

# Gender Ideologies as Correlates of Career Maturity Among Senior Secondary School Science Students in Nasarawa State, Nigeria

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**Abstract:** This study was a correlational research design which investigated gender ideologies as correlates of career maturity among senior school students in Nasarawa State, Nigeria. The population of the study comprised 1900 public senior secondary school science students in the State, while the sample size was 200 senior secondary school III (SSIII) students comprising 100 males and 100 females purposely sampled from 20 schools. The instrument used for data collection was a researcher-modified questionnaire titled, "Career Maturity Inventory Attitude Scale for Students" (CMIASS). The instrument was validated by experts in the Faculty of Education, Nasarawa State University, Keffi, Nigeria. The instrument was thereby, pilot-tested in five independent senior secondary schools selected outside the original sampled 20 schools. The reliability coefficient of 0.81 was determined using Cronbach alpha. Data were analysed using descriptive statistics in the form of frequencies and percentages for research questions, while z-test and Pearson's Product Moment Correlation methods were used to test the hypotheses. The findings of the study showed that there was a significant positive relationship between gender ideologies and students' career maturity. Based on the findings of this study, it was recommended that; Science students should be exposed to attend career conferences and field trips for career exploration so as to enlighten them on different career options to them before they graduate.

**Keywords:** Career Maturity; Gender Ideologies; Senior Secondary School Science Students.

## Introduction

Science is a core subject taught in schools all over the world, and science educators believe that any nation that hopes to develop must not neglect the teaching and learning of science in its schools (Fafunwa, 2004). Science education is a veritable instrument for social change which brings about socio-economic development and empowerment all the world. The application of scientific knowledge to real life problems is the most powerful instrument for enabling society to face global challenges and innovations in education. Eze (2010) maintained that science education is at the centre of empowerment of students toward self-reliant and industrial skills that are needed for survival especially in this era of global economic crisis.

Gender ideologies refer to ways and manners in which people consider themselves as masculine, feminine, or some combination of the two (Malicke, 2013). Gender ideologies also refer to attitudes regarding appropriate roles, rights and responsibilities of men and women in society as well as their distinctive roles as either breadwinners (men) or homemakers (women), (Davis & Greenstein, 2009). The characteristic qualities associated with a particular gender vary over time, and across cultures. For instance, at one time it was not considered very feminine to play sports; however, in contemporary cultures both men and women play sports with equal zeal. Despite an abundance of research on ethnic and racial ideologies, work on gender ideologies is minimal (Banchevsky & Park, 2018). Male-dominated environments attract and reinforce gender ideologies that support a masculine status-quo and discourage women from joining, influencing, or remaining within that environment. Although often used interchangeably, a distinction should be drawn between the term "gender" and "sex", where "gender" refers to a broad set of characteristic qualities that distinguish between masculinity and femininity and includes personal attributes, social roles, social customs, activities, and behaviors, while "sex" refers to being male or female (Newman, 2018).

Men in male-dominated fields benefit from a masculine culture in which they are presumed to be superior. In a classroom environment, for instance, male children may tend to draw men when asked to draw a scientist because they believe that men are naturally more gifted than women in male-dominated fields (Eddy & Brownell, 2016). This may explain why men in male-dominated environments determine the beliefs and attitudes which bestows upon them a greater sense of belonging (Danbold, Felix & Huo, 2017) and self-efficacy (Eddy & Brownell, 2016) when compared to women. These positive gender ideologies should therefore, be less commonplace among men in male-dominated fields compared to men in other fields. Some women face the gender reversal trend by assimilating to masculine norms in male-dominated fields as a coping mechanism—to be taken seriously, avoid harassment, and advance their career (Danbold, Felix & Huo, 2017). It is thus, reasonable to expect that regardless of gender ideologies, women will be more likely than men to disagree with the negative gender ideologies, and agree with the positive gender ideologies.

