Determining Gender Issues in Technical and Vocational Education and Training (TVET) and its Influencing Factors in the Philippines

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Abstract

The Philippines pledged to help attain the Sustainable Development Goals, such as eradicating poverty, promoting quality education, and achieving gender equality. In the country, Technical and Vocational Education and Training (TVET) helps encourage employment opportunities and contributes to poverty alleviation efforts. Gender-related issues within TVET have the potential to restrict career opportunities, leading to unequal access to education, limited employment prospects, and job segregation, which lead to a worsening poverty rate. This research aims to determine gender-related issues and their factors. The study utilized the Gender Schema Theory, Social Role Theory, and Population Theory of Discrimination to craft the research questionnaire and analyze the results. The study employed a mixed-method research approach, incorporating qualitative and quantitative methodologies. Purposive and convenience sampling was used to select the participants, and there were 133 trainees and 7 trainers with 140 participants. To get quantifiable data, a self-made survey questionnaire was developed with five Likert-type scales, and for qualitative, a semi-structured interview format with open-ended questions was employed. The findings revealed that social roles, gender schema, and pollution theory indeed contribute to gender issues in TVET. In conclusion, gender equality, especially in TVET, necessitates a comprehensive approach involving the nation. While transforming societal perceptions of gender roles, norms, and stereotypes is a formidable task, initiating change in how children perceive gender is a crucial starting point, as gender schema is the primary contributing factor to these identified gender issues.

Keywords: *Gender Issues, Gender Role, Gender Stereotyping, Gender Norms, Gender Schema.*

INTRODUCTION

Gender inequality remains a pervasive global concern, with no nation having attained complete gender equality. In 2023, East Asia and the Pacific were at 68.8% gender parity, ranking fifth among eight regions. Despite this progress, the region has experienced stagnation for over ten years, with a slight decline of 0.2 percentage points compared to the previous assessment (World Economic Forum, 2023). The Philippine government recognizes the importance of gender equality in combating poverty and expanding employment opportunities for Filipino citizens.

The Philippines pledged to help attain the Sustainable Development Goals set by the United Nations, such as eradicating poverty, ensuring food security, promoting quality education, and achieving gender equality. One of the strategies of the Philippine government is to strengthen its education program and ensure its curriculum aligns with the ASEAN Qualifications Reference Framework (AQRF). The Philippine Educational System has a tri-focalized educational system. It is composed of three government agencies that supervise different areas. The Department of Education (DepEd) is for basic education, the Commission on Higher Education (CHED) is for higher education, and the Technical Education and Skills Development Authority (TESDA) is for technical and vocational education training (TVET). The senior high school students can enroll in the technical-vocational-livelihood (TVL) track, where they can receive a National Certificate from TESDA upon passing the national assessment. Alternatively, Filipinos who have already graduated with basic education or want to

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gain additional skills and competencies can enroll in TVET programs by signing up at any TESDA-accredited training center in the country.

The TVET programs can significantly reduce poverty in the country by providing Filipinos with Training and the competencies and expertise needed to secure better-paying jobs or start businesses (Vandenberg & Laranjo, 2020). The belief that Technical and Vocational Education and Training (TVET) can alleviate poverty is not exclusive to Filipinos; it is a shared notion among developing nations. TVET is often regarded as a panacea for addressing challenges such as youth unemployment and structural changes in the labor market. This perception holds particularly true for developing countries that lack adequate basic education systems and experience high numbers of youth entering the workforce annually (Jones et al., 2021). A nation's economic growth and social development depend on its workforce, and increasing its employability through vocational, technical, and educational programs is critical. Enhancing vocational skills is often seen as an effective strategy for empowering disadvantaged individuals by improving their prospects for employment.

The underrepresentation of females in Technical and Vocational Education and Training (TVET) is prevalent in developed and developing nations (Ngugi et al., 2017). The practice of gender discrimination persists in practically all domains of development, including skill development. For instance, the 2017 India Skills Report highlighted the inequality in employment opportunities between males and females in all industries (Chandra,2019). Another concern is females' unequal representation in STEM-related fields within TVET. Female students are underrepresented in TVET compared to general programs, particularly in disciplines requiring expertise in science, technology, engineering, and mathematics (STEM) (Tikl et al., 2020). According to (Masud et al.,2018; and Rahayu and Aryanti, 2022), technical courses are predominantly popular among male students, with minimal participation from female students, as only a tiny fraction of them apply to TVET institutions. However, in South Korea, female students appear more enthusiastic about enrolling in vocational high schools than their male counterparts. Vocational education appears to cater better to the needs of females, particularly those who may lack sufficient parental support (Choi,2020).

