Evaluating Gender Parity in Wood Technology Programmes at a TVET Institution in Harare, Zimbabwe

Abia Mutumbwa (Zimbabwe Open University)
Corresponding email:mutumbwaa@zou.ac.zw
ORCID ID: 0009-0006-3977-6342

Date Received: 10/05/2025: Date Accepted: 31/07/2025: Date Published: January 2026

Abstract
This study explored gender parity in wood technology programmes at a technical and vocational education and training institution in Harare, Zimbabwe, amidst rising female enrolment in higher education. A mixed-methods approach, using a concurrent nested design, was employed to collect both quantitative data from enrolment registers, attendance records and performance lists, and qualitative data through focus groups, interviews and questionnaires with eight lecturers and 30 students. The findings revealed that Gender Parity Index (GPI) for enrolment in wood technology programmes was 0.44. The study also showed that female students slightly outperformed males in theoretical assessments but were outperformed in practical tasks requiring gross motor skills. Females showed higher lesson attendance and better organisational skills but faced higher dropout rates due to gender-based discrimination and challenges in balancing academic and household responsibilities. Suggested strategies to improve gender parity include gender sensitisation workshops, mentorship, flexible schedules and childcare support.

Keywords: Gender parity, Technical Vocational Education and Training, Wood Technology Programmes

Background to the Study

In Zimbabwe, the number of females enrolled in higher education has increased in recent years. This has prompted discussions on whether gender parity has been achieved in Technical Vocational Education and Training (TVET) institutions, particularly in wood technology programmes. The main bone of contention is on whether the overall increase in enrolment by females in higher education institutions such as teachers' colleges, universities and polytechnic colleges, has changed the pattern of gender parity indices such as enrolment, performance, pass rate, retention rates, repetition rate, graduation rate and the teaching and learning process in wood technology programmes offered in TVET institutions.

Gender parity in education refers to the ratio of a particular indicator among female students to the same indicator among male students (Adeyeye & Ighorojeh, 2019). The indicators compared can range from enrolment rates, graduation rates, computer literacy, completion rate (Khuluvhe & Negogogo, 2021), dropout rates (Naeem et al., 2021), performance in class and classroom interaction (Wiseman et al., 2008). Gender parity is different from gender equality in that it is only a statistical measure that does not concern itself with how people of different genders are treated (Manlosa & Matias, 2018). However, it is used to measure the state of gender equality in an organisation or country (Adeyeye & Ighorojeh, 2019; Khuluvhe, & Negogogo, 2021). According to UNESCO (2003) gender parity in education is the first step towards gender equality. To calculate gender parity, the value of a particular indicator for female students at any level of education is divided by the value of a particular indicator for male students at the same level of education (Chang & Hu, 2019). The answer obtained is called the Gender Parity Index (GPI) for that particular indicator. The formula for calculating the (GPI) is:

$$\text{GPI} = \frac{Value\ of\ indicator\ for\ females}{Value\ of\ indicator\ for\ males}$$

The formula can be used to calculate the GPI for a given level of education, type of institution, or region (UNESCO,2009).

After calculating the GPI, an index value that is between 0 and 1 implies that male students outnumber female students in the value measured. Values greater than 1 indicate that female students outnumber male students in the value measured (Adeyeye & Ighorojeh, 2019). An index of 1 indicates equality of indicators for female students to those of male students. An ideal gender parity index should lie between 0.97 and 1.03 (Achuka et al., 2016; Khuluvhe, & Negogogo, 2021). In terms of enrolment, a gender parity index approaching 1 could indicate rapidly increasing enrolment of females, catching up with male enrolment. However, it can also indicate a decline in enrolment, with males seeing a faster decline than females (Subrahmanian, 2005). In this regard Xu et al. (2019) argues that enrolment should not be the only indicator used when measuring gender parity. Using enrolment alone to measure gender parity may be misleading in that females may be lagging in other educational measures (Xu et al., 2019).