From early to mid-adolescence, youths' understanding of gender is quite rigid and stereotyped. As a result, younger adolescents will typically participate in more gender-stereotyped behaviors than do older adolescents (Kpanja & Umar, 2018). There are a number of reasons for these gender-stereotyped behaviors. For instance, physically, they have changed so much during puberty that their bodies now begin to resemble adult bodies. This explains why girls may enjoy shopping for bras that satisfy their new feminine figure, while at the same time, they may begin to use costly cosmetics to conceal unwanted black facial patches. On the other hand, boys may employ their new shaving ritual and insist on spraying themselves with heavy designer perfumes and deodorants to mask their new powerful body odour.

As young men and women become more secure and confident in their gender ideologies, they no longer feel they must always present a perfectly masculine or feminine appearance (Winter, 2016). This explains why young ladies may feel totally comfortable wearing jeans, tee-shirts, sneakers, and ball caps, even though this outfit isn't particularly feminine. By late adolescence youth have usually figured out their role in society, including their gender ideologies that meets their aspirations in life (Winter, 2016). When a child's interests and abilities are different from what society expects, they may be subjected to discrimination and bullying (Abdulkadir, Gulma & Mohammed, 2018). It is thus, natural for parents to have gender-based expectations for their children and to want to protect them from criticism and exclusion. Instead of pushing children to conform to these pressures and to limit themselves, parents can play an important role in advocating for safe spaces where their children can feel comfortable and good about themselves (Abdulkadir, Gulma & Mohammed, 2018).

Career maturity is the extent to which an individual has mastered the tasks needed for career development (Liu, Peng & Won, 2014). This is as an individual's readiness to make well-informed career decisions in the face of global labour competition. It thus, describes an individual's ability to successfully cope with career development tasks that are encountered across the development stages. At a socio-economic spectrum, the person's career maturity is influenced by age, race, status and gender. The complexities of these factors invariably, affects the individual's readiness to succeed in achieving the tasks needed at every stage of career development.

Most senior secondary school students in Nigeria do not possess career maturity by the time they are leaving school due to lack of qualified personnel and equipment required to galvanise the curriculum for effective success in their favours (Adekeye, Adeusi, Ahmadu & Okojide, 2017). Furthermore, the female students in almost all cultures are stereotyped to be helpers to their future husbands and as such their careers may not be all that important to them as they are to the males. Researches on the relationship between gender ideologies and career maturity have produced inconsistent results. For instance, some researchers have found significant gender differences in career maturity (Sivakumar & Sridhar, 2016; Alam, 2013) others found no such differences (Momin & Chetry, 2016; Sivakumar & Sridhar, 2016; Tekke & Ghani, 2013).

From the foregoing, it is evident that most senior secondary school students lack the prerequisites of career maturity that can bolster them into successful career aspirations and actualisation. In order to fit into their expectations, they depend on external factors for guidance such as their parents, peers and society instead of their internal capabilities (Kumazhege, 2017). Consequently, most the students make immature and unrealistic career decisions. They shut their eyes and focus only on the salaries, positions, glamour and prestige attached to the careers (Mayange & Umar, 2018). For instance, most of them may prefer careers in medicine, engineering, law, banking, architecture, and pharmacy without adequate knowledge of what it takes to succeed and achieve in those careers (Mayange & Umar, 2018). Consequently, this study examined the relationships between gender ideologies and career maturity of senior secondary school science students in Nasarawa State, Nigeria.

### Research Questions

The following research questions guided the study:

1. What is the relationship between gender ideologies and senior secondary school science students' career maturity?
2. What is the relationship between male and female senior secondary school science students' gender ideologies and career maturity?

### Research Hypotheses

The following hypotheses were tested at 0.05 level of significance.

**Ho<sub>1</sub>:** There is no significant relationship between gender ideologies and senior secondary school science students' career maturity.

**Ho<sub>2</sub>:** There is no significant relationship between male and female senior secondary school science students' gender ideologies and career maturity.

