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Full Length Research Paper

## SHAPING THE FUTURE FOR A SUSTAINABLE WORLD: PERSPECTIVES OF WOMEN LEADERS FROM COMMONWEALTH OPEN LEARNING INSTITUTIONS

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This study aimed to examine the perspectives of female leaders from Commonwealth open learning institutions on women's leadership and a sustainable future. Nineteen women leaders from fourteen Commonwealth countries responded to an open-ended survey. Using a thematic qualitative analysis, four critical constructs for advancing women in leadership emerged: having a mentor, building a powerful network, empowering women in ICT, and championing climate change. The findings suggest that female leaders are conscious of their critical role and must motivate other women to take up leadership or decision-making roles. Nevertheless, there seemed to be a disconnect between envisioning a sustainable future and actualizing that vision. The study highlights the importance of women in shaping the future for a sustainable world, as they offer valuable insights, experiences, and narratives on leadership and change.

Keywords: women leaders, open learning, Commonwealth countries, sustainable world, future

The Covid-19 pandemic has brought to light the significant dependence of society on working women, particularly those on the frontline and at home. At the same time, it has spotlighted the long-standing structural inequalities experienced across all realms. This served as a wake-up call to societies and economies worldwide, demonstrating the importance of placing women at the center of efforts to recover from the pandemic. In response, United Nations Women, the sole United Nations entity that focuses on gender equality and women empowerment, has initiated policy and intervention measures and a global gender response tracker to assess if countries' efforts are gender sensitive. The agency found that 20% of the 206 countries tracked had no gender-sensitive measures implemented. Women's leadership and contributions must be central to resilience and recovery to prevent a reverse of the limited progress made on gender equality and women's rights (United Nations, 2020).

## **Envisioning A Sustainable World**

According to Meadows (1994), everyone needs to envision a sustainable world where people and nature live in harmony and human needs are taken care of without exploiting the natural environment. For this to happen, a revolutionary change involves a collective call toward values people hold, how they view the world, and how society defines progress and organizes itself (Senge et al., 2010). However, more importantly, people need to

think differently, taking inspiration from the environment. Though the Industrial Revolution brought development and economic success, it also resulted in the exploitation of renewable and non-renewable resources, the creation of industrial waste, and consumer and commercial toxicity (Senge et al., 2010). To achieve a sustainable world, people must learn from past mistakes and have exceptional leadership from individuals to organizations. The question then is, what can be done to make this happen?

## Women Leaders in Higher Education

A sustainable world can be achieved through education (Blewitt, 2010). Education offers the potential to foster a green knowledge-based society, providing the necessary skills and knowledge to leverage the potential of new technologies and social media to adapt and transform the complex and unpredictable world into a more sustainable one. Moreover, the current sustainability challenges can be prevented if higher education teaches and practices a more robust form of sustainability rather than simply offering a few token courses (Clugston & Calder, 2014).

To bring about this shift in mindset, new cultural narratives, values, and ethics must be developed to enable everyone to live in a way that all can survive. It requires a significant shift in individuals' lifestyles, the functionality of communities, and the formation of social and economic policies. To achieve this, the

university leadership must strongly embrace the concept of sustainability and empower their faculties to produce graduates who can support, practice, and lead in social movements to create a sustainable world.

In the past, the Commonwealth of Learning (COL) has reported that women are making their presence felt in higher education, introducing new teaching, learning, and administrative approaches in the 21st century (Latchem et al., 2013). However, women leaders in higher education remain underrepresented in developing countries (Morley, 2013). Men are preferred for leadership roles due to the perceived notion of them having the "toughness" to perform well in these positions (Ahad & Gunter, 2017). Past studies have also highlighted the struggles of women in attaining leadership positions in higher education where family members' resources, support, and attitudes are crucial factors in this regard (Morley & Crossouard, 2015). To encourage more women in leadership roles, there must be adequate support in the form of social networking, family, and mentor support, changing the mindset of employers towards women's potential as leaders, and at a higher level, diversity and inclusivity policies must be implemented (Maheshwari & Nayak, 2020). Vietnam, an economy developing rapidly, has laws to reduce gender inequality, yet women leaders in higher education remain scarce (Maheshwari & Nayak, 2020).

