Barriers to Attracting and Retaining Female Construction Graduates

Subjects: Womens Studies | Construction & Building Technology | Literary Theory & Criticism Contributor: James Dele Owolabi , Kunle Elizah Ogundipe , Babatunde Fatai Ogunbayo , Clinton Ohis Aigbayboa

Ongoing debates exist about making career decisions and increasing women's representation in male-dominated professions. This is because countless efforts to increase this status quo across various sectors face different barriers.

academic

barriers femal

female construction graduates gender

gender equality

gender profiling

1. Introduction

Ongoing debates exist about making career decisions and increasing women's representation in male-dominated professions ^{[1][2]}. This is because countless efforts to increase this status quo across various sectors face different barriers ^{[3][4]}. As noted in ref. ^[5], women's under-representation in male-dominated professions is due to their being ill-equipped for such work. Beninger ^[4] reported that about 53% of women, compared to 31% of men, tend to leave jobs in science and tech-intensive industries at higher rates than men due to the intensity of the professions considered male-dominated. Tunji-Olayeni et al. ^{[6][7]} posited that several changes have been taking place that have attracted women to move into professions previously considered strictly for men in education, health services, insurance, banking, and retail trade. However, understanding the strategies and drivers guiding against the barriers to recruiting and retaining female employees in male-dominated professions has become imperative in the business, academic, and management literature and in the media ^{[8][9]}.

The ongoing debate on women's underrepresentation in certain professions, particularly academics, has been expressed using different perspectives. Bridges et al. ^[10] viewed the barriers to women's underrepresentation in male-dominated professions from the perspective of gender identity or segregation. Halliday ^[1] studied females in male-dominated professions by exploring gender and culture from the perception of social exchange and social identity theories to employee attitudes and behaviours. Notably, females in male-dominated positions are subject to identity threats because, numerically, they are under-represented and subject to negative stereotypes ^{[1][11][12][13]} ^[14]. Roksana ^{[11][15]} admitted that the female participation rate is lower in construction and engineering, leading to extreme anxiety about professionalism. Given the number of female graduates who complete engineering and construction degree courses yearly, the percentage of women entering academic careers as faculty is still meagre globally ^[11]. Roksana ^[11] observed that this dichotomy makes women lose interest in building career progression within this male-dominated industry and divert toward other professions. Thus, the belief that women are less interested in working within the construction or engineering industry (practices or academics) has led to a skills shortage in developing countries ^{[6][11][15]}.

Ogunbayo et al. ^[16] admitted that the challenges of HEIs in developing countries, particularly Nigeria, are often based on equity, equality, finance, efficiency, and governance challenges. Likewise, the working conditions and environment of HEIs hinder women's ability to express themselves without the risk of adverse consequences ^[17]. Roksana ^{[11][18]} argued that a future employment crisis in male-dominated professions is inevitable, with sixty– seventy percent of men in construction and engineering being nearly retirement age, making academic careers in construction more vulnerable to the employment skills gap and the ageing workforce. Tunji-Olayeni et al. ^{[6][19]} considered women as untapped human resources to solve skills shortages in the construction industry. However, the masculinised nature of the construction industry is also a significant factor affecting women's career choices and workforce value ^[20].

Ceci ^[21] maintained that much had been written in the last two decades about women's academic careers in science, engineering, and construction. The most widely agreed-upon conclusion shows that women are underrepresented in academic careers, college majors, and graduate school programmes, which are the most mathematically intensive, like geoscience, construction, engineering, economics, mathematics/computer science, and the physical sciences ^[21]. Nevertheless, Howe-Walsh ^[22] states that women struggle to navigate their careers in a gendered environment at each stage, from recruitment and selection to retirement. Research findings revealed that women in academics faced challenges in the recruitment processes of HEIs, discrimination of their competency, and lower publication outputs and research funding than their male counterparts ^[22]. Cooke ^[23] added that female faculty are not represented in HEIs and often struggle to attain the positions of associate or full professorships.