TESDA has initiated many programs to promote gender equality in technical-vocational education and training (TVET) to cultivate a skilled workforce. One initiative is that TESDA established the TESDA Women's Centre, which started in 1993 and offered ten (10) Pre-Employment training focusing on Non-Traditional Trades (NTT). TESDA Women's Centre symbolizes the Philippine government's commitment to gender equality. It concentrates on activities promoting women's economic empowerment and gender equality (TESDA Women's Center, n.d.). TESDA has also embraced gender mainstreaming to promote and uphold women's human rights while working towards eliminating gender discrimination in its systems, structures, policies, programs, and processes.

These are just a few efforts of the country to address gender inequality and disparity in education, the workforce, and across various sectors of society. Within the East Asia and Pacific region, the Philippines remains the second-best performer after New Zealand in addressing gender disparity. Notably, it is the sole Southeast Asian country to become part of these rankings (World Economic Forum, 2021). Despite this achievement, there are still more things to do to attain gender-equal rights in the country. The Philippines holds the lowest female workforce involvement ranks in the ASEAN countries, and the gender imbalance in labor force involvement is notably vast compared to other countries (Cabegin et al.,2019). In the country, women still find it challenging to enter industries that remain to be male-dominated.

Beyond all the programs and studies initiated by the government and non-government organizations to promote gender equality in the country, there are still many challenges in promoting gender equality, particularly in TVET. Gender issues can limit the career options available to students and perpetuate gender inequality in the workplace. Thus, this research project aims to identify the cause of these gender issues being observed and experienced by the trainees. The result of this study may also be used by other countries that share the same problem to develop a more comprehensive solution to combat this unending problem.

Theoretical Framework

This study benchmarks the three theories: the Gender Schema Theory, the Social Role Theory, and The Pollution Theory of Discrimination. These theories guide the researchers in constructing the survey questionnaire and understanding gender issues in technical vocational institutions.

Gender Schema Theory

In this study, the researcher employed the gender schema theory to explore how individuals' childhood experiences might influence their perceptions of gender roles, norms, and stereotypes. Gender Schema Theory focuses specifically on how children conceptualize and process gender-related information. It is a cognitive theory rooted in information processing, explaining the development of gender understanding. It proposes the existence of mental frameworks that categorize incoming information by gender, shaping individuals' perceptions and interpretations of the world. According to this theory, children develop a gender schema early on, becoming more intricate as they grow. People tend to be particularly attuned to information that aligns with their gender identities, paying close attention to, interpreting, and remembering gender-related behaviors and cues (Zosuls et al., 2008; Martin & Dinella, 2001; Martin et al., 2014; Petersen &Hyde, 2014; Wood& Eagly,2012).

Social Role Theory

Another theory incorporated in this study is social role theory, which examines how the communities in which trainees reside influence their views on gender roles. The social context in which we are embedded influences our perceptions of gender equality. Social Role Theory examines how social behavior is influenced by the distribution of men and women into different societal roles. It suggests that gender differences and similarities in behavior stem from their societal roles. Men and women are socialized to conform to specific behaviors based on their societal roles, leading to the development of personality traits. Participation in various social roles shapes individuals' expectations about gender roles for themselves and others (Wood& Eagly.;2012; Rucker et al., 2018; Newman & Newman, 2020; Daniels & Leaper, 2011).

The Pollution Theory of Discrimination

The trainees expressed their interest in enrolling in TVET programs to acquire additional skills for career advancement or utilize the certificate to secure employment. Therefore, the researchers applied the pollution theory of discrimination to investigate how gender discrimination might influence their decisions regarding which qualifications to pursue in TVET. The Pollution Theory of Discrimination is currently one of the most widespread explanations for labor segregation by gender (Heras et al., 2021). Women work in occupations different from men and get paid less for the same personal and job characteristics (Goldin, 2014). Furthermore, gender-based occupational differences remain a common feature of labor markets.

Conceptual Framework

Figure 1 shows how the researchers tried to examine the connection of how social roles, gender schema, and a pollution theory of discrimination may affect the gender issues in TVET and how these gender issues in TVET affect the TVET sector, individuals, and society.