Several studies have been carried out to determine the gender parity index of enrolment in institutions of higher learning. According to the World Bank (2020), the gender parity index for gross tertiary education enrolment in 2018 by country showed that German had a gender parity index of 1.0. The republic of Korea and Sub Sharan Africa had a gender parity index of 0.8 (Khuluve and Negogogo 2021). In India, Amirtham and Kumar (2021) studied the gender parity in STEM higher education. Their study showed that in STEM disciplines, enrolment of females was higher than males in biological sciences at all levels, but lower in physical sciences. Gender parity was poor in mechanical engineering, civil engineering, and electrical engineering at all levels of higher education.

In South Africa, Khuluve and Negogogo (2021) presented a fact sheet on gender parity in post school education and training. They showed that the gender parity index in TVET colleges was 1.4 and 2.2 in community education training colleges. In this presentation, concerns were raised about the lower number of male students. In relation to specific fields of training, more females were graduating from science, engineering and technology and humanities. The GPI in these fields was 1.2 in 2019. Zimbabwe aspires to have a GPI of 1 in its institutions of learning. In this regard, it subscribes to the United Nations' (UN) Strategic Development Goals (SDG) 4 which calls for member countries to ensure inclusive and equitable quality education and promotion of lifelong opportunities for all. It also subscribes to SDG 5 which aims at achieving gender equality and empowerment of all women and girls by 2030. As shown by UNEVOC (2020), a national gender policy (2013-2017) is also in place to foster equal access to all spheres of economic and social life to all citizens regardless of gender. In line with this policy, women have embraced the gender policy and enrol in numbers into the various universities, polytechnics and colleges. The current situation in colleges, polytechnics and universities is that there are now more female students than male students who enrol and graduate from the institutions (ZIMSTATS, 2021; Mukeredzi, 2022).

According to the Zimbabwe Statistical Agency (ZIMSTATS), in 2018, 50699 female students compared to 43432 male students were enrolled in universities (ZIMSTATS, 2021). In 2019,

60149 females against 51535 males were enrolled. In 2020, the figures were 62629 and 53699 respectively. The situation is also similar in teachers training colleges (Mukeredzi, 2022). According to Mukeredzi (2022), in 2019, 18491 female students were recruited against 5546 males. These statistics show a major shift in the enrolment in higher education, which traditionally has favoured males than females. This scenario raises questions about gender parity in masculine stereotyped disciplines in these colleges and universities. The scenario raises gender parity questions because most statistics show that women generally enrol in programmes that are traditionally regarded as feminine (Gaidzanwa, 2008; UNESCO, 2013; Williams et al., 2018)). In support of the preceding assertions, Adigun et al., (2015), In contrast to traditional male stereotyped technical trades like electricity, construction, furniture design, welding and plumbing, Amoamah et al. (2016) and Bray-Collins et al. (2022) contend that female students who enrol in vocational training typically take courses that train them in feminine stereotyped training programmes like secretarial work, beauty care, catering, fashion design and textiles.

In Zimbabwe, statistics released by ZIMSTATS in 2021, confirm the preceding assertions. The statistics show that there were more women than men in the following National Certificate programmes at Harare polytechnic in 2019. In Industrial Clothing 64 females against six males were enrolled. Beauty Therapy had 37 females and no male, Office Management had 138 females and six males, Accountancy had 63 females against 49 males. In contrast, Motor Mechanics had 40 females against 450 males, while Diesel Plant Fitting had 11 females against 237 males and Carpentry and Joinery had two females against 27 males, (ZIMSTATS, 2021). The situation in Zimbabwean higher education institutions where more females are enrolled than men may have thus altered the pattern of gender parity indices in TVET programmes that are traditionally stereotyped as masculine. This study was carried out to evaluate the patterns of gender parity in the teaching and learning of wood technology programmes in TVET institutions in Harare.

Statement of the Problem

In recent years, the enrolment of female students in Zimbabwean higher education has increased significantly, surpassing that of male students in many institutions (ZIMSTATS, 2021; Mukeredzi, 2022). This demographic shift raises important questions about whether this increase has translated into greater female participation and improved gender parity in traditionally male-dominated fields, such as wood technology. Despite these pertinent questions, there is a notable gap in the literature addressing this issue. Gender parity and female enrolment in programmes with masculine stereotypes have historically been low (Williams et al., 2018; Bray Collins et al., 2022), with women mostly enrolling in courses that are seen as feminine. If these traditional enrolment patterns are still persisting; the current trends may have posed new challenges for achieving gender parity in wood technology programmes. Therefore, it is essential to investigate the emerging patterns of gender parity in wood technology in light of the increased female enrolment in TVET institutions. This study aims to address the question: "What patterns of gender parity have emerged in wood technology as a result of the increased enrolment of female students in TVET institutions?"

