal work in best practices for effective instruction as established by Chickering and Gamson (1987) and the early work of the Center for Applied Special Learning (Scott et al., 2003).

Universal Design for Learning (UDL)

Universal Design for Learning (UDL) is student-centric, emphasizing the needs of the learner. The basic guidelines for UDL address three core principles for instructors to use as guiding frameworks for instructors in designing and improving courses and classroom experiences. The four core principles include engagement, representation, action, and expression. Practices emphasize the why, what, and how of learning (Rose & Meyer, 2002).

The guidelines for UDL implementation were updated in July 2024 to more explicitly emphasize the cultural and multidimensional intersection of assets, frameworks, and pedagogies (CAST, 2024). The revisions go further than previous iterations in elevating individuality and identity in both teaching and learning. While a good portion of the revised guidelines are changes in wording that subtly change the tone and tenor of previous guidelines, a portion of the new guidelines add emphasis on recognizing and addressing bias in modes of communication, expression, and methods that may result in exclusionary practices.

Despite the prevalence of UDL as a principle often pointed to in the field of higher education, the practice of UDL is often complex and challenging for faculty to implement in practice (Edyburn, 2010). There is a limited amount of research that has investigated the development of teaching skills to effectively incorporate UDL principles into teaching and learning approaches (Hromalik et al., 2020). However, according to Westine et al. (2019), investigating how faculty members adopt this approach is crucial in promoting the widespread adoption of Universal Design for Learning (UDL) in online education.

Evidence supports the use of Universal Design for Learning (UDL) as a tool for instructors to reflect on student learning in online training, as stated by Hromalik et al. (2020). Engaging in such introspection can provide positive outcomes in terms of enhancing classroom dynamics and ultimately enhancing the overall educational journey of all students, including non-traditional and graduate students as well as students from differing socio-economic backgrounds. For example, non-traditional students (NTS) often connect with other NTS and form a unique camaraderie rooted in shared experiences and academic journeys. As student populations continue to diversify, instructors could use UDL to cultivate support communities more intentionally rooted in characteristics beyond basic demographics such as age, race, and major (McKenzie et al., 2024; Steinhauer & Lovell, 2021.) When considering the student experience and UDL, graduate and undergraduate students alike reported that their

level of motivation and connection to each other increased when UDL was embraced by instructors (Lohmann et al, 2018).

Integrated Multicultural Instructional Design

Integrated multicultural instructional design (IMID) is an approach to universal design in the classroom that considers social identity as a factor impacting learners (Higbee, 2008;). The guidelines include 15 items as noted in Table 1 (see Appendix A), emphasizing various perspectives and practices that recognize and value student differences. The design approach is rooted in first recognizing and appreciating diverse values, fostering trust and inclusion, and injecting multicultural perspectives throughout the learning process. At the same time, IMID encourages meaningful opportunities to explore the concepts of justice, equality, and charity and create meaningful interactions between students and faculty. Research for this universal design model seems to be more limited, but studies show positive student feedback in human-centered curricula like human resource development (Schultz & Higbee, 2011).

Table 1

Comparison of Universal Design Models in Education

	Universal Design for Instruction (UDI)	Universal Instructional Design (UID)	Universal Design for Learning (UDL)	Integrated Multicultural Instructional Design (IMID)	Quality Matters (QM)
Overview and Purpose	Focuses on creating accessible post-secondary instructional environments that are equitable and intuitive (Scott et al., 2003).	Aims to develop universal access in higher education for students with special needs through inclusive course components that may benefit all students (Silver et al., 1998).	Emphasizes flexibility in engagement, representation, and action to address diverse learner needs (CAST 2024; Rose & Meyer, 2002).	Addresses student diversity by integrating multicultural content and strategies for teaching to support all learners. (Higbee, 2008)	Ensures high-student quality and blended learning experiences for continual improvement.
Foundational Concepts	Environment and Accessibility (Burgstahler, 2001)	Disability Laws (Rehabilitation Act, 1973 and ADA, 1990)	Neuroscience (<i>UDL & the Learning Brain</i> , 2018)	Social Identity (Higbee, 2008)	Quality Assurance, Continuous Improvements, and Benchmarking (<i>Quality Matters, 2025a</i>)
Instructional Climate	Encourages a supportive and inclusive instructional climate, with high expectations for all students.	Focuses on creating a welcoming and supportive environment.	Fosters collaboration, belonging, and a positive emotional capacity for learning.	Promotes mutual respect and open dialogue between students and faculty, creating a sense of trust and belonging.	Provides support through clear expectations, instructor presence, and peer engagement

Feedback	Supports tolerance for error, allowing students to learn through mistakes. Feedback is integrated with instructional flexibility.	Provides clear, constructive feedback to help students grow, and offers multiple ways to assess understanding.	Focuses on providing feedback that encourages persistence and helps monitor and guide student progress through various methods.	Delivers timely and constructive feedback using culturally appropriate and responsive methods.	Emphasizes timely and actionable instructor feedback that is constructive and aligned with learning objectives.
Key Principles	1. Equitable use 2. Flexibility in Use 3. Simple and Intuitive Instruction 4. Perceptible Information 5. Tolerance for Error 6. Low Physical Effort 7. Size and Space for Approach and Use 8. Community of Learners 9. Instructional Climate	1. High Expectations for student potential 2. Opposed to "weed-out" mentality 3. Responsive to diverse learning needs 4. Use of methods that benefit all students 5. Maintain high academic standards 6. Commitment to multiple methods of instruction and assessment 7. Continual instruction improvement 8. Awareness of diverse learning styles	1. Welcoming interests and identities 2. Information is perceptible to all learners. 3. Materials and environment support interaction needs and preferences. 4. Sustaining effort and persistence 5. Clarify language and symbols 6. Multiple means of expression and communication 7. Supports and extends emotional capacity 8. Build usable knowledge 9. Develop meaningful strategies and measurements to support student progress. (CAST, 2024)	1. Value diversity 2. Commit to inclusion 3. Foster a welcoming environment. 4. Connect learning to real-world contexts 5. Develop key content 6. Integrate skill development with gaining knowledge 7. Set clear expectations. 8. Constructive Feedback 9. Include diverse cultural views 10. Highlight shared human values 11. Use technology to increase access 12. Adapt to different learning styles 13. Offer multiple ways to show learning 14. Assess fairly and sensitively 15. Encourage interaction and collaboration. (Higbee, 2008)	Continuous, centered on research and student learning, collegial, and collaborative, a peer-reviewed process (Snyder et al., 2024)
Customization & Flexibility	Provides various learning paths, accommodating different learning speeds and styles.	Incorporates diverse teaching methods to accommodate various learning styles and abilities.	Emphasizes flexibility in engagement, representation, and action to accommodate	Includes intentional flexibility in linguistic accommodations and cultural sensitivity based	Adapts to diverse disciplines and learning preferences by providing various

			different learner needs.	on class composition.	assessment methods.
Challenges	Strong focus on ability but lacks a clear vision for other identities: race, gender, etc.	Can face resistance to the process from teachers/learners who are committed to the status quo	Relies on student digital literacy. Some methods may create barriers for other students. (Cumming & Rose, 2022) (Griful-Freixenet et al., 2017)	Limited research with implementation guidance Requires training to address biases to implement effectively.	Ever-changing nature of education in today's world can be "prescriptive" in nature, with less space given for alternatives.

Source: Authors' Illustration (2025)

Discussion

Universal Design: Single Structure, Broad Impact, Individual Uses for Students

Universal design practices can help all students by making materials more accessible and by increasing flexibility in delivery and usage (Moriña et al., 2025). Burgstahler and Russo-Gleicher (2015) provide interesting examples in how the value of universal design practices amplifies instructional efforts for students with diverse needs. For example, the researchers point out that providing video recordings of lectures for a face-to-face class has a wide range of benefits for the instructor and perhaps also for a wide range of students. A video captioned lecture recording can provide the legally required accommodation for deaf students unable to hear the audio (King & Piotrowski, 2021). At the same time, the lecture recording could allow English as a Second Language (ESL) students to go back and view sections in which they may be unsure of language translations or perhaps allow a student-athlete to view a missed lecture. A student who commutes could use the recording to listen to the audio on the way to campus or work, increasing their engagement in the content without increasing perceived time invested. One lecture recording could improve the accessibility and engagement for a diverse set of students while simultaneously multiplying the value of the time invested by the instructor in developing the videos and making them available.