Conceptual Framework
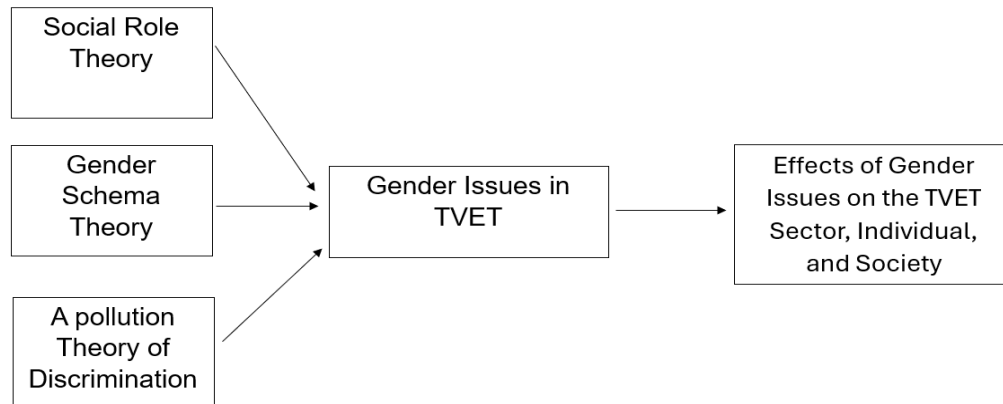
METHODOLOGY

The study utilized a mixed-method research design, specifically a convergent parallel design. A mixed research design combines qualitative and quantitative methods to understand a research problem comprehensively. A convergent parallel design involves the researcher simultaneously carrying out quantitative and qualitative aspects during a single phase in the research procedure. They give equal importance to both methods, analyze each component separately, and then interpret the combined results (Demir & Pismek, 2018).

The descriptive design will describe the present status of (TVET) concerning the gender issues in implementing TVET in the TESDA Accredited Training Center in Northern Mindanao. A quantitative approach used various empirical methods, such as a Likert-type item questionnaire, to assess a phenomenon. Qualitative research design is a research approach that focuses on insights into the personal experiences, behaviors, and viewpoints of individuals or groups. The semi-structured interview is a helpful tool to support quantitative data in research studies.

Qualitative methodology was employed to semi-structured interview trainers regarding their observations and experiences, mainly focusing on gender-related topics within their respective institutions. Additionally, a quantitative approach was utilized, where the researcher formulated a survey questionnaire to assess the trainers' observations of gender-related issues within their institutions and to identify the factors influencing these issues.

Participants

The researchers used both purposive and convenience sampling, which gave them flexibility in determining the most suitable sample size based on their judgment. This study used a purposive sample to select certain participants, such as trainee participants, who should be eighteen or older and enrolled in TESDA-recognized TVET institutions in Northern Mindanao, Philippines. This criteria on the participants ensures direct insight into the gender issues they encountered. Additionally, the decision to set the minimum age at eighteen was based on the researchers' belief that individuals at this age demonstrate sufficient maturity and legal adulthood in the Philippines. Another participant group was TVET trainers with at least 3 years of teaching experience. Three years of teaching experience is enough to see how gender-related issues affect Technical Vocational Institutions in the country. For convenience sampling, they only determined those trainees and trainers available in the TESDA-recognized TVET institutions and got a sample size of 140. There were 133 trainees, and 7 trainers were willing to participate in the study. Therefore, there are a total of 140 respondents in this study. The researcher believed it was enough to get meaningful results. Both purposive and convenient sampling are non-probability sampling techniques useful in quantitative and qualitative research designs (Suen et al.,2014).

Research Tools

The self-made survey questionnaire was developed through reading related literature and studies. According to (Taherdoost,2019), in quantitative data collection, survey questionnaires are frequently employed to gather

statistically significant information and serve as a valuable instrument for research and assessment purposes. This study utilized a set of five Likert-type questions to capture the responses of survey participants regarding specific inquiries pertinent to the study's objectives. The Likert scale rates the degree of agreement or disagreement with various statements concerning attitudes, objects, individuals, or events, and it is known to yield reliable and high-quality scales. The respondents selected a number from least to highest (1-5) for each specified criterion: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree. The self-made survey questionnaire was developed through reading related literature and studies. The Likert scale is the most frequent and fundamental psychometric tool used in social sciences research (Joshi et al., 2015).