Research Questions

1. What are the gender parity indices in wood technology programmes in terms of:
    i. enrolment?
    ii. performance?
    iii. dropouts?
    iv. lesson attendance?

2. What characteristics do female students exhibit when compared to their male counterparts in terms of:
    i. housekeeping?
    ii. Academic procrastination?
3. What strategies can be used to maintain equality in gender parity?

Objectives of the Study

1. Determine the gender parity indices in relation to:
    i. enrolment.
    ii. Performance
    iii. Dropout
    iv. Lesson attendance
2. To examine the characteristics exhibited by female students when compared to their male counterparts in relation to.
    i. housekeeping?
    ii. Academic procrastination?
3. To suggest strategies that can be used to maintain gender parity in wood technology.

Literature Review

We review related literature in the following paragraphs:

Theoretical Framework

The theory adopted for use in this study was the feminist theory. This theory is also known as Liberal Feminism (Mohajan, 2022). This theory advocates for the quality of men and women. Women should therefore be allowed to participate in all life aspects (Mohajan, 2022). The theory argues that women have rights to the same opportunities and freedoms as men. Equal opportunities should thus be created to eradicate gender imbalances while at the same time promoting gender parity in all aspects of life (Kumar & Gautam, 2019). The theory indicates that any similarities and differences that exist between men and women can be attributed to the social construction (Mohajan, 2022). The theory informed the study that opportunities in TVET are supposed to open to both genders. Females should therefore be encouraged to enrol in technical vocational education, a field labelled as the domain of males (Najoli, 2019).

Enrolment of Females in TVET

Various scholars such as Omar et al. (2020); Aldossari (2020); Andiema and Manasi (2021); Adams and Baddianaah (2023) have indicated problems of low numbers of female students in male stereotyped TVET programmes in various countries across the world. In Saudi Arabia, Aldossari (2020) showed that they were very few female students enrolled in male stereotyped programmes in TVET. The study showed that more women preferred programmes in nursing, education, and Home Economics. In Rwanda the enrolment of females in male dominated programmes is as low as 16% (Uwiringiyimanu, 2022). In Ghana, Atsu and Lartey (2018) showed low enrolment of female students in courses such as Automobile, Building Construction, Carpentry and Joinery, Mechanical, Electrical and Welding Engineering.

Performance of Female Students

Research results on the performance of female students when compared to male students in TVET have been inconclusive. Three groups of findings have been gleaned from literature. Some researchers opine that the difference between females and males is insignificant (Nagoli, 2019). Other scholars posit that differences occur. For instance, some findings seem to suggest that females perform better than males in fine motor skills (Liutsko, 2020), verbal skills (Jim,

2014 as cited in Oguejiofor et al., 2021) and in non-technical subjects. The third group of scholars argue that females are out classed in gloss motor skills (Liutsko, 2020), spatial perception and special visualisation (Jim, 2014 as cited in Oguejiofor et al., 2021). Manwa (2018) argues that males perform better than females in technical skills because of cultural beliefs that orient them in masculine stereotyped skills at home.

Lesson Attendance

Most studies show that female students dominate in lesson attendance (Nja, 2019; Cheema et al., 2022; Abdullah & Teacher II, 2022: Oweikpodor et al., 2022)). In a study by Nja et al., (2019) to investigate lesson attendance in Chemistry, females had a mean of 83.76 against 67.2 for males. On the other hand, Østby et al. (2018) found out that the rate of absenteeism especially due to sickness was higher among female students than male students. Sloan et al. (2019) showed that gender has no influence on lesson attendance.

Dropout Rates by Gender

Studies on whether the dropout rate of females from courses is more than that of their male counter parts is inconclusive. Some researchers argue that dropout rate is equal among males and females (Isphording & Qendari, 2019). On the other hand, some researchers such as Moyo et al. (2021) show that females more than their male counter parts drop out of masculine stereotyped courses.