### Methodology

This study is a correlational research design in which questionnaires were used for data collection. The population of the study comprised 1900 public senior secondary school students in Nasarawa State, Nigeria, while the sample size was 200 comprising 100 male and 100 female senior secondary school III (SSIII) science students purposely sampled from 20 schools of the State. The instrument for the study was a researcher-adapted Career Maturity Inventory Attitude Scale for Students (CMIS). CMIS was rated using a four-point rating scale. The options were; Strongly agreed (SA) = 4 points, Agree (A) = 3 points, Disagree (D) = 2 points and Strongly Disagreed (SD) = 1 point. The instrument was validated by experts in the Faculty of Education, Nasarawa State University, Keffi, Nigeria. The instrument was pilot-tested in five independent senior secondary schools selected outside the original sampled 20 schools, but had similar characteristics (public coeducation schools) as the original sample. The reliability coefficient was found to be 0.81 using Cronbach-alpha.

### Results

Data were analysed using descriptive statistics in the form of frequencies and percentages for research questions, while z-test and Pearson's Product Moment Correlation methods were used to test the hypotheses at 0.05 level of significance.

**Research Question One:** What is the relationship between gender ideologies and senior secondary school science students' career maturity?

To answer this research questions, students' responses were placed in Table 1

**Table 1**  
**Students' Responses on Gender Ideologies and Career Maturity**

Variables	Male			Female		
	Frequency	%	Position	Frequency	%	Position
Gender Aware	14	11.5	4 <sup>th</sup>	10	11.5	5 <sup>th</sup>
Gender Blind	3	2.00	9 <sup>th</sup>	17	16.5	2 <sup>nd</sup>
Gender Assimilation	20	29.5	1 <sup>st</sup>	20	21.00	1 <sup>st</sup>
Gender Segregation	7	6.00	6 <sup>th</sup>	7	4.50	7 <sup>th</sup>
Career Maturity	2	1.00	10 <sup>th</sup>	15	15.00	3 <sup>rd</sup>
Involvement in carrier choice	16	14.5	3 <sup>rd</sup>	12	12.00	4 <sup>th</sup>
Independence in career choice	5	5.00	7 <sup>th</sup>	4	2.00	10 <sup>th</sup>
Orientation towards work	18	17.00	2 <sup>nd</sup>	7	4.50	7 <sup>th</sup>
Preference for career choice factors	10	9.00	5 <sup>th</sup>	5	3.50	9 <sup>th</sup>
Conception of career choice process	5	4.50	8 <sup>th</sup>	3	9.50	6 <sup>th</sup>
<b>Total</b>	<b>100</b>	<b>100</b>		<b>100</b>	<b>100</b>	

Table 1 shows that among male students, gender assimilation has the highest frequency, while career maturity was the lowest. The female students also have gender assimilation with the highest frequency, while independence in career choice was the lowest.

**Research Question Two:** What is the relationship between male and female senior secondary school science students' gender ideologies and career maturity?

The students' responses regarding research question two are demonstrated in Table 2.

**Table 2**  
**Descriptive Statistics and Bivariate Correlations between Gender Ideologies and Career Maturity**

Variables	Gender Awareness	Gender Blind	Gender Assimilation	Gender Segregation	Career Maturity
Gender	1	0.014	-0.014	0.03	0.05
Awareness					
Gender Blind	0.002	1	0.07	0.01	0.04
Gender	-0.33	-0.014	1	0.06	0.39
Assimilation					
Gender	-0.01	0.001	0.05	1	0.17
Segregation					
Career	0.001	0.09	0.08	0.07	1
Maturity					

P<0.05

Table 2 shows that gender awareness correlates positively with gender segregation and career maturity, but negatively with gender assimilation. Similarly, Career maturity correlates positively with all the other variables.

**Hypotheses Testing**

**Hypothesis One:** There is no significant relationship between gender ideologies and senior secondary school science students' career maturity.

