

The Roles of Intellectual Intelligence, Emotional Intelligence, and Spiritual Intelligence in Efforts to Enhance Learning Achievement

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Abstract

This research aims to test and analyze the influence of Intellectual Intelligence, Emotional Intelligence and Spiritual Intelligence on learning achievement through learning interests. The sample used was 171 students of Mandala Institute of Technology and Science. Data analysis uses descriptive statistics and inferential analysis. The sampling method is two stage sampling. The data analysis method use Smart PLS. The results of the study show that both Intellectual Intelligence, Emotional Intelligence and Spiritual Intelligence direct effect on learning achievement. The variable of learning interest does not play a role intervening variable. Important implication of this finding is the need to adjust the learning method to the characteristics of the course, student characteristics and strive to select learning methods that encourage students to be more enthusiastic about learning. In addition, it also necessary to improve the soft skills of students the Mandala Institute of Technology and Science.

Keywords: Intellectual Intelligence, emotional Intelligence, Spiritual Intelligence, Learning Interest, Learning Achievement

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1. Introduction

To build a nation into a large and competitive nation, it requires the availability of several quality resources. One of the resources that plays an important role and is decisive is the availability of quality human resources, meaning resources that have competence. Efforts to increase the nation's competitiveness require the participation of the world of education, ranging from primary, secondary to higher education. At each level of education, graduates must be able to produce graduates who have the appropriate hard and soft skill competencies.

Education is important for every individual. Education will affect how a person thinks, acts and seeks solutions to the problems faced. Every individual has acquired an education from an early age. Education can be obtained from families, communities to formal educational institutions. Formal education is education in schools that is held in a regular, systematic, multi-level manner by following clear rules and regulations. Formal education starts from primary and secondary education to higher education.

Higher education as one of the levels of education has a role to create graduates who have competencies in both hard and soft skills. In higher education, every individual will be trained in various fields of knowledge, both academic and non-academic. College graduates are prepared to have both hard and soft skills. Hard skills are the entrance to the world of work, while soft skills will make one person superior to others. Universities always try to adapt the curriculum to the demands of stakeholders. In addition to an adequate curriculum, the university also provides several facilities to its students to participate in various activities aimed at improving the soft skills of its graduates.

The goal of students in addition to gaining knowledge is also to get useful learning achievements to achieve their goals in the future. According to Parnawi (2019), learning achievement is the level of success achieved in an activity or business that can be measured with certain tools or tests. The achievements obtained by students must be supported by the student's ability. Students' abilities can be in the form of intellectual intelligence, emotional intelligence and spiritual intelligence. In addition to these abilities, another psychological factor that also plays an important role in achieving achievement is interest in learning. Laili and Listiadi (2020) wrote that positive interest in lessons will cause students to feel happier which later the results of the lesson will be good and can achieve good understanding. Students who have an interest in something, such as an interest in learning, will pay more attention to that interest. From the results of initial observations, students whose interest in learning is lacking, which is generally characterized by a lack of activity in the learning process, often checking

their mobile phones during learning, maybe even playing games, talking to their friends with their achievements are not good.

Literature Review

Hotima (2016) wrote that intellectual intelligence is the ability to adapt to new needs by using thinking tools that are appropriate to the goal. According to Azwar (2017) who quoted Stenberg's writing. Indicators of intellectual intelligence are, 1) problem-solving ability, 2) verbal intelligence, 3) practical intelligence.

Sudaryo, et al. (2018) emotional intelligence shows a person's ability to use feelings in solving problems and towards a more effective life. Emotional intelligence shows a person's ability to manage emotional clues or information, namely recognizing feelings of oneself, others, assessing emotions of oneself, others, understanding the meaning of emotions and the ability to provide encouragement to become a better person.

Wahab and Umiarso (2017) quoted Zohar and Marshal's opinion, interpreting spiritual intelligence as intelligence to face problems, meanings and values, namely intelligence to place our behavior and life in the context of broader and richer meanings, an intelligence to assess that a person's actions or life path are more meaningful than others. A spiritual foundation is a foundation needed to function intellectual intelligence and emotional intelligence.

According to Parnawi (2019), learning achievement is the level of success achieved in an activity or endeavor that can provide emotional satisfaction, and can be measured using certain tools or tests.