Based on the above references to past studies, women in higher education face various challenges in leadership roles (Ahad & Gunter, 2017; Maheshwari & Nayak, 2020; Morley, 2013; Morley & Crossouard, 2015). While discrimination, stereotyping and subtle biases persist, it is important to share the narratives of women leaders in higher education to bring about meaningful and sustainable change in the future.

## The Context of Study

In open learning institutions, women are often catalysts of change, using new methods and technologies to serve and reach out to individuals and communities. Nonetheless, in most cases, these women are employed in low- to mid-level, part-time, or untenured positions. Thus, interventions are necessary to recognize and represent these women at the senior decision-making levels of their institutions or organizations.

Since 2018, the Commonwealth of Learning (COL) and Wawasan Open University have conducted various training programs advocating for women to lead transformation in open learning institutions. This year's program, entitled 'Women Leaders: Shaping the Future for a Sustainable Future', aligned with COL's goal of advocating gender equality and giving women the right to assume leadership positions in their respective institutions or careers. Twenty-six participants from sixteen Commonwealth countries took part in this program.

The program was designed with the understanding that the participants had prior experience as leaders in various positions and aspired to assume more impactful leadership roles in their respective institutions or careers. Through panel discussions and presentations revolving around the main open education and sustainable themes of Women and Leadership, Educational Technology, and Women and Climate Change, participants reflected on their experiences, strengths, and weaknesses, and distilled lessons learned.

## **Purpose and Rationale for Study**

This study aims to investigate the key constructs and challenges that shape a sustainable future for women leaders who participated in the training program. The findings of this study are crucial for accelerating progress towards the 2030 Agenda for Sustainable Development, which includes a specific goal of gender equality and the empowerment of women and girls.

## Methods

In this study, we utilized thematic analysis to analyze the written responses to the open-ended survey questions. Thematic analysis is a widely used method in qualitative research that involves identifying, analyzing, and reporting patterns within data. It is a flexible and iterative approach that allows for the identification of both explicit and implicit themes. The program organizer lead, selected to assume the role as an independent rater in this process, conducted a separate exercise of assigning codes and documenting coding decisions. We followed the steps outlined by Braun and Clarke (2006) for conducting thematic analysis. First, we familiarized ourselves with the data by reading through the responses multiple times. We then independently generated initial codes that identified meaningful units of text related to our research question. These codes were collated into potential themes and reviewed for accuracy and coherence. The percentage agreement on the inter-rater reliability assessment is 80%. Minor changes were made to the coding scheme to improve its clarity. We then refined the themes, checked their relevance to the purpose of the study, and selected representative quotes from the data to illustrate each theme. This process allowed us to identify key themes and patterns in the data related to the experiences of women in leadership positions. Also, according to Singer and Couper (2017), open-ended survey questions allowed respondents to freely express their opinions on specific topics instead of being confined to responding to a range of statements using a Likert scale. As a result, we obtained more detailed and meaningful data on the topics under examination.

Women leaders from Commonwealth open learning institutions who participated in the 'Women Leaders: Shaping the Future for a Sustainable Future' event held from August 1 to 3, 2022, were conveniently sampled for this study. The women leaders, as respondents, were informed that their participation was voluntary and that their responses would remain anonymous throughout the data analysis process. A survey containing open-ended questions was physically distributed to the twenty-six participants from sixteen Commonwealth countries and collected that same day. There was a 73% response rate.

Table 1 shows that the nineteen respondents were represented by fourteen Commonwealth countries, with Malaysia having the most representatives at 32%. All respondents held mid to senior leadership positions in their respective higher learning

institutions, while most of them were from the universities (84%), with the majority between the ages of 40 - 59 (79%).

