

Influence Of Multiple Intelligences On Career Maturity Among Adolescents



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Abstract

Choosing a future career is an important developmental task during adolescence. At the secondary-school stage, students gradually begin to understand their abilities, interests and possible educational pathways. However, students differ in the kinds of intellectual strengths they possess, and these differences may be connected with their readiness to think about future careers. The present study examined the influence of Multiple Intelligences on Career Maturity among adolescents and compared boys and girls on both variables.

The study followed a quantitative descriptive-correlational survey design. The sample consisted of 100 Grade 9 adolescents, including 50 boys and 50 girls between 14 and 16 years of age. Multiple Intelligences and Career Maturity were measured using standardized tools, and data were analysed using mean, standard deviation, the independent-samples t-test, Pearson correlation and simple linear regression.

The overall mean Multiple Intelligence score was 104.19 (SD = 16.08), and the mean Career Maturity score was 96.79 (SD = 12.57). No significant gender difference was found in Multiple Intelligence, $t(98) = 0.713$, $p = .477$, or in Career Maturity, $t(98) = -0.103$, $p = .918$. A strong positive relationship was found between Multiple Intelligences and Career Maturity, $r(98) = .749$, $p < .001$. Simple regression showed that Multiple Intelligence scores explained approximately 56.2% of the variance in Career Maturity scores, $F(1, 98) = 125.53$, $p < .001$.

The findings indicate that adolescents with stronger overall intellectual profiles also tend to show greater readiness for career-related thinking and decision-making. The study highlights the need to connect career guidance with students' individual strengths instead of providing the same guidance to every learner.

Keywords: Multiple Intelligences, Career Maturity, Adolescents, Career Development, Career Guidance, Secondary School Students

1. Introduction

Adolescence is a period in which students begin to think seriously about their future. Until the early school years, education is mainly organized around common subjects and general learning experiences. As students move toward secondary and senior secondary education, they gradually face decisions about subjects, courses, further education and occupations. These decisions may influence later academic and professional opportunities. For this reason, career development should not begin only when a student is ready to enter college. The process starts much earlier through self-understanding, awareness of abilities, exploration of occupations and preparation for future choices.

Career choice is not a single decision taken at one moment. It develops slowly. A young person first becomes aware that different occupations exist, then begins to connect those occupations with personal interests and abilities, and later develops the readiness to select realistic educational and career pathways. Super (1957) viewed career development as a developmental process extending across life. Within this perspective, adolescence is especially important because students begin to explore the

relationship between their developing self-concept and possible occupational roles.

Career maturity is commonly used to describe how prepared an individual is to deal with age-appropriate career-development tasks. A career-mature adolescent does not necessarily have one final occupation already selected. Rather, such a student shows readiness to gather information, think about alternatives, understand personal strengths, consider future consequences and make responsible choices. Career maturity therefore involves preparation, awareness and decision readiness rather than merely naming a preferred occupation.

The construct has remained important in career psychology, although later theories have also used terms such as career adaptability and career choice readiness. Savickas (1997) explained that planning, exploration and decision-making are important parts of adapting to career tasks. Later revisions of career-maturity measures

continued to emphasize readiness, concern, curiosity and confidence in career choice.

One important question is why some adolescents

appear more prepared for career decisions than others even when they are studying in the same class and receiving similar school guidance. Career maturity can be affected by several psychological and educational factors. Age, self-concept, career information, confidence, family experiences, school exposure and personal abilities may all contribute to career development. Studies of adolescents have shown that career maturity cannot be understood from age or gender alone and that individual psychological characteristics have an important role.

The present study focuses on one such characteristic: Multiple Intelligences.

Traditional discussions of intelligence often place strong emphasis on general intellectual ability and academic performance. Gardner's theory of Multiple Intelligences offered a wider view. Gardner (1983) argued that human intellectual functioning includes different areas of strength rather than only one general capacity. These include linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal and intrapersonal abilities, with naturalistic intelligence later included in the broader framework.

This approach is important for career development because occupations also require different combinations of abilities. A person interested in writing or communication may draw heavily on linguistic strength. Engineering and scientific work may require logical reasoning and spatial understanding. Careers involving counselling, teaching or management may require strong interpersonal skills. Sport, movement-based professions and practical occupations may involve bodily-kinesthetic strengths. Intrapersonal understanding may be especially important when individuals are required to evaluate their own abilities, preferences and future goals. Pathak, G. (2024)

This connection does not mean that a single intelligence should determine a student's career. Career decisions are more complex than such a direct matching process. Students may possess several strengths, and occupational success usually requires combinations of abilities, knowledge, motivation and opportunity. Nevertheless, understanding one's intellectual profile may provide useful information during career exploration.

Career counselling literature has therefore considered Multiple Intelligences as one possible way of helping individuals understand themselves in a broader manner. Shearer and Luzzo (2009) discussed how Multiple Intelligences theory may be applied in career counselling to support educational and vocational planning. Their work emphasized that career guidance may become more personally

meaningful when students explore their individual patterns of ability rather than relying only on marks or general test performance.

There is also evidence that self-knowledge within an intelligence profile may be relevant to career uncertainty. Shearer (2009), for example, reported that low intrapersonal intelligence was an important characteristic among university students experiencing moderate or high career confusion. This finding supports the view that understanding oneself may contribute to clearer career planning.