Hypothesis Development

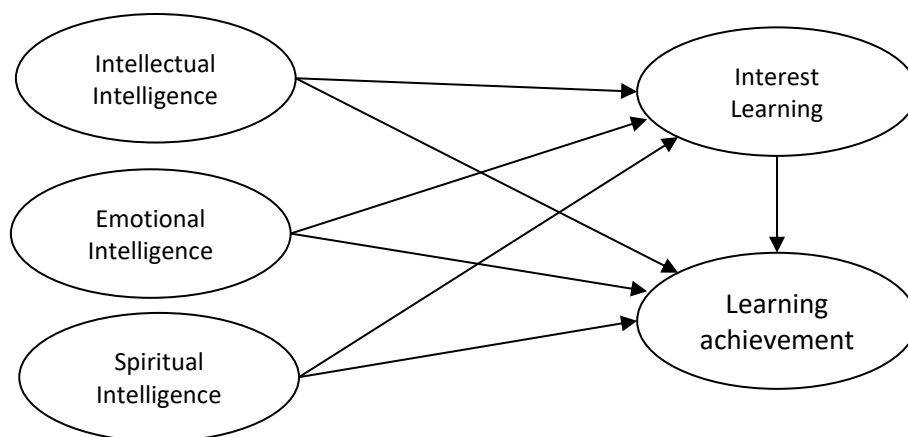


Figure 1. Conceptual Framework
Source: Development by Researcher (2025)

Hypothesis in this study:

- H1: intellectual intelligence has a direct effect on learning interest.
- H2: emotional intelligence has a direct effect on learning interest.
- H3: spiritual intelligence has a direct effect on learning interest.
- H4: intellectual intelligence has a direct effect on learning achievement.
- H5: emotional intelligence has a direct effect on learning achievement.
- H6: spiritual intelligence has an effect on learning achievement.
- H7: learning interest has a direct effect on learning achievement.

2. Methods

The purpose of this study is to explain the influence between variables through hypothesis testing and at the same time to explain the variables. The study was conducted at the Mandala Institute of Technology and Science (ITSM). The reason for choosing the research location is that ITSM as an educational institution has an important role and contributes to efforts to increase national competitiveness. The population in this study were students from ITSM from 2 faculties and 7 study programs. At the time of the study, there were 1971 students recorded. The sampling used was two-stage sampling. The number of samples taken was 171 with the following details:

Table 1. Number of Samples for Each Study Program:

Study Program	Sample
Management	95
Accountancy	36
Economic Development	25
Diploma	10
Software Engineering	2
Information System & Technology	3
Amount	172

Source: ITSM Academic Division (2025)

The data analysis methods used are descriptive analysis and inferential analysis. Inferential analysis using Smart PLS.

Operational Definition of Variables and Research Indicators:

Table 2. Operational Definition

Variable	Indicators	Source
Intellectual Intelligence	1. Problem-solving ability 2. Verbal intelligence 3. Practical intelligence	Azwar (2017)
Emotional Intelligence	1. Self-awareness 2. Self-management 3. Social awareness 4. Relationship management	Goleman (2008)
Spiritual intelligence	1. Be flexible 2. High level of self-awareness 3. Facing and taking advantage of suffering 4. Facing and overcoming pain 5. Vision and Mission 6. Refusal to cause loss 7. Have a holistic view 8. Tendency to ask questions	Zohar dan Marshal (2007)
Interest in Learning	1. Enjoys Lessons 2. No feeling of boredom 3. Be present during lessons	Safari (2003)
Learning Achievement	1. Cognitive domain 2. Affective domain 3. Psychomotor domain	Parnawi (2019)

Source: Development by Researcher (2025)

3. Results and Discussion

3.1. Results

Out of 200 questionnaires distributed, 171 were analyzable, as 29 questionnaires received could not be included in the analysis due to duplicate answers, clustering on one scale, and incomplete responses. The characteristics of the respondents are as follows:

Table 3. Table of respondent characteristics based on gender

No	Gender	Respondent	Percentage
1	Male	55	32,7
2	Female	116	67,3

Source: Data Processed (2025)

Table 4. Table of respondent characteristics by age

	Age interval			
	17-20	20-22	23-25	> 25
Respondent	25	120	25	2
Percentage	25	48	25	2

Source: Data Processed (2025)

Table 5. Respondent characteristics based on study program

No	Program Studi	Respondent	Percentage
1	Management S1	110	64,4
2	Accounting	30	17,6
3	Economics Development	17	10
4	Financial and Banking	9	5,2
5	Technology Information System	4	2,3
6	Software Engineering	1	0,5

Source: Data Processed (2025)