#### Table 1

Demographic profile of respondents (N=19)

Details	Qty	Details	Qty
Country		Position	
Bahamas	1	CEO	1
Barbados	1	Director	3
Botswana	1	Dean	1
Eswatini	1	Head	6
Fiji	1	Deputy Head	2
Guyana	1	Manager	2
Malaysia	6	Others	4
Namibia	1		
Nigeria	1	Age Range	
Pakistan	1	30 - 39	3
Philippines	1	40 - 49	7
Sierra Leone	1	50 - 59	8
Sri Lanka	1	60 - 69	1
Tanzania	1		
Types of Institution			
University	16		
Polytechnic/Technical Vocational Institution	2		
Teachers' Training Institution	1		

## **Findings and Discussion**

Based on the thematic data analysis grounded in the purpose of the study, several key themes emerged which shed light on the influencing constructs and challenges faced by women leaders in shaping a sustainable world. In this section, we present and discuss these themes in detail, providing insights into the experiences and perspectives of women leaders who have participated in a leadership development program.

## Having a Mentor

In the past, mentors have typically taken on various roles for their mentees, such as serving as role models, offering sponsorship, providing guidance and protection, and helping to ensure acceptance by others (Forret & Dougherty, 2004). They also provide support and strategies to help women reposition themselves intellectually, socially, and professionally (Blackmore et al., 2015; O'Meara & Stromquist, 2015).

However, based on the responses of the women leaders surveyed for this study, the role of mentors has extended to include leadership in ICT. Given the recent Covid-19 pandemic, mentoring need no longer be in-person or face-to-face. With the emergence of new technologies, remote mentoring has become possible. The profile of a mentor on leadership in ICT has been further refined, with respondents noting the need for mentors to be passionate, people-centric, motivating, inspiring, experts in their field, professional, and knowledgeable of the latest technological trends. The respondents also highlighted the importance of having mentors to provide a strong foundation of their leadership skills in ICT and beyond.

Van der Weijden et al. (2015) have noted that formal mentoring can support women in furthering their careers. They found that young professors with mentors became more positive towards their work and research activities. This finding reinforces the respondents' opinions on the value of having mentors. They have mentioned that mentors can help identify potential leadership roles, guide career decisions, and reach leadership goals. Mentoring can thus provide the foundation for women leaders to build strong peer networks where they do not need to face their struggles alone. By sharing experiences and taking collective action, women leaders can become more assertive and occupy more leadership positions (Brabazon & Schulz, 2020).

The respondents also highlighted the importance of a psychologically safe environment to foster a successful mentor-mentee relationship. This includes the need for trust and openness to learning and change. Furthermore, women leaders in ICT often face challenges regarding mentoring and leadership due to a lack of time, opportunities to mentor or be mentored, trust, and confidence. Respondent 6 noted, "The challenge is that people are often scared of asking for help. Therefore, we do not take full advantage of the possibilities or positive career growth likely from effective mentoring and leadership."

According to Tran (2014), mentoring plays a critical role in shaping positive experiences and success pathways for women of color in higher education institutions in the US. This is because the personality, personal experiences, and professional backgrounds of individuals can influence the experiences of mentoring or being mentored. The respondents in the study were aware of the importance of mentorship but highlighted the difficulty of finding a mentor. As one respondent stated, "Women need role models for inspiration...but the question is how to get them? How to get and be connected with a mentor?" (Respondent 7). However, powerful networks could be the answer since mentoring is no longer unidimensional but multidimensional, with various mentoring relationships occurring among individuals (de Janasz & Sullivan, 2004). These relationships form powerful support networks (Brabazon & Schultz, 2020).

## **Building a Powerful Network**

The respondents are aware of the power of networks, and they shared that building a powerful network should be a priority for leaders, as its benefits are innumerable. One of the common advantages of having a solid network is tapping into the knowledge, skills, and experiences of people in the network or communities of practice, which increases one's and others' capacity. Respondent 10 stated, "Networking helps open up minds to appreciate diversity, to recognize opportunities, and to contribute to a wealth of knowledge through the interpersonal exchange, publishing, and conferencing."