The school has an important role in this process. Students may receive career information through teachers, counsellors, parents, peers, media and online resources. However, information alone is not always enough. A list of available careers cannot tell students which direction is personally suitable. Students need opportunities to connect information about occupations with information about themselves.

This is where Multiple Intelligences can contribute to career guidance. Instead of asking only, "Which career do you want?", teachers and counsellors can help students ask more useful questions: "What kinds of tasks come naturally to me?", "In which activities do I show confidence?", "Do I prefer working with people, words, patterns, movement, space or ideas?", and "Which educational and career environments can use these strengths?"

Such questions can make career exploration more realistic and personal.

Adolescence is therefore an appropriate period for studying the relationship between Multiple Intelligences and Career Maturity. Grade 9 students have not yet reached final occupational decisions, but they are entering a stage in which future educational choices become increasingly relevant. Their career maturity at this stage may influence the quality of later choices.

Gender is also considered in the present research. Boys and girls may sometimes be guided toward different academic or occupational options because of social expectations. At the same time, previous research on gender and career maturity has produced mixed results. Patton and Creed (2001), in a large study of 1,971 Australian adolescents, found a developmental progression in career maturity but reported a less uniform pattern for gender differences.

For this reason, gender differences should be tested rather than assumed.

The present study examines whether boys and girls differ in their Multiple Intelligence and Career Maturity scores and, more importantly, whether Multiple Intelligence significantly predicts Career

Maturity among adolescents.

The study does not claim that intelligence alone determines career development. Career maturity is shaped by many personal and environmental influences. The purpose is narrower: to determine whether variation in Multiple Intelligence scores is statistically associated with meaningful variation in Career Maturity scores in the selected adolescent sample.

2. Conceptual Basis of the Study

2.1 Multiple Intelligences

Multiple Intelligences refers to the view that human intellectual ability can be expressed through several different areas of functioning. Gardner's framework challenged the idea that intelligence can be fully represented through a single score. The educational importance of this view lies in its recognition that learners may demonstrate competence in different ways.

For career development, the framework is useful because occupational environments also differ in the kinds of abilities they demand. A student with strong interpersonal abilities may be comfortable in occupations involving communication and cooperation, while a learner with strong spatial or logical ability may be attracted to design, technology or analytical work. These patterns do not prescribe a career but can contribute to self-exploration.

2.2 Career Maturity

Career Maturity refers to the readiness of an individual to handle career-development tasks appropriate to his or her stage of life. It includes the ability and willingness to think about future work, explore alternatives, gather information and move toward responsible career decisions.

Crites developed the Career Maturity Inventory to assess dimensions of vocational development. Later revisions of the instrument continued to treat career readiness as a measurable developmental construct. Crites and Savickas explained that career maturity includes both attitudinal and competency-related aspects, while later work by Savickas and Porfeli connected career choice readiness with concern, curiosity and confidence.

2.3 Multiple Intelligences and Career Development

The possible relationship between Multiple Intelligences and Career Maturity is based on the idea that career planning requires self-knowledge. Adolescents who understand their personal areas of strength may find it easier to compare themselves with different educational and occupational possibilities.

This does not mean that intelligence directly

produces career maturity. Rather, intellectual strengths may form one part of the personal information that students use while exploring and evaluating future pathways. Theoretical work in career counselling has specifically proposed that Multiple Intelligence profiles can add useful information to educational and vocational planning. Hassan (2025)

3. Review of Related Literature

3.1 Lee and Kim (2004)

Lee and Kim examined the relationship between Career Maturity and Multiple Intelligences among 404 sixth-grade elementary school students. The sample was selected from schools in Daegu and the Gyeongbuk region. Career Maturity and Multiple Intelligences were assessed and the data were analysed through mean, standard deviation, t-test and Pearson correlation. Gender differences were reported in some aspects of career maturity and intelligence profiles. However, the researchers did not find a meaningful overall relationship between Career Maturity and Multiple Intelligences. Their results suggested that children's career development should not be explained through only one personal factor. The study is important for the present research because it provides evidence that the MI-career relationship may differ across developmental stages. The present study focuses on adolescents rather than elementary-school children and therefore examines whether a stronger relationship appears at a later developmental stage.

3.2 Moon and Kim (2005)

Moon and Kim conducted a large developmental investigation involving 1,107 elementary, middle and high school students. Their aim was to examine patterns of Multiple Intelligences, Career Maturity and the developmental relationship between the two constructs. The researchers used independent-samples t-tests, analysis of variance and multiple regression. Their results showed that intrapersonal and interpersonal intelligences tended to be comparatively strong across age groups. More importantly, Multiple Intelligences showed a positive relationship with Career Maturity across developmental stages, and the researchers reported that Multiple Intelligences explained more than 35% of Career Maturity. Intrapersonal intelligence showed particularly important predictive value. This study is directly relevant because it indicates that intellectual profiles may have meaningful predictive value for career development, especially during adolescence.