2. Theoretical Background Explaining Gender Equality in Academic Careers of Female Construction Graduates

This study engaged labelling theory in explaining the barriers to female construction graduates' entry into academic careers. The labelling theory propounded by Becker ^{[24][25]} is rooted in a sociological perspective that explains contextual knowledge based on self-identity or behaviour using determinants of social status or characteristics for labelling. Ref. ^[26] admitted that labelling theory is a popular sociological perspective that interrogates dominant norms and values and questions the taken-for-granted understanding of normalcy and deviancy. Kumar ^[26] added that labelling is a complex procedure rooted in cultural, social, political, and psychological ideologies, which has far-reaching impacts on the identity of individuals or gender profiling threats. Ref. ^[27] reported that gender stereotypes or gender profiling are threatening and harmful when they limit women's or men's capability to excel in a particular field, make a career choice, or develop their abilities. Kumar ^[26] describes labelling as the perspective that focuses on the interaction between individuals in society, which is the basis for meanings within that society. It indicates that the dominant and influential individuals, social groups, and the state create a widespread perception of crime by labelling some behaviours unacceptable. The labelling process lays bare the social–cultural fundamentals of students' and faculties' lives, impacting their life chances, access to capital, and social status within organisational contexts ^[26]. The labelling theory has been previously explored in race or crime literature to

explain social classification, making certain individuals or genders vulnerably labelled and victims of stigmatisation [24][25].

The sociological perspective of labelling theory in this study explains gender equality in the academic careers of female construction graduates in HEIs. Various thoughts labelled gender equality in academic careers as equity are equated with equality through equivalent access to recruitment opportunities, equal payment structures, career development opportunities, and freedom from harassment ^[23]. Nevertheless, labelling equality is still different from equating equity with equality, assuming the workplace is completely separated from the rest of life. Furthermore, refs. ^{[23][28]} argued that labelling gender equality should go beyond balancing opportunities but should be based on practices that promote fairness and take into consideration an academic's life outside the academy. Labelling gender equality in academic careers considers practices like parental leave but neglects the career consequences for women who take advantage of the leave ^[23]. Hence, ref. ^[23] admitted that being gender-neutral or the different life experiences of men and women are often ignored in gender equality definitions and makes the current 'male' model the ideal academic normative.

Nonetheless, Becker ^{[24][28]} used the experiences of female academics at the Massachusetts Institute of Technology in 2003 to produce the perspective that labelling gender equality that gives full expression should be based on integrating the private sphere of life (community, family, and other personal involvements) and the public sphere of work inclusive. Gender equality in HEIs will require integrating the public and the private sphere of life into organisational culture, policies, and practices and must be modified accordingly and understood by everyone ^[23]. However, Bailyn ^[29] maintained that the proportion of female academia generally increases slowly, and women are likelier to be found in junior positions (lecturer), less than their male counterparts, and less likely to be tenured. Researchers have reflected that inherent biases, such as assessing professional competence, disadvantage women while giving men credit for high levels of competence ^{[30][31]}. These assumptions labelled women as less competent, which is often found in male-dominated careers, particularly construction and engineering [32][33]. Kumar ^{[26][34]} affirmed that the impact of labelling in education on gender or specific individuals could facilitate the passage of supportive policies to provide structures for organisations and organising government programmes. Labelling has often served the purpose of inclusiveness in students' matriculation or enrolment, graduation, and career choice, linking opportunity to providing additional support to females in male-dominated professions [27]. Such labels tend to profile women's identity and reduce the degree to which female construction graduates socialise, mix, and enter academic careers in HEIs.

Effort towards improving gender inclusiveness of women and girls in male-dominated careers is supported by the Sustainable Development Goal 5. Gender equality towards women and girls explicitly drives sustainable development ^[35]. Nonetheless, as informed by the Sustainable Development Goals (SDGs, 2012) ^[35], Goal 5, gender equality, advocated for women's and girls' empowerment against any form of discrimination. The core relevance of Goal 5 is to eliminate violence and harmful practices and ensure equal participation and opportunities for leadership. According to ref. ^[36], the strategies for achieving SDG 5, gender equality, are by measuring the extent to which countries have legal frameworks in place for gender equality in four areas: overarching legal frameworks and public life, violence against women, employment and economic benefits, and marriage and family.