Powerful networks can be a powerful tool for advancing careers, enabling smoother problem-solving, decision-making, accessing the latest updates and finding the right industry or research partners. As Respondent 15 stated, "Building a powerful network is connecting with the right people at the right time and sustaining the network." This importance is also reflected in past studies, which have highlighted the advantages of networking in terms of career achievements (Forret & Dougherty, 2004), such as access to information and resources, career sponsorship, and professional and personal support (Casciaro et al., 2014). Although building external networks is possible, doable, and can be validated, some respondents highlight similar challenges. For instance, maintaining a robust network for work or research can be challenging without institutional or top-management support. Communities of practice and professional learning communities, which can often foster healthy professional competition, are not always promoted in higher learning institutions. Contrastingly, other respondents revealed that their institutions actively encourage networking, resulting in numerous collaborations for institutional and staff development with other universities and new global and local partnerships that are necessary for the institution's progress. Another respondent noted that building, sustaining, and maintaining networks are now an almost automatic agenda item in her institution's daily processes.

The respondents brought up the challenge of linking effort, ideas, or intentions with a person's affiliation being discouraging. This is consistent with Gibson et al. (2014), who argued that networking should be based on having a common purpose which drives both internal and external networking behaviors, focusing on the quality and usefulness of the relationships. A respondent also shared that networks in the higher education industry are not as open in sharing information as manufacturing networks, potentially due to the lack of common purpose or usefulness in sharing information. Respondents also opined that international connections are more challenging than regional networking, which is deemed feasible. However, it is still challenging for a pioneering open university to build powerful networks due to the lack of local benchmarks to navigate regional and international networks.

Additionally, the respondents raised the concern that powerful networks may be affected by the lack of women in senior positions since most institutions are under male leadership. Through powerful networks, women leaders are seen as "creating safe spaces for other women and girls and supporting one another" (Respondent 15). Despite networking differences between men and women, female leaders with strong relationships in their networks have an intensive inner circle of two or three other women connected to diverse but non-overlapping contacts (Yang et al., 2019). This tight, female-dominated inner circle provides the women leaders with gender-specific information and support, while the more extensive network provides relevant job market information. Moreover, McNae and Vali (2015) discovered that networks are essential for women leaders in higher education in Papua New Guinea, especially when making decisions. Although some women in the higher education environment are subject to nepotism, restricting access to leadership positions, other women use this system to secure leadership roles. This action highlights that individual women may view their leadership position as an opportunity to facilitate the advancement of other women.

Lastly, amid the Covid-19 pandemic, respondents have discovered that technology has made communication and networking within and outside of institutions more accessible. Through online platforms such as Zoom, Microsoft Teams, and WhatsApp groups, women leaders can empower other women in ICT and take advantage of new technologies.

## **Empowering Women in ICT**

All respondents in this study view knowledge of ICT as essential for leadership. They recognize they are change agents to empower women in ICT, particularly in the post-pandemic period. To reach this goal, they emphasize what is required: lifelong learning, connection to society, recognition of changing trends, mentorship, and support for ICT at the grassroots level, opportunities for ICT experiences and participation, and allocation of ICT resources.

Institutions empower both men and women in ICT, offering them similar opportunities. During the pandemic, many stories were shared about the increased use of ICT, particularly among digital immigrants who found adapting more difficult than digital natives. Staff and students had to be educated on the technology to ensure successful online assessments. The pandemic highlighted the importance of being tech-savvy, and women began to share knowledge and offer peer guidance in ICT. Despite this positivity and the increased availability of ICT training, women leaders still faced challenges in providing equal opportunities, affordability, and confidence for ICT education, with funding being a significant barrier. This lack of access to ICT knowledge, skills and gadgets particularly impacts women. Furthermore, using and acquiring IT is time-consuming and requires people to learn in their free time (Muthama et al., 2013). This situation means that women are disadvantaged, as they often must prioritize family chores in their free time. As a result, there is an apparent disparity in technological advancement between men and women.