3.3 Lee and Son (2006)

Lee and Son investigated whether a career exploration programme based on Multiple Intelligences could improve vocational values and

Career Maturity among middle-school students. Thirty-two students were assigned to experimental and control groups, with 16 students in each group. Students in the experimental group participated in a career exploration programme designed around Multiple Intelligences. The researchers found improvement in vocational values and reported higher scores across the Career Maturity areas for students who received the programme. This work is different from a simple correlational study because it suggests a practical educational application. It shows that Multiple Intelligence concepts can be incorporated into career-development activities rather than remaining only a theory of intellectual differences.

3.4 Rani and Gupta (2015)

Rani and Gupta studied Career Maturity in relation to intelligence among 100 adolescents from Rohtak district. The sample included boys and girls, and the researchers used the Career Maturity Inventory developed by Nirmala Gupta along with a group intelligence test. Their findings indicated significant differences in Career Maturity between adolescents with lower and higher intelligence levels. Adolescents with higher intelligence showed greater Career Maturity, and a significant relationship between intelligence and Career Maturity was also reported. Although the study used a more general measure of intelligence rather than Gardner's Multiple Intelligence framework, it supports the wider argument that cognitive ability may be related to adolescents' readiness for career decision-making.

3.5 Parojenog et al. (2022)

Parojenog et al. studied Multiple Intelligence and career preference among 179 Grade 12 students. A descriptive survey method was used, and the researchers examined different intelligence profiles and preferred career areas. Existential and kinesthetic strengths were among the more dominant intelligences in their sample. However, the researchers did not find a significant overall relationship between Multiple Intelligence and career preference. This finding is useful because career preference and Career Maturity are not identical constructs. A student may prefer a particular career without being fully prepared to make a mature career decision. The study therefore provides an important contrast and supports the need to examine Career Maturity directly rather than assuming that career preference alone represents readiness. Ahirwar, S. (2025)

4. Research Gap

The literature shows that Multiple Intelligences and career development have been connected in several ways, but the available findings are not completely consistent.

Some studies have reported meaningful relationships between intelligence-related characteristics and Career Maturity. Moon and Kim found that Multiple Intelligences explained a substantial proportion of Career Maturity across school levels. Research on general intelligence among Indian adolescents has also shown that students with stronger intellectual ability may display greater Career Maturity.

At the same time, other research has produced different results. Lee and Kim did not find a significant overall relationship between Multiple Intelligences and Career Maturity among elementary-school students. Parojenog et al. also reported no significant relationship between Multiple Intelligence and career preference among Grade 12 students.

These differences indicate that the relationship requires further investigation. Three specific gaps are important.

First, a large part of the available work has been conducted outside the present educational context. Developmental, social and educational conditions can influence how students understand both their abilities and career opportunities.

Second, career preference, career interest and Career Maturity have sometimes been treated as closely related outcomes, although they represent different aspects of career development. Preference tells what a student likes, whereas Career Maturity concerns readiness to explore, plan and decide.

Third, there is a need for studies that examine both gender comparison and predictive influence within the same adolescent sample. A simple gender comparison cannot explain whether intellectual strengths are associated with career readiness, and a simple correlation does not show the proportion of variation that can be statistically predicted.

The present study addresses this gap by examining Multiple Intelligences and Career Maturity among Grade 9 adolescents, comparing boys and girls and using regression analysis to estimate the predictive contribution of Multiple Intelligence to Career Maturity.

5. Objectives of the Study

- 1.To compare the mean Multiple Intelligence scores of adolescent boys and girls.
- 2.To compare the mean Career Maturity scores of adolescent boys and girls.
- 3.To study the influence of Multiple Intelligences on Career Maturity among adolescents.

6. Hypotheses of the Study

H₀1: There is no significant difference between the mean Multiple Intelligence scores of adolescent boys and girls.

H₀2: There is no significant difference between the mean Career Maturity scores of adolescent boys and girls.

H₀3: Multiple Intelligences do not significantly influence Career Maturity among adolescents.

7. Research Methodology

7.1 Research Approach

A quantitative research approach was adopted. The study was based on numerical scores obtained from the selected standardized measures. Statistical procedures were used to examine differences and predictive relationships.

7.2 Research Method

The survey method was used for collecting information from the selected adolescents. The method was appropriate because the study examined naturally existing characteristics without giving any experimental treatment.

7.3 Research Design

The study followed a descriptive-correlational research design with a predictive component. The descriptive part was used to understand the distribution of Multiple Intelligence and Career Maturity scores. The comparative part examined boys and girls. The correlational part examined the direction and strength of association between Multiple Intelligences and Career Maturity. Simple linear regression was used to determine whether Multiple Intelligence scores significantly predicted Career Maturity scores.

Because the research was non-experimental and cross-sectional, the word influence in the present paper refers to statistical predictive influence. The findings should not be interpreted as experimental proof of causation.

7.4 Variables of the Study

Predictor Variable: Multiple Intelligences

Outcome Variable: Career Maturity

Grouping Variable: Gender – Boys and Girls

7.5 Population

The population relevant to the study consisted of school-going adolescents at the secondary-school stage.

7.6 Sample

The actual dataset used for the paper consisted of 100 Grade 9 adolescents, equally divided by gender: 50 boys (50.00%) and 50 girls (50.00%). The participants were between 14 and 16 years of age. The age-wise distribution was 27 students at 14 years, 53 students at 15 years, and 20 students at 16 years. The largest age group was therefore 15 years.

