

Exploring the Impact of Artificial Intelligence on Decision-Making in Higher Education Leadership

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Abstract

The adoption of AI can be beneficial in the educational market where the privilege of data collection and analysis can support policymakers and leaders in handling comprehensive data and meeting the challenges of providing quality education overall in higher education. The study aims to review the impact of Artificial Intelligence on Decision-Making in Higher Education Leadership specifications. The study has chosen the primary quantitative method. A set of 150 sample has been used to explore the specific method. The data has been tested using PLS software. The final outlook has been created using the results based on the excel sheets based on the results for 4 hypotheses. All the hypotheses are proved as positive and it is found that artificial intelligence has a positive impact on leadership effectiveness in higher education. This has been proved using the variables and checking their influence. Based on results, study recommends the use of AI in leadership in higher education. It is recommended that the monitoring should be done and it should be made sure that the correct use of the relevant operations have been used.

Keywords: Artificial intelligence; decision-making; higher education; efficiency; effectiveness; leadership.

JEL Classification: I23

1. Introduction

The role of Artificial Intelligence in decision-making in higher education leadership, a person can know that it means the role of AI, such as data analysis, natural language processing, and machine learning. The section has provided the background of the study. It has also justified the scope and significance. The aim and objectives are outlined. The research questions are elaborated. The roadmap of the study plan has been provided. In the modern world AI is used in every field, AI is not only specified to computers or mobile but it is everywhere and can be used anywhere (Khairullah et al., 2025). AI is the best technology in the modern world and it also helps everyone in making decisions, in the modern world, AI is important in every field. Mousa (2024) adds that AI decision-making means the use of AI technology to identify analyze the data and give a perfect decision to the client. It is

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done in several parts, such as data input, where the AI analyses the data, and at the end, it gives the best suggestion or decision to the clients. It has many advantages in our daily lives, such as saving time, increasing efficiency, improving strategic planning, being accurate, and providing the best answer (Wang, 2021). However, it also has many disadvantages that cannot be ignored, such as privacy issues, high-cost work implementation, and less human judgment.

According to the Global Market Insights report (2023), it is forecasted that AI use will increase by 10% from 2023 to 2032 in educational markets. This is a positive opinion for the educational area, where the decision-making is under the context of AI and leadership seems to take advantage of it. It has many advantages in higher education, such as personalised learning at scale, early intervention for student success, operational efficiency, decision-making, increased work efficiency, innovation, support, and proper checking with planning. There is need for exploring AI to manage leadership challenges and work accordingly.

The purpose of this study is to review AI from the lens of its supporting role. This has been discussed in the context of when the higher education area has been chosen. The idea has been supported with evidence when leadership in higher education has been used as a valued discussion area. A critical evaluation has been done from this perspective to support the idea of how the evaluation and timeline of education can be employed using the expertise of AI. Further, Asghar and Iqbal (2025) refer that problem of exploring AI in higher education leadership exist in Pakistan that can be solved with knowledge-based efforts. The role of Artificial Intelligence in decision-making within higher education leadership includes applications such as data analysis, natural language processing, and machine learning (Hojeij, 2025). In the decision-making process of college and university presidents, provosts, deans and other leaders can use it to manage leadership challenges (Crawford et al., 2023). The study has taken a step in this context to review the topic and outline the role of AI in detail.

The study aims to review the impact of Artificial Intelligence on Decision-Making in Higher Education Leadership specifications to support leaders. The objectives are to review the impacts of artificial intelligence in higher education leadership, to analyse the decision-making process using AI in higher education leadership and to recommend better ways to apply AI in decision-making in leadership in higher education.

The study questions are:

1. What are the impacts of artificial intelligence on higher education leadership?
2. What is connection of decision-making process with use AI in higher education leadership?
3. What improvements can help using AI in decision-making in leadership in higher education?