Housekeeping

Housekeeping activities are essential in wood technology especially during workshop practical activities. Both males and female students are supposed to keep their working areas clean and tidy. Different findings have emerged on how females and males perform on housekeeping activities. According to Olabayonde et al. (2023) and Thebaud et al. (2021), females are better at cleaning and keeping their working environment clean than their male counterparts. On the other hand, Çelik and Yüce (2019) found no significant difference by gender on general housekeeping issues.

Academic Procrastination

Academic procrastination is defined as the postponement of doing work related to studies (Pereira & Ramos, 2021). Nieberding and Heckler (2021) found out that female students tended to procrastinate less than their male counterparts. Male and female procrastinating behaviour did not differ, according to Ajay (2020) and Fentaw and Ismael (2022).

Methodology

This research adopted a mixed methods approach. The approach was chosen because the research questions required the collection of both quantitative and qualitative data (Creswell & Creswell, 2023). Quantitative data were collected to determine gender parity indices of enrolment, performance, lesson attendance and dropout rates while qualitative data was collected to determine gender parity in housekeeping issues and academic procrastination as well as the strategies for maintaining gender parity. The research design chosen was the concurrent nested design. The use of the concurrent nested design enabled the researcher to use the same sample to simultaneously collect both quantitative and qualitative data from a sample of eight lecturers and 30 students. The sample was purposively sampled to participate in the research through focus group discussions, audio taped interviews and questionnaires. The questionnaires used open ended questions. Enrolment registers, attendance registers and mark lists were also used as data collection tools. Data was analysed using descriptive statistics and thematic analysis.

Findings, Discussion and Analysis

We discuss and analyse the findings below:

Enrolment

The Gender Parity Index (GPI) of wood technology programmes was 0.44. This reflected serious underrepresentation of female students. This finding is in line with the overall enrolment figures of the years 2019 to 2022, where 62 males and only 27 females were part of the total 89 recruited students. Annual enrolment figures reflected the same imbalance. In 2019, there were six female and 19 male students in the total enrolment of 25 students. In 2020, the total enrolment was 20 with eight females and 12 male students. In 2021, there were seven females and 17 males. In 2022, there were six females and 14 males. Findings from the qualitative phase also agreed with the quantitative findings.

One respondent noted that, "*the figures don't lie. Despite the growth in female intake into higher education, wood technology is still dominated by males. It is a struggle to get the perception to shift and more females to register."*

Performance

The performance analysis indicated that female students scored 70% compared to male students' 68% in theory exams in 2019, 72% compared to 71% in 2020, 74 compared to 77% in 2021 and 73 compared to 71% in 2022. This is proof of narrow but consistent superiority by females. In contrast, technical drawing assessment and hands-on skill tests produced conflicting outcomes where males generally did better in gross motor activity tasks than females, although females excelled in fine motor skills and detailing tasks. The findings from the qualitative phase also revealed similar findings. Most of the participants indicated that as far as theory was concerned the performance between genders was the same.

One of the lecturers had this to say, "*Female students tend to do better on the theoretical part of the course, but when the practical work that involves physical strength and technical drawing sets in, males tend to take over. Nevertheless, the dedication that female students have towards their work is admired."*

Dropouts

The dropout rate of female students in 2019 was two out of 25 (8%), whereas that of male students was 0%. Three female student (15%) and two male students (10%) dropped out in 2020. No dropouts were seen in 2021. Two female students out of 20 (10%) dropped out in 2022. Interviews attributed several reasons for this rising dropout rate of women, including gender discrimination, absence of support, attempting to balance studies and household work and no role models and guidance in the career. One of the female students said, "*it is difficult to stay motivated when you feel you are outnumbered and unsupported. The workload is heavy and trying to balance it with family demands just makes it harder. Sometimes it feels like we are being trained to fail."*

Attendance at Lessons

For the five-year duration (2019 to 2023) that this research is examined, girls recorded a higher mean attendance rate of 90% compared to 85% for boys. However, the reasons for absences were varied, with girls citing health issues and family obligations as excuses, while boys often cited lack of interest, lack of motivation as well as truancy. One of the participants noted,

Women are more consistent in coming to classes because they understand the

importance of education and are more disciplined. But when they do not come to classes, it is for valid reasons like health or family matters. On the other hand, male students bunk lessons mostly because of mischief.