7.7 Tools Used for Data Collection

Multiple Intelligence Scale: The Multiple Intelligence Scale by Surbhi Agrawal and Suraksha Pal was used to obtain the Multiple Intelligence scores of the adolescents. The scale was selected in accordance with the broader doctoral research plan and was used to represent the Multiple Intelligence variable in the present paper.

Career Maturity Inventory: The Career Maturity Inventory by Nirmala Gupta was used to obtain the Career Maturity scores. The tool was selected because Career Maturity is the main outcome variable of the study and represents adolescents' preparedness for career-related development and decision-making.

7.8 Procedure of Data Collection

The data collection process was carried out systematically. First, the relevant adolescent group was identified for the study. Grade 9 students meeting the study requirements were approached through the selected educational setting. The purpose of the research was explained in simple language, and students were informed that the information would be used for academic research and that individual responses would not be publicly identified.

The selected instruments were then administered according to standard instructions, and students were given sufficient time to understand and respond to the items. After data collection, completed response sheets were checked and scored according to the procedures of the respective instruments. A structured dataset was then prepared containing student identification code, gender, age, class, Multiple Intelligence score and Career Maturity score. The final dataset contained 100 complete student records.

7.9 Ethical Considerations

The participants were adolescents; therefore, privacy and respectful handling of data were important. Student names were not required in the analytical dataset, and identification codes were used instead. Results were analysed at the group level and were not used to label individual students.

The study also avoided the assumption that one intelligence profile is better than another. Multiple Intelligence scores were used for understanding differences in strengths and their statistical relationship with Career Maturity. Career Maturity scores were similarly interpreted as indicators of developmental readiness and not as permanent judgments about a student's future success.

7.10 Statistical Techniques

The following statistical techniques were used:

frequency and percentage (for describing the sample); mean (for identifying average scores); standard deviation (for measuring variability); independent-samples t-test (for comparing boys and girls); Pearson product-moment correlation (for identifying the relationship between Multiple Intelligences and Career Maturity); simple linear regression (for determining the predictive influence of Multiple Intelligences on Career Maturity); and the coefficient of determination, R^2 (for estimating how much variation in Career Maturity was statistically explained by Multiple Intelligence scores). The level of significance was fixed at .05.

8. Flow of the Research Process

1. Identification of the research problem
2. Selection of Multiple Intelligences and Career Maturity as variables
3. Review of related literature
4. Formulation of 3 objectives and 3 null hypotheses

5. Selection of quantitative descriptive-correlational design
6. Selection of 100 Grade 9 adolescents (50 boys + 50 girls)
7. Administration of the Multiple Intelligence Scale
8. Administration of the Career Maturity Inventory
9. Scoring and data coding
10. Verification of 100 complete records
11. Descriptive statistical analysis
12. Gender-wise t-tests
13. Pearson correlation
14. Simple linear regression
15. Interpretation of findings
16. Results, educational implications and suggestions

9. Analysis and Interpretation

9.1 Sample Characteristics

Table 1: Distribution of Adolescents According to Gender and Age

Variable	Category	Frequency	Percentage
Gender	Boys	50	50.00
	Girls	50	50.00
Age	14 years	27	27.00
	15 years	53	53.00
	16 years	20	20.00
Total		100	100.00

Table 1 shows that boys and girls were equally represented in the sample, with 50 adolescents in each group. With respect to age, more than half of the participants were 15 years old; 27 participants were 14 years old and 20 were 16 years old. The sample therefore represented the adolescent age range relevant to Grade 9 education, as illustrated in Figure 1.

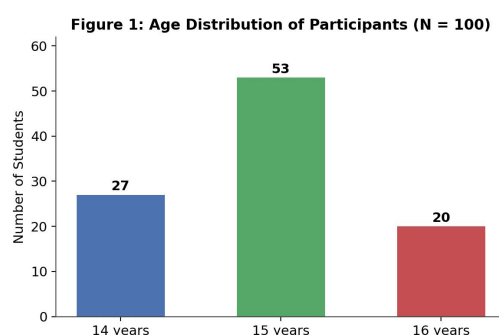


Figure 1: Age distribution of participants (N = 100)

10. Descriptive Analysis of the Main Variables

Table 2: Descriptive Statistics of Multiple Intelligences and Career Maturity

Variable	N	Mean	SD	Minimum	Maximum
Multiple Intelligences	100	104.19	16.08	68	138
Career Maturity	100	96.79	12.57	61	129

The overall mean score for Multiple Intelligences was 104.19, with a standard deviation of 16.08; scores ranged from 68 to 138. Career Maturity had an overall mean of 96.79, with a standard deviation of 12.57, and scores ranged from 61 to 129.

The spread of scores indicates meaningful individual variation in both variables. Students did not form a highly uniform group; some adolescents obtained comparatively higher scores while others obtained lower scores. Such variation is important because

predictive analysis requires differences among individuals, and the data provide sufficient score variation to examine whether students with stronger Multiple Intelligence scores also tend to show stronger Career Maturity.