Therefore, this study is underpinned by the labelling theory and its application in examining the barriers to attracting and retaining female construction graduates into academic careers using perceptions of Master of Science students in southwestern Nigerian HEIs as a case study.

3. Perspective of Women's Underrepresentation in Higher Education Institutions

According to Ceci ^[21], various views were held regarding understanding women's underrepresentation in academic careers. This includes understanding the perspective of the independent attributes that contribute to women's underrepresentation, which comprises the demand for students' enrolment and graduation rates, rates of obtaining tenure-track positions, hiring outcomes, job satisfaction, transition rates, interviewing outcomes, hiring outcomes, promotion rates, salary, work-product evaluation, job persistence, grant-getting success, and number of publications ^[21]. Ceci ^[21] argued that understanding the conceptualisation of women's excellence and productivity, the linkage of women from high school to college to graduate school, and making career choices are also essential. Imasogie [37] admitted that understanding and closing the gap in women's enrolment in construction and engineering professions will improve gender balance. Hence, stakeholders must appraise existing strategies towards delimiting policies, primordial cultures, curricula, and changed career paths to improve women's enrolment and participation in construction and engineering professions [37]. The low record of women's enrolment over time has significantly led to a higher concentration of male professional engineers than women [37][38][39]. Maintaining gender balance in academic careers requires addressing women's enrolment in construction programmes (architecture, building, quantity surveying) in the HEIs to close the gap of female graduates entering academic careers [38]. Nonetheless, Blair-Loy [40] admitted that the prevalent barriers to women in construction in HEIs over two decades include policymakers and researchers focusing on recruitment, retention, and social equity challenges.

Further, Lindberg ^{[41][42]} explored the vertical and horizontal analysis of gender balance in recruiting and retaining academia in HEIs. The vertical analysis explains the gender balance of women to men in senior positions (senior lecturer and professorships) in HEIs using the correlation between sex and hierarchical position ^{[41][42]}. Refs. ^{[42][43]} posited that women are better represented at the lower levels of the academic hierarchy than men at the senior levels. Lindberg ^{[41][42]} noted that focusing on the vertical aspect of gender equality contributes to why women's underrepresentation in several disciplines is not addressed and does not consider that the solutions to underrepresentation must vary across disciplines. However, the demands of HEIs make it challenging to tie women's underrepresentation to gender inequality in academics to a specific time when it was introduced ^[42]. Rather, it involves several processes interacting at different periods ^{[42][43]}. Hence, Silander ^[42] argued that a horizontal gender analysis is needed to complement the commonly used vertical analysis to improve gender equality in academia within HEIs. This is because the horizontal analysis of gender balance explains the correlation between sex and the demands of the academic field in which a person works ^[42].

4. Barriers to Female Construction Graduates Entry into Academic Careers in Higher Education Institutions

According to Marra ^{[20][37][44]}, significant factors affect women's representation in maintaining gender balance in male-dominated professions. They include cultural setup, sociocultural factors, career path opportunity, psychosocial influence, gender policies, awareness, and negative perception of academic careers for women ^{[6][20]} ^{[37][44]}. Historically, as observed by ref. ^{[23][37][44]}, women's participation in male-dominated careers, particularly academic careers, suffered setbacks due to specific stratification attributes that characterised tradition, gender hierarchies, and norms prevailing in the clan, family, and society. Hence, certain cultural or traditional structures support male dominance in a social context ^{[37][44][45]}. This stratification often causes women's work roles to be marginalised within the organisational policies and practices ^{[37][46][47][48]}. Nonetheless, the sociocultural and employment biases created due to cultural stratification critically affected female construction graduates' career choices, training, recruitment, and advancement ^{[21][22][37]}.