Providing recordings of all lectures can require significant effort and may feel technologically burdensome to some faculty, but the time investment may be worth it for the instructor for a variety of reasons. The instructor can use the recordings to proactively address individual learning accommodations, which could expedite answers to individual student inquiries and then be used as a tool for future sections or alternative formats such as an online course. Video recordings of lectures are just one of the methods that can be utilized to improve the flexibility, organization, and accessibility of materials and activities.

Such proactive course design leveraging UDL principles improves accessibility (Casarez et al., 2019). Researchers have captured and documented a wide variety of applications of UD beyond lecture recordings that actively benefit all students. Some examples include posting slides ahead of time, using an e-book and offering multiple means of assessment like a paper or presentation (Kirsch et al., 2024). Research

shows that student satisfaction rises when courses are well-organized, flexible, and accessible (Black et al., 2015; Glazier & Harris, 2021; Yu, 2014).

Considerations for Higher Educational Universal Design

While improved usage of flexible instructional methods and accessible materials may improve engagement and satisfaction of students, it may not be an educational panacea. There is a danger of becoming too prescriptive in the approach to universal design instructional practices. Acton and Hujig (2020) warn against formulaic institutional checklists that literally and figuratively cause faculty members to “check the box” for universal elements. They warn that such processes can reduce radical innovation, the perceived urgency for marginalized students, and the overall strategic importance of universal design practices. Additionally, they note the duality of UDL demands placed on instructors to serve the student, yet faculty with needs similar to their students rarely receive individualized accommodations that benefit their professional practice of instructing.

Global Implications of UD and Sustainable Development Goal 4

Globally, the Sustainable Development Goals (SDGs) developed by the United Nations (UN) were created with the intent of engaging countries across the globe to create a more equitable world (United Nations, n.d.). SDG 4 works to promote high quality, equitable and lifelong learning opportunities for all (“Goal 4,” n.d.) In that vein, Veytia Bucheli et al. (2024) suggest that UDL can be a useful tool for contributing toward equitable access of education for all, thus furthering SDG 4 in higher educational institutions around the world by revolutionizing information access and enabling flexible approaches to learning.

Worldwide, higher educational institutions increasingly strive to develop policies and parameters that are more inclusive, but in practice, they often find it challenging to implement inclusive practices (Oswal et al., 2025). UD contributes to SDG 4 globally by reducing barriers for marginalized and excluded groups by proactively designing curricula and materials to be accessible to all students, often using technology as an enabler (Veytia Bucheli et al., 2024). While technology has been a propelling force in UD implementation in higher education in many countries, various parts of the world (especially rural and socioeconomically challenged communities) struggle with providing equal accessibility to all students at all levels within the educational system (Khurana, 2019; Smith & De Arment, 2019; H. Zhang & Zhao, 2019). UD goes beyond the traditional view of “disabilities.” In the traditional view, the understanding of a disability is based on the medical model of disabilities in which accessibility is a problem for the student, and accessibility is achieved through individual accommodations that may be provided through exclusive (and often temporary) content targeted to a narrow group of learners. Alternatively, UD views a disability through a social model of “different abilities” in which accessibility becomes a problem of course design, and accessibility is achieved through the implementation of UD principles through inclusive content with accessibility proactively built in to instructional design and delivery (Hills et al., 2022). In South Africa, UD is utilized to bridge the digital divide in distance education for those with disabilities and those without digital access in a post-apartheid environment by providing physical and digital access points and specialized exam arrangements for disabled students (Satar, 2019). Ultimately,

while the shift toward viewing disabilities as “different abilities” reflects a progressive shift in educational models through UD, it is imperative for faculty and other leaders in higher education to recognize the value in championing inclusive practices, especially in countries and cultures that may vary or lag behind in their efforts to accommodate or support students of all abilities.

UD also advances systematic educational reform by providing educational strategies and strategies and practices that improve adherence to governmental laws and institutional policies designed to maximize the learning of all students (Alvarez et al., 2019; H. Zhang & Zhao, 2019). The research of Manokore et al. (2024) advocates for UD as an essential framework in Zimbabwe in creating a more proactive and inclusive classroom environment for diverse teachers and learners, thus moving the cultural baseline of inclusivity beyond basic adherence to governmental laws and policies.

UD has improved learning outcomes around the world by improving faculty development and increasing student engagement. Globally, educators may have limited access to professional training in UD practices (Smith & De Arment, 2019). Multiple studies suggest that specific training in UD increases teaching competencies and enhances inclusive and effective pedagogical skills (Moriña et al., 2025; Oswal et al., 2025; Sanderson et al., 2022). Notably, a Global UDL Virtual Classroom project bridged cultural and technological barriers in UD implementation in Jamaica by pairing US faculty with Jamaican counterparts in a community of learning dedicated to professional development in UD. (Smith & De Arment, 2019). Such collaborations emphasize the importance of global communities of practice in diffusing UD practices globally. Ultimately, faculty in higher education serve as leaders in the classroom by developing inclusive pedagogies that enhance the learning of diverse students. Understanding and effectively and proactively implementing universal design principles can perpetuate an ethical stewardship of educational resources by signalling commitment to human rights frameworks and undergirding the implementation of SDG 4 for equitable access in global higher education with minimal increases to cost of delivery (Global Education Monitoring Report, 2020: Inclusion and Education: All Means All, 2020).

Future Research

Future research should include pragmatic solutions for instructors who have limited resources, ensuring that all learners have access and opportunity to have their needs met. Artificial intelligence is and continues to grow firmly embedded in educational settings, so there should be more time and energy given to studying the implications of emerging technologies in developing curriculum and materials that are rooted in socially just universal design principles (Hodgkinson-Williams & Trotter, 2018). Furthermore, universal design principles should be examined for emerging curriculum trends such as open-source textbooks (CAST, 2024). Globally, more research is needed outside the Global North to provide more robust insight into the application of UD beyond a Western view (Fovet 2021). While there are beginning points for universal design models to become a norm in global education, future research could begin with regionally. Lastly, there should be further study of the benefits of universal design for broader student populations beyond protected identities as well as for

faculty in classroom instruction efficiency/effectiveness (Black, Weinberg, & Brodwin, 2014; Higbee, 2008; Silver et al., 1998). In the coming decades, technology is sure to change the way we engage learners in the learning process. Universal design principles have an opportunity to fill gaps in this process, lessening barriers to learning overall.

Limitations

This article recognizes limitations such as highlighting that the discussion may not represent the full breadth of all Universal Design frameworks used in educational settings. Additionally, the review did not include primary, direct feedback from practitioners and students who have experienced and utilized these models. Furthermore, as a qualitative review, the discussion and findings are subject to the interpretation and possible bias of the authors. Despite these limitations, the study provides a valuable comparative overview of UD models used in higher education and identifies areas of future research for deeper exploration.

Conclusion

This study highlights the fundamental ideas, frameworks, and real-world applications of several of the key Universal Designs in Education (UDE) models in a variety of learning contexts. The study provides institutions and educators with a broad and comparative view of multiple approaches to universal design in higher education. Among the analyzed models, including UDI, UID, UDL, IMID, and QM, some recurring elements are evident, particularly the substantial advantages that universally designed teaching provides for all students. Overall, Universal Designs in Education has significant benefits for all students, with design being particularly critical in online learning (Martin & Bolliger, 2023). Principles of various UDE models can equip instructors at all levels to design with the student audience and voice as a primary driver of methods to increase student engagement in diverse classroom environments such as on-campus classrooms, online classrooms, hybrid and blended learning environments, etc.). As the diversity of student composition continues to change, regular training for teachers at all levels and modalities, and process enhancements through model updates like the Quality Matters framework and the 2024 CAST guidelines will be essential for the continuous improvement of UD's application in higher education. Such goal-oriented practices not only help improve instruction and support student learning but also necessitate institution-wide adoption and reinforcement by the administration and faculty leadership. Embedding and developing UD as both a strategic practice to support student success and cultural norms among faculty offers potential to improve retention and the student experience. Still, individuals and institutions should resist the temptation to take a rote checklist approach to simply symbolically or mechanically fulfill institutional universal design requirements, reducing creative thinking and innovation (Acton & Hujig, 2020). Ideally, universal design in higher education should offer courses that resemble well-constructed cities with several paths leading to the same place. While each student can successfully journey to the destination, the route will differ.