Higher education leadership has been extensively discussed by the authors and a comprehensive elaboration is available in the literature (Hojeij, 2025; Crawford et al., 2023). The contribution of AI in this regard seems lacking to an extent, as the relevant discussion on the topic has been lacking in the context of decision-making. The study is purposed to meet this literature gap and provide an ample and reliable piece of data that supports the evidence. The study is unique because most of the existing research has focused on AI as a tool. In contrast, the current study examines the hybrid use of leadership models to address leadership challenges. Some studies like Hojeij (2025), add AI as a tool whereas Wang (2021) claims AI as an essential foundation only in data driven support. The study is meeting the literature gap because it is enabling the reader to understand the focus of AI on the support in leadership using data-driven expertise and transforming the authority of academic leaders by redefining their role in universities.

Higher education has been becoming global support and international universities are trying their best to come on a single page. This is possible if the relevant idea is implemented with the expertise and the study also recommends the use of modern tools in this context with AI use. The leadership can take advantage of the study as it clearly specifies how AI can be a positive and pragmatic approach. The study has a huge scope as it is oriented to support policymakers and leaders in higher education globally.

2. Literature Review

The literature has outlined the main literature and added the literature gap. The theoretical and conceptual frameworks are shared. The section has shaped the plan for the study by creating hypotheses. Various authors' opinions are discussed to conduct comparative and critical analyses.

AI refers to Artificial Intelligence. It is a modern world technology that helps humans in many fields, such as study, jobs, maps, health care, transport routes, agriculture, business, security, and any information that is required by a person. Some AI used nowadays are Amazon Alexa, Chat GPT, Apple Siri, Claude, Google Gemini, Squirrel AI, Querium, and Knewton (Al-Zahrani & Alasmari, 2024). AI has become an important need in the modern world. It's helping in different fields of work, including manufacturing, retail, finance, e-commerce, logistics, transport, legal, agriculture, future trends prediction, marketing, and many more. The role of Artificial Intelligence decision-making in higher education leadership, a person can know that it means the role of AI, such as data analysis, natural language processing, and machine learning, in the decision-making process of college and university presidents, provosts, deans and other leaders. Students now do not have any idea about their career selection (Cox, 2021). In this aspect, AI helps these unguided students in their careers. A person first tells what they want to do, and then AI offers recommendations and fields in which a person can apply. It is essential to apply it in the leadership to support the foundations

of leaders that have been discussed in the next section.

The role of AI in the selection of higher education leadership is playing an important role in the selection process. Here are some roles of AI Candidate predictive analysis is a person in which an AI can tell the old performance of any candidate and tell if can a person perform this role properly or not, screening and shortlisting quality of AI in which it can fast read a large number of CVs and applications very quickly, with this the AI can tell the qualities of candidates (Cox, 2021). Bias reduction is a process in which an AI does not promote the people who are biased by people, and there is a fair selection (Wang, 2021; Tarisayi, 2024). Interview support is a feature of AI that can help interview a person and know the capability of a person for the role of leader (Fatile, 2025). Cultural fitting should also be kept in mind for the selection of a leader for this purpose AI also helps in selecting the correct people.

In finance, it is helping in the detection of fraud, in health care, it is helping in learning new machines and students are trained (Cox, 2021). Further, in retail and E-commerce AI suggests the products, in transportation it helps in route giving by keeping traffic police and weather in mind, it also helps in giving ideas about future trends such as in clothing brands (Sposato, 2025). It has many advantages such as time efficiency, improved candidate selection, enhanced transparency, predictive insight, Bias reduction, Comprehensive Analysis, and consistency. It has some advantages but also has some disadvantages, such as privacy issues, overemphasis on quantitative data, limited contextual understanding, legal issues, risk of reliance, and ethical concerns. Decision making has been advantageous in leadership with the support of AI, which has been further elaborated in the next section.

Nowadays, AI is a basic need in every field. In the teaching field, it helps teachers in many ways and makes teachers' work easier than before. It helps in the following ways, such as predictive analysis, administrative efficiency, data-driven personalised learning, strategic planning, equity, and inclusion (Khairullah et al., 2025; Tarisayi, 2024). Global Market Insights Report (2023) adds that data-driven decision-making is already playing an essential role in curricula development and resource allocation. However, there is a need to understand how the adoption of AI can be helpful in the educational markets where the privilege of data collection and analysis can support policymakers and leaders in handling comprehensive data and meeting the challenges of the provision of quality education overall in higher education.