Table 6. Table of characteristics by semester

No	Level	Sum	Percentage
1	2	40	23,4
2	4	40	23,4
3	6	91	53,2

Source: Data Processed (2025)

Description of the research variables

Table 7. Distribution Table of Variable X1 (Intellectual Intelligence)

Variable X1	5 (Strongly Agree)	4(Agree)	3(Netral)	2(Disagree)	1(Strongly Disagree)	Total
X1.1	25	114	32	0	0	171
X1.2	42	106	23	0	0	171
X1.3	30	112	29	0	0	171

Source: Data Processed (2025)

Table 8. Table of Distribution of Variable X2 (Emotional Intelligence)

Variable X2	5	4	3	2	1	Total
X2.1	14	135	22	0	0	171
X2.2	11	121	39	0	0	171
X2.3	10	120	41	0	0	171
X2.4	23	102	46	0	0	171

Source: Data Processed (2025)

From the distribution of the research variables, both intellectual intelligence and emotional intelligence received the highest responses in the agree range, which means that the intellectual and emotional intelligence of students at the Institute of Technology and Sciences is relatively good.

Table 9. Distribution table of answers for Variable X3 (Spiritual Intelligence)

Variable X3	5	4	3	2	1	Total
X3.1	47	107	17	0	0	171
X3.2	47	100	24	0	0	171
X3.3	46	110	15	0	0	171
X3.4	44	102	25	0	0	171
X3.5	43	105	23	0	0	171
X3.6	43	113	15	0	0	171
X3.7	48	101	22	0	0	171
X3.8	55	101	15	0	0	171

Source: Data Processed (2025)

From the answers in the table above, most respondents agree on each indicator, indicating that the majority believe that students of the Mandala Institute of Technology and Science have good spiritual intelligence. Most students of the Mandala Institute of Technology and Science are aware that they should pray before starting something. Most are obedient and practice their worship according to their beliefs.

Table 10. Distribution table of answers for variable Z (Learning interest)

Variable Z	5	4	3	2	1	Total
Z1	138	33	0	0	0	171
Z2	135	35	1	0	0	171
Z3	138	25	8	0	0	171

Source: Data Processed (2025)

Table 11. Table of distribution of responses for variable Y (Learning Achievement)

Variable Y	5	4	3	2	1	Total
Y1	99	69	3	0	0	171
Y2	110	60	1	0	0	171
Y3	113	56	2	0	0	171
Y4	116	53	2	0	0	171

Source: Data Processed (2025)

Table 12. Results of Convergent Validity Test

Indicator	Outer Loading	Description
X1.1	0,722	Valid
X1.2	0,775	Valid
X1.3	0,779	Valid
X2.1	0,720	Valid
X2.2	0,742	Valid
X2.3	0,725	Valid
X2.4	0,715	Valid
X3.1	0,765	Valid
X3.2	0,730	Valid
X3.3	0,758	Valid
X3.4	0,727	Valid
X3.5	0,722	Valid
X3.6	0,744	Valid
X3.7	0,735	Valid
X3.8	0,742	Valid
Y1	0,774	Valid
Y2	0,850	Valid
Y3	0,791	Valid
Y4	0,777	Valid
Z1	0,916	Valid
Z2	0,794	Valid
Z3	0,810	Valid

Source: Data Processed (2025)

Table 13. Discriminant Validity Test

	Intellectual Intelligence (X1)	Intellectual emotional (X2)	Intellectual Spiritual (X3)	Student Achievements (Y)	Learning Interest (Z)
X1.1	0,622	-0,049	0,450	0,188	0,185
X1.2	0,775	0,119	0,313	0,361	0,213
X1.3	0,679	0,454	0,498	0,324	0,260
X2.1	0,170	0,720	0,256	0,180	0,166
X2.2	0,257	0,742	0,158	0,246	0,208
X2.3	0,113	0,725	0,257	0,206	0,203
X2.4	0,296	0,715	0,239	0,281	0,122
X3.1	0,330	0,417	0,765	0,261	0,255
X3.2	0,604	0,029	0,730	0,333	0,189

X3.3	0,310	0,393	0,758	0,283	0,247
X3.4	0,617	0,033	0,727	0,326	0,226
X3.5	0,575	-0,014	0,722	0,313	0,158
X3.6	0,272	0,411	0,744	0,249	0,264
X3.7	0,540	0,035	0,735	0,340	0,159
X3.8	0,266	0,505	0,742	0,290	0,299
Y1	0,262	0,133	0,325	0,774	0,328
Y2	0,387	0,205	0,393	0,850	0,294
Y3	0,395	0,351	0,298	0,791	0,298
Y4	0,331	0,304	0,279	0,777	0,340
Z1	0,299	0,213	0,304	0,351	0,916
Z2	0,241	0,153	0,246	0,342	0,794
Z3	0,264	0,245	0,216	0,300	0,810

Source: Data Processed (2025)

Based on the table, the cross loading values show that all loading values of the indicators are greater than all cross loading values to other constructs.