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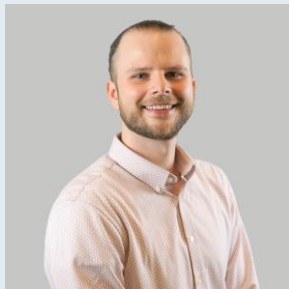
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Technology-facilitated Sexual Harassment of a University Student in the Era of Digital Communication: A Case Study

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Abstract

Background: This case study explores power dynamics through the story of Lucia, a first-year law student and victim of technology-facilitated sexual harassment by a professor at her university. Readers will analyze the issues and conditions facing Lucia, consider potential courses of action, and evaluate actionable solutions for this real-world scenario. **Objectives:** Readers will explore the complexities of Role Theory, inequities inherent in professor and student relationships, conflicts of interest in institutional settings, and potential pitfalls of digital interconnectedness while developing a broader understanding of appropriate ethical boundaries. **Learning Outcomes:** As a result of heightened awareness, readers will develop an awareness and ability to self-advocate for appropriate relationships within the academy, to recognize signs of sexual harassment, and to exercise greater autonomy over their digital existence. **Use:** This case study is intended for instructional settings in university gender studies, communications, and ethics courses as well as in academic and corporate human resources, board and governance, and business management settings. Some content may not be suitable for minors. **Teaching Notes:** Teaching notes and materials will be made available upon request of a verified instructor or educator. **Limitations:** Names and locations were anonymized to protect the privacy and integrity of those involved, and some narrative was editorialized for purposes of clarity. Any dialogue presented in this case study is representative of conversations and data that is either protected or no longer available through public channels.

Keywords: sexual harassment; digital violence; technology; power dynamics; non-fraternization; Social Role Theory

Paper type: Case Study

Case Description

A male law school professor exploits his role and status to solicit one of his female students through the WhatsApp text messaging platform. Eventually the student reports the professor, but she quickly learns that power dynamics are no match for ethical conduct or protection from technology-facilitated sexual harassment – neither of which seems to be a priority for the university’s administration or the judiciary to oversee.

This case involves topics that may be triggering for certain individuals. Difficult and contentious conversation may occur regarding gender status and social role theory, concepts of sexual harassment, institutional behavior, and ethical obligations. Participation may be most productive if readers are initially assigned in pairs or small groups for discussion prior to dialogue among larger groups. Due to the complexity of the topics, a dedicated time of 45 minutes to one hour is recommended for the exercise of reading, evaluation, and discourse.

Case Synopsis

Lucia is an attractive, 23-year-old female university student who is native to, and resides in, a Latin American country. As a result of dedication to her academic studies and commitment to bringing honor to her family, Lucia is now attending law school as a first-year student at a prestigious Catholic University in her home country.

One of Lucia’s male professors utilized his access to the university’s student contact information and began to send her friendly WhatsApp text messages. After a short period of time, the professor’s messages became constant and disruptive, escalating to an inappropriate and sexual nature. When Lucia rebuffed his advances, the professor’s messages turned hostile, and Lucia became concerned for her academic success and personal safety.

After repeated prodding from her mother and their family’s parish priest, Lucia reported the professor to the university. Lucia quickly learned that the professor was earnest in his threat to retaliate against her, and that she had very little standing with the university as a student.

Readers will access creative decision-making skills as they identify inappropriate interactions from an individual in a role of authority targeting a person of inferior status who was put in an untenable position. Intellectual curiosity from readers will support their critical assessment of technology-facilitated sexual harassment in the digital era, a university’s failure to protect their student from abuse, and the systemic corruption that privileges male authority in this Latin American country.

Background & Case Story

Lucia

Being accepted to law school was a tremendous opportunity for Lucia. Her family had a strong commitment to the Catholic faith, and Lucia's attendance at a Catholic university – especially one with such prestige – was a dream come true for them. Lucia was the first from their family to be educated beyond grade school and she would be the only person from their neighborhood to become a lawyer, if she could make it through the program!

Lucia was aware of her family's pride for her accomplishments. She felt immense pressure to maintain top grades and to bring honor to her family and community. Lucia was also required to keep her grades up to maintain the financial scholarship she received for her high class standing during her undergraduate studies, and she was determined to succeed.

Lucia was thankful that she could remain living at home while she continued her education in law school. It helped that she didn't need to worry about incurring temporary housing costs, and she was able to dedicate a part of her financial aid scholarship to help provide support at home. Lucia was especially happy to be able to assist her widowed mother, Maria, who sacrificed so much of herself to provide the best she could for her children as they grew up.

Maria, Lucia's Mother

Maria worked three jobs to take care of her six children after her husband was killed 11 years ago in a work-related accident. Her family lived a stable life in a modest home full of love. Even though she was often exhausted from long days at work and the pressure of raising her kids alone, Maria ensured that the children were respectful, earned reasonable grades, and went to weekly mass following Catholic traditions. She knew her husband was watching over them all from heaven, and Maria was humbled to carry on his legacy by ensuring the family was faithful to their religion, respected in the community, and hardworking at their studies and in their jobs.

Maria knew that her daughter had dreams of becoming a lawyer since childhood. She was entertained that Lucia watched crime shows on TV and played "courtroom" with her brothers and sisters by grilling them with questions about where they had been, what they had been doing, and who they were with. Lucia's natural curiosity may have annoyed her siblings, but Maria could not be prouder of her daughter.

She was happy that Lucia wanted to continue to live at home while she studied law at university. Maria didn't understand the cases that Lucia talked about while she studied for her classes, but she was overjoyed to watch her daughter's excitement over learning new subjects and working toward a career that could make a difference in the world.

Professor Jiminez

It takes a firm commitment to learning the law and a deep talent for interpretation and analysis to become a tenured law professor. A member of university faculty must be an exceptional scholar and profoundly dedicated to the success of the legal field as

well as the quality instruction of future lawyers. Prof. Jiminez excelled at these requirements – so much so that he was elected to a seat on the local judiciary's oversight committee as president of the Jury of Magistrates. He worked hard and was impassioned of the illustrious roles he served as a tenured professor and distinguished member of the judiciary. Additionally, Prof. Jiminez served as legal counsel for the university.

The professor's talent and reputation afforded his family a comfortable lifestyle, and he was regarded as one of the most powerful men in the surrounding region in this Latin American country. Prof. Jiminez was charming and handsome; everyone wanted to be around him and listen to what he had to say. Prof. Jiminez and his wife were parents to three children who attended private school with other kids from important families. The professor had a public life that many people aspire to, and he enjoyed the attention it brought him.

The Catholic University

Universities earn top ranking in three significant ways: through the academic excellence provided to their students, the endowed financial support of alumni and funders, and their elite faculty's participation in the publishing of high-quality research in top journals. Add to these qualities the value of a pristine global reputation, the support of the country's government, and the sponsorship of the archdiocese – and a Catholic University has all the makings of international visibility, access to resources, and political influence.

Such was the case for this institution, and its administrators were intent on maintaining their prestigious standing. The administration was careful to only admit students with excellent grades and outstanding potential, and to hire professors with stellar credentials. They were very fortunate to count among their tenured faculty a man who was also an active member of the judiciary! Prof. Jiminez was the crown jewel of the university's instructional staff, and they intended to award him with an endowed chair position at the end of the current school year.

There are some who may find it curious that Prof. Jiminez was also the university's lawyer, but such things were rather common in Latin American contexts and did not concern the administration. They felt confident that with the stellar reputation of their law program and the favor of the local diocese, no one would be asking too many questions. After all, Prof. Jiminez had oversight responsibility for the Jury of Magistrates, and he was a popular political figure – not to mention a significant fundraiser for the university.

Students did not always rate Prof. Jiminez perfectly on their end-of-semester surveys, but administrators chalked it up to him being a hard instructor. It was likely that some students resented having to work for their grades, particularly the girls. Law school was hard! No one got by as a free rider, and the university defended its faculty.

Law School: And So It Begins

Lucia is both excited and a little nervous to start law school. She is eager to succeed and committed to staying focused on her studies. Lucia doesn't have experience in this level of academic circles, nor does she have any friends or family that went to

college. She leans on her mother, Maria, as her emotional support system. Lucia is also under tremendous self-imposed pressure to do well – the scholarship she earned covers her class fees as well as a little extra that Lucia offers as financial assistance to Maria.

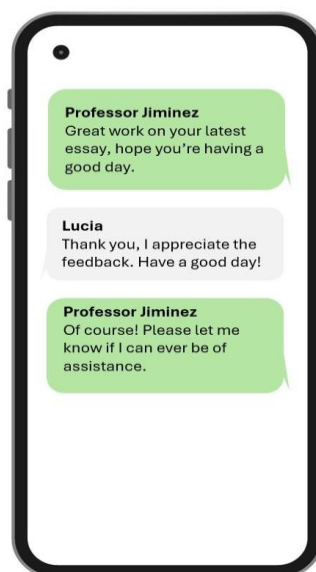
Even with the stress and pressure, Lucia is following her dream! She is one of the first students to arrive to her classes each day, and she takes exhaustive notes that she reviews at home every evening. Lucia has heard that her classmates hang out together in the evenings, but she worries that she will fall behind if she doesn't stay focused on her classwork and keep to herself.