It has many advantages in our daily lives, such as saving time, increasing efficiency, improving strategic planning, being accurate, and providing the best answer (Cox, 2021; Tarisayi, 2024). However, it also has many disadvantages that cannot be ignored, such as privacy issues, high-cost work implementation, and less human judgment. Educationists need to learn about decision-making with the need of modern tools as elaborated by Wang

(2021), that AI is used by educational leaders everywhere in every country. Here is a list of countries such as China, the UK, the USA, Australia, Singapore, Canada, and the UAE (Mousa, 2024). It is used in different universities in different countries, such as Edinburgh in the UK, Arizona State University in the USA, Georgia State University in the USA, Tsinghua University in China, the University of Toronto in Canada, the National University of Singapore, Mohammed bin Zayed University in the UAE, and the University of Melbourne in Australia.

It has many advantages in higher education, such as personalised learning at scale, early intervention for student success, operational efficiency, decision-making, increased work efficiency, innovation, support, and proper checking with planning. On the other hand, Wang (2021) adds that it has many disadvantages which cannot be unseen, such as biased algorithms, privacy concerns, lack of human judgment, resistance to change, high implementation cost, legal challenges, digital divide, and data issues. The essential role of decision-making is not avoidable as the expertise is needed to support the idea of the impact that can be in the long run in the context of handling student concerns (Tarisayi, 2024). It has many positive impacts on teachers, such as support for students, improved teaching effectiveness, job satisfaction, reduced administrative workload, innovation, equality in classes and better curriculum design (Cox, 2021). It has many positive effects, but on the other hand, it has a lot of negative effects which cannot be ignored, such as reduced autonomy, lack of training, increased pressure, fear of job loss, lack of knowledge, privacy concerns, and unequal access.

There is a literature gap as the previous writers evaluated the impact of AI (Asghar & Iqbal, 2025; Abbas, 2023; Bollaert, 2025). The study is unique in exploring the specific areas of AI support with the up to date content to reveal the importance of AI and meet the literature gap. This has been elaborated when the study is executed for higher education with the correct variables. The literature has already discussed some parts of the variables; however, more investigation is needed to elaborate on the significance of the study. The contribution of AI in this regard seems lacking to an extent, as the relevant discussion on the topic has been lacking in the context of decision-making. The study is purposed to meet this literature gap and provide an ample and reliable piece of data that supports the evidence.

Normative decision theory is applicable when the descriptive decision has been applied, and cognitive biases have been limited to understanding the implementation of any task. This narrates the idea of how normative decision-making privileges the use of artificial intelligence foundations to support the leaders or experts working in a specific field (Mumtaz et al., 2025). It is a successful application where some risk has been controlled and the risk assessment is also using AI expertise (Sposato, 2025). Decision analysis is helpful where optimal decision-making can be privileged under the paradigm of AI understanding to handle the challenges. The other theory is the AI theory, which is prominent when the artificial intelligence foundations are supporting the decision-making in making informed decisions

and avoiding cognitive biases (Bollaert ,2025). The two theories are applicable in the present paradigm, where the leaders can support the decision-making using the planned actions.

2.1 Hypotheses Development

The following hypotheses are based on the variables:

- *H1*: Artificial intelligence has a positive impact on leadership effectiveness in higher education.
- *H2*: Artificial intelligence has a positive impact on leadership effectiveness in higher education when ethical foundations are mediating variable.
- *H3*: Artificial intelligence has a positive impact on leadership effectiveness in higher education when decision-making is mediating variable.
- *H4*: Artificial intelligence has a positive impact on leadership effectiveness in higher education when efficiency is a mediating variable.

Artificial intelligence is the independent variable, whereas decision making is the dependent variable. The impact has been reviewed for the leadership using mediating variables, including ethical foundations and efficiency for decision-making. The image outlook is given in Figure 1. This has been reviewed with the statistical foundations to reveal the results of the study in the fourth section.