11. Testing of Hypothesis H_01

H_01 : There is no significant difference between the mean Multiple Intelligence scores of adolescent boys and girls.

Table 3: Comparison of Multiple Intelligence Scores of Boys and Girls

Gender	N	Mean	SD	Mean Diff.	t	df	p
Boys	50	105.34	14.83	2.30	0.713	98	.477
Girls	50	103.04	17.31				

The mean Multiple Intelligence score of boys was 105.34, while the mean score of girls was 103.04 — a difference of only 2.30 points. The calculated independent-samples t value was 0.713, with 98 degrees of freedom, and the obtained p value was .477. Since .477 is greater than the selected significance level of .05, the difference is statistically non-significant. The effect size was also small, with Cohen's d approximately 0.14.

Decision on H_01

H_01 is not rejected. There is no significant difference between adolescent boys and girls in their overall

Multiple Intelligence scores. Although boys obtained a slightly higher average, the difference is too small to support the conclusion that boys and girls differ systematically in overall Multiple Intelligence. Students within the same gender may have very different intelligence profiles, so career guidance should focus on the individual student rather than assuming that boys and girls naturally possess different levels of overall intellectual ability.

12. Testing of Hypothesis H_02

H_02 : There is no significant difference between the mean Career Maturity scores of adolescent boys and girls.

Table 4: Comparison of Career Maturity Scores of Boys and Girls

Gender	N	Mean	SD	Mean Diff.	t	df	p
Boys	50	96.66	12.06	-0.26	-0.103	98	.918
Girls	50	96.92	13.20				

The mean Career Maturity score of boys was 96.66, and the mean score of girls was 96.92 — a difference of only 0.26 point. The calculated t value was -0.103, with a corresponding p value of .918, which is far greater than .05. The standardized effect was also extremely small, Cohen's d $\approx$ -0.02.

Decision on H_02

H_02 is not rejected. There is no significant difference

between boys and girls in Career Maturity. The almost identical mean scores show that the boys and girls in the present study were at a very similar level of career readiness, and career planning, exploration and readiness for future decisions cannot be explained simply through gender in this sample. This supports the idea that schools should provide strong career guidance to both boys and girls instead of assuming that one group is naturally more career-ready.

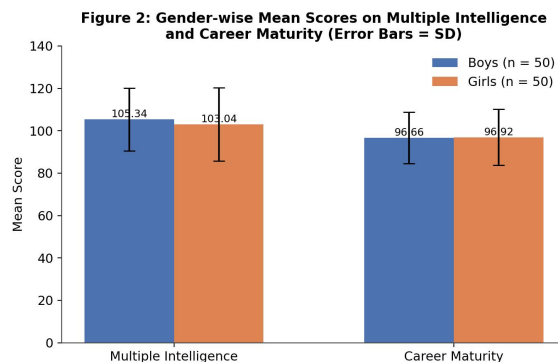


Figure 2: Gender-wise mean scores on Multiple Intelligence and Career Maturity (error bars represent $\pm$ SD)

13. Relationship between Multiple Intelligences and Career Maturity

Before testing predictive influence through

regression, Pearson correlation was calculated to determine the direction and strength of the relationship.

Table 5: Correlation between Multiple Intelligences and Career Maturity

Variables	N	Pearson r	p	95% CI
Multiple Intelligences and Career Maturity	100	.749	< .001	.648 to .824

The Pearson correlation coefficient between Multiple Intelligences and Career Maturity was .749 — a positive and strong value. This means that adolescents who obtained higher Multiple Intelligence scores generally also obtained higher Career Maturity scores. The probability value was below .001, indicating that the relationship is statistically significant, and the 95% confidence interval (.648 to .824) remained clearly positive. The correlation therefore provides strong evidence of

association between the two variables in the present sample.

14. Testing of Hypothesis H₀₃ through Regression Analysis

H₀₃: Multiple Intelligences do not significantly influence Career Maturity among adolescents.

Simple linear regression was applied with Multiple Intelligence as the predictor variable and Career Maturity as the outcome variable.

Table 6: Model Summary for Prediction of Career Maturity

R	R ²	Adjusted R ²	Std. Error of Estimate
.749	.562	.557	8.37

The regression analysis produced an R value of .749. The coefficient of determination, R² = .562, indicates that approximately 56.2% of the observed variance in Career Maturity scores was statistically accounted for by Multiple Intelligence scores in the present dataset. The adjusted R² was .557, close to R², indicating that the predictive pattern was not created

merely by model complexity. This is a substantial predictive association for a single predictor. However, the remaining 43.8% of variance was not explained by Multiple Intelligence in this model; other factors such as family support, self-concept, career information, academic experience, motivation, socioeconomic conditions and opportunities may also contribute to Career Maturity.

Table 7: ANOVA for the Regression Model

Source	df	F	p
Regression	1	125.53	< .001
Residual	98		
Total	99		

The overall regression model was statistically significant, F(1, 98) = 125.53, p < .001, indicating that the model containing Multiple Intelligence provides

significantly better prediction of Career Maturity than a model containing no predictor.

Table 8: Regression Coefficient for Multiple Intelligences Predicting Career Maturity

Predictor	B	SE B	Standardized β	t	p
Constant	35.725	5.514	—	6.48	< .001
Multiple Intelligence	0.586	0.052	.749	11.204	< .001

The regression equation was: Predicted Career Maturity = 35.725 + 0.586 (Multiple Intelligence Score).