Prof. Jiminez is Lucia's Contracts Law instructor. His class is extremely challenging for Lucia, who hasn't had any prior experience with business dealings. When Prof. Jiminez selects students to recite facts about cases and changes in the law over time, Lucia keeps her head down and hopes that he doesn't call on her. She's afraid of being embarrassed and has been lucky to avoid his attention so far in the first two weeks of class! Then, about three weeks into the first semester, Prof. Jiminez sends Lucia a WhatsApp text message praising her recent class essay and offering to help her if she ever needed it.

Lucia is surprised that her professor noticed her and cared enough about his students to send her personal encouragement. She is thankful for the personal attention and grateful that so far she has missed out on the potential humiliation that some other students have received when they didn't have good answers to the professor's questions about the contract cases. Lucia finds comfort that someone of Prof. Jiminez's rank and status in the university is taking the time to check on her.

Figure 1

Example: WhatsApp Text Exchange #1



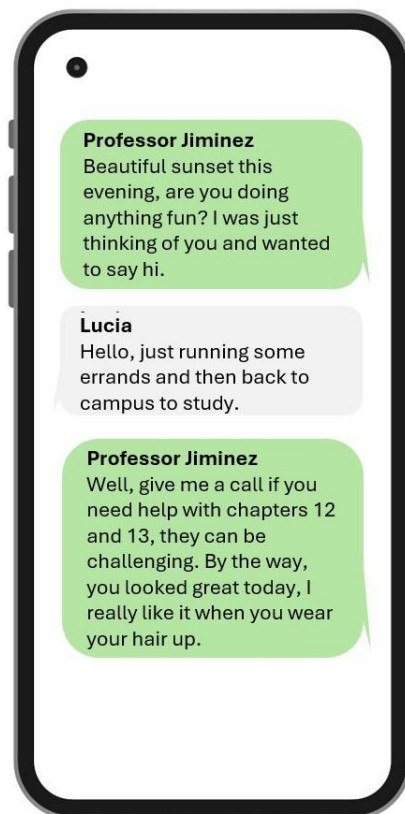
Text Messages Become More Frequent

Prof. Jiminez begins to send Lucia frequent messages on the WhatsApp platform. In fact, it has become a regular occurrence that she receives a “Good morning” message and two or three friendly, playful messages throughout the day. This feels rather normal to Lucia since informal communications between students and faculty are not an uncommon thing in the local culture, and so messages from her professor quickly became commonplace.

She responds to Prof. Jiminez’s texts with updates about how things are going in other classes and sends questions that she has about difficult points of law. When the professor’s messages slowly become more personal in nature, Lucia tells herself that Prof. Jiminez is just very friendly and complimentary. She believes that he must say nice things to all his students to encourage their good work in class.

Figure 2

Example: WhatsApp Text Exchange #2



Lucia is amazed that she has become friends with a professor! While she is at home studying, Maria noticed that Lucia’s phone would chime often with messages, distracting her from classwork. When Maria asked about messages, Lucia told her that she was texting with one of her course professors. Alarmed, Maria asks Lucia if it is

normal for professors nowadays to communicate so personally and regularly with students. Lucia just laughs.

Her mom is from a different time – everyone communicates on texting platforms these days. Besides, Prof. Jiminez is her Contracts instructor and he wants her to succeed in his very difficult class. Law school is hard! Her mom wouldn't understand. Lucia is thankful for her good fortune.

Another month of school goes by, and Lucia is doing so well! She is studying hard, earning high marks on assignments in all her classes, and getting special help from Prof. Jiminez – who now sends her messages between classes and during the evenings, too. It is sometimes a struggle for Lucia to receive and respond to so many texts, and she thinks that she must have become Prof. Jiminez's class favorite that he spends so much time chatting with her. Meanwhile, Maria is becoming more vocal about her concern with this texting relationship between Lucia and her professor.

First semester exams are right around the corner. Lucia cannot understand how other students find time for a social life – it seems like all she does is study and listen to her mother complain about how often she messages with Prof. Jiminez. Lucia attempts to comfort Maria, telling her that the class will end soon and she is sure that the professor will mentor a different student next semester.

Privately, Lucia feels relief that Contracts class is finishing up because the content of all her class work is hard to focus on. Plus, there are so many messages from Prof. Jiminez every day that it is taking extra energy for her to keep up. Getting good grades is crucial for Lucia to keep her scholarship every semester and she has heard that classes do not get any easier, so she cannot afford the time away from studying to get a part-time job if she loses her financial aid.

Time for a Break

Just like that, first semester is almost over! Where did all the time go? Lucia looks forward to a week of break from school, the chance to finish her final class projects, and study for exams. Lucia decides to take a small break, and she spends a day at the market with Maria. It is the first time in four months that Lucia made time to do something fun alone with her mother, and Maria was thrilled. But Lucia's phone chimed constantly while they were out, and Maria became frustrated with Lucia's excuses.

Maria believed that this male professor was obsessed with her daughter. She knew from stories in the news that he had a wife and children, and that he was politically connected. Maria did not approve of a married man sending text messages to female students – and especially not to her daughter. Despite being morally unacceptable by society, cases of abuse and sexual harassment of students by university professors or school teachers were not uncommon in the country's culture, and Maria was well aware of that. Any perception or rumors of a relationship between them would bring disgrace to her family, and Maria tried to explain her concerns to Lucia.

It bothered Maria especially that Lucia did not seem to appreciate the gravity of the personal contact between the professor and her, and Maria believed her daughter to be too young, inexperienced, and naive to fully understand the risks of her actions. This man sent Lucia WhatsApp messages at all times of the day and night when she was home. Where was his wife, Maria wondered? This then felt like illicit behavior to devoted Maria, and she began to urge Lucia to discuss this situation with their priest during her next confession. Lucia had always been a good girl, and surely she would not want to disappoint the church.

Over the Edge

Even though school is on break before final projects are due to be turned in and end-of-semester exams begin, Lucia is now receiving a seemingly endless number of messages each day, sometimes even multiple messages an hour, from Prof. Jiminez. He won't be an instructor for Lucia next term, and she wonders if professors mentor the same students even when they don't have a class together.

There's no way for Lucia to casually find out though. She has never mentioned their texting relationship to any of her classmates, and there's no one else for her to ask. None of her other professors have sent her text messages, which does seem a bit odd in her particular situation. On reflection and with the insistence of her mother, Lucia begins to consider that something may be "off" with this relationship she has with Prof. Jiminez.

She knows what her mother thinks about her professor, and it makes Lucia uncomfortable. Lucia is made even more anxious, though, because of the recent message content from Prof. Jiminez. He is inviting her out for drinks! It seemed initially that he wanted to help her with school projects, but when he compliments her hair and legs, Lucia feels very self-conscious. She wonders, is she doing something wrong?

Lucia can't ignore the volume or content of the professor's messages any longer. He mixes information about classes with comments that sound like admiration, and he also includes invitations to meet him out for dinner and drinks. This confuses and upsets Lucia, and she is unable to make sense of it any longer. Without looking for other options, Lucia takes her mother's advice and explains the situation to her priest during confession this week.

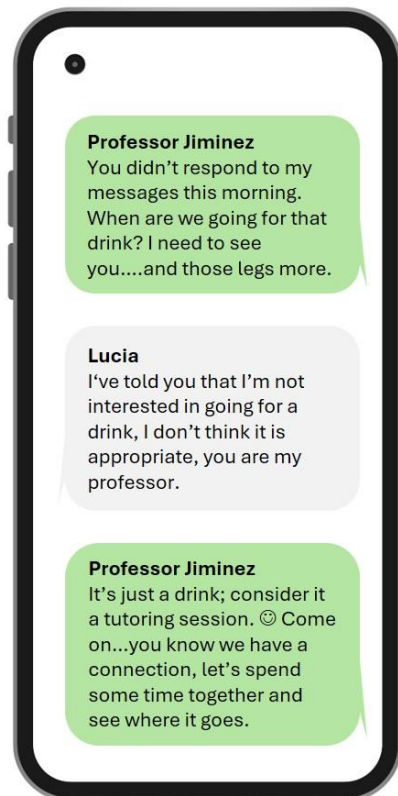
Grateful that her priest said she didn't do anything sinful, Lucia was shocked and dismayed at the advice she was given. The Father suggested that Lucia tell Prof. Jiminez firmly that she was not going to meet him outside of class, and that they should stop texting now that class was coming to an end. Lucia knew this was the right thing to do – Maria told her so several weeks ago.