The researcher used a semi-structured interview with open-ended questions to collect qualitative data. Qualitative research often relies on semi-structured, in-depth interviews as a primary data collection method, one of the most prevalent qualitative data sources. These interviews enable researchers to gather open-ended information, delving into participants' thoughts, emotions, and perspectives on a specific subject. Typically, such interviews involve a conversational exchange between the researcher and the respondents, guided by a flexible interview protocol. Additionally, researchers may incorporate follow-up questions, probes, and comments to explore and further elucidate the responses given by participants (DeJonckheere & Vaughn, 2019).

Data Analysis

The researchers examined the gathered quantitative data using descriptive statistical analysis. This method offers a concise overview of the characteristics and distribution of values within one or more datasets. It enables a rapid understanding of the dataset's central tendency and the extent of variation (Lee,2020). This study employed descriptive statistics to obtain frequency, percentage, and median values from Likert scale responses in the survey questionnaire. The researcher utilized conventional content analysis for qualitative content analysis, where coding categories were directly derived from the text data. This method is rooted in the significance of context and meaning, with data defined as the coded content generated by the analyst (Roller, 2019). After obtaining the needed data, the researcher compared and triangulated the identified problems between trainees and trainers and their factors. Triangulation can enhance the validity and strength of research findings by incorporating diverse viewpoints and perspectives on the phenomenon under investigation (Alele & Malau-Aduli, 2023).

Ethical Considerations

In conducting research, the researcher intends to follow some generally accepted ethical practices. The researchers sent an application for ethical approval of the research proposal following the requirements. The College of Education Research Ethics Committee members have reviewed and discussed the researcher's application for your study entitled "Gender Issues and Sex Segregation in (TVET)." Upon the approval of the college research ethics committee, the researchers sent letters through the entry protocol asking permission from the different TESDA provincial directors in Region X. After the request was approved, data was gathered by meeting the respondents. First, the respondents were given an "informed consent" explaining the motive of the study. It also explained the researcher's responsibility throughout the study, keeping the data collected, their rights to decline participation, answer any or all questions, terminate their involvement at any time, how the outcome will be used, and so on. Then, they were requested to write their signature on the agreement form to participate in this study. After completing the agreement form, they can quit at any time for a reasonable reason. The researcher conducted the study after the respondents signed the form and agreed to participate.

RESULTS AND DISCUSSION

The results and discussions below are the results of the researchers' analysis based on answers from the respondents based on the given questionnaires. The first part will show the gender issues in technical vocational institutions, and the second part is about the factors influencing gender issues in TVIs. All these discussions are based on trainees' and trainers' observations and experiences. The trainee's responses were based on given survey questionnaires and trainers' responses in semi-structured interviews.

Gender Issues on Technical Vocational Institutions (TVIs) in Northern Mindanao, Philippines

Table 1. Trainee's Identified key issues based on their observations in TVET

Statements	Response	Categories
I believe that there are specific occupations in TESDA/TVET/TVL that are traditionally associated with a particular gender.	Yes	Gender Role
There are divisions of gender-based jobs in TESDA/TVET/TVL, where specific tasks are considered more suitable for males or females.	Yes	Gender Role
I believe that trainees' choice of training paths/career options in TESDA/TVET/TVL courses are influenced by societal expectations related to their gender.	Yes	Gender Role
Believe that there are gender-related beliefs in TESDA/TVET/TVL, such as "females are better at housekeeping and males are better at technical skills," affect the opportunities given to trainees pursuing TVL.	Yes	Gender Stereotyping
I believe that certain gender-related attitudes or behaviors create barriers for individuals pursuing TVL training.	Yes	Gender Stereotyping
Believe that gender-related norms impact teaching styles and TESDA/TVET/TVL classroom dynamics.	Yes	Gender Norms

Table 1 shows that the most observed problem is under gender roles, followed by gender stereotyping and then gender norms. Gender roles are the roles or behaviors that individuals are taught to perceive as suitable for their gender, and the prevailing cultural norms shape them (Worthy et al., 2020). The physical characteristics of their genitalia determine a person's sex at birth (Tong, 2012). Gender stereotyping refers to preconceived notions such as attributes, characteristics, or roles believed to be inherent in, or should be undertaken by, women and men (United Nations Human Rights, 2022). Gender norms are society's expectations of certain genders (European Institute for Gender Equality, 2023). The results demonstrate how specific patterns of behavior associated with a particular gender are widely adopted and applied to individuals, shaping societal expectations. All these factors become problems once they affect an individual's career choice and limit their career opportunity due to fear and social pressure. This finding also mirrors a similar experience in Ghana, where a misconception persists that technical and vocational programs predominantly dominated by men are most suitable for males (Farm Radio International, 2023).