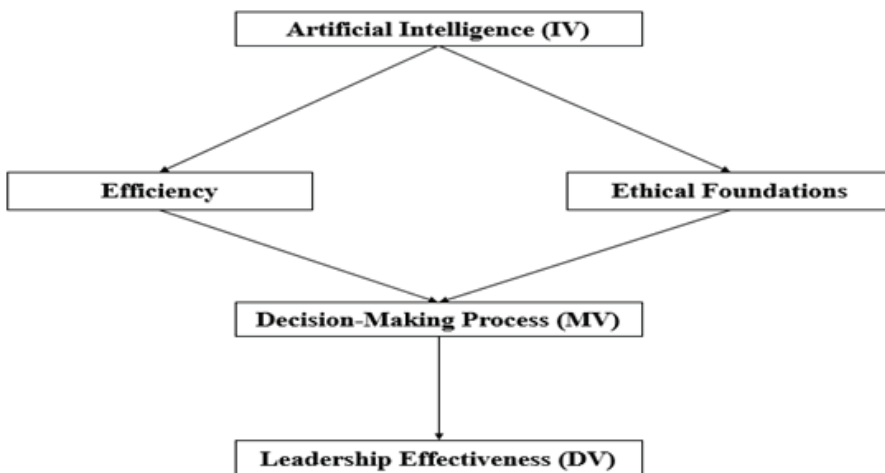


Figure 1: Conceptual Framework

3. Data and Methodology

The method has clarified the plan for the study. The main plan for the use of the design and approach has been added. The data collection and analysis methods are discussed. The statistical operations are discussed in detail.

3.1 Research Design and Approach

The study has used a primary design which is suitable with the help of positivism philosophy. Positivism philosophy does not add additional content while revealing the data and extraction is quite easy when quantitative content has been under review. The data has been taken from the primary respondents to reveal the influence of AI in the decision-making in leadership in higher education. The use of the deductive approach is recommended by Verma et al. (2024) for using the primary quantitative approach because it supports the primary quantitative data and limits the results to make it more relevant. The data collection is possible with this approach to avoid the in-depth details that are not needed in the quantitative context. The content has been aligned using the deductive approach and primary research design. The design is suitable because it is providing up to date information and supporting evidence-based content, where positivism philosophy is helpful in comprehending relevant data in quantitative paradigm.

3.2 Research Population and Sample

The purpose of this study is to review AI from the lens of its supporting role. This has been discussed in the context of when the higher education area has been chosen. The idea has been supported with evidence when leadership in higher education has been used as a valued discussion area. The specific population working in the leadership position are suitable so the sample has been taken with the stratified sampling from the relevant group (Pandey & Pandey, 2021). The stratified sampling is helpful because it reveals the relevant population and make sure that the researcher has been keenly focused on extracting the content based on relevant information from the data, based on the whole population. This has helped the researcher make sure that the relevant audience has been targeted. The sample size is 150. This is an ideal size to avoid irrelevant data collection. The sample is representative of the whole population. The size is easy to review and seems applicable in the limited time and resources.

3.3 Research Instrument

The questionnaire research instrument is used based on 4 number of items each for the 5 variables. It is further supported with the use of the Likert scale for strongly agree to strongly disagree based on 1-5 limit.

Table 1
Variables

Variable	No. of items	Scale
Decision making	4	1-5
Artificial intelligence	4	1-5
Ethical foundations	4	1-5
Efficiency	4	1-5
Leadership effectiveness	4	1-5

3.4 Data Collection

The contribution of AI in this regard seems lacking to an extent, as the relevant discussion on the topic has been lacking in the context of decision-making. This is why the primary data collection method has been planned. Respondents are offering up to date information as per their experience this method is more reliable as compared to secondary data collection. The data has been collected using a Google survey form. A suitable survey has been generated based on the variables (Pandey & Pandey, 2021). Artificial intelligence is the independent variable, whereas decision making is the dependent variable. The impact has been reviewed for the leadership using mediating variables, including ethical foundations and efficiency for decision-making. The data was collected when they filled out the form and submitted it back online. An ethical approval was obtained earlier to avoid any kind of issues in the data collection and privacy breach.