Lucia had appreciated the professor's kindness and did not want to make him angry. It was the end of the semester, after all, and it was important that the high quality of Lucia's work and her commitment to learning the difficult class material spoke for itself. Still, her mother and their priest both gave her the same advice, and Lucia cared

greatly about their respect and opinion of her. Surely Prof. Jiminez would understand her uncomfortable position and her decision to stop replying to all his messages.

Figure 3

Example: WhatsApp Text Exchange #3



Regret and Disbelief

Before the break is over, the professor's text messages begin to take on a different tone. His questions have become increasingly personal. Although Lucia has always defended Prof. Jiminez's texting habits to her mother, she promised Maria that she would no longer replied to messages that were not specifically related to class work or the law. The circumstances become dire for Lucia when the professor sends her an erotic poem and sexually explicit images. Despite having heard in the past about a few similar cases back in her own public high school, she's never expected to ever face a situation like this during her academic studies. Even less when dealing with such a reputed, prestigious and powerful scholar like Prof. Jiminez!

Lucia is shocked and embarrassed by the content of the message, and she immediately feels regret for not taking her mother's concern seriously. Lucia doesn't know what to do or say! How can her professor send her such profanity? What must he think of Lucia to be vulgar with her? She finds it all so hard to believe – Prof. Jiminez has always been so kind and friendly. This situation has just gone too far.

She is sick to her stomach and has nowhere else to turn. Lucia cried as she finally shared the actual messages from the professor with her mother. Maria was furious, and they immediately went together to meet with their priest for guidance. Although he is kind and gentle in his counselling of Lucia, the Father is firm that she *must* now report Prof. Jiminez to university administration. She attends a Catholic university, after all, and there are ethical standards that must be maintained.

Although Lucia has now completely stopped responding to the professor's messages, Prof. Jiminez continues to text her with increasingly insistent requests to meet with him. His messages frequently contain insensitive language and offensive images. Prof. Jiminez threatens Lucia that she will regret it if she doesn't respond to him.

Figure 4

Example: WhatsApp Text Exchange #4



Fear and Humiliation

Lucia is both uncomfortable and fearful. Although she avoids Prof. Jiminez on the university's campus, she continues to receive unwelcome advances and lude images from him. She doesn't have anyone to confide in besides her mother and priest and has never formally received any sort of sexual education before, neither at school nor university. Lucia is concerned about her grades and Prof. Jiminez treating her unfairly since she stopped answering his messages and consistently refused to meet with him

outside of class. Even with Lucia's efforts to deescalate the situation, her professor's messages turned malicious and threatening.

Lucia considered following the advice of the Father at her parish. After doing some legal research, she discovered that despite not having established official protocols, policies, or programs dealing with abuse, sexual harassment or alike via online platforms, her university did have a Non-Fraternization Policy stating that no university employee shall have or pursue a relationship with any student under the supervision of the same employee. The policy also discussed the inherent conflict of interest that may arise in relationships, and the potential of a situation of harassment due to the imbalance of power between a professor and a student. Any person who suspected or participated in a violation of the policy had a duty to report the situation to university administration. At the same time, Lucia was conscious that doing the latter could mean a negative ruling against her given Prof. Jiminez's position within that institution, implying her suspension or even expulsion from law school, among other undesired outcomes.

Lucia also found some actionable recourse within her country's legal system that -at least in theory- could provide her with some support. These included a few constitutional articles, whistle blowing safeguards and other legal norms protecting her well-being and integrity, as well as a hot line made available by the government to offer assistance and contention in case of violence against women. Lucia knew about the country's high level of corruption as well as Prof. Jiminez's political influence, meaning that an unfavourable verdict in case of a legal complaint could have severe consequences for Lucia, that go even beyond pecuniary compensations for -supposed- defamation. But she also had great faith that the lord will somehow bring justice to the table and so was ready to take a decision in order to finally end this nightmare.

Instruction

After participating in this case study, readers can discuss their views of sexual harassment and the inappropriate use of technology to assert authority in relationships. Readers should develop and defend their position on the following inquiries:

- Was the protagonist a victim of any action in this case?
- If yes, did she follow appropriate steps to protect her interests?
- Was there any information available related to (mediatized) similar cases?
- If yes, what were the outcomes?
- What responsibility did the university have to protect its students?
- What actionable steps would then be available for the protagonist to gain justice?
- Were there other concrete options she could have thought about (even beyond the country's legal system)?
- Should the university make any policy or procedural changes?

Conclusion

This case offers readers the opportunity to evaluate the devastating impact of unchecked ethical boundaries. Readers were introduced to a scenario highlighting the slippery slope of harassment by digital communication that can occur in relationships. The example illuminated the general role inequities present, and the power dynamics involved, in university settings. There is also an unspoken question raised of gender equity, given the position of the female student versus the male professor.

Social Role Theory

As described by Eagly and Wood (2012), men and women lean into their gender identity as a foundation for their behavior. That is to say that behavior and expectations tend to be gender-normative, with individuals identifying as male behaving in more aggressive, dominant patterns as compared to individuals who identify as female. Researchers posit that role identity influences the expectations that people have of gendered behavior, which is to say that men who act in an aggressive manner are often accepted as having tendencies that fall in alignment with their male gender-normative status.

Additionally, Bourdieu (2013) expresses that several forms of gender-based violence are much more expanded and profound in male-dominating societies and cultures, to the point of attaining a normalization status that usually becomes uncontested within families and community members. According to Díez-Gutiérrez (2015), this also translates into the educational field with the build-up and adoption of “masculinity codes”, so as to implicitly impose a hegemonic view of masculinity, heterosexuality and homophobia across both faculty and students.

A study undertaken by Ramirez & Barajas (2017) in a Latin American country then revealed that, despite being typified as crimes by federal laws, sexual harassment and gender-based violence are still common practices in educational institutions. The authors argue that the latter mainly stems from a lack of political will to internally change such status quo within Latin American universities, as reflected by the complete inexistence of protocols, policies or training that deal with sexual harassment, digital violence and other inappropriate behaviours across campuses.

Technology-Assisted Education, Violence and Abuse

In the specific case of the WhatsApp text messaging platform, Suarez (2018) explains that its massive usage around the globe (i.e. roughly 98% of any smartphone holder worldwide had an active WhatsApp account in 2017) does give reasons to consider its formal implementation in the teaching-learning process, so as to reinforce communication and interaction between faculty and students. This is especially true in poor Latin American contexts, where low incomes, scarce physical infrastructure, long distances in rural areas and the lack of resources/materials at hand (e.g. libraries, computers, etc.) make it all suitable for this costless tool to potentially strengthen education levels, if correctly implemented within academic institutions (Colunche et al., 2025).

In practice, however, a study by Gosse et al. (2023) identified that although professors are now required to communicate with their students through online platforms as a mechanism to mobilize knowledge across modalities, universities are well behind in establishing appropriate protocols, policies, and procedures. This also extends to

WhatsApp and other text messaging platforms, since many higher education institutions worldwide still haven't installed any norms, systems or manuals related to the proper adoption of this tool (Enakrire & Kehinde, 2022). In the absence of mechanisms to support appropriate and meaningful conduct in higher education, instances of digital violence and technology-facilitated violence are then likely to increase in the near future.

Moreover, the massive use of WhatsApp in some collectivistic cultures is characterized by facing no pre-established boundaries, whether formal or informal, hence mixing and extending to every aspect of people's lives, from social to professional and educational (Matassi et al., 2019; Faisal & Al-Qaimari, 2020). In fact, a research study undertaken by Lucio et al. (2018) revealed that close to 40% of students in a Latin American university have received pornographic videos, obscene pictures and other disturbing images without requesting them nor being informed about, whether they come from fellow students, faculty or other university staff.

In terms of gender, the 2023 UN Report on Technology-Facilitated Violence Against Women reports alarming global statistics regarding the incidence of controlling behavior, stalking, and harassment experienced by women (UN Entity for Gender Equality and the Empowerment of Women, 2023). The increase in harm to women through digital communication is a topic of current importance worldwide. An imperative exists to do more work within the field of higher education, specifically, in support of issue avoidance and protection for both faculty and students.