Housekeeping Traits

On housekeeping, the female students were also seen to be more conscientious in maintaining clean and organised workplaces during practical sessions. One of the lecturers verified this in observation:

> *The female students take good care in keeping their workplaces clean and neat. They take pride in the workplace, which is vital in wood technology. In most cases you will not find cluttered tools and materials on a female student's work bench. Neither will you find unnecessary shavings. They are quick in cleaning up their workplaces. Boys on the other hand have to be coerced to clean up their work areas. If you are not careful, they will disappear at the end of a practical session without cleaning their workspaces or the workshop.*

Academic Procrastination

When it comes to academic procrastination, female students did not rank as high, with 15% saying they procrastinated often as opposed to 25% of men. One female student said, *"we know we have to work twice as hard to prove ourselves in this field. There is no room for procrastination if we want to succeed.* One male student said, *"they are overwhelmed with other activities besides academic issues leading to delays in doing schoolwork."*

Strategies for Maintaining Gender Parity

Participants suggested that to maintain gender parity, regular awareness and sensitisation programmes should be implemented through workshops and seminars to teach students and staff about gender parity and inclusivity. Other recommendations included establishing mentorship and support systems by linking female students to successful women in the wood technology field. It is also very important for the institution to formulate policies that support students. It was believed that offering flexible schedules with childcare support would be an important strategy that would empower female students in balancing academics and personal life.

Limitations

The study focused on a single TVET institution in Harare, limiting the generalisability of the findings to other regions and institutions. Additionally, the sample size of eight lecturers and 30 students, while adequate for qualitative insights, may not fully capture the broader trends across the entire population of wood technology students.

Discussion

The research showed that there was a large gender imbalance in enrolment of the wood technology programmes at the TVET institution in Harare. While female enrolments had increased in higher education institutions in Zimbabwe in general, this situation did not translate into somewhat proportional increases in female enrolment in the more traditionally male dominated wood technology fields. From 2019 to 2022 that female enrolments showed a slow but steady increase, yet males still vastly outnumbered females. This is consistent with research showing that women are more likely to participate in programs associated with women, like secretarial or beauty care, than those associated with men, like wood technology. (Adigun et al., 2015; Amoamah et al., 2016; Bray-Collins et al., 2022).

The academic performance presented a bit of a contrary picture. Female students showed marginally better performance on theoretical tests compared to male students. However, in practical skills assessments, the results were mixed. Males generally performed better in tasks requiring gross motor skills, while females excelled in those requiring fine motor skills and attention to detail. This finding is consistent with the literature indicating gender differences in specific skill sets (Liutsko, 2020; Jim, 2014 as cited in Oguejiofor et al., 2021). These results highlight the need for tailored instructional strategies that leverage the strengths of both genders in practical skills training.

The higher dropout rates for female students than for male students was a cause for concern. Interviews with female students revealed that additional factors like lack of support, and domestic responsibilities were contributors to greater dropout rates. This finding corroborates evidence from other studies that contend that female students within the male-dominated areas face distinct challenges that hinder their advancement (Moyo et al., 2021).

Female students also attended classes better than their male counterparts, which showed commensurate interest in their studies. Male and female students had varied motives for absence from class. Female students mostly missed classes because of poor health and family commitments, while male students attributed their absence to lack of interest and engagement with the subject. This points out that, while female students appear to be quite interested, they may need extra support to carry on with their studies and other obligations. Scheduling classes flexibly and providing childcare would help female students sustain high levels of attendance. The study noted that generally female students kept their workspaces cleaner and more organised during practical class sessions and were less likely to procrastinate. This strongly supports the conclusion that female students exhibited superior organisational and time management skills.

Conclusion

While enrolment of female students in wood technology programmes has increased, significant gender parity challenges remain. Female students exhibit commendable academic performance and lesson attendance but face higher dropout rates and encounter various barriers. Addressing these challenges through comprehensive support and policy measures is essential for achieving true gender parity in TVET institutions.

References

Abdullah, S.N & Qui, A (2020). Causes of absenteeism and academic performance of low performing students of Esperanza National High School. *Journal of American Academic Research*, *8*(1).