Despite women's challenges and limitations when embracing ICT, the survey respondents recognized the importance of leveraging new technologies while holding leadership positions in higher learning institutions. They have come to "gradually understand the power of social media and how it can help in decision-making rather than just being more efficient" (Respondent 1). Leading a higher learning institution in the post-Covid-19 era requires using crucial new technological tools and social media to engage with Generation Z students, who are digital natives. As a result, the teaching and learning processes have changed to this new normal. One respondent shared that her institution plans to establish a Development and Training Academy to arm faculty members with the necessary technical skills and strategies.

New technologies and social media are powerful communication tools. Senior et al. (2014) opined that emails are particularly effective for women faculty leaders in establishing closer ties with their student community. These interactions could create inspirational role models for students, helping them to shape their future aspirations. Ultimately, technology can facilitate interactions between women faculty leaders and the student body, thus improving the overall learning environment of the higher learning institution. New technologies and social media are increasingly influential in daily decision-making, so women leaders must have the necessary skill set to leverage these tools appropriately. Some respondents believe it is essential for women leaders to stay up-to-date on new technologies to ensure their use has no adverse consequences. Adapting to new technologies is becoming increasingly important for university leaders, although not all have fully embraced social media and its potential to reach a large audience (Sharma et al., 2022). As role models in their communities, women leaders should strategically use social media to promote their university's branding and messaging.

With new technologies revolutionizing the higher education sector, data privacy, distinguishing between trustworthy and false news, and the digital divide among marginalized populations are among the worries expressed by respondents concerning adopting new technologies and social media. Respondents call for training initiatives to address these anxieties, especially for older faculty members who may lack familiarity with the latest technologies.

## **Championing Climate Change**

There is an increased awareness of the necessity to protect the environment from further harm. As part of the 17 Sustainable Development Goals, SDG 13 encourages climate action to combat climate change and its implications. Sieghart (2021) revealed that women are more concerned about climate change and its potential effects on future generations than men. Consequently, female leaders are more likely to enact climate-focused changes that may help reduce global warming.

This present study reinforces that the reality of climate change has been accepted by the respondents, who have experienced its effects first-hand. Women have specially adjusted to this new reality, though unpredictable weather patterns have made planning and incurring costs more difficult for institutions. While typically seen as small contributors to the problem, countries in the tropics still feel the financial strain of climate change in specific industries and disaster recovery efforts (Respondent 16). It is widely accepted that climate change could have severe and detrimental impacts on the environment and human lives. All the respondents seemed to agree that this is an issue not to be taken lightly and that everyone should take responsibility for it: "It is everybody's business" (Respondent 8).

Despite acknowledging the issue, there appears to be a lack of proactive measures or active initiatives to address it. One person remarked that there is "no internalization of how much we contribute toward the destructions that we witness". The responses showed that there is an underplaying of the systemic effects of inaction or delayed action. More plans are being proposed for leaders to address the problem than personal or institutional initiatives are being implemented. Additionally, the expressed concerns about the effects of the problem seemed to be localized. For example, one respondent said the impact had not been felt much in their country apart from the increasing temperature. Another person mentioned that countries in the tropics were not significant contributors.

The overall sentiment is that many tasks must be completed to address the issue of climate change effectively; convincing supporters of conspiracy theorists, changing habits and behaviors, providing a supportive environment, training mindsets, and raising awareness of practical approaches for daily practice. The respondents were convinced that acting is achievable for anyone and that women leaders are particularly well-suited to lead the charge (Birindelli et al., 2019; Kovaleva et al., 2022; Pierli et al., 2022). For instance, Pierli et al. (2022) discovered that women leaders of five companies in Italy actively promoted and implemented environmental and social practices due to their natural tendencies to listen, share, and collaborate. Women leaders who advocate for sustainability often have a systematic or holistic way of thinking, the ability to manage complexity, and a commitment to inclusivity in their leadership approach.