Case Study Questions

The case objectives provide an accessible framework toward understanding and addressing ethical issues of power dynamics between professors and students in the university setting and within the context of Social Role Theory, an analysis of non-fraternization, and the insidious nature of technology-facilitated sexual violence.

Additional questions to stimulate discussion include:

- At what point did the professor's contact with the student cross the line, if it did?
- What is the relationship between text messaging and technology-facilitated sexual violence?
- What action should the university have taken regarding its published policy?
- What other explicit protocols and policies should the university establish to handle and mitigate cases of sexual harassment, digital violence and abuse?
- What's the role of transparency?
- How important are sexual education programs and training to deal with these kinds of matters, both for faculty and students?
- How did the imbalance of power between the student and professor impact the student's decision-making?
- Could the outcome have been different for a student who reported their professor to university administration earlier in the communication cycle?
- What does an appropriate relationship look like between a professor and a student?

- How can culture influence the relationship and interaction between faculty and students?
- Are there steps that a student can take to protect their autonomy and without becoming a victim of harassment or retaliation?
- How should professors be trained regarding communicating with students (and vice-versa)?
- Should the university have a zero-tolerance policy for cases of professor-student fraternization?
- Could a university-sponsored communication portal have mitigated the escalation in communication via personal technology between the professor and student?
- Should a professor recuse themselves from the court in a harassment (or any) case brought against them if they have a leadership role within the court?
- Is it good practice for an active professor to hold a position of oversight or authority that directly involves or impacts the university where they teach (i.e., General Counsel)?
- Should the court revisit how it manages the apparent conflict of interest of a lawyer with political influence over judges and the justice system itself, if the lawyer becomes involved in a legal complaint?

Teaching Materials

Teaching materials may be found in the accompanying Teaching Notes document. Please contact arete@smwc.edu to request access. The request should originate from an active educator or trainer. Provide confirmation by linking to your faculty directory or organizational chart, and by sending a copy of your work badge or identification along with the written request for access.

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Detra Lynn Mills, JD, MBA was a litigator and mediator in private practice following a 20-year career in the health and hospital industry before transitioning to corporate executive leadership. She is currently pursuing a doctorate in global leadership (PhD 2025 *anticipated*, Saint Mary-of-the-Woods College). As a committed interculturalist, Detra's research interest is found at the interdisciplinary nexus of behavioral science (i.e., psychological safety) and social justice studies (i.e., gender equity).



Tammy Haenlein is an MBA student at St. Mary-of-the-Woods College. She has a background in communications and an interest in travel and cultures. She works in member services at an electric cooperative. Tammy is active in her community and involved with an organization that supports women and children affected by domestic violence. This case study is an opportunity to learn and reflect on gender equity in different cultures.



Lucero Vázquez is a junior researcher at the Institute of the Central Bank of Paraguay, and a student of economics at the Universidad Americana in Paraguay. In this work, she has sought to build a comprehensive view that allows not only to describe realities, but also to interpret them from within, respecting the complexity of the contexts and the voices that inhabit them. For her, research is an act of commitment with the real, with the lived and with the possibility of transformation, is to give voice to those who rarely have it in academic discourses and contribute, from the lived, to a more human and situated understanding of knowledge.



Marcelo Echague Pastore is a researcher and faculty member at the Department of Economics, Universidad Americana in Paraguay. He also acts as an Adjunct Instructor for the Master's in Leadership Development Program at SMWC, while being a peer-reviewer of the Private Academic Library Network of Indiana (PALNI Press) and the Journal of Excellence in Global Leadership (Arete). Marcelo started collaborating with the Woods since 2023 during his US visit as a Fulbright Scholar-in-Residence from Paraguay, by giving lectures and helping tighten SMWC connections with South American institutions. He holds a Bachelor's degree in Economics and obtained a Master's in Public Policy from the National Graduate Institute for Policy Studies (Tokyo, Japan), while specializing in Financial Technologies (FinTech) and Sustainable Finance.

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Wings of Resistance: A Case Study

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Abstract

Background: This case study explores Letizia Ruiz Fonseca's groundbreaking journey, highlighting her firsthand experiences as she navigated a male-dominated aviation industry. Through her detailed accounts, it examines the challenges, triumphs, and resilience that shaped her career. **Objectives:** To analyse the pioneering achievements of Letizia Ruiz Fonseca, Paraguay's first female pilot to earn international licenses and captain a commercial airline, as a case study in gender barriers within aviation. **Learning Outcomes:** Learners will critically examine ethics, leadership, and gender equity issues in South America. They will discuss the systematic challenges faced by women in male-dominated industries and explore strategies for fostering inclusivity and equity in professional environments.

Use: Having a better understanding of gender norms. **Teaching Notes:** Suggested class format, structured discussion questions, guided reflection questions, interviews with Letizia Ruiz Fonseca, and case-based ethical dilemmas and leadership analysis.

Keywords: Gender, Gender Equality, Aviation Industry, Paraguay, Leadership Under Adversity, Workplace Harassment, Systemic Discrimination, Inclusive Leadership

GLI classification: 70

Target Audience: Suitable for upper-level undergraduate or graduate courses in Leadership Studies, Gender & Diversity in Organizations, Aviation Ethics, Organizational Behaviour, or Global Management.

Paper type: Case Study

Case Background

This case study explores the real-life journey of Letizia Ruiz Fonseca, the first female pilot in Paraguay to earn international aviation licenses and serve as a commercial airline captain. Through her firsthand experiences, it provides a detailed account of the gender-based challenges she encountered, including systemic discrimination, abuse, and institutional neglect in the aviation industry. Fonseca's story highlights remarkable personal resilience and highlights the broader structural barriers that still limit women's progress in male-dominated fields.

By analysing her lived experiences, this case study explores key themes of ethics, leadership, and gender equity, emphasizing the urgent need for institutional reform and inclusive policies that provide protective support to women in professional settings. It contributes to ongoing discussions about social justice, workplace equity, and leadership accountability in South America. It offers valuable insights for scholars, policymakers, educators, and advocates committed to promoting gender equality and ethical leadership worldwide.

Case Synopsis

This case study investigates the life and career of Letizia Ruiz Fonseca, the first woman in Paraguay to obtain international aviation licenses and command a commercial airline. By leveraging her firsthand experiences, the study underscores the considerable gender-based obstacles she encountered, including systemic discrimination, abuse, and institutional disregard due to her gender. Fonseca's journey represents the wider struggles faced by women in male-dominated fields, particularly aviation in South America. Through her narrative, the case study examines personal resilience, ethical leadership, and the necessity of institutional reform. It also assesses how her determination inspired change within her profession and altered societal views of women in leadership positions. This case study offers a compelling perspective on the complexities of gender equity, the limitations of current support systems, and the transformative potential of individual action in promoting systemic change in South America.

Background & Case Story

Childhood Dreams and Early Aspirations

Letizia Ruiz Fonseca always dreamed of flying. As a child, born on March 23, 1975, in Paraguay, she imagined herself in many roles, but, being born during the dictatorship of Alfredo Stroessner, knew her gender would limit her opportunities.

When she was little, she wanted to be an astronaut and told her older brother about it, but he said, "You weren't born in the United States, and you're female." While watching movies, she aspired to be an FBI agent. Again, her brother said, "You weren't born in the United States, and still female." Letizia knew from an early age that gender inequality was deeply rooted in Paraguay's history—a legacy shaped by decades of patriarchal norms, limited access to education for women, and systemic barriers that marginalized female voices in politics, labour, and society.

Then, as she grew older, she wanted to be a CIA agent. Her older brother told her, “Well, for that, you must be the best at everything. And one day they will tap you on the shoulder and say, Do you want to be in the CIA?” So, at school, she behaved well, looking around, thinking that at any moment someone would tap her on the shoulder to say, “Do you want to be a CIA agent?” Never, never in her life has anyone ever tapped her on the shoulder.

When she was six years old, she went to the airport to say goodbye to her father, who was traveling to Chile. She saw the plane take off, and for her, that was a passion. It was love at first sight. She came home running, and one can imagine what it is like when one wants something so passionately.

But something clicked when she watched her father take off on a plane at the airport when she was six. She will never forget how, as a young girl around 10 or 12, her brother Alfredo brought her a newspaper and handed it to her because it was about the first female commercial pilot in Germany. “I want to fly,” she told her brother Alfredo. “Then you’ll be the first,” he said.

Breaking Barriers in Aviation

By the age of eighteen, Letizia Ruiz had already achieved what many only dream of. While still a student at Goethe Schule in Paraguay, without her parents' support, she had to take out a loan from the Dirección Nacional de Aeronáutica Civil (DINAC), cosigned by her aunt and then a fellow (male military) student. The military student cosigned for her loans after learning that she had been turned down because she was not in the military (where she was also turned away from admission).

