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Intellectual, Emotional, Spiritual, and Adversity Quotients: Their Impact on Cognitive Performance and Interpersonal Communication of Office Management Students

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ABSTRACT

The development of the digital era requires vocational students, especially in the field of office management, to have cognitive competencies and interpersonal communication skills that not only develop in parallel but also are synergistically integrated. The modern workplace increasingly emphasizes the mastery of soft skills such as critical thinking, complex problem solving, collaboration, and skills in building productive social networks. This study aims to analyze the influence of intellectual quotient (IQ), emotional quotient (EQ), spiritual quotient (SQ), and adversity (AQ) on the cognitive performance (CP) and interpersonal communication (IC) of office management students. This study uses a quantitative method with a Partial Least Squares Structural Equation Modelling (PLS-SEM) approach with a sample of 151 office management students. The results show that IQ predominantly influences CP (β=0.432, p<0.001), followed by EQ (β=0.274, p=0.003), while SQ and AQ are not significant. In IC, EQ (β=0.345, p<0.001) and SQ (β=0.279, p<0.001) were the main predictors, while IQ had a marginal effect (β=0.156, p=0.069) and AQ was not significant. The R^2 values of 0.518 (CP) and 0.605 (IC) indicated moderate predictive power. These findings emphasize the importance of IQ-based competency development strategies for CP as well as EQ-SQ integration for IC, with implications for the development of a holistic vocational education curriculum.

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1. INTRODUCTION

The development of the digital era and the acceleration of the transformation from Industry 4.0 to Society 5.0 require vocational students, particularly in office management, to possess cognitive competencies and interpersonal communication skills that not only develop in parallel but also synergistically integrate. These competencies are necessary not only to support academic performance but also to ensure adaptive work readiness to technological change, organizational complexity, and the demands of the global job market (Binkley et al., 2012; Forum, 2023). The modern workplace increasingly emphasizes mastery of soft skills such as critical thinking, complex problem solving, collaboration, and productive social networking skills (Alonso-Almeida et al., 2017).

Research on vocational educations shows that vocational programs play a vital role in preparing yung people to face the challenges of society 5.0 by equipping them with practical skills and enhancing their readiness to enter a rapidly changing workforce, including the development of relevant soft skills in communication and collaboration (Febrian et al., 2024, Kholqiyah and Tusyanah, 2025). The society 5.0 era challenges educational institutions to produce graduates who are not only technically proficient but also highly competence in soft skills such as critical thinking, communication, collaboration, and emotional intelligence, which are increasingly decisive for employability and career sustainability (Wynda, 2025). Furthermore, empirical evidence indicates that soft skils including critical thinking, complex problem solving, interpersonal communication, and teamwork have become core competencies sought by employers and serve as key indicators of vocational students' work readiness in a competitive global context (Kandoli, 2025; Alonso-Almeida et al., 2017).

Cognitive performance includes the ability to process information, analyze problems, and make strategic decisions, is a fundamental component in supporting successful learning and the implementation of complex administrative tasks (Anderson, 2010). However, numerous studies have shown that quotient (IQ) explains only a small portion of the variation in an individual's long-term success. Non-cognitive factors such as emotional quotient (EQ), spiritual quotient (SQ), and adversity quotient (AQ) have been shown to play an important role in complementing and strengthening these cognitive abilities (Serrat, 2017; Shahhosseini & Daud ., 2018; MacCann et al., 2019).

Emotional quotient (EQ) serves as the foundation for social skills, enabling individuals to recognize, understand, and regulate their own and others' emotions. A strong EQ fosters the ability to communicate effectively, build healthy collaborative relationships, and manage conflict constructively (Miao et al., 2017). Furthermore, cross-disciplinary research shows that EQ not only influences interpersonal relationships but also improves cognitive processes such as decision-making and problem-solving (Meyer, 2014).

Meanwhile, spiritual quotient (SQ) provides a framework of values, meaning, and purpose in life that serves as an ethical guideline in decision-making and stress management (Zohar & Marshall, 2000). High SQ helps students build moral resilience and deep empathy, thereby strengthening the quality of meaningful interpersonal communication (Petchsawang & Duchon, 2019).

Adversity quotient (AQ) as the ability to persist, rebound, and adapt in the face of adversity, is becoming increasingly relevant in an era of uncertainty. AQ has been shown to help individuals maintain motivation and focus in stressful situations (Stoltz, 2019; Anju & Sahoo, 2023). However, previous research findings show that the role of AQ in formal academic contexts still varies, thus requiring further study (Thalib et al., 2024; Sofya et al., 2025).