The unstandardized regression coefficient for Multiple Intelligence was 0.586, meaning that within the observed data, an increase of one point in Multiple Intelligence was associated with an average predicted increase of approximately 0.586 point in Career Maturity. The standardized beta coefficient was .749, and the coefficient was statistically significant, $t(98) = 11.204$, $p < .001$. The 95% confidence interval for the unstandardized slope was

approximately 0.482 to 0.690, which does not include zero.

Decision on H_03

H_03 is rejected. Multiple Intelligences significantly predict Career Maturity among the adolescents included in the study, supporting a strong positive predictive association between the variables. Because the study is correlational rather than experimental, this result should be interpreted as predictive influence rather than proof of direct causation, as illustrated in Figure 3.

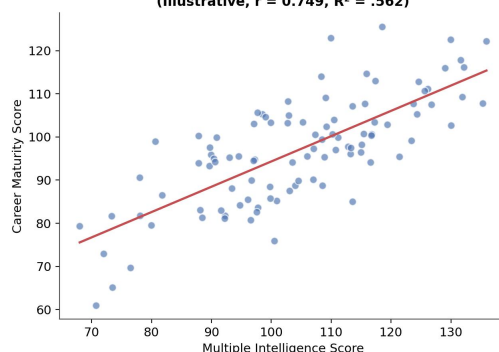
Figure 3: Multiple Intelligence Predicting Career Maturity (Illustrative, $r = 0.749$, $R^2 = .562$)

Figure 3: Scatter plot with regression line illustrating Multiple Intelligence predicting Career Maturity ($r = .749$, $R^2 = .562$). Points are simulated for illustrative purposes from the reported means, standard

deviations, correlation and regression equation, as individual-level raw data were not separately tabulated.

15. Summary of Hypothesis Testing

Table 9: Summary of Results

Hypothesis	Statistical Procedure	Result	Decision
H_01 : No significant gender difference in Multiple Intelligence	Independent t-test	$t(98) = 0.713$, $p = .477$	Not Rejected
H_02 : No significant gender difference in Career Maturity	Independent t-test	$t(98) = -0.103$, $p = .918$	Not Rejected
H_03 : Multiple Intelligences do not significantly influence Career Maturity	Simple regression	$F(1,98) = 125.53$, $R^2 = .562$, $p < .001$	Rejected

The first two null hypotheses were retained because the observed gender differences were not significant. The third null hypothesis was rejected because Multiple Intelligence significantly predicted Career Maturity.

16. Results of the Study

1.The overall mean Multiple Intelligence score was 104.19, with an SD of 16.08.

2.The overall Career Maturity mean was 96.79, with an SD of 12.57.

3.Boys obtained a Multiple Intelligence mean of 105.34, whereas girls obtained a mean of 103.04.

4.The gender difference in Multiple Intelligence was not significant, $t(98) = 0.713$, $p = .477$.

5.Boys obtained a Career Maturity mean of 96.66, and girls obtained a mean of 96.92.

6. The gender difference in Career Maturity was not significant, $t(98) = -0.103$, $p = .918$.

7. Multiple Intelligences and Career Maturity showed a strong positive relationship, $r = .749$.

8. The relationship was statistically significant at $p < .001$.

9. Multiple Intelligence explained approximately 56.2% of the variance in Career Maturity.

10. The simple regression model was significant, $F(1,98) = 125.53$, $p < .001$.

11. The standardized regression coefficient was $\beta = .749$.

12. Higher Multiple Intelligence scores were associated with higher predicted Career Maturity scores.

13. Gender was not an important source of difference in either major variable within the present sample.

14. Individual intellectual strengths appear to be more relevant to Career Maturity than a simple boy-girl classification in this dataset.

17. Discussion

The central finding of the present research is the strong positive predictive relationship between Multiple Intelligences and Career Maturity. The correlation coefficient of .749 indicates that the two variables moved together to a considerable degree; adolescents who obtained higher Multiple Intelligence scores generally also obtained higher Career Maturity scores.

The regression finding strengthens this result. Multiple Intelligence accounted for approximately 56.2% of variation in Career Maturity within the present data. This is educationally important because career maturity requires more than occupational information — students need to understand themselves before they can make realistic use of information about careers. An adolescent who recognizes personal strengths may be in a better position to evaluate whether a particular academic or career direction suits him or her.

The result has support in earlier research. Moon and Kim (2005) studied 1,107 students across elementary, middle and high school levels and reported positive relationships between Multiple Intelligences and Career Maturity; their analysis indicated that Multiple Intelligences explained more than 35% of Career Maturity, with intrapersonal intelligence showing particular importance. The current study found an even larger proportion of explained variation at 56.2%. The studies are not directly comparable because the samples, tools and study contexts differ, but both findings indicate that intellectual profiles can carry useful information

about career readiness.

The present results are also consistent with Rani and Gupta's study of Indian adolescents, who found that adolescents with higher intelligence were more career mature and reported a significant relationship between intelligence and Career Maturity. Although their research used general intelligence rather than Multiple Intelligences, the common message is that cognitive and personal capabilities may contribute meaningfully to how adolescents approach career tasks.