This is how she was able to afford her education; she was the first woman civilian to receive support from DINAC. She soon became a licensed civil pilot and was fluent in five languages—German, English, Portuguese, Spanish, and Guaraní. Her classmates, who aspired to become doctors, politicians, or business leaders, laughed when she declared she wanted to be a pilot. But Letizia was undeterred. She was already living her dream, flying planes while still in high school.

Her daily routine was a testament to her discipline and ambition. After school, she would attend language classes, practice piano, play tennis, paint, and then head to the Adrián Jara Institute to train as a pilot. She earned her Professional Aeronautics Certificate (PAC) for visual flight operations. She soon began working toward her Instrument Flight Rules (IFR) license, which allows pilots to fly using only instruments, without relying on visual cues—a significant milestone in aviation (San Lorenzo PY, 2015).

In the 1990s, Letizia became the first woman in Paraguay to earn an Instrument Flight Rules (IFR) license, making her the country's first female pilot qualified to fly solely by instrument reference rather than by sight (La Nación, 2017; ABC, 2017). Her achievements did not stop there. She became the first female commander to obtain a Transport License for Airline (TLA) for international commercial flights. She was also part of the first all-female flight, entirely operated by women, in Paraguay. Despite facing numerous barriers in a male-dominated field, Letizia's determination and excellence drove her forward.

Her journey is a testament to personal triumph and a powerful example of breaking gender barriers in aviation, marked by resilience, talent, and unwavering dedication. In June 2015, she received national recognition from the Paraguayan government during a session of Congress. She was honoured as the first female Paraguayan pilot to achieve several historic milestones in aviation (La Nacion, 2017; ABC, 2017).

These included becoming the first woman in Paraguay to serve as a commercial airline captain with an international transport license, the first female commercial airline pilot, the first woman certified for instrument flight operations, and the first female pilot to command a commercial flight. This prestigious recognition garnered both national and international media attention, highlighting her groundbreaking contributions to aviation in Paraguay.

Personal Life and Parallel Struggles

Letizia Ruiz faced ridicule and disbelief from the beginning of her journey. As early as school, peers laughed at her ambitions, telling her she would never make it. This scepticism evolved into something far more sinister once she entered the aviation profession. Letizia endured relentless abuse from male colleagues—pilots who grabbed her by the uniform and threw her to the ground in front of passengers and crew. Despite these public humiliations, she would pick herself up, compose herself, and continue in silence, building a mental “bubble” to survive.

The abuse escalated to physical assaults, verbal insults, and humiliation. Insults were made in front of flight attendants, other pilots, and even passengers. Demeaning comments were spoken in front of crew members, and she was shoved in front of flight attendants, passengers, and fellow pilots. Letizia internalized the trauma, retreating into her mental defenses and continuing her duties as if nothing had happened. She was routinely subjected to degrading slurs, including being called a “chipera”—a term used to demean her by referencing a lower-status job. Her male colleagues mocked her openly, calling her a “cheap little bitch” and questioning her presence in the cockpit.

In the cockpit, she was physically assaulted and yelled at during flights, to the point that flight attendants thought fights were happening. She was pushed into hotel lobbies and airplane aisles, often still in her full uniform, in front of passengers and crew. On one flight, a captain intentionally sabotaged her landing by giving her conflicting commands, only to criticize her afterward in front of all fourteen passengers.

In 2009, Letizia was one of five candidates considered for a commander role. However, she was coerced into signing a false testimony, which resulted in her not being selected.

Determined to expose wrongdoing within the aviation sector and the commander-in-chief's ranking system, she travelled to aviation headquarters in Brazil to voice her concerns. Although she was assured that the issues she raised would be addressed, it was already too late—her superiors had learned of her complaint. As a result, she was denied the commander position.

Her mental and physical health began to decline, leading to a six-month rest period. The stress gradually affected her, initially unnoticed, as her mind started to weaken,

feeling like her screws were coming loose. When Letizia inquired about her situation after the rest and whether she could resume flying, she was informed that she should be retired due to a permanent disability, given the seriousness of her health condition. She also occasionally had trouble speaking and getting off the plane.

Soon, her legs began to give out. How many times had she gotten off the plane in a wheelchair? She would tell the co-pilot, “You know what? I hit myself with the suitcase. My back hurts. I am going to request a wheelchair.” When the commander asked what was happening, she said, “No, I’m not requesting a wheelchair.” However, the truth was that her legs were not working. So, she would quietly tell the co-pilot, “Just go ahead, I’ll get a wheelchair.” She would say to the doctor and the nurse, “Please, don’t tell anyone that I can’t move my legs.”

Eventually, Letizia was diagnosed with burnout syndrome, and her body began to tell her it was time to quit flying.

Despite the guarantees of gender equality outlined in Article 46 of the Paraguayan Constitution and the Labor Code (Law No. 213/1993), which mandates equal treatment regarding wages and promotions. Unfortunately, Letizia was unable to secure the rights and fair treatment she deserved. As a pioneer in her profession, she would lack the necessary policies and protections against harassment and derogatory treatment, leaving her vulnerable to discrimination.

The Turning Point: Seeking Help and Legal Action

Letizia Ruiz endured persistent and deeply traumatic abuse throughout her aviation career. Despite being surrounded by colleagues and supervisors, no one intervened as she was routinely subjected to verbal assaults, public humiliation, and even physical abuse. Even in social settings like hangar barbecues, she was targeted with cruel remarks meant to belittle her intelligence and professionalism. One commander came up to her, lowered his head to her ear, and said, “What the hell are you laughing at, you pathetic little wretch? You do not know a damn thing. What gives you the right to be here?” Despite these relentless verbal attacks, Letizia preserved her composure, responding with unshakable dignity and professionalism, even as she endured emotional harm and intentional exclusion.

She stood at a crossroads. She could stay silent and preserve what remained of her career. Or she could speak out—risking her reputation, safety, and legacy—to expose the truth. A third option—reporting internally—had long since proven futile.

Conclusion

This case study of Letizia Ruiz Fonseca’s pioneering journey in aviation thoroughly examines gender equity, leadership, and ethical challenges in male-dominated industries. By analysing her experiences, readers gain insight into the systemic barriers that women face, including workplace harassment, institutional neglect, and broader structural discrimination. Fonseca’s resilience highlights the importance of protective policies and inclusive leadership frameworks that promote equitable professional environments.

This case effectively achieves its learning objectives through classroom discussions, interviews, and ethical analyses, encouraging critical engagement with gender norms in South America and beyond. Comparative studies of female aviation pioneers in other regions further highlight the global nature of these challenges, emphasizing both progress and ongoing gaps in gender equity.

Data from student reflections and facilitated discussions will show that this case effectively enhances discussion and understanding of leadership during adversity, ethical decision-making, and institutional reform. Similar case studies from international contexts that examine women's breakthroughs in STEM, aviation, law, and corporate leadership offer additional perspectives that enrich the discourse on gender equity. This case study is a valuable resource for scholars, policymakers, and industry professionals aiming to promote gender-inclusive policies and leadership practices. By applying lessons learned from Fonseca's journey and similar cases worldwide, readers are encouraged to critically assess existing frameworks and advocate for meaningful institutional change.

Case Study Questions

1. What would you have done if you were in Letizia's position?
2. What ethical responsibilities would organizations have in preventing and addressing harassment?
3. How could people manage personal risk, like mental and physical well-being, while pursuing their goals of justice?
4. What systemic changes could be implemented to support whistleblowers in male-dominated industries?

Teaching Materials

All teaching materials can be found in the accompanying teaching notes document. Please request the teaching notes by email Arete@smwc.edu.

This case study follows the journey of Letizia Ruiz Fonseca, Paraguay's first female commercial airline captain, as she navigates a career filled with groundbreaking achievements and systemic abuse. It presents a powerful ethical dilemma: whether to remain silent in the face of harassment or risk everything to speak out.

For a thorough discussion to be presented, it is essential for those teaching this case study to consider all the interviews (4) completed with one of the researchers and the pilot for whom this case study is intended. The above quotations come from Letizia Ruiz, who was interviewed by Sofia Maria Lamas Knust, and then translated into English by Melanie Samudio Caballero. Ashley Hemrich further translated into English and fixed the grammar for publication.

This case aims to help students analyse ethical dilemmas within professional settings, recognize the effects of systemic gender discrimination, assess the risks and repercussions of whistleblowing, and suggest institutional reforms to enhance equity and accountability.