Previous research has tended to examine IQ, EQ, SQ, and AQ separately, without integrating all four into a comprehensive analytical framework that considers the interactions

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between these dimensions. However, in vocational education, which focuses on employability skills, an integrative approach is crucial for understanding how the combination of cognitive and non-cognitive factors contributes to students' cognitive performance and interpersonal communication (Goleman, 2020; Gardner, 2011). Therefore, this study aims to analyze the simultaneous influence of the four dimensions of quotient on the two main competencies of final semester office management students in order to provide a scientific basis for the development of learning strategies that are effective, contextual, and responsive to the needs of today's job market.

2. THEORETICAL FRAMEWORK

2.1. Grand Theory

This research is based on the Multiple Quotients Theory developed by Gardner (2011), which assumes that "it is not how smart you are that matters, but how you are smart", emphasizing that individual success is not solely determined by logical-mathematical quotient (IQ), but also by various other complementary forms of quotient. This framework is relevant in the context of vocational education because it places cognitive and non-cognitive skills as integral parts of work readiness. This theory is reinforced by the emotional quotient model presented by Goleman (2020), which assumes that "emotional competencies are not innate talents but learnt capabilities that must be worked on and developed to achieve outstanding performance." Similarly, Spiritual quotient presented by Zohar & Marshall (2012) assumes that "SQ is the ultimate quotient, which grounds the effectiveness of both IQ and EQ", as well as the Adversity Quotient concept by Stoltz (2019), which assumes that AQ is "the capacity to respond constructively to adversity and to turn obstacles into opportunities". The integration of these four dimensions of quotient provides a comprehensive conceptual framework for analyzing their contribution to the cognitive performance and interpersonal communication of students.

In addition, this research refers to the Social Cognitive Theory, which was popularized by Bandura (2012), confirming that "human functioning is a product of the interplay of personal factors, behavior, and environmental influences". In this context, IQ, EQ, SQ, and AQ are personal factors that influence behavior in the form of cognitive performance and interpersonal communication skills, which in turn are influenced by the dynamics of the academic and professional environment.

2.2. Cognitive Performance (CP)

Cognitive Performance (CP) refers to an individual's ability to perform mental processes involving the collection, processing, storage, and use of information (Anderson, 2010). Anderson confirms that "cognitive performance encompasses the mental skills necessary for acquiring knowledge and understanding through thought, experiences, and the senses." This aspect includes functions such as attention, memory, problem-solving, reasoning, and decision-making (Lezak, 2012). Lezak explains that "effective cognitive functioning is essential for adaptive behavior and successful performance in both academic and occupational settings." In the context of vocational education, CP plays a central role in completing administrative tasks, managing data, and making strategic decisions. Previous research suggests that CP is influenced by a combination of innate factors, such as intellectual capacity (innate cognitive capacity), and trainable factors, such as emotional management and resilience (Deary et al., 2010).

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2.3. Interpersonal Communication (IC)

Interpersonal Communication (IC) is defined as the process of exchanging verbal and non-verbal messages between two or more individuals with the aim of building understanding, fostering relationships, and achieving specific goals (Guerrero et al., 2017). Guerrero et al. menegaskan bahwa "effective interpersonal communication is the lifeblood of personal and professional relationships." IC depends not only on speaking skills but also on active listening skills, empathy, conflict management, and interaction management (Rubin & Martin, 1994). Rubin and Martin stated that "competence in interpersonal communication predicts satisfaction and effectiveness in diverse social contexts." In the modern workplace, IC is an important indicator of professional success because it influences team collaboration, negotiation, and customer satisfaction (Keyton, 2017). The relationship between IC and CP is reciprocal: good cognitive performance improves the quality of communication, while effective communication can enrich thinking processes and problem-solving.

2.4. Emotional quotient (EQ)

Emotional quotient (EQ) is defined as an individual's ability to recognize, understand, manage, and utilize emotions effectively in social interactions and decision-making. Goleman (2020) identified five main dimensions of EQ, namely self-awareness, self-control and regulation, motivation, empathy, and social skills. Although the initial concept of EQ was developed in the 1990s, recent studies have shown its increasing relevance in academic and professional contexts. Research by Miao et al. (2017) emphasizes that high EQ enables individuals to manage stress, maintain focus, and make rational decisions, which in turn improves cognitive performance and the effectiveness of interpersonal communication. In a teamwork context, EQ strengthens empathy and social skills, thus creating harmonious and productive work relationships.

2.5. Intellectual Quotient (IQ)

Quotient quotient (IQ) refers to an individual's general capacity to think logically, comprehend information, and solve problems analytically. Measured initially through standardized tests such as the Stanford–Binet and Wechsler Adult Intelligence Scale (WAIS), IQ has long been a leading indicator of cognitive potential. Classic studies by Neisser et al. ( ) confirm a strong relationship between IQ and academic and technical performance. Contemporary research emphasizes that IQ does not always correlate directly with interpersonal communication effectiveness, as logical quotient does not automatically encompass empathy or social skills. However, IQ remains a significant determinant in tasks that require complex analysis, data-based problem solving, and logic-based decision-making.