Achuka, J.A., Usikalu, M.R., Akinyemi, M.L., Kayode, O.T., Abodunrin, T.J. & Ometan, O.O. (2016). Gender parity of science students in Covenant University. In *3rd International Conference on African Development Issues (CU-ICADI 2016)*.

Adams, A.M. & Baddianaah, I. (2023). Factors affecting female enrolment in Technical and Vocational Education and Training Institutions in Sub-Saharan Africa: Insights from North-Western Ghana. *International Journal of Training Research*, 1-24.

Adeyeye, B.A. & Ighorojeh, B. (2019). Education and gender disparity in West African Countries: The Nigeria Scenario. *European Scientific Journal*, *15*, 28.

Adigun, J., Onihunwa, J., Irunokhai, E., Sada, Y. & Adesina, O. (2015). Effect of gender on students' academic performance in computer studies in secondary schools in New Bussa, Borgu Local Government of Niger State. *Journal of Education and Practice*, *6*(33), 1-7.

Ajayi, O. S. (2020). Academic self-efficacy, gender and academic procrastination. *Epiphany. Journal of Transdisciplinary Studies*, *13*(1), 75-84.

Aldossari, A. S. (2020). Vision 2030 and reducing the stigma of vocational and technical training among Saudi Arabian Students. *Em Res Voc Educ Train*, *12*(3).

Amirtham, S.N. & Kumar, A. (2021). Gender parity in STEM Higher Education in India: A trend analysis. *International Journal of Science Education*, *43*(12), 1950-1964.

Amoamah, M.O., Brew, E.M., Ampiaw, R.E. & Dadzie, J. (2016) Gender inequality in TVET institutions–Bridging the gap: The case of Accra Polytechnic, Mathematical Theory Modelling, *6*(1).

Atsu, A.M. & Lartey, R.L. (2018). Enhancing participation of girls in technical and vocational education and training (TVET): The case of Tamale Technical University. *EPH-International Journal of Educational Research*, *2*(1), 1-5.

Bray-Collins, E. Andrade, N. & Wanjiru, C. (2022) Gender and TVET in Africa: Review of literature on gender issues in Africa's TVET sectors, futures of education culture and nature, learning to become, *1*, 151-171.

Cheema, M.A., Rehman, A., Khalid, S., Ali, S. M.H. & Khan, R.A. (2022). Role of attendance in academic performance of male and female medical students in pre- clinical years: A descriptive study. *Journal of University Medical and Dental College*, *13*(4), 513-517.

Çelik, E. Y. & Yüce, Z. (2019). Investigation of the awareness and habits of secondary school students about cleanliness and hygiene from various variables. *International Education Studies*, *12*(4), 173-184.

Fentaw, Y., Moges, B.T. & Ismail, S.M. (2022). Academic procrastination behaviour among public university students. *Education Research International*, *2022*.

Gaidzanwa, R. (2008) Beyond primary education: Challenges and approaches to expanding learning opportunities in Africa. Semantic Scholar.

Isphording, I. & Qendrai, P. (2019). Gender differences in student dropout in STEM. *IZA Research Reports*, *87*.

Khuluvhe, M. & Negogogo, V. (2021). Gender parity in post-school education and training opportunities. lmi-research.org.za. https://docslib.org/doc/1370093/fact- sheet-on

Kumar, S. & Gautam, S. (2019). Liberal feminist perspective in gender and education: A critique. *Our Heritage*, *67*(4), 78-84.

Liutsko, L., Muiños, R., Tous Ral, J. M. & Contreras, M. J. (2020). Fine motor precision tasks: Sex differences in performance with and without visual guidance across different age

groups. *Behavioural Sciences*, *10*(1), 36.

Manlosa, A. & Matias, D.M. (2018). From gender parity to gender equality: Changing women's lived realities. *German Development Institute.*

Manwa, L. (2018). Impact of gendered cultural codes on academic performance of female students at a university in Masvingo, Zimbabwe. *IRA International Journal of Education and Multidisciplinary Studies*, 13(2), 19-26. http://dx.doi.org.10.21013.jems.v13.n2.p3. ISSN 2455-2526.

Mohajan, H. (2022). An overview on the feminism and its categories. *Research and Advances in Education, 1*(3), 11-26.