**Table 3**  
**Z-test for Influence of Gender Ideologies on Career Maturity**

Variables	Male (200)			Female (200)			Z-Cal.	Z-Crit.	Decision
	Mean	S.D.	DF.	Mean	S.D.	DF.			
Gender	2.40	1.01		2.41	2.03				
Ideology			198			198	5.89	2.37	Reject
Career	3.31	2.16		3.18	3.08				
Maturity									

P<0.05

Table 3 shows that the calculated Z-test value (5.89) is higher than the critical value of Z-test (2.37) at alpha = 0.05, indicating a rejecting of the null hypothesis and accepting the alternate hypothesis. This means that there is significant influence of gender ideologies on the students' career maturity.

**Hypothesis Two:** There is no significant relationship between male and female senior secondary school students' gender ideologies and career maturity.

**Table 4**  
**Relationship between Gender Ideologies and Career Maturity (N= 200)**

Variables	N	Mean	S.D.	R-Cal.	R-Crit.	Decision
Gender Ideologies	200	25.55	10.13	.193	.036	Sig.
Career Maturity	200	10.72	08.38			

P<0.05

Table 4 shows that the calculated R-value (0.193) is greater than the R-critical value of (0.36), indicating significant relationship between gender ideologies and career maturity.

### Discussion

This study investigated the relationship between gender ideologies and career maturity of senior secondary school science students in Nasarawa State, Nigeria. The study shows that among male students, gender assimilation has the highest on the students' career maturity. The female students also indicated that gender assimilation has the highest influence on their career maturity. This finding supports that gender maturity has influence on both male and female senior secondary school students' career maturities in Nasarawa State, Nigeria. This indicates that they have similar level of career maturity. A probable explanation might be that they all have similar exposures on career decision, independence in career decision making and what careers to choose. This result supports the findings of (Sivakumar & Sridhar, 2016; Alam, 2013) who found that gender ideologies have significant influence on career maturity of secondary school students.

Another finding of this study shows that gender awareness correlates positively with gender segregation and career maturity, but negatively with gender assimilation. Similarly, career maturity correlates positively with the other variables. This means that gender has significant influence on the career maturity of the students, hence they have similar level of career maturity. This finding supports the research finding of (Sivakumar & Sridhar, 2016) who found that gender has significant influence on career maturity, but disagrees with the findings of Momin and Chetry (2016) as well as Sivakumar and Sridhar (2016) who in their different researches found out that gender has no significant influence on the career maturity of students.

The finding of the study also shows that the calculated Z-test value (5.89) is greater than the critical value of Z-test value (2.37) at  $\alpha = 0.05$ , indicating a rejection of the null hypothesis and accepting the alternate hypothesis. This implies that gender ideologies and career maturity differed significantly. This finding agrees with the finding of Alam (2013), who discovered that the two variables were noticeable among their respondents.

Lastly, the finding of this study indicates that the calculated R-value (0.193) is greater than the R-critical value (0.36), which infers a significant relationship between the students' gender ideologies and career maturity. This agrees with the finding of Salami (2010) who found that gender ideologies moderate the relationship between the two tested variables and added the fact that gender has to be considered when dealing with students' career maturity.

### Conclusion

The findings from this study showed that the influence of gender ideologies on career maturity among students revealed divergent outcomes. This is an evidence of inconsistency which needs to be clarified and gaps that need to be filled. The results may however, provide clear pictures about the influence of gender ideologies and career maturity among senior secondary school students in Nasarawa State, Nigeria. The findings also suggest that gender ideologies are significant predictors of students' career maturity. Given the relationships between gender ideologies and career maturity, career planning interventions could be encouraged to facilitate both occupational and gender ideology development among senior secondary school students.

### Recommendations

In view of the findings of this study, it is recommended that:

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- i. Counsellors should design interventions to improve career maturity level of science students in order to increase their awareness of career aspirations and minimize their level of career ignorance;
- ii. Teachers should explore the understanding of the problems of career maturity of science students in relation to their gender ideologies for better career stability in future;
- iii. Parents, school authorities and the significant others should encourage senior secondary school science students to relate career maturity with their gender ideologies so as to operate on a platform that produces mature career development;
- iv. Science students should be exposed to attend career conferences and field trips for career exploration so as to enlighten them on different career options to them before they graduate.

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