The respondents believe that one can start from the family unit and be a role model for others. On the educational institution level, various initiatives have been suggested, such as developing programs on sustainability as mandated by the Prime Minister, integrating topics on climate change into classrooms, conferences, course designs, and business operations, and recognizing the importance of becoming a green university. On the macro level, the government and NGOs have numerous roles; however, the problems encountered in the country are the lack of monitoring, waste bins, and proper waste disposal systems.

The lack of tangible initiatives to address the problem of climate change is evident when one respondent states that there is a sense of comfort in simply seeing someone else championing the cause. Respondent 3's remark of "someone needs to take steps to lead others to do more..." implies that while people are aware of the damaging effects of climate change, they lack the knowledge and ownership needed to act.

The respondents raised several challenges climate change poses, such as resistance to change, difficulty in changing people's habits and behaviors, and inadequate implementation and monitoring of climate change policies. This finding is in line with the findings of Kovaleva et al. (2022), who found that, despite the increasing participation of women in climate change issues and decisions in Africa, they face numerous challenges due to limited knowledge, mentors, and political will.

Women leaders must be equipped with specific skills to face the challenges ahead successfully. According to Rimita et al. (2020), foresight, agility, and conscientiousness are critical 21st-century skills that these leaders need to effectively navigate the volatile, uncertain, complex, and ambiguous business landscape. Foresight is essential for predicting what could happen and making necessary adjustments. Agility is also critical, enabling them to respond to changes and adjust their strategies when needed quickly and effectively. Moreover, conscientiousness

ensures they have the necessary information to strategize, make wise and timely decisions, and guide others in taking the right actions. The ultimate question remains: how can women leaders enhance their leadership capacities and drive transformations?

## **Conclusion and Implications**

The current study aimed to investigate the perspectives of women leaders from open learning institutions in Commonwealth countries regarding their role as educational leaders in shaping a sustainable future. Their shared thoughts and experiences showed that the women leaders knew their role in this pursuit and their challenges. However, what was sometimes shared indicated the need for more comprehensive or specific strategies, which could affect implementation when cascading to lower levels within the institutions. There appears to be a disconnect between envisioning a sustainable world and translating that vision into reality through feasible and concerted actions. This idea could be explored in future research.

The experiences and insights of women leaders have highlighted several implications for the consideration of other women leaders in higher education:

- 1. Women leaders must be provided with mentorship to succeed. Mentoring offers a secure space to grow and learn while providing access to valuable networks and connections.
- 2. Women leaders need to create strong networks to enact change. Networking is essential for new ideas and innovations and provides the opportunity for multiple perspectives to make better decisions.
- Women must be empowered in Information and Communications Technology (ICT). Despite men dominating the ICT career field, girls and women must be given equal opportunities. Social media and new technologies can be used to cultivate global citizens.
- 4. Women leaders must champion climate change issues. Universities have started integrating sustainability and climate change into their curricula and projects, hopefully inspiring the next generation to become informed and caring global citizens.

Further insights into nuances from respondents' narratives could not be captured due to the limitation in using written surveys to collect data. Data collected was not rich enough to explain how distinct country cultures influence representatives' narratives. Nevertheless, findings from this study are sufficient to guide institutions on how to begin or reflect on their sustainability initiatives.

## References

- Ahad, L. R., & Gunter, H. (2017). Women in leader roles with higher education in Bangladesh. *Management in Education*, 31(3), 135-140. https://doi.org/10.1177/0892020617721147
- Birindelli, G, Iannuzzi, A. P., & Savioli, M. (2019). The impact

of women leaders on environmental performance:

Evidence on gender diversity in banks. Corporate Social Responsibility and Environmental Management, 1–15. https://doi.org/10.1002/csr.1762