Moyo, A., Sankhulani, L. & Namalima, S. (2021). Socio-economic factors contributing to female students' dropout in community technical colleges in Thyolo and Phalombe Districts: A case of Milonga and Naminjiwa Technical Colleges. *Journal of Education and Practice, 5*(4), 31-45.

Mukeredzi, T. (2022, January 20). Women students dominate at tertiary education institutions. University World News. https://www.universityworldnews.com/post.php?story=20220116115440156

Naeem, S., Ali, M. M. & ur Rehman, H. (2021). Fiscal decentralisation and gender parity in education: Empirical evidence from Pakistan. *Journal of Business and Social Review in Emerging Economies*, *7*(4), 949-962.

Najoli, E. K. (2019). The effectiveness of WITED programme on enrolment of women in technical and vocational education and training (TVET). *EURASIA Journal of Mathematics, Science and Technology Education*, *15*(3), em1682.

Nieberding, M. & Heckler, A.F. (2021). Patterns in assignment submission times: Procrastination, gender, grades and grade components. *Physical Review Physics Education Research*, *17*(1), 013106.

Nja, C., Cornelius-Ukpepi, B. & Ihejiamaizu, C. C. (2019). The influence of age and gender on class attendance plus the academic achievement of undergraduate chemistry education students at University of Calabar. *Educational Research and Reviews*, *14*(18), 661-667.

Oguejiofor, V. I., Ijeoma, A. B., Ugwunwoti, E. P., Lebechukwu, N. C., Yaro, J. T., Imakwu, V. N. & Eya, G.M. (2021). Influence of gender on academic achievement and retention of TVET students in Nigeria. *Journal of Pharmaceutical Negative Results, 12*(1), 93-97.

Olabayonle, O. A., Mohamad, M. R., Bachok, S., Zahari, M.Z.M. & Kadir, N.A.A. (2023). An assessment of gender disparity that exists in the transit service provision: A case study of Mrt Feeder Bus Service in Klang Valley, *Planning Malaysia*, *21*.

Omar, M. K., Rauf, M.A., Ismail, N., Rashid, A.M., Puad, H.M. & Zakaria, A. (2020). Factors on deciding TVET for first choice educational journey among pre-secondary school students. *European Journal of Molecular and Clinical Medicine, 7*(3), 609-627.

Østby, K.A., Mykletun, A. & Nilsen, W. (2018). Explaining the gender gap in sickness absence. *Occupational Medicine, 68*(5), 320-326.

Oweikpodor, V. G., Egwunyenga, E. J. & Onafowope, M. A. (2022). Lecture attendance habit among students in college of education: Factors responsible and managements options. *European Journal of Open Education and E-learning Studies, 7*(2).

Pereira, L.D.C. & Ramos, F.P. (2021). Academic procrastination in university students: A systematic review of the literature. *Psicologia Escolar e Educacional*, *25*.

Sloan, D., Manns, H., Mellor, A. & Jeffries, M. (2020). Factors influencing student non-attendance at formal teaching sessions. *Studies in Higher Education, 45*(11), 2203-2216.

Subrahmanian, R. (2005). Gender equality in education: Definitions and measurements.

International Journal of Educational Development, 25, 395-407.
Thébaud, S., Kornrich, S. & Ruppanner, L. (2021). Good housekeeping, great expectations: Gender and housework norms. *Sociological Methods & Research, 50*(3), 1186-1214.
UNESCO (2009). Education Indicators Technical Guidelines. https://www.openemis.org/resources/references/unesco-education-indicators-technical- guidelines-2009/
Uwiringiyimanu, A. (2022). Factors affecting female enrolment in TVET male dominated courses (Doctoral dissertation, Van Hall Larenstein).
Williams, A., Becky, C. M. & Theophilus, A. T. (2018). Challenges of women in technical and vocational education: A case study of Federal College of Education (Technical), Gusau. *International Journal of Vocational and Technical Education*, *10*(1), 7-13.
Wiseman, A. W. (2008). A Culture of (in) Equality? A cross-national study of gender parity and gender segregation in National School Systems. *Research in Comparative and International Education*, *3*(2), 179-201.
Xu, S., Shonchoy, A. & Fujii, T. (2019). Illusion of gender parity in education: Intrahousehold resource allocation in Bangladesh. *SMU Economics & Statistics Working Paper*.