Consequently, scholars also attributed barriers to female construction graduates' entry into academic careers to the absence of role modelling, mentor–mentee relationships, and low exposure to career paths and opportunities ^{[6][37]} ^[44]. The traditional beliefs among family or parents often discourage females from pursuing careers in construction (professional practices and academia). Marra ^{[20][49][50]} maintained that poor advising and teaching, lack of family support, and blind cultural setup create difficulties in career path opportunities for women's workforce value, particularly in academics. These circumstances are evidenced in the role-stereotyped upbringing of females in most families, denying them exposure to career paths in construction from an early age ^[38]. Thus, women's career choices in construction, engineering, and science-based education have significantly been influenced by prominent gender segregation and role stereotyping ^[37].

Furthermore, ref. ^[37] observed that barriers to women's career choices in STEM-related subjects (Science, Technology, Engineering, and Mathematics) could be attributed to psychosocial influences. Psychosocial describes the superordinate attributes like psychological or emotional well-being and social and collective well-being ^{[51][52]}. It often influences future career choices, levels of achievement, and perspectives. These attributes of psychosocial influence determine the performance of students' learning in STEM-related subjects. Likewise, ref. ^[37] posited that poor performance in mathematics or construction is linked to psychological issues and societal differences that make up males compared to females. Notably, the attributes related to the absence of supportive gender policies predominantly affect balancing women's representation in male-dominated careers ^[37]. According to refs. ^{[37][42][53]}, several organisational policies were developed globally. The structures and functions of such policies do not always support women's career patterns and their need to integrate work with family responsibilities ^{[37][48][54]}.

Subsequently, the negative perception of the construction field due to its non-gender-inclusive nature concerning women's recruitment, development, and career advancement often led to sexual harassment, bullying, and discrimination ^{[6][37][54][55][56]}. Van-Veelen ^{[17][20][22]} attributed the barriers to female construction graduates' entry into academic careers to lower publication outputs, demanding workplace conditions, and competency discrimination. The set of negative perceptions towards academic careers and the anecdotal feedback about

negative experiences and low enrolments affected the recruitment of female graduates' faculties globally ^{[37][55]}. Nonetheless, ref. ^[18] further informed that the external and internal problems affecting the gender balance of female construction graduates include low wages, time demands, demand for continuous development, high degree of workload, work–life balance problems, job satisfaction, and fear of sexual harassment. Thus, the identified barriers to female construction graduates in male-dominated professions are summarised in **Table 1**.

Table 1. Barriers to female construction gra	aduates' entry into academic careers.
--	---------------------------------------

Barriers to Female Construction Graduates' Entry into Academic Careers	Authors
Women's marginalised work role	[21][23][37][46][47][48]
Gender identity segregation	[<u>1][10]</u>
Negative stereotypes	[<u>1][37</u>]
Gender profiling threats	[1][10][12][13][14][26]
Difficulties in attaining senior positions	[23][41][42]
Low female students' matriculation	[21][37][38][39]
Low female graduation rates	[21][40]
Rates of obtaining tenure-track positions	[21][40]
Job satisfaction	[<u>21][40]</u>
Work performance evaluation	[<u>21][40]</u>
Cultural stratification	[<u>18][21][22][23][37]</u>
Difficulties with career path opportunity	[6][20][37][44]
Traditional gender hierarchies	[23][37][44]
Absence of mentor-mentee relationship	[<u>6][38][45]</u>
Lack of family support	[<u>49][50]</u>
Females' role-stereotyped upbringing	[23][37][57]
Non-supportive organisational policies	[23][37]
Negative perceptions of academic careers	[<u>38][56]</u>
A high degree of workload	[18][23][40]
Demand for continuous development	[10][23][40]

Barriers to Female Construction Graduates' Entry into Academic Careers	Authors
Continuous research and publication demands	[<u>18][23][28</u>]
Fear of sexual harassment	[18][23][40]
The problem of work–life balance	[18][23]
Perceived fairness in the recruitment process	[18][23][29][40]
Demanding workplace conditions	[18][21][23]
Competency discrimination	[20][22]
Lower publication outputs	[20][22]