3.5 Data Analysis

The data has been analysed using statistical operations. The data has been analysed using PLS software. It is a modern software that has been helpful in exactly providing the numbers and percentages to support the data variables and see the impact to justify the hypothesis, which is why this method has been chosen in the current study. Higher education has become a global support, and international universities are trying their best to come on a single page so the data has been reviewed with the Smart PLS operations for outer loading, path coefficient, Cronbach alpha, and HTMT. This made it possible for the relevant idea to be implemented with the expertise and the study also recommends the use of modern tools in this context, with AI use with the help of analytical methods.

4. Results and Discussion

The result has outlined the statistical findings. The discussion has been done where the four hypotheses are critically reviewed to ensure that either they are approved or failed. It is also answering the research questions. The results show the values review and the data retrieved from the foundations of analyses based on the content from the statistical Smart

PLS operations. The data has been analysed using PLS software. Higher education has been becoming a global support and international universities are trying their best to come on a single page so the data has been reviewed with the Smart PLS operations for outer loading, path coefficient, Cronbach alpha, and HTMT. The sample size is 150. This is an ideal size to avoid irrelevant data collection. The sample is representative of the whole population. The demographic data has been executed here.

Table 2
Gender Data

Data	Details
Gender	Male: 66.7% Female: 33.3%
Education	Metric: 66.7% Intermediate and above: 33.3%
Experience	Low experience: 66.7% High experience: 33.3%

Gender data mention that about 33.3% are female while 66.7% are male. This mention is dominant percentage of male respondents. Educational data has been identified where it has been found that the maximum percentage is belonging from below metric group. The others are from intermediate level which is providing data for 33.3%. The professional data represents a high percentage of experienced ones comprising about 66.7% followed by the highly experienced for 33.3%.

Table 3
Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AI -> DMP	-0.076	-0.075	0.024	3.232	0.001
DMP -> LEHE	0.821	0.822	0.034	24.347	0
EF -> DMP	-0.005	-0.005	0.016	0.316	0.752
EFF -> DMP	1.062	1.061	0.024	44.216	0

Notes: AI: artificial intelligence, DMP: decision-making process, LEHE: leadership effectiveness in higher education, EF: ethical foundations, EFF: efficiency

Path coefficient shows the value of EFF to DMP as high for above 1 as 1.062 while the others seem insignificant.

Table 4
Outer Loading

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AI 1 <- AI	0.754	0.754	0.048	15.624	0.000
AI 2 <- AI	0.871	0.873	0.022	39.332	0.000
AI 3 <- AI	0.768	0.771	0.033	22.998	0.000
AI 4 <- AI	0.808	0.806	0.044	18.213	0.000
AI 5 <- AI	0.813	0.813	0.034	23.818	0.000
DMP 1 <- DMP	0.758	0.757	0.047	16.124	0.000
DMP 2 <- DMP	0.808	0.807	0.039	20.838	0.000
DMP 3 <- DMP	0.772	0.773	0.039	19.836	0.000
DMP 4 <- DMP	0.878	0.878	0.020	43.371	0.000
DMP 5 <- DMP	0.813	0.812	0.036	22.427	0.000
EF 1 <- EF	0.879	0.877	0.033	26.349	0.000
EF 2 <- EF	0.804	0.807	0.029	28.164	0.000
EF 3 <- EF	0.845	0.845	0.042	19.973	0.000
EFF 1 <- EFF	0.837	0.837	0.033	25.519	0.000
EFF 2 <- EFF	0.743	0.742	0.050	14.756	0.000
EFF 3 <- EFF	0.786	0.786	0.040	19.575	0.000
EFF 4 <- EFF	0.768	0.769	0.037	20.556	0.000
EFF 5 <- EFF	0.877	0.876	0.021	41.464	0.000
EFF 6 <- EFF	0.822	0.821	0.033	24.918	0.000
LEHE 1 <- LEHE	0.770	0.771	0.044	17.535	0.000
LEHE 2 <- LEHE	0.865	0.866	0.026	33.044	0.000
LEHE 3 <- LEHE	0.766	0.769	0.037	20.643	0.000
LEHE 4 <- LEHE	0.819	0.817	0.036	22.840	0.000
LEHE 5 <- LEHE	0.632	0.630	0.071	8.915	0.000

Outer loading shows the dominant value for the various categories. All the values are above 0.7 which is showing the significance for most of the variables.