2.6. Spiritual Quotient (SQ)

Spiritual quotient (SQ) is understood as the capacity to access, integrate, and apply values of meaning and purpose in life, which form the basis for ethical decision-making and the construction of a life vision. This concept, initially introduced by Zohar & Marshall (2012), is now receiving renewed attention in research across fields, including education and organizational psychology. Individuals with high SQ are able to integrate values and meaning into their thinking processes, thereby improving the quality of cognitive decisions and maintaining emotional balance (Kelly & Eddie, 2020). In the context of social interactions, SQ strengthens empathy, tolerance, and authenticity, all of which contribute to deeper and more meaningful interpersonal communication (Petchsawang & Duchon, 2019).

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2.7. Adversity Quotient (AQ)

Adversity quotient (AQ) describes a person's ability to survive, recover, and adapt in the face of difficulties, obstacles, or failure. (Stoltz, 2019) formulated AQ through four main dimensions known as CORE—Control, Ownership, Reach, and Endurance. Recent research shows that individuals with high AQ tend to have strong resilience, are able to maintain focus, and demonstrate perseverance even under high pressure (Stoltz, 2019). In interpersonal communication, AQ enables one to remain calm in conflict, maintain resilient relationships, and develop trust in situations full of uncertainty.

3. METHODS

This quantitative study used the Partial Least Squares Structural Equation Modelling (PLS-SEM) approach with a sample of 151 office management students. Data were collected through a questionnaire that measured (1) independent variables (IQ with three indicators, EQ with five indicators, SQ with four indicators, and AQ with two indicators) and (2) dependent variables (cognitive performance with five indicators and interpersonal communication with four indicators). Convergent validity analysis showed that most indicators met the loading factor criteria ≥ 0.7, except for AQ3, EQ5, SQ1, and IC5, which were then removed from the final model. Hypothesis testing was conducted by bootstrapping 5000 samples at a significance level of $p<0.05$.

Table 1. Definitions and Indicators of the Variables

No	Variable	Operational Definition	Indicators	Valid Academic Sources
1	Emotional Quotient (EQ)	The ability to recognize, understand, manage, and use emotions effectively	Self-emotional awareness Emotional regulation Self-motivation Empathy Social skills	Goleman (2020). *Emotional quotient*
2	Adversity Quotient (AQ)	An individual's ability to persevere through challenges	1) Control 2) Ownership 3) Reach 4) Endurance	Stoltz (2019). *Adversity Quotient*.
3	Intellectual Quotient (IQ)	General cognitive ability, including reasoning and problem-solving	1) Verbal ability 2) Numerical ability 3) Spatial ability	Carroll (1993). *Cognitive Abilities*.
4	Spiritual Quotient (SQ)	Capacity to address problems of meaning and value	1) Self-awareness 2) Spontaneity 3) Vision & values 4) Holism 5) Moral compass	Zohar & Marshall (2012). *SQ*.
5	Cognitive Performance (CP)	Cognitive functioning across domains like	Daily task scores Midterm exam scores Final exam scores	Lezak (2012). *Neuropsychological Assessment*.

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		information processing and memory		
6	Interpersonal Communication (IC)	The exchange of verbal and nonverbal messages	1) Self-disclosure 2) Empathy 3) Social relaxation 4) Assertiveness 5) Interaction management	Guerrero et al. (2017). *Close Encounters*.