The case is applicable to undergraduate and graduate students pursuing studies in business ethics, gender studies, human resource management, aviation, STEM fields, or leadership and organizational behaviour.

Suggested Class Format

Total Time: 60–90 minutes

Segment	Activity	Time
1	Case Reading (pre-class or in-class)	15–20 min
2	Small Group Discussion	20–30 min
3	Class wide Debrief	20–30 min
4	Reflection	10–15 min

Discussion Questions

1. What could you do if you were in Letizia's position?
 - Explore personal values, risk tolerance, and ethical reasoning.
2. What ethical responsibilities could Letizia's employer have?
 - Discuss duty of care, HR protocols, and leadership accountability.
3. What ways can organizations foster safer environments for underrepresented groups in a male-dominated culture like Paraguay?
 - Consider training, reporting mechanisms, and cultural change.
4. What could the risks and benefits associated with whistleblowing be?
 - Analyze from personal, professional, and societal perspectives.
5. How could a toxic culture affect workplace dynamics?
 - Reflect on machismo, institutional silence, and global parallels.

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About the authors:



My name is Ashley Hemrich, and I am from Paris, Illinois. I have two wonderful boys who have supported me over the past ten years. I am currently in the dissertation phase of my doctoral program in Global Leadership. With a background in political science and public administration, I have been extremely interested in change management, vertical or shared leadership, and resilience. Working on a case study with international students was not only a pleasure but also an honour. Learning from diverse cultures around the world has opened my eyes to the injustices many people face, globally.



My name is Sofía María Lamas Knust, and I am originally from Asunción, Paraguay. I am currently working toward a degree in Commercial Engineering at Universidad Americana. As a student deeply interested in innovation, global impact, and leadership, I was especially drawn to this project and Letizia's pioneering role in aviation. Working on this case study allowed me to see how resilience, vision, and purpose can lead to meaningful change. I am passionate about combining strategy and creativity in my future career and hope to continue learning from inspiring leaders like Letizia.



My name is Melanie Samudio Caballero, and I am from Greater Asunción, Paraguay. I am currently studying Marketing and Advertising at Universidad Americana. I have a strong interest in how communication influences social change, especially in areas like gender equality and leadership. This project gave me the chance to explore the often-unspoken struggles of leadership and purpose-driven work, and how these ideas relate to broader societal impacts. I learned a lot through collaborating with others and learning about Letizia's professional journey and the challenges she encountered. This experience has increased my curiosity, pushed me to expand my limits, and inspired me to continue growing both personally and professionally.

Acknowledgments:

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Heritage Tourism in Cancun: Fostering Tourist Connection and Destination Resilience through Cultural Experiences.

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Terre Haute, Indiana, USA*

Abstract

Background: This research explores destination resilience in Cancún, México, which is known for its relaxed Caribbean atmosphere and sandy beaches worldwide and uses heritage experiences such as tours to archaeological sites and culinary tastings to weave a destination narrative. **Objectives & Method:** Utilizing heritage tourism theory to provide a lens for understanding how global tourism leaders strengthen their destination's resilience, the study was conducted using observational research to investigate cultural tourist experiences at Museo Maya de Cancún and Coba and in Cancún's hotel zone. **Results/Conclusion:** This poster examines the role heritage tourism plays in helping to create connection between the region's Mayan culture with its tourists, leading to a stronger destination image for Cancún's resort community.

Keywords: Resilience, Cancún, México, Global Tourism, Observation, culture, heritage tourism, destination image, community

GLI classification: 75

Paper type: Poster

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Abstract: This research explores destination resilience in Cancún, México, which is known for its relaxed Caribbean atmosphere and sandy beaches worldwide and uses heritage experiences such as tours to archaeological sites and culinary tastings to weave a destination narrative. Utilizing heritage tourism theory to provide a lens for understanding how global tourism leaders strengthen their destination's resilience, the study was conducted using observational research to investigate cultural tourist experiences at Museo Maya de Cancún and Coba and in Cancún's hotel zone. This poster examines the role heritage tourism plays in helping to create connection between the region's Mayan culture with its tourists leading to a stronger destination image for Cancún's resort community.

Introduction

Global travel destinations such as Cancún, México offer tourists an escape to tropical beach destinations. These destinations also offer opportunities to experience local culture, enhancing the destination's ability to be resilient through establishing connections between tourists and the rich history of the region (Shang et al., 2022). Cancún, México, located on the Caribbean Sea, is a coastal destination that attracts millions of tourists each year. The city's economy is heavily reliant on tourism, with the hotel zone being the primary economic driver. The city's heritage, however, is often overlooked in favor of its modern amenities. This research explores the role of heritage tourism in fostering destination resilience by examining the experiences of tourists at the Museo Maya de Cancún and the JW Marriott Cancún Resort and Spa, and in the hotel zone. The study aims to understand how these experiences contribute to the destination's resilience and its ability to attract tourists in the future.

Methodology

Observational research was conducted at the Museo Maya de Cancún, the JW Marriott Cancún Resort and Spa, and in the hotel zone. Data was collected through field notes, photographs, and interviews with tourists and local residents. The data was analyzed using a thematic analysis approach to identify key themes related to heritage tourism and destination resilience.

Theory

Cultural heritage theory is based on the idea that culture is a key factor in a destination's resilience. This theory suggests that a destination's culture, history, and traditions are what make it unique and attractive to tourists. By preserving and promoting these cultural assets, a destination can enhance its resilience and attract tourists in the future.

Results

The study found that the integration of cultural experiences into a destination's tourism offerings is a key factor in its resilience. Tourists who engage in cultural experiences are more likely to have a positive view of the destination and to return in the future. This research suggests that destinations should focus on creating authentic cultural experiences for tourists to enhance their resilience and attract tourists in the future.

Learning Experiences - Museo Maya

The Museo Maya is a small museum in the Cancún hotel zone. The collection contains pottery, art, carved stone, and jewelry from a number of sites including Chichén Itzá, Tulum, Coba, and Yucatan. The museum grounds contain the ruins of the Chichén Itzá site, which is a major archaeological site. The museum grounds are used for educational purposes, and tourists who visit the museum learn about the history of the region. The museum is a key attraction for tourists who are interested in the history of the region.

Fun Cultural Experiences - Hotel Zone

Resorts in the Cancún hotel zone offer tourists an opportunity to participate in fun cultural experiences. These experiences include traditional Mexican music, dance, and food. Tourists who participate in these experiences are more likely to have a positive view of the destination and to return in the future. These experiences are a key part of the destination's resilience and its ability to attract tourists in the future.

Emotional Experiences - Coba Site

Coba is an archaeological site of the Mayan civilization that provides a look at what life was like in the region 2,000 years ago. The site is a key attraction for tourists who are interested in the history of the region. The site is a key part of the destination's resilience and its ability to attract tourists in the future.

Conclusion

As a key destination, Cancún offers tourists a unique experience. By focusing on cultural experiences, Cancún can enhance its resilience and attract tourists in the future. This research suggests that destinations should focus on creating authentic cultural experiences for tourists to enhance their resilience and attract tourists in the future.

Keywords: Heritage tourism theory, destination resilience, integrated tourism, Cancún, observational research, tourism

References: Shang, D., & Zhang, L. (2022). The impact of cultural experiences on destination resilience: A case study of Cancún, México. *Journal of Global Leadership*, 3(2), 1-10.

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Heritage Tourism in Cancun: Fostering Tourist Connection and Destination Resilience through Cultural Experiences

Heritage tourism is a type of tourism that focuses on a destination's history, culture, and traditions, creating deep and meaningful connections for tourists. This research explores the role of heritage tourism in fostering destination resilience by examining the experiences of tourists at the Museo Maya de Cancún and the JW Marriott Cancún Resort and Spa, and in the hotel zone. The study aims to understand how these experiences contribute to the destination's resilience and its ability to attract tourists in the future.

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About the author



Karen Dyer, Ph.D., is the Executive Director of the Terre Haute Convention and Visitors Bureau, a role she has held since 2024. With over 28 years of leadership experience, she drives tourism growth through strategic marketing, regional partnerships, and innovation through collaboration. Karen earned her Ph.D. in Global Leadership in 2025 from Saint Mary-of-the-Woods College. Her research focused on resilience and adaptability in the global tourism industry. Dyer has expertise in leadership development, marketing, and strategic planning, informed by a decade of service as the Executive Vice President of Advancement and Strategic Initiatives at Saint Mary-of-the-Woods College.

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