Table 14. Composite Reliability Results

Response	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Emotional Intelligence (X2)	0,702	0,704	0,816	0,526
Intellectual Intelligence (X1)	0,477	0,476	0,736	0,483
Spiritual Intelligence (X3)	0,882	0,883	0,907	0,548
Learning Interest (Z)	0,792	0,801	0,879	0,708
Student Achievements (Y)	0,810	0,814	0,875	0,637

Source: Data Processed (2025)

Based on the table above, it shows that each construct has a Cronbach's alpha and composite reliability value above 0.60. This indicates that the indicators used in this study are reliable.

Table 15. Hypothesis Testing of Direct Influence

Categoriest	Original Sample (O)	T Statistics (O/STDEV)	P Values	Explanati on
Emotional Intelligence (X2) -> Learning Interest (Z)	0,140	2,043	0,042	Accepted
Emotional Intelligence (X2) -> Student Achievement (Y)	0,147	2,534	0,012	Accepted
Intellectual Intelligence (X1) -> Learning Interest (Z)	0,190	2,345	0,019	Accepted
Intellectual Intelligence (X1) -> Student Achievement (Y)	0,226	2,810	0,005	Accepted
Spiritual Intelligence (X3) -> Learning Interest (Z)	0,150	2,097	0,036	Accepted
Spiritual Intelligence (X3) -> Student Achievement (Y)	0,153	2,070	0,039	Accepted
Learning Interest (Z) -> Student Achievement (Y)	0,239	2,702	0,007	Accepted

Source: Data Processed (2025)

Among all the relationship variables, direct influences provide a t-statistic value greater than 1.96 and a p-value < 0.05. Based on the results of the hypothesis test, it can be concluded that intellectual intelligence, emotional intelligence, and spiritual intelligence have a direct influence on learning interest as well as academic performance. Similarly, there is a direct influence of learning interest on academic performance.

Table 16. Indirect influence

Categories	Original Sample (O)	T Statistics (O/STDEV)	P Value	Explanation
Emotional Intelligence (X2) -> Learning Interest (Z) -> Student Achievement (Y)	0,033	1,534	0,126	Rejected
Intellectual Intelligence (X1) -> Learning Interest (Z) -> Student Achievement (Y)	0,045	1,748	0,081	Rejected
Spiritual Intelligence (X3) -> Learning Interest (Z) -> Student Achievement (Y)	0,036	1,577	0,116	Rejected

Source: Data Source processed

From the hypothesis testing results, it can be seen that the t-statistic value of the three indirect effects is smaller than 1.96 and the p values are greater than 0.05, so it can be concluded that the variable of learning interest cannot mediate the influence of intellectual intelligence, emotional intelligence, and spiritual intelligence on student achievement.

3.2. Discussion

Direct Influence The influence of intellectual intelligence on learning interest Hypothesis testing shows that the t-statistic value is $2.345 > 1.96$ and the P-Value is $0.019 < 0.05$ which means there is a significant influence between intellectual intelligence and learning interest. The intellectual intelligence possessed by ITSM students can enhance their learning interest. This can also be seen from the answers to the questionnaire from the three indicators of problem-solving abilities, practical intelligence, and verbal intelligence, the majority of which answered agree and strongly agree. ITSM students always think critically before making decisions; they also have good communication skills and strive to consider the consequences of every decision made. The conclusions of this research are in line with the research by Lina Herlina and Suwarno (2018), The influence of emotional intelligence on learning interest.

Hypothesis testing shows a t-statistic value of $2.043 > 1.96$ and a P-Value of $0.042 < 0.05$, which means there is a significant influence between emotional intelligence and learning interest. The emotional intelligence possessed by ITSM students can enhance their interest in learning. This can also be seen from the questionnaire responses to the 4 indicators, namely self-awareness, self-management, social awareness, and relationship management, where most are in the agree and strongly agree categories. Students are aware of their strengths and weaknesses, can control their emotions, adhere to ethics, and have good relationships with their environment. This conclusion is consistent with the research of Novia Miftahul Jannah and Umi Fariyah (2021), Evi NurFajri, and Rochmawati (2021) on the influence of spiritual intelligence on learning interest.