Table 5
R square

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
DMP	0.985	0.986	0.002	510.911	0
LEHE	0.674	0.678	0.055	12.272	0

R square value is dominant and shows the significance for the DMP and LEHE values. The DMP is above 0.7 with a high significance of 0.985. the other value shows less significance for 0.674 below 0.7.

Table 6
R Square Adjusted

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
DMP	0.985	0.985	0.002	500.608	0
LEHE	0.671	0.675	0.055	12.151	0

R square adjustment value is dominant and shows the significance for the DMP and LEHE values. The DMP is above 0.7 with a high significance of 0.985. the other value shows less significance for 0.671 below 0.7.

Table 7
Ave Variance

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AI	0.646	0.649	0.029	22.657	0
DMP	0.651	0.652	0.03	21.46	0
EF	0.711	0.713	0.033	21.628	0
EFF	0.651	0.651	0.03	21.818	0
LEHE	0.599	0.602	0.03	19.89	0

Average variance shows the results with the significance for the EF only which is above 0.7 and recorded as 0.711. The other values are low.

Table 8
RHO c

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AI	0.901	0.901	0.011	79.992	0
DMP	0.903	0.903	0.012	75.809	0
EF	0.88	0.881	0.017	52.024	0
EFF	0.918	0.917	0.01	90.947	0
LEHE	0.881	0.881	0.013	65.285	0

RHO c value is significant for all the variables but the maximum value is recorded for EFF as 0.918.

Table 9
RHO a

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AI	0.874	0.876	0.016	53.619	0
DMP	0.867	0.868	0.018	49.403	0
EF	0.797	0.803	0.032	24.582	0
EFF	0.894	0.895	0.014	65.238	0
LEHE	0.848	0.852	0.02	41.89	0

RHO a value is good for all variables but the maximum is recorded for EFF as 0.894.

Table 10
Cronbach Alpha

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AI	0.863	0.863	0.017	50.397	0
DMP	0.865	0.864	0.019	46.542	0
EF	0.795	0.796	0.033	24.359	0
EFF	0.892	0.891	0.015	60.959	0
LEHE	0.83	0.83	0.022	38.285	0

Cronbach alpha shows dominance for EFF as 0.892. the lowest value was 0.795 for EF but it is also significant as it is above 0.7.

4.1 Discriminant Validity

Construct	AIDIB	ECO	PRS	CQU	SAT
AIDIB	—				
ECO	0.614	—			
PRS	0.660	0.843	—		
CQU	0.757	0.644	0.650	—	
SAT	0.704	0.759	0.808	0.653	—

Table 11
HTMT

	Original sample (O)	Sample mean (M)	2.5%	97.5%
DMP <-> AI	0.971	0.971	0.913	1.024
EF <-> AI	0.903	0.902	0.771	1.020
EF <-> DMP	0.868	0.866	0.731	0.983
EFF <-> AI	0.985	0.985	0.929	1.035
EFF <-> DMP	1.128	1.130	1.095	1.174
EFF <-> EF	0.875	0.873	0.738	0.989
LEHE <-> AI	1.155	1.155	1.113	1.208
LEHE <-> DMP	0.958	0.957	0.865	1.032
LEHE <-> EF	0.969	0.968	0.863	1.070
LEHE <-> EFF	0.964	0.963	0.871	1.039

HTMT is high for all variables but it is above 1.0 for EFF <-> DMP and LEHE <-> AI as compared to the other variables in contrast.

Table 12
Fornell–Larcker

Construct	AIDIB	ECO	PRS	CQU	SAT
AI	0.878				
ECO	0.521	0.826			
EFF	0.560	0.707	0.870		
DMP	0.626	0.526	0.529	0.841	
LEHE	0.600	0.642	0.684	0.542	0.868

4.2 Discussion

The results show that the hypothesis has been proved to an extent where the variables are contrasted in comparison, and the statistical foundation provides the exact results. Artificial intelligence is the independent variable, whereas decision making is the dependent variable. The impact has been reviewed for the leadership using mediating variables, including ethical foundations and efficiency for decision-making. The diagram shows the hypothesis representation where the comparison of variables has been clarified, how many contrasts have been explored and how the data has been quoted in revealing the hypothesis justification.