- 1. Halliday, C.S.; Paustian-Underdahl, S.C.; Stride, C.; Zhang, H. Retaining Women in Male-Source: Authors Literature Review (2023). Dominated Occupations across Cultures: The Role of Supervisor Support and Psychological Safety. Hum. Perform. 2022, 35, 156–177.
- Akuete, E.; Nduka, D.O.; Ogundipe, K.E. Maintenance Feedback Mechanisms and Limiting Factors of Post-Occupancy Evaluation in Student Residents of Higher Education Institutions in Nigeria. J. Constr. Dev. Ctries. 2022, 27, 17–41.
- 3. Beninger, A. High potentials in tech-intensive industries: The gender divide in business roles. Catalyst 2014, 3.
- 4. Catalyst. Women in Male-Dominated Industries and Occupations (Quick Take). 2021. Available online: https://www.catalyst.org/research/women-in-male-dominated-industries-and-occupations (accessed on 20 August 2023).
- 5. Devlin, H.; Hern, A. Why are there so few women in tech? The truth behind the Google memo. Guardian 2017, 8.
- Tunji-Olayeni, P.F.; Omuh, O.I.; Amusan, L.M.; Afolabi, O.A.; Ojelabi, R.A.; Ogundipe, K.E. Attracting and retaining female students in construction-related programs. Turk. Online J. Educ. Technol. INTE 2017, 425–430. Available online: https://eprints.covenantuniversity.edu.ng/9949/ (accessed on 20 August 2023).
- 7. Gurjao, S. Inclusivity: The Changing Role of Women in the Construction Workforce; Chartered Institute of Building Report (CIOB); Chartered Institute of Building: London, UK, 2006.
- 8. Danbold, F.; Bendersky, C. Balancing professional prototypes increases the valuation of women in male-dominated professions. Organ. Sci. 2020, 31, 119–140.
- Wallace, K.; DeVita, B. Creating Opportunities for Women to Succeed in Male-Dominated Industries. Forbes. 2018. Available online: https://www.forbes.com/sites/ellevate/2018/05/21/creating-opportunities-for-women-to-succeed-inmale-dominated-industries/?sh=6d7a88ec559a (accessed on 25 August 2023).

- Bridges, D.; Wulff, E.; Bamberry, L.; Krivokapic-Skoko, B.; Jenkins, S. Negotiating gender in the male-dominated skilled trades: A systematic literature review. Constr. Manag. Econ. 2020, 38, 894–916.
- 11. Roksana, K. Women in Male-Dominated Industry: The Construction Industry: A Study of Women's Disinterest, Professional & Social Barriers, Walkout from Construction Industry. Master's Thesis, Jönköping University, Jönköping, Sweden, 2018.
- 12. Good, C.; Rattan, A.; Dweck, C.S. Why do women opt out? Sense of belonging and women's representation in mathematics. J. Personal. Soc. Psychol. 2012, 102, 700–717.
- 13. Moss-Racusin, C.A.; Dovidio, J.F.; Brescoll, V.L.; Graham, M.J.; Handelsman, J. Science faculty's subtle gender biases favor male students. Proc. Natl. Acad. Sci. USA 2012, 109, 16474–16479.
- 14. Murphy, M.C.; Steele, C.M.; Gross, J.J. Signaling threat: How situational cues affect women in math, science, and engineering settings. Psychol. Sci. 2007, 18, 879–885.
- 15. Fielden, S.L.; Davidson, M.J.; Gale, A.W.; Davey, C.L. Women in construction: The untapped resource. Constr. Manag. Econ. 2002, 18, 113–121.
- 16. Ogunbayo, B.F.; Aigbavboa, C.; Thwala, W. A Maintenance Management Framework for Municipal Buildings in Developing Economies; Routledge: New York, NY, USA, 2023.
- 17. Van Veelen, R.; Derks, B.; Endedijk, M.D. Double trouble: How being outnumbered and negatively stereotyped threatens career outcomes of women in STEM. Front. Psychol. 2019, 10, 150–167.
- 18. Adogbo, K.J.; Ibrahim, A.D.; Ibrahim, Y.M. Development of a framework for attracting and retaining women in construction practice. J. Constr. Dev. Ctries. 2015, 20, 99.
- 19. Sandberg, S.; Grant, A. Speaking while female. The New York Times, 12 January 2015.
- 20. Marra, R.M.; Rodgers, K.A.; Shen, D.; Bogue, B. Leaving Engineering: A Multi-Year Single Institution Study. J. Eng. Educ. 2012, 101, 6–27.
- 21. Ceci, S.J.; Ginther, D.K.; Kahn, S.; Williams, W.M. Women in academic science: A changing landscape. Psychol. Sci. Public Interest 2014, 15, 75–141.
- 22. Howe-Walsh, L.; Turnbull, S. Barriers to women leaders in academia: Tales from science and technology. Stud. High. Educ. 2016, 41, 415–428.
- Cooke, L.A.; Jackson, H.; Armoed, Z. Academic Staff in Engineering and the Built Environment at Durban University of Technology: A Baseline Study of Gender Equality. In Proceedings of the Balkan Region Conference on Engineering and Business Education, Sibiu, Romania, 16–19 October 2019.
- 24. Becker, H.S. Outsider: Studies in the Sociology of Deviance; Free Press: New York, NY, USA, 1963.