Table 2. Trainer's observation of gender-related issues inside their classroom

Responses	Categories
In my classroom, students do indeed engage in gender stereotyping, inferring traits, preferences, and behaviors from one another based solely on appearance. (R1) There is a difference in academic achievement because girls are generally expected to perform better than boys. (R4)	Gender Stereotyping
Students make assumptions about abilities, interests, and behavior based on gender. For instance, boys are often presumed to excel in practical or masculine tasks, while girls are assumed to be skilled in writing and verbal communication. (R3)	Gender role expectations
All my students are male. (R5) Some of the gender issues I have noticed in my class are single-sex grouping. (R6) One issue in my classroom is that it is entirely made up of male learners. (R7)	Single Sex Grouping

Table 2 shows the results of the trainers' interviews about the gender-related issues they observed in their classrooms. The responses are categorized into gender stereotyping, gender role expectations, and single-sex grouping. The data in Table 1 and Table 2 show that trainees and trainers shared the same observation that gender stereotyping and gender role expectations persist in the Technical Vocation Institution. Vietnam, too, expressed similar worries, instituting policies aimed at enhancing Technical and Vocational Education and Training (TVET) programs to align with the labor market's need for skilled workers. Despite efforts to make these reforms and programs gender-sensitive, societal stereotypes and biases, among other influences, continue to impact the participation of both men and women ("Enhancing Gender Responsiveness of Technical and Vocational Education and Training in Vietnam," 2018).

This gender stereotyping and gender roles may contribute to another observed issue, which is single-sex grouping. The observed single-sex grouping of trainees in the classroom is due to enrolling qualifications based on gender, with some courses exclusively composed of male enrollees and others solely of female enrollees. Trainers in their respective institutions noted this as the most prominent issue. This observation aligns with

trainees' recognition of gender stereotyping and adherence to traditional gender roles within the TVET institution.

Analysis of responses from both trainees and trainers across various tables indicates that there is no deliberate effort to segregate based on sex within the region's Technical Vocation institutions. Instead, single-gender groups emerge due to individual trainee preferences when selecting qualifications. Factors such as job prospects, career aspirations, and personal interests influence these choices rather than intentional sex segregation policies.

It is important to note that there are no formal policies dictating sex segregation and no limitations on which specializations males and females can pursue. This trend, if continued, risks reinforcing gender stereotypes and traditional roles within TVET institutions. It may also influence students' specialization choices, further entrenching single-sex dominance in specific fields within these institutions (Simmons et al., 2019).

Factors Influencing Gender Issues in Technical Vocational Institutions (TVIs)

Another objective of this study is determining the factors influencing gender issues in TVIs. Therefore, the data below shows certain background information about the respondents.

Table 3. Potential factors affecting gender issues based on the trainee's response

Experiences	Median	Interpretation	Categories	Theory
1. In our community, members expect males should pursue male-dominant courses while females should pursue female-dominant courses.	4	Agree	Gender Role	Social Role Theory
2. During childhood, I was encouraged to engage in specific activities based on gender.	4	Agree	Gender Role	Gender Schema Theory
3. I grew up seeing and thinking that females should be good at domestic work, such as cooking and cleaning, and males are more at technical skills, such as repairs	4	Agree	Gender Stereotyping	
4. I grew up reading and watching instructional materials at school that men should work in the construction sector and females as caregivers	4	Agree	Gender Norms	
5. I notice that gender-based job discrimination still exists, particularly among job applicants.	4	Agree	Gender Norms	Pollution Theory of Discrimination

Table 3 shows the factors affecting gender issues in the technical vocational institution in Northern Mindanao, Philippines. Societal norms dictate specific roles and behaviors for individuals based on their gender, leading to the formation of gender stereotypes within communities. This phenomenon is elucidated by Social Role Theory, which emphasizes how societal expectations regarding gender roles shape individuals' perceptions and behaviors, assigning them specific roles and responsibilities based on their gender (Eagly & Wood, 2012).