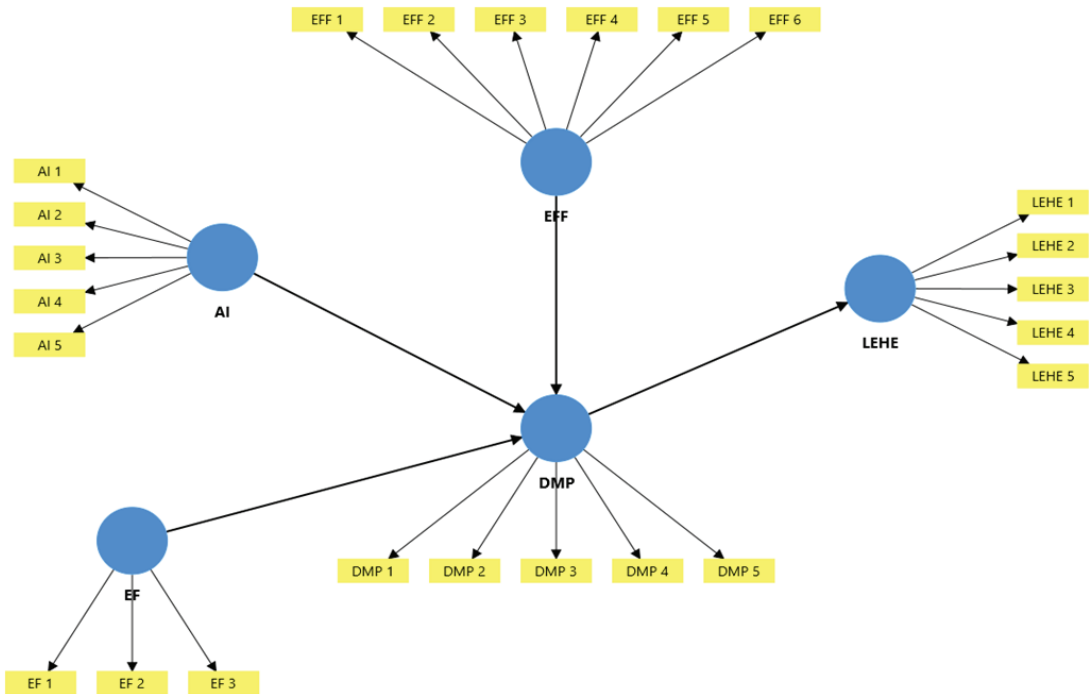


Figure 2 : Hypotheses Diagrammatic View

Figure 2 illustrates the relationships among various variables in relation to decision-making. Specifically, AI effectiveness, efficiency, leadership effectiveness, and other variables were examined. The approval of the hypotheses is justified as follows:

H1: artificial intelligence has a positive impact on leadership effectiveness in higher education. RHO a value for AI mentions 0.874 which is significant. All the values are above 0.7 for AI and LEHE for outer loading which shows the significance for most of the variables. The role of Artificial Intelligence decision-making in higher education leadership, a person can know that it means the role of AI, such as data analysis, natural language processing, and machine learning, in the decision-making process of college and university presidents, provosts, deans and other leaders. Students now do not have any idea about their career selection (Cox, 2021). In this aspect, AI helps these unguided students in their careers. A person first tells what they want to do, and then AI offers recommendations and fields in which a person can apply. A significant impact has been found as per the results.

The role of AI in the selection of higher education leadership is playing an important role in the selection process. Here are some roles of AI Candidate predictive analysis is a person in which an AI can tell the old performance of any candidate and tell if can a person perform this role properly or not, screening and shortlisting quality of AI in which it can

fast read a large number of CVs and applications very quickly, with this the AI can tell the qualities of candidates (Cox, 2021). The positive inference is proving the hypothesis as positive. All the values are above 0.7 for AI and LEHE for outer loading which shows the significance for most of the variables. This is a dominance parameter. The value is not avoidable. Hence, artificial intelligence has a positive impact on leadership effectiveness in higher education. The results of this hypothesis support objective # 1.