Source: processed data, 2025

4. RESULTS AND DISCUSSION

4.1 Outer Model Test (Measurement Model)

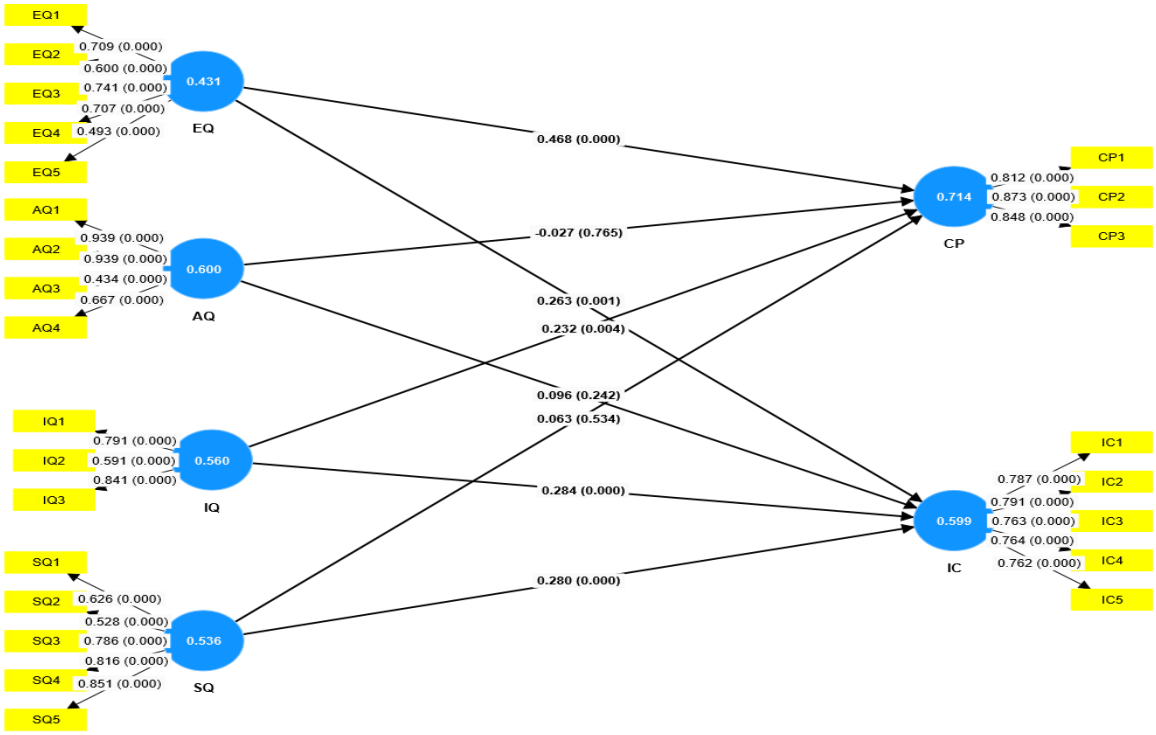

Figure 1. Outer Model Test Result

Outer model (measurement model) analysis is the initial stage in PLS-SEM, which aims to ensure that the indicators used truly measure the latent construct validly and reliably. The main objective of this analysis is to evaluate the quality of the measurement by examining convergent validity, discriminant validity, and construct reliability. Validity can be seen from the loading factors on the research indicators, as shown in Table 2.

Convergent Validity

To assess outer loading and Average Variance Extracted (AVE) values, we conducted evaluations for convergent validity. As per Ghozali (2014), observation, an indicator with an inner loading of 0.7 or above, is considered high quality. A higher outer loading value indicates a more substantial impact of the factor loading in explaining the matrix factors.

Table 2. Outer loading per the indicators of the variable

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No	Variables	Indicators	Outer Loadings	AVE	AVE After Eliminating	Notes
1	Adversity Quotient (AQ)	AQ1 <- AQ	0,939	0,5992	0,5992	Valid
		AQ2 <- AQ	0,939			Valid
		AQ3 <- AQ	0,434			Valid
		AQ4 <- AQ	0,667			Valid
2	Cognitive Performance (CP)	CP1 <- CP	0,812	0,7135	0,7135	Valid
		CP2 <- CP	0,873			Valid
		CP3 <- CP	0,848			Valid
3	Emotional Quotient (EQ)	EQ1 <- EQ	0,709	0,4309	0,5713	Valid
		EQ2 <- EQ	0,600			Invalid
		EQ3 <- EQ	0,741			Valid
		EQ4 <- EQ	0,707			Valid
		EQ5 <- EQ	0,493			Invalid
4	Interpersonal Communication (IC)	IC1 <- IC	0,787	0,5983	0,5983	Valid
		IC2 <- IC	0,791			Valid
		IC3 <- IC	0,763			Valid
		IC4 <- IC	0,764			Valid
		IC5 <- IC	0,762			Valid
5	Intellectual Quotient	IQ1 <- IQ	0,791	0,5608	0,5608	Valid
		IQ2 <- IQ	0,591			Valid
		IQ3 <- IQ	0,841			Valid
6	Spiritual Quotient (SQ)	SQ1 <- SQ	0,626	0,5357	0,5367	Valid
		SQ2 <- SQ	0,528			Valid
		SQ3 <- SQ	0,786			Valid
		SQ4 <- SQ	0,816			Valid
		SQ5 <- SQ	0,851			Valid

Source: processed data, 2025

Table 2 shows that the construct values have mostly met the criteria for convergent validity. On the variable Emotional Quotient (EQ), two indicators, namely EQ2 with outer loading 0.600 and EQ5 with outer loading 0.493, are considered to have a relatively low contribution to construct formation. Both were removed to improve model quality, in accordance with literature recommendations that set a minimum threshold for outer loading by 0.50 (Hair et al., 2019). The calculation results show that after the removal of the two indicators, the AVE value for the EQ variable increased significantly from 0.4309 to 0.5172, thus fulfilling the minimum criteria for convergent validity.

Meanwhile, the AVE values for other variables remain the same as before, namely AQ = 0.5992, CP = 0.7135, IC = 0.5983, IQ 0.5608, and SQ 0.5357, all of which are above the threshold of 0.50 and are therefore declared convergently valid. The decision to retain other indicators in the EQ that have relatively low loading values (e.g., EQ2 = 0.600) can still be justified if their theoretical relevance is strong, as explained by Goleman (2020). However, if the objective of the analysis prioritises optimising the strength of the statistical model, then removing the indicator with the next lowest loading can be considered to push the AVE EQ value beyond the required minimum limit.