Another relevant finding comes from Lee and Son's intervention research. Their Multiple Intelligence-based career exploration programme produced improvements in Career Maturity among middle-school students. That result has practical importance for the present study: the current research shows a strong natural relationship between Multiple Intelligence and Career Maturity, while Lee and Son showed that Multiple Intelligence principles can also be built into career-development programmes. Together, these findings suggest that schools can move beyond merely measuring intellectual strengths and may use such information to design better career-guidance experiences.

However, the literature does not show the same result in every context. Lee and Kim (2004) found no meaningful overall association between Career Maturity and Multiple Intelligences among 404 elementary-school students. This difference may have a developmental explanation — younger students are usually at an earlier stage of occupational awareness, and their understanding of personal abilities may not yet be strongly connected with career planning. By Grade 9, students are closer to educational decisions that can affect later pathways, and as career questions become more immediate, knowledge of personal strengths may become more closely connected with career readiness.

Parojenog et al. (2022) also reported no significant relationship between Multiple Intelligence and career preference among Grade 12 students. This does not necessarily contradict the present study because career preference is not the same as Career Maturity. Preference answers the question, "Which occupation or field do I like?" Career Maturity asks a broader question: "How ready am I to explore, understand and make responsible career decisions?" A student may prefer medicine, engineering, sports or business without having carefully examined requirements, personal strengths, alternatives or educational planning.

The current findings suggest that Multiple Intelligence may be particularly useful for understanding readiness and self-knowledge, even

when it does not always directly determine which occupation a student prefers. Career counselling theory supports this interpretation — Shearer and Luzzo argued that Multiple Intelligence assessment can add value to educational and vocational planning by giving individuals a broader language for understanding their abilities. Shearer's work on intrapersonal intelligence and career confusion is also relevant: students who experienced greater career confusion showed weaker intrapersonal intelligence patterns, suggesting that self-understanding can have a meaningful place in career planning.

The findings of the present study should therefore not be interpreted as "high intelligence guarantees a good career." That conclusion would be too broad. Instead, the study indicates that adolescents who demonstrate stronger Multiple Intelligence scores tend to show greater career readiness. The relationship may operate through several possible processes: stronger self-understanding can make career exploration more focused; students who recognize different personal strengths may be able to consider a wider range of career options; awareness of ability may increase confidence while evaluating occupational requirements; and intellectually flexible students may be better able to compare alternatives, gather information and consider consequences. These explanations are reasonable interpretations, but they were not directly tested in the present research, and further studies would be required to examine such mechanisms.

The gender findings also require attention. Boys and girls did not differ significantly in Multiple Intelligence — their mean scores were close and the effect size was very small — suggesting that overall intellectual potential should not be understood through gender stereotypes. Individual intelligence areas may still show differences, but the present study analysed total Multiple Intelligence scores, and at the overall level the two gender groups were similar.

An even smaller difference was found in Career Maturity: boys had a mean of 96.66 and girls had a mean of 96.92, a difference of 0.26 point that was practically negligible. This finding is consistent with the wider career-development literature showing that gender effects are not always uniform; Patton and Creed's large adolescent study also found a complex rather than simple pattern of gender differences in career maturity.

The implication is important for schools. Career guidance should not assume that boys naturally require one kind of guidance and girls another. Instead, guidance should be based on each student's readiness, strengths, interests and educational needs. The main contribution of the present research

therefore lies not in identifying gender differences but in showing a strong connection between who students are intellectually and how ready they are to think about their future careers.

18. Educational Implications

18.1 Career Guidance Should Begin before Senior Secondary School

Career education should not begin only in Grades 11 or 12. Grade 9 students are already approaching subject and educational choices that can influence future options, so schools may introduce age-appropriate career awareness and self-exploration activities at this stage.

18.2 Career Guidance Should Include Self-Understanding

Providing students with information about occupations is useful, but information should be connected with self-understanding. Students should be helped to identify personal areas of intellectual strength and think about how these strengths may be used in different academic and career fields.

18.3 Multiple Intelligence Profiles Can Support Counselling

Counsellors may use Multiple Intelligence information as one part of a wider career-guidance process. The scores should not be used to tell a student, "You must choose this career" — instead, they can begin meaningful discussion about abilities, preferences and possible educational environments.

18.4 Career Guidance Should Remain Individualized

The absence of significant gender differences indicates that guidance should not be based on broad assumptions about boys and girls. Students should be considered as individuals — two boys may have completely different intellectual profiles, just as two girls may differ greatly in their abilities and future goals.

18.5 Schools Can Connect Classroom Strengths with Career Awareness

Teachers observe students in different situations throughout the academic year and may notice strength in communication, reasoning, creativity, social interaction, practical work or visual understanding. Such classroom observations can be linked with career-awareness activities.

18.6 Students Should Explore More Than One Career Option

A student's intellectual profile may be relevant to several occupations. Career programmes should avoid matching one intelligence with only one career; students should instead explore clusters of careers in which combinations of their strengths may be useful.