Hypothesis testing shows a t-statistic value of $2.097 > 1.96$ and a P-Value of $0.036 < 0.05$, which means there is a significant influence between spiritual intelligence and learning interest. The spiritual intelligence possessed by ITSM students, characterized by a good level of spirituality, is able to foster enthusiasm and interest in learning among students. This is consistent with the research by Muh. Yahya (2020).

The influence of intellectual intelligence on learning achievement Hypothesis testing shows a t-statistic value of $2.810 > 1.96$ and a P-Value of $0.005 < 0.05$, which means there is a significant influence between intellectual intelligence and learning achievement. This can also be seen from the questionnaire answers from the 3 indicators of problem-solving ability, practical intelligence, and verbal intelligence, where the majority answered agree and strongly agree. ITSM students always think critically before making decisions; they also have good communication skills and strive to see the consequences of every decision made. This condition inspires students to strive for good achievements. This is consistent with the research of Kus Andini Purbaningrum (2018) and Anis Erika (2021).

The influence of emotional intelligence on academic achievement Hypothesis testing shows a t-statistic value of $2.534 > 1.96$ and a P-Value of $0.012 < 0.05$, which means there is a significant influence of emotional intelligence on academic achievement. The emotional intelligence possessed by ITSM students, such as being aware of their own strengths and weaknesses, being able to control emotions, showing sympathy and empathy towards others can encourage students to become better, and the awareness of the need to always learn is quite high among students, ultimately encouraging students' enthusiasm for learning and achieving good results. This is in accordance with research by Kus Andini Purbaningrum (2028), Anis Erika (2021), Dita Maharani (2021), Dina Fahmasari (2022), Gregorius Meinanda (2023).

The influence of spiritual intelligence on learning achievement. The hypothesis testing showed a t-statistic value of $2.070 > 1.96$ and a P-Value of $0.039 < 0.05$, which means there is a significant influence between spiritual intelligence and learning achievement. The spiritual intelligence possessed by ITSM students is demonstrated through behaviors such as high spiritual awareness, having a life purpose and striving to achieve it, enthusiasm for asking questions about things that are not well understood, which encourages students to be motivated to

learn, and ultimately its impact on learning achievement. This is consistent with research by Dita Maharani Suwardi (2021), Muh. yahya A (2020), Dina Fahma Sari (2022).

The influence of learning interest on academic achievement The hypothesis testing shows a t-statistic value of $2.702 > 1.96$ and a P-Value of $0.007 < 0.05$, which means there is a significant effect of learning interest on academic achievement. Learning interest measured by 3 indicators: enjoyment in attending lessons, no feeling of boredom, and presence during learning can boost academic achievement. This is in accordance with the research from Novia Miftahul Jannah and Umi Fariyah (2021).

Indirect Influence To assess the influence of intellectual intelligence, emotional intelligence, and spiritual intelligence on learning achievement through learning interest, the t-statistic test results showed that the t-statistic value was less than 1.96 and the P-value was greater than 0.05, leading to the conclusion of no significance. The variable of learning interest is not a mediating variable. This can be interpreted that the intellectual intelligence, emotional intelligence, and spiritual intelligence of ITSM students can directly foster learning interest and also directly influence learning achievement.

4. Conclusion

Intellectual intelligence, emotional intelligence, and spiritual intelligence have a direct impact on learning interest and also a direct impact on learning achievement. The variable of learning interest does not mediate the influence of intellectual intelligence, emotional intelligence, and spiritual intelligence on learning achievement. Implications The implications that can be formulated concerning the research results are, first, to maintain the intellectual intelligence, emotional intelligence, and spiritual intelligence of the students. In addition, it is also necessary to improve the soft skills of students at the Mandala Institute of Technology and Science. It is also essential to adjust the learning methods to the characteristics of the subjects, the characteristics of the students, and to strive for the selection of learning methods that encourage students to be more enthusiastic about learning.

Suggestions that can be given: 1) To the Mandala Institute of Technology and Science, to periodically evaluate and update the curriculum in accordance with the demands of stakeholders. 2) During the New Student Campus Life Introduction activities, to allow more time to distribute questionnaires aimed at mapping out what soft skills need to be provided to support the enhancement of intellectual, emotional, and spiritual intelligence. 3) To other researchers to add research variables that influence interest and learning achievement, such as the availability of scholarships, and the availability of reference materials for lectures.

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