Discriminant Validity

Discriminant validity evaluates whether a construct (latent variable) is statistically different from other constructs in the model. The examination must meet these thresholds:(1) HTMT

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(Heterotrait-Monotrait Ratio) value to be less than 0.90 (Hair et al., 2019). Table 3 presents the results of the discriminant validity of HTMT, confirming that the constructs are valid and statistically distinct.

Table 3. Discriminant validity of the HTMT test result

Variables	Original Sample (O)	Sample Mean (M)	2.5%	97.5%
CP <-> AQ	0.505	0.515	0.313	0.697
EQ <-> AQ	0.832	0.835	0.699	0.966
EQ <-> CP	0.848	0.841	0.738	0.957
IC <-> AQ	0.705	0.710	0.541	0.869
IC <-> CP	0.688	0.688	0.535	0.841
IC <-> EQ	0.918	0.909	0.810	1.026
IQ <-> AQ	0.782	0.789	0.614	0.950
IQ <-> CP	0.713	0.718	0.529	0.896
IQ <-> EQ	0.874	0.877	0.692	1.056
IQ <-> IC	0.926	0.932	0.793	1.058
SQ <-> AQ	0.773	0.777	0.650	0.896
SQ <-> CP	0.662	0.663	0.500	0.824
SQ <-> EQ	0.957	0.954	0.858	1.055
SQ <-> IC	0.862	0.864	0.768	0.955
SQ <-> IQ	0.918	0.925	0.767	1.068

Source: processed data, 2025

Reliability

Composite Reliability (CR) measures the internal consistency of indicators in forming a construct, where a CR value > 0.7 indicates that the indicators are reliable and consistently measure the same construct.

Table 4. Composite reliability

Variables	Composite Reliability	Cronbach's alpha	Threshold	Notes
AQ	0.847	0.750	0.7	Reliable
CP	0.882	0.799	0.7	Reliable
EQ	0.788	0.661	0.7	Reliable
IC	0.882	0.832	0.7	Reliable
IQ	0.789	0.609	0.7	Reliable
SQ	0.849	0.776	0.7	Reliable

Source: processed data, 2025

Table 4 presents the results of the Composite Reliability (CR) test, which assesses the level of internal consistency of indicators in forming a construct. In the literature, CR values exceeding the threshold of 0.70 are interpreted as evidence that the indicators consistently represent the same construct (Hair et al., 2019). The analysis shows that all constructs in this study—Adversity Quotient (AQ), Cognitive Performance (CP), Emotional Quotient (EQ), Interpersonal Communication (IC), Intellectual Quotient (IQ), and Spiritual Quotient (SQ)—achieved CR values above this threshold; thus, they can be declared to have adequate internal consistency.

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The advantage of CR compared to Cronbach's Alpha lies in its ability to take into account the weight of actual indicators (outer loadings). It does not assume equality of indicator contributions, thus producing more accurate construct reliability estimates (Henseler et al., 2015). Guide (Hair et al., 2019) also emphasized that for exploratory research, CR values between 0.60 and 0.70 are still acceptable, while values above 0.70 indicate good reliability.

Taking this into consideration, although the Intellectual Quotient (IQ) construct has a Cronbach's Alpha value slightly below the ideal limit, the strong CR values across all constructs provide an adequate basis for stating that the measurement model has met the reliability criteria. Therefore, this model is worthy of proceeding to the inner model analysis stage, or structural model analysis, in order to evaluate and test the causal relationship between latent variables that are the focus of the research.

4.2 Inner Model Test (Structural Model)

The inner model or structural model test is a statistical method used to assess how a specific construct affects a given system. This test involves the analysis of different metrics, such as R-squared and t-tests, to ascertain the statistical significance of the obtained results. By evaluating these metrics, researchers can gain insights into the impact of the construct on the system under study.