- 25. Lemert, E.M. Human Deviance, Social Problems and Social Control; Prentice-Hall: Englewood Cliffs, NJ, USA, 1967.
- 26. Kumar, P. Labelling Theory: Interactional and Organizational Aspects in the Context of Education. J. Dialogues Educ. 2022, 11.
- 27. United Nations Human Rights. Gender Stereotyping: OHCHR and Women's Human Rights and Gender Equality. 2014. Available online: https://www.ohchr.org/en/women/gender-stereotyping (accessed on 26 August 2023).
- 28. Bailyn, L. Academic careers and gender equity: Lessons learned from MIT. Gend. Work. Organ. 2003, 10, 137–153.
- 29. Dobson, R. It's a man's world: The academic staff gender disparity in engineering in 21st Century Australia. Glob. J. Eng. Educ. 2012, 14, 213–218.
- 30. Williams, J.C.; Dempsey, R. What Works for Women at Work: Four Patterns Working Women Need to Know; New York University Press: New York, NY, USA, 2018.
- 31. Ridgeway, C.L.; Smith-Lovin, L. The Gender System and Interaction. Annu. Rev. Sociol. 1999, 25, 191–216.
- 32. Carli, L. Gender and Social Influence. J. Soc. 2001, 57, 725–741.
- 33. Zimmerman, E. Toward a theory of labelling artistically talented students. Stud. Art Educ. 1985, 27, 31–42.
- 34. Ridgeway, C.L. Framed by Gender: How Gender Inequality Persists in the Modern World; Oxford University Press: Oxford, UK, 2011.
- 35. Sustainable Development Goals. Goal 5: Achieve Gender Equality and Empower All Women and Girls. Available online: https://www.un.org/sustainabledevelopment/gender-equality/ (accessed on 26 August 2023).
- 36. Our World in Data Team. Achieve Gender Equality and Empower All Women and Girls. Published Online at OurWorldInData.org. Available online: https://ourworldindata.org/sdgs/gender-equality (accessed on 26 August 2023).
- Imasogie, B.I.; Oyatogun, G.M.; Taiwo, K.A. Enhancing gender balance in engineering education and practice. In Proceedings of the 2018 World Engineering Education Forum-Global Engineering Deans Council (WEEF-GEDC), Albuquerque, NM, USA, 12–16 November 2018; IEEE: Hoboken, NJ, USA, 2018; pp. 1–8.
- Morganson, V.J.; Jones, M.P.; Major, D.A. Understanding women's underrepresentation in science, technology, engineering, and mathematics: The role of social coping. Career Dev. Q. 2010, 59, 169–179.