- Blackmore, J., M. Sánchez-Moreno, & N. Sawers. (2015). Globalised Re/gendering of the Academy and Leadership. *Gender and Education*, 27(3), iii–vii. https://doi.org/10.1080/09540253.2015.1028738
- Blewitt, J. (2010). Higher Education for a Sustainable World. *Education & Training, 52*(6-7), 477-488. https://publications.aston.ac.uk/id/eprint/19351/1/HE\_for a sustainable world.pdf
- Bob, U., & Babugura, A. (2014). Contextualising and conceptualising gender and climate change in Africa. *Agenda*, 28(3), 3–15. https://doi.org/10.1080/10130950.2014.958907
- Brabazon, T., & Schulz, S. (2020). Braving the bull: Women, mentoring and leadership in higher education. *Gender And Education, 32*(7), 873-890. https://doi.org/10.1080/09540253.2018.1544362
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
- Casciaro, T., Gino, F., & Kouchaki, M. (2014). The contaminating effects of building instrumental ties: how networking can make us feel dirty. *Administrative Science Quarterly*, *59*(4), 705-735. https://doi.org/10.1177/0001839214554990
- de Janasz, S. C., & Sullivan, S. E. (2004). Multiple mentoring in academe: Developing the professorial network. *Journal of Vocational Behavior*, 64, 263–283.
- Denton, F. (2002). Climate change vulnerability, impacts, and adaptation: Why does gender matter? *Gender & Development*, *10*(2), 10-20. https://doi.org/10.1080/13552070215903
- Diehl, A. B. (2014). Making meaning of barriers and adversity: Experiences of women leaders in higher education. *Advancing Women in Leadership, 34*, 54-63.
- Drury, M. (2016). Still Alone at the Table? Women Working in Technology Organizations. In: Connerley, M., Wu, J. (Eds.) Handbook on Well-Being of Working Women. *International Handbooks of Quality-of-Life*. Springer. https://doi.org/10.1007/978-94-017-9897-6\_18
- Gibson, C., Hardy, H. H., & Buckley, M. R. (2014). Understanding the role of networking in organizations. *Career Development International*, *19*(2), 146–161. http://dx.doi.org/10.1108/CDI-09-2013-0111
- Greguletz, E., Diehl, M.-R., & Kreutzer, K. (2019). Why women build less effective networks than men: The role of structural exclusion and personal hesitation. *Human Relations*, 72(7), 1234–1261. https://doi.org/10.1177/0018726718804303
- Kovaleva, M., Filho, W. L., Borgemeister, C., & Kalungu, J. W. (2022). Understanding needs and potentials for gender-balanced empowerment and leadership in climate change adaptation and mitigation in Africa. *Sustainability*, *14*(15), 9410. https://doi.org/10.3390/su14159410

Latchem, C., Kanwar, A., & Ferreira, F. (2013). Conclusion: Women are making a Difference. In Perspectives on Open and Distance Learning: Women and Leadership in Open and Distance Learning and Development, A. Kanwar, F. Ferreira, and C. Latchem (Eds.), 157–174. Commonwealth of Learning.

Maheshwari, G., & Nayak, R. (2020). Women leadership in Vietnamese higher education institutions: An exploratory study on barriers and enablers for career enhancement. *Educational Management Administration & Leadership*, 50(5), 758–775.

https://doi.org/10.1177/1741143220945700

McNae, R., & Vali, K. (2015). Diverse experiences of women leading in higher education: locating networks and agency for leadership within a university context in Papua New Guinea, *Gender and Education*, 27(3), 288-303. https://doi.org/10.1080/09540253.2015.1027669

Meadows, D. H. (1994). Envisioning a sustainable world. Presented in the Third Biennial Meeting. http://www-personal.umich.edu/~rdeyoung/syllabus/Mea dows, D. (1994)\_Envisioning\_a\_Sustainable\_World,\_IS EE\_Third\_Biennial\_Meeting.pdf

Morley, L. (2013). Women and Higher Education Leadership: Absences and Aspirations. *Leadership Foundation for Higher Education*, 1-32.
https://www.semanticscholar.org/paper/Women-and-High er-Education-Leadership%3A-Absences-and-Morley/6c3 00fa13c93a7793c03d2097ce380422f12c5e1#citing-paper s

Morley, L., & Crossouard, B. (2015). Women in higher education leadership in South Asia: Rejection, refusal, reluctance, revisioning. British Council and University of Sussex, *Centre for Higher Education & Equity Research*, 1-7.