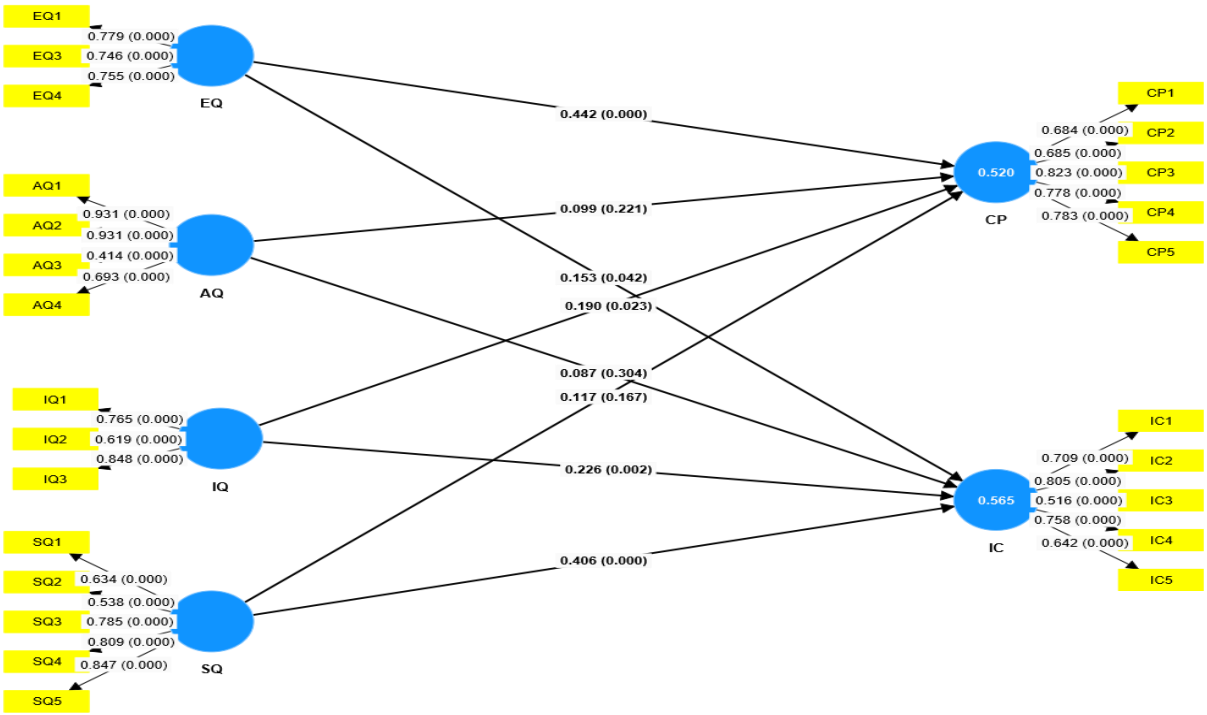

Figure 2. Inner Model

Hypothesis Testing

Hypothesis testing in this research can be seen based on p-value or t-statistics and total effect to know the impact of a variable (Kock, 2016).

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Table 5. Hypotheses Testing

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Hypotheses	Notes
EQ -> CP	0.442	0.445	0.077	5.756	0.000	H1	Accepted
AQ -> CP	0.099	0.098	0.081	1.224	0.221	H2	Rejected
IQ -> CP	0.190	0.192	0.083	2.282	0.023	H3	Accepted
SQ -> CP	0.117	0.117	0.085	1.381	0.167	H4	Rejected
EQ -> IC	0.153	0.151	0.075	2.036	0.042	H5	Accepted
AQ -> IC	0.087	0.088	0.085	1.029	0.304	H6	Rejected
IQ -> IC	0.226	0.228	0.074	3.067	0.002	H7	Accepted
SQ -> IC	0.406	0.412	0.087	4.669	0.000	H8	Accepted

Source: processed data, 2025

Table 5 presents the results of hypothesis testing, including the path coefficient (β), p-value, significance level, and the decision to accept/reject the hypothesis. Of the eight hypotheses tested, five were accepted (H1, H3, H5, H7, H8) and three were rejected (H2, H4, H6). These results indicate that the dimensions of emotional and spiritual quotient exert a dominant influence in this model, while adversity quotient does not show a significant influence.

The first hypothesis (H1), which tested the effect of Emotional Quotient (EQ) on Cognitive Performance (CP), showed highly significant results (β = 0.442, p = 0.000). This finding aligns with Goleman's (2020) theory that self-emotional awareness, emotional regulation, and social skills collectively enhance cognitive performance. These results strengthen evidence that aspects of EQ, such as self-motivation and empathy, contribute to the completion of academic tasks and exams.

The eighth hypothesis (H8) confirms the positive influence of Spiritual Quotient (SQ) on Interpersonal Communication (IC) (β = 0.406, p = 0.000). This finding supports the theory (Zohar & Marshall, 2012). Self-awareness, vision & values, and a moral compass are the foundations of authentic communication. SQ indicators such as holism and spontaneity appear to foster an individual's ability to manage social interactions (interaction management) and empathy.

The seventh hypothesis (H7) shows that Intellectual Quotient (IQ) has a significant effect on IC (β = 0.226, p = 0.002). Although Anderson (2010) emphasises IQ as a cognitive ability, such as verbal and numerical, these results indicate that analytical ability also supports communication aspects such as assertiveness and interaction management. However, its effect is weaker than that of SQ, suggesting that spiritual quotient is more crucial in interpersonal contexts.