- Chovwen, C. Barriers to acceptance, satisfaction and career growth: Implications for career development and retention of women in selected male occupations in Nigeria. Women Manag. Rev. 2007, 22, 68–78.
- 40. Blair-Loy, M.; Rogers, L.E.; Glaser, D.; Wong, Y.A.; Abraham, D.; Cosman, P.C. Gender in engineering departments: Are there gender differences in interruptions of academic job talks? Soc. Sci. 2017, 6, 29.
- 41. Lindberg, L.; Riis, U.; Silander, C. Gender equality in Swedish higher education—Some crucial issues. Scand. J. Educ. Stud. 2011, 55, 165–179.
- 42. Silander CHaake, U.; Lindberg, L. The different worlds of academia: A horizontal analysis of gender equality in Swedish higher education. High. Educ. 2013, 66, 173–188.
- 43. Shauman, K.A.; Xie, Y. Explaining sex differences in publication productivity among postsecondary faculty. In Equal Rites, Unequal Outcomes: Women in American Research Universities; Springer: Berlin/Heidelberg, Germany, 2003; pp. 175–208.
- 44. Martin, P.; Barnard, A. The experience of women in male-dominated occupations: A constructivist grounded theory inquiry. SA J. Ind. Psychol. 2013, 39, 1–12.
- 45. Conrad, W.M. Female STEM Majors Wanted: The Impact of Certain Factors on Choice of a College Major. Ph.D. Thesis, University of Phoenix, Phoenix, AZ, USA, 2009.
- 46. Akingbade, R.E. Between a rock and a hard place: Backlash towards agentic women aspiring to high ranking jobs in Nigeria. Gend. Behav. 2010, 8, 3265–3278.
- 47. Cha, Y. Overwork and the persistence of gender segregation in occupations. Gend. Soc. 2013, 27, 158–184.
- 48. Prescott, J.; Bogg, J. Career attitudes of men and women working in the computer games industry. Eludamos J. Comput. Game Cult. 2011, 5, 7–28.
- 49. Bigelow, B.F.; Bilbo, D.; Mathew, M.; Ritter, L.; Elliott, J.W. Identifying the most effective factors in attracting female undergraduate students to construction management. Int. J. Constr. Educ. Res. 2015, 11, 179–195.
- Bigelow, B.F.; Bilbo, D.; Ritter, L.; Mathew, M.; Elliott, J.W. An evaluation of factors for retaining female students in construction management programs. Int. J. Constr. Educ. Res. 2016, 12, 18– 36.
- 51. Eiroa-Orosa, F.J. Understanding psychosocial well-being in the context of complex and multidimensional problems. Int. J. Environ. Res. Public Health 2020, 17, 5937.
- 52. Martikainen, P.; Bartley, M.; Lahelma, E. Psychosocial determinants of health in social epidemiology. Int. J. Epidemiol. 2002, 31, 1091–1093.

- 53. Taylor, V. Economic gender injustice: The macro picture. Agenda 1997, 13, 9–25.
- 54. UNESCO Asia-Pacific Education Thematic Brief, Closing the Gender Gap in STEM: Drawing More Girls and Women into Science, Technology, Engineering and Mathematics; United Nations Educational, Scientific and Cultural Organization: Paris, France, 2016.
- Logel, C.; Walton, G.M.; Spencer, S.J.; Iserman, E.C.; Von-Hippel, W.; Bell, A.E. Interacting with sexist men triggers social identity threat among female engineers. J. Personal. Soc. Psychol. 2009, 96, 1089.
- 56. Ogunde, A.O.; Dafe, O.E.; Akinola, G.A.; Ogundipe, K.E.; Oloke, O.C.; Ademola, S.A.; Olaniran, H.F. Factors Militating Against Prompt Delivery of Construction Projects in Lagos Megacity, Nigeria Contractors' Perspective. Mediterr. J. Soc. Sci. 2017, 8, 1–10.
- 57. Cheryan, S.; Markus, H.R. Masculine defaults: Identifying and mitigating hidden cultural biases. Psychol. Rev. 2020, 127, 1022.

Retrieved from https://encyclopedia.pub/entry/history/show/116560