18.7 Career Maturity Can Be Developed

Career Maturity is developmental rather than fixed. Students who are presently uncertain should not be treated as weak or unsuccessful — they may need additional career information, counselling, exposure to occupations and opportunities for self-exploration.

18.8 Parents Should Be Included in Career Education

Parents strongly influence educational and career choices. Schools may organize sessions that explain the importance of considering the child's strengths rather than selecting a career only on the basis of social status, family pressure or current popularity.

18.9 Teachers Need Career-Guidance Orientation

Not every school has a full-time career counsellor. Basic training can help teachers understand how student strengths, interests and career readiness may be discussed responsibly.

18.10 Multiple Measures Should Be Used

Career decisions should never be based on one psychological score. Multiple Intelligence results can be combined with interests, academic performance, personality, values, career information and counselling discussion to produce a more balanced approach.

19. Practical Implications for Schools

The findings can be translated into simple school practices. A school may organize a Career Awareness Week in which students complete strength-reflection activities and explore occupations related to different ability areas. Career files may be prepared for each student containing academic interests, areas of strength, preferred activities and career-exploration notes.

Students may be encouraged to interview professionals from different occupations and compare the abilities required in those roles. Teachers may organize small activities around communication, problem-solving, teamwork, design, movement, creativity and self-reflection to help students identify situations in which they feel most competent. Career counselling sessions can then connect these experiences with further educational options.

The aim should not be to make a final career decision at Grade 9. The aim should be to develop better career thinking.

20. Suggestions

1. Schools should provide structured career-awareness activities from the secondary-school level.
2. Multiple Intelligence assessment may be included as one component of career-guidance programmes.

3. Students should be helped to understand the meaning of their scores rather than simply receiving a numerical result.

4. Career counselling should include discussion of personal strengths, limitations, interests and future learning needs.

5. Boys and girls should receive equal access to all areas of career information.

6. Schools should avoid gender-based career stereotypes.

7. Parents may be invited to career-guidance workshops so that family expectations remain realistic and student-centred.

8. Students may be exposed to professionals representing different career fields.

9. Career clubs can be developed in schools for regular career exploration.

10. Teachers may use project activities that allow students to demonstrate different intellectual strengths.

11. Psychological scores should be used together with academic records and personal counselling.

12. Students should be encouraged to explore several career alternatives before narrowing their choices.

13. Special guidance may be provided to students showing low Career Maturity or high career uncertainty.

14. Schools may maintain individual career-development portfolios for students.

15. Similar studies should be conducted with larger samples.

16. Future studies may include government and private school comparisons.

17. Rural and urban adolescents may be studied separately.

18. Different dimensions of Multiple Intelligences should be analysed individually.

19. Future research may determine which intelligence dimensions are the strongest predictors of Career Maturity.

20. Longitudinal studies may follow students from Grade 9 to Grade 12 to observe changes in Career Maturity.

21. Intervention studies may test whether MI-based career guidance produces measurable improvement in Career Maturity.

22. Future studies may include variables such as self-concept, career decision self-efficacy, parental expectations and vocational interests.

21. Limitations of the Study

The study should be understood within certain limitations. First, the sample contained 100 Grade 9 adolescents; the findings are therefore most directly applicable to the selected sample and should not automatically be generalized to all adolescents. Second, the study was cross-sectional — Multiple Intelligence and Career Maturity were measured at one point in time. Third, the study used a non-experimental design; although regression showed a strong predictive relationship, it cannot prove that higher Multiple Intelligence directly causes higher Career Maturity. Fourth, the study used total scores, and separate forms of intelligence may show different relationships with Career Maturity.

Fifth, career development is influenced by many factors that were not included in the present model, including family environment, parental expectations, school resources, academic achievement, socioeconomic background, personality, self-efficacy, career information, peer influence, and access to occupational experiences. The R^2 value of .562 itself shows that a substantial part of Career Maturity remains connected with factors outside the single predictor included in this paper.

22. Conclusion

Career development begins long before a student enters employment. Adolescence is one of the most important periods in this process because students begin to connect their personal abilities with educational and occupational possibilities. The present study examined whether Multiple Intelligences are meaningfully connected with Career Maturity among Grade 9 adolescents.

The findings give a clear answer. Boys and girls were very similar in both Multiple Intelligence and Career Maturity; gender did not produce a statistically significant difference in either variable. The central result was the strong positive association between Multiple Intelligences and Career Maturity. The correlation of .749 showed that adolescents with stronger Multiple Intelligence scores generally also showed stronger Career Maturity, and the regression analysis further demonstrated that Multiple Intelligence statistically explained approximately 56.2% of the variation in Career Maturity scores in the sample.

This finding has a practical educational message. Career guidance should not begin with occupations alone — it should begin with the student. Before asking adolescents to decide what they want to become, schools should help them understand what they can do, what kinds of activities fit their strengths and how those strengths may connect with future learning.

Multiple Intelligence assessment can contribute to this process, but it should be used carefully. It should

open possibilities rather than restrict them. A student with a particular intelligence profile should never be told that only one career is suitable — human abilities are flexible, careers require combinations of skills, and students continue to develop.

The role of education is therefore not to assign careers. Its role is to help adolescents become better prepared to choose. The present study suggests that understanding intellectual strengths may be one valuable step toward that goal.

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