The third hypothesis (H3) tested the effect of IQ on CP and was significant (β = 0.190, p = 0.023). This finding is consistent with the theory (Caroll, 1993) that spatial and numerical abilities contribute to academic performance, such as test scores. However, the smaller coefficients compared to EQ suggest that non-cognitive factors (such as emotional regulation) may be more important in determining daily task scores.

The fifth hypothesis (H5), which tested the relationship between EQ and IC, was also significant (β = 0.153, p = 0.042). These results reinforce the role of empathy and social skills (Guerrero et al., 2017) in building effective interpersonal communication, particularly in terms of self-disclosure and social relaxation.

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On the other hand, the second (H2) and sixth (H6) hypotheses regarding the influence of Adversity Quotient (AQ) on CP and IC were rejected ($p > 0.05$). Although Stoltz (2019) states that control and endurance are indicators of AQ, these findings indicate that resilience in the face of adversity does not directly improve cognitive or communication performance. Mediating variables such as motivation or social support may be needed to activate AQ.

The fourth hypothesis (H4) regarding the influence of SQ on CP was also insignificant ($p=0.167$). It is interesting because although SQ includes vision and moral compass aspects. These aspects do not have a direct impact on test scores or academic assignments. The implication is that spirituality may serve more as a long-term foundation than as a direct driver of performance.

Overall, these findings confirm that the emotional quotient (EQ) and meaning-in-life (SQ) dimensions are more crucial in this model than the adversity quotient (AQ). While IQ remains relevant, its influence is limited to specific aspects such as academic performance and rational communication. Future research should explore the role of mediators (such as motivation or social environment) to explain why AQ is not significant in the current model.

The R-Square

The test measures how much the endogenous variables change in response to changes in the exogenous variables. It shows the relationship between latent variables and the theory evaluated by the dependent construct. The higher the R-square (R^2) value, the better the construct. According to (Ghozali, 2014), the model is firm and good if the R-squared value is over 0.67. If it is between 0.33 and 0.67, the model is in the sufficient or moderate category. Table 6 shows the R-square (R^2) results.

Table 6. R-Square Test Results (R^2)

Variables	R-square	Adjusted R-square	Notes
Cognitive Performance (CP)	0.520	0.507	Moderate
Interpersonal Communication (IC)	0.565	0.553	Moderate

4.3 Discussion

The analysis results show that Emotional Quotient (EQ) has the most decisive influence on CP with a path coefficient of 0.442 and powerful significance ($p=0.000$). This finding indicates that the ability to recognize and manage one's emotions (self-emotional awareness and emotional regulation), accompanied by intrinsic motivation (self-motivation) and empathy, collectively makes a significant contribution to the achievement of cognitive performance. Intellectual Quotient (IQ) also shows a significant positive influence, although smaller ($\beta=0.190$, $p=0.023$), where verbal, numerical, and spatial abilities also support the completion of academic tasks. However, Spiritual Quotient (SQ) and Adversity Quotient (AQ) do not show a significant influence on CP, with p values of 0.167 and 0.221, respectively. This model is able to explain 52% of the variation in CP ($R^2=0.520$), indicating that there are still 48% of other factors outside the model that influence cognitive performance.

In the IC variable, Spiritual Quotient (SQ) emerged as the strongest predictor with a coefficient of 0.406 ($p=0.000$). Self-awareness and understanding of life values (vision & values), which are the main components of SQ, significantly encourage the formation of empathetic and open interpersonal communication (self-disclosure and empathy). Intellectual Quotient (IQ) also made a positive contribution ($\beta=0.226$, $p=0.002$), where analytical and verbal abilities helped in conveying ideas (assertiveness) and managing social interactions (interaction management). Emotional Quotient (EQ) showed a more minor but

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still significant influence (β=0.153, p=0.042), primarily through social skills and the ability to relax in social situations (social relaxation). Similar to CP, AQ did not show a significant influence on the IC model, which is able to explain 56.5% of the variation in IC (R^2=0.565), indicating that there are still 43.5% of other external factors that influence interpersonal communication.

The findings of this study reveal that Emotional Quotient (EQ) has a dominant influence on the Cognitive Performance (CP) of Office Management students in Indonesia (β = 0.442, p < 0.001). This result provides a strong theoretical basis for the model. (Goleman, 2020) about emotional quotient, particularly in the context that self-awareness and emotional regulation are key to success in completing complex administrative tasks. This theory is further strengthened by research (MacCann et al., 2019), which found that EQ contributes up to 40% to the success of managerial tasks, including in the context of office administration.

Field conditions indicate that students in this study program are often faced with office work simulations that require mature emotional management, especially when facing deadline pressure or interpersonal conflict in the simulated work environment. This finding aligns with research findings.