> https://www.britishcouncil.in/sites/default/files/women\_in \_higher\_education\_leadership\_in\_sa.pdf

Muthama, M. N., Kimathis, K.P. G., & Kitung'u, K. M. (2013). Gender Issues in Information Technology. International *Journal of Mechanical Engineering Research & Applications, 1*(3), 1-8.

Nerantzidis, M., Tzeremes, P., Koutoupis, A., & Pourgias, A. (2022). Exploring the black box: Board gender diversity and corporate social performance. *Finance Research Letters*, 48, 102987.

https://doi.org/10.1016/j.frl.2022.102987

O'Meara, K., & Stromquist, N. P. (2015). Faculty peer networks: role and relevance in advancing agency and gender equity. Gender and Education, 27(3), 338–358.

Pierli G., Murmura F., & Palazzi, F. (2022). Women and leadership: How do women leaders contribute to companies' sustainable choices? *Frontiers in Sustainability*, 3(930116), 1-10. https://doi.org/10.3389/frsus.2022.930116

Putnam, K. A. (2021). Information technology usage among Afghan women business leaders. *Communications of the*  *IIMA*, 19(1), 1-23.

https://scholarworks.lib.csusb.edu/ciima/vol19/iss1/4

Senge, P., Smith, B., Kruschwitz, N., Laur, J., & Schley, S. (2010). The necessary revolution: how individuals and organizations are working together to create a sustainable world. Broadway Books.

Senior, C., Howard. C., & Senior, R. (2014). The future and the female academic leader: Advancing student engagement. *Frontiers in Psychology*, 5(335), 1-3. https://doi.org/10.3389/fpsyg.2014.00377

Sharma, H., Jain, V. & Mogaji, E., (2022). Usage of social media channels by higher education leaders. *Research Agenda Working Papers*, 2022(1), 1-10. http://dx.doi.org/10.2139/ssrn.4025759

Shortland, S. (2011). Networking: A valuable career intervention for women expatriates. *Career Development International*, 16(3), 271-292. https://doi.org/10.1108/13620431111140165

Sieghart, M. A. (2021). The authority gap: Why women are still taken less seriously than men, and what we can do about it (1st ed.). W. W. Norton Company.

Singer, E., & Couper, M. P. (2017). Some methodological uses of responses to open questions and other verbatim comments in quantitative surveys. *Methods, Data, Analyzes, 11*(2), 1-19. https://doi.org/10.12758/mda.2017.01

Toh, S. M., & Leonardelli, G. J., (2013). Cultural constraints on the emergence of women leaders: How global leaders can promote women in different culture. *Organizational Dynamics*, 42, 191-197.

http://dx.doi.org/10.1016/j.orgdyn.2013.06.004

Tran, N. A. (2014). The role of mentoring in the success of women leaders of color in higher education. *Mentoring & Tutoring: Partnership in Learning*, 22(4), 302-315. https://doi.org/10.1080/13611267.2014.945740

United Nations. (2020). Policy brief: The impact of Covid-19 on women. United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) United Nations Secretariat, 1-21.

https://www.unwomen.org/sites/default/files/Headquarters /Attachments/Sections/Library/Publications/2020/Policybrief-The-impact-of-COVID-19-on-women-en.pdf

Van der Weijden, I., R. B., van Arensbergen, P., & van den Besselaar, P. (2015). How do young tenured professors benefit from a mentor? Effects on management, motivation and performance. *Higher Education*, 69(2), 275–287.

Yang, Y., Chawla, N. V., & Uzzia, B. (2019). A network's gender composition and communication pattern predict women's leadership success. *PNAS*, 116(6), 2033–2038. https://www.pnas.org/doi/pdf/10.1073/pnas.1721438116