Societal norms play a central role in shaping children's upbringing, as interactions with parents, peers, adults in the community, and exposure to media collectively shape perceptions of gender-appropriate behavior for both males and females. This factor is elaborated upon in the gender schema theory, which assumes that children, from a young age, assimilate information from their social surroundings, encoding and organizing it into mental associations. This process ultimately influences how children acquire gender-specific characteristics early in life (Canevello, 2020).

Gender discrimination in the workplace may influence individual choice career choices and contribute to gender issues such as gender roles, norms, and stereotyping. The Pollution Theory of Discrimination explains labor segregation by gender (Heras et al., 2021). Goldin (2014) suggests that men within an all-male profession may resist the entry of women, even if they meet the necessary qualifications. This resistance stems from concerns that the wider society may not recognize the woman's qualifications and perceive her entry as altering the nature of the occupation. Consequently, she may be viewed as disrupting or "polluting" the traditional character of the profession.

Table 4. Trainer's identified factors contribute to gender-related issues inside the classroom

Responses	Categories
Insufficient school policies and inadequate training for trainer's gender awareness (R1)	Lack of gender Awareness training in both trainers and trainees
These factors are social norms and expectations and the trainer's gender bias. (R2)	
Inadequate trainer's training in gender awareness and insufficient school policies contribute to gender-related issues. (R3)	
The lack of diverse gender role models in leadership roles within the school can convey unintentional messages about the potential and possibilities accessible to students of different genders. (R4)	
Lack of literacy among students regarding gender issues. (R5)	

Table 4 shows the trainer's viewpoint that gender-related issues stem from a deficiency in gender awareness among trainers and trainees. This does not imply a complete absence of training or policies; instead, it underscores the necessity for heightened efforts from all involved parties to foster gender awareness and ensure rigorous adherence to policies promoting gender equality.

The trainee's assessment of the factors contributing to gender issues in TVET underscores the significant role played by the lack of gender awareness among trainers and trainees and the rigorous enforcement of gender-related policies within the institution. According to the Asian Development Bank (2020), while some areas of TVET have gender-responsive laws, policies, and strategies, the key challenge lies in their consistent implementation. Kollmayer et al. (2020) noted that teachers are crucial in promoting gender equality in education, given that their attitudes and instructional practices substantially impact students' motivation and performance. The Global Education Monitoring Report (2018) emphasizes the collective responsibility of governments, schools, teachers, and students to ensure that academic institutions are free from violence and discrimination and provide a gender-sensitive, high-quality education.

CONCLUSION

The study provided valuable insights into gender issues and the factors affecting them within Technical Vocational Institutions (TVIs) in Northern Mindanao, Philippines. The researchers concluded that social roles, gender schema, and pollution theory contribute to gender issues in TVET.

Despite the efforts of the Technical Education and Skills Development Authority (TESDA), gender roles, gender norms, and gender stereotyping continue to exist. The experience of both trainers and trainees supports this issue. The results give us a deeper understanding of how this problem prevails in TVIs and its effects on TVET sectors, individuals, and society. For example, the contributions of their upbringing and the society in which they belong have many contributions to these issues, which are better explained by gender schema theory and social role theory. Moreover, gender discrimination in the workplace persists in the region, and the Pollution Theory of Discrimination sheds light on this.

However, it is also important to consider the limitations of the study. This only focuses on specific regions and potential bias of the respondent's answers in survey research questionnaires and interviews. While the study determined the gender issues and factors affecting it, it is necessary to conduct a thorough study on how each factor affects each gender issue. With this, the government can devise interventions and strategies to address these issues effectively.

In conclusion, gender equality, especially in TVET, necessitates a comprehensive approach involving the nation. While transforming societal perceptions of gender roles, norms, and stereotypes is a formidable task, initiating change in how children perceive gender is a crucial starting point. By focusing on shaping children's understanding and attitudes toward gender from an early age, we lay the foundation for broader societal change toward gender equality. In a country like the Philippines, where Filipinos are known for having high family values, gender-responsive parenting is one of the better to do. This is why the United Nations Children's Fund (UNICEF) promotes gender-responsive parenting as one of the key programmatic strategies for positive gender socialization. This is where gender schema theory plays an important role as a basis for creating gender-related programs and policies.

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