Intellectual Quotient (IQ) was also found to be significant, albeit with a more negligible effect (β = 0.190, p = 0.023), which is consistent with the Cattell-Horn-Carroll theory of the hierarchy of cognitive abilities. Previous research by Schmidt & Hunter (2004) confirms that IQ remains an important predictor in various types of jobs, including administrative fields, contributing approximately 20-25% to the variation in performance. However, the finding that IQ is not the strongest predictor indicates that in today's era of office automation, soft skills are becoming more crucial than purely cognitive abilities, as revealed in a recent study.

Interestingly, Spiritual Quotient (SQ) and Adversity Quotient (AQ) did not show a significant influence on CP. This finding differs from previous research. (Kelly & Eddie, 2020), which reported a positive influence of SQ on performance in several job areas, but is consistent with research (Luthans, 2007), which found that AQ was only significant in work environments with very high levels of stress. This phenomenon can be understood through the specific conditions of vocational education in Indonesia, where (1) the office management curriculum emphasizes practical skills more than spiritual development, and (2) academic challenges in vocational education environments tend to be structured and less demanding of adversity resilience than research-based education. These findings strengthen the argument (Sternberg, 2003) about the context-specificity of quotient in different educational settings.

From a teaching practice perspective, these results imply the importance of integrating emotional quotient training into the office management curriculum, particularly through project-based learning methods that simulate real-world work pressures. It needs for adjustment is further emphasized given the characteristics of Indonesian vocational students, who are often more responsive to learning approaches that involve emotional and interpersonal aspects than to conventional, cognitive-centric teaching methods.

The study also reveals a dominant influence of Spiritual Quotient (SQ) on the effectiveness of interpersonal communication of Office Management students in Indonesia, with a path coefficient of 0.406, which is highly statistically significant. This phenomenon is justified in Indonesia's unique socio-cultural characteristics, as explained in Mujiburrahman (2006) in the relationship between spirituality and communication patterns in religious communities. The self-awareness component of SQ enables individuals to adapt their communication style to local values that highly value social harmony. In contrast, the vision and values aspect provides an ethical framework for interactions.

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An in-depth study of the mechanisms of SQ influence reveals that in the collectivist Indonesian context, spiritual dimensions such as moral compass and holism act as cultural filters that regulate communication patterns. Geertz (1976), with The Study of Religion as a Cultural System, explains how internalized spiritual values shape the framework of interpretation in everyday social interactions. This finding is reinforced by studies (Magnis-Suseno, 1985), which show that the concept of "tepo seliro" (tolerance) in Javanese culture is a concrete manifestation of spirituality that is internalised in communication practices.

The dominance of SQ in the Indonesian context can also be understood through the lens of intercultural communication theory, about power distance and uncertainty avoidance. The spontaneity aspect of SQ allows for flexible communication adaptation to rigid social hierarchies, while the holism component helps navigate complex value systems. Kim's (2002) research on communication in Asia shows that societies with strong spiritual traditions tend to develop indirect and considerate communication patterns.

The pedagogical implications of these findings call for a business communication learning approach that accommodates Indonesia's unique spiritual dimensions. A multinational study by Mayer et al. (2016) on the effectiveness of cross-cultural communication shows that training programs that integrate local values achieve a 30% higher success rate than universal approaches. In the context of vocational education, internalizing spiritual values through contextual learning methods and local case-based role-playing has been shown to significantly improve students' communication competencies.

This finding about the strong influence of SQ also challenges the Western paradigm, which tends to emphasize the cognitive and emotional aspects of professional communication. House et al. (2004) studied in the GLOBE project. They showed that effective leadership and communication in countries with highly religious cultures, like Indonesia, are more influenced by spiritual values than by purely technical skills. This explains why, in the context of Indonesian office administration, employees with high SQ tend to be more successful at building professional networks and resolving conflicts harmoniously.

5. CONCLUSION

This research confirms that:

1. Cognitive Performance (CP) is primarily influenced by IQ and EQ, indicating that academic success and completing administrative tasks require a combination of analytical skills and emotional management. SQ and AQ are insignificant, indicating that spiritual and resilience aspects are less relevant in the context of routine cognitive tasks.
2. Interpersonal communication (IC) is more influenced by EQ and SQ, emphasizing the role of emotional awareness and spiritual values in building effective interactions. This finding aligns with the collectivist and harmony-oriented characteristics of Indonesian culture.
3. Practical Implications:
   The Office Management curriculum needs to emphasize IQ (logic, analysis) and EQ (stress management, empathy) training for CP. Strengthening SQ (local values, ethics) and EQ (social skills) is needed to improve IC through contextual, case-based learning methods. The insignificance of AQ indicates the need for a different approach, such as integrating real-world work simulation challenges to activate their roles.

This study contributes to the literature on multiple quotients by revealing specific patterns of influence of IQ, EQ, SQ, and AQ in the context of Indonesian vocational education. A

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limitation of the study lies in the limited sample size of office management students. Further research could expand the sample size or explore mediating variables such as motivation and social support.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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