H2: Artificial intelligence has a positive impact on leadership effectiveness in higher education when ethical foundations are mediating variables. The average variance shows the results with the significance for the EF only which is above 0.7 and recorded as 0.711. The other values are low. The rho value for AI is 0.874, indicating it significant. The role of Artificial Intelligence decision-making in higher education leadership, a person can know that it means the role of AI, such as data analysis, natural language processing, and machine learning, in the decision-making process of college and university presidents, provosts, deans and other leaders. Students now do not have any idea about their career selection (Cox, 2021). In this aspect, AI helps these unguided students in their careers. A person first tells what they want to do, and then AI offers recommendations and fields in which a person can apply. This mentions that the ethical foundation has been influencing the context of AI in this connection.

A critical evaluation has been done in this perspective to support the idea of how the evaluation and timeline of education can be employed using the expertise of AI. Further, the role of Artificial Intelligence in decision-making in higher education leadership, a person can know that it means the role of AI, such as data analysis, natural language processing, and machine learning (Hojeij, 2025). In the decision-making process of college and university presidents, provosts, deans and other leaders can use it (Crawford et al., 2023). This is ideally evaluating that the use of the pragmatic approach is possible to emphasise the foundations of AI in connection to LEHE. In finance it is helping in the detection of fraud, in health care, it is helping in learning new machines and students are trained. Further, in retail and E-commerce AI suggests the products, in transportation it helps in route giving by keeping traffic police and weather in mind, it also helps in giving ideas about future trends such as in clothing brands (Sposato, 2025). The hypothesis is also in the same sequence to prove the opinions. So, artificial intelligence has a positive impact on leadership effectiveness in higher education when ethical foundations are mediating variables. The results of this hypothesis support objective # 2.

H3: Artificial intelligence has a positive impact on leadership effectiveness in higher education when decision-making is a mediating variable. Path coefficient shows the value of EFF to DMP as high for above 1 as 1.062 while the others seem insignificant. AI is a professional plan, as it helps in many ways, such as predictive analysis, administrative efficiency, data-driven personalised learning, strategic planning, equity, and inclusion

(Khairullah et al., 2025; Tarisayi, 2024). Further, the results also add the same opinion with the significance. In another review, Global Market Insights Report (2023) adds that data-driven decision-making is already playing an essential role in curricula development and resource allocation. However, there is a need to understand how the adoption of AI can be helpful in the educational markets where the privilege of data collection and analysis can support the policymakers and leaders in handling comprehensive data and meeting the challenges of the provision of quality education overall in higher education.

It has many advantages in our daily lives, such as saving time, increasing efficiency, improving strategic planning, being accurate, and providing the best answer (Cox, 2021; Tarisayi, 2024). However, it also has many disadvantages that cannot be ignored, such as privacy issues, high-cost work implementation, and less human judgment. The value of the significance is also adding to the same opinion from the results. Educationists need to learn about decision-making with the need for modern tools, as elaborated by Wang (2021) that AI is used by educational leaders everywhere in every country. So, it is summed up that artificial intelligence has a positive impact on leadership effectiveness in higher education when decision-making is a mediating variable. The results of this hypothesis supports objective #2.

H4: Artificial intelligence has a positive impact on leadership effectiveness in higher education when efficiency is a mediating variable. RHO c value is significant for all the variables but the maximum value is recorded for EFF as 0.918. RHO a value is good for all variables but the maximum is recorded for EFF as 0.894. Decision analysis is helpful where optimal decision-making can be privileged under the paradigm of AI understanding to handle the challenges. The other theory is the AI theory which is prominent when the artificial intelligence foundations are supporting the decision-making in making informed decisions and avoiding cognitive biases. AI in decision-making is not avoidable, so there is an applicable plan of AI in the present paradigm where the leaders can support the decision-making using the planned actions.

Normative decision theory is applicable when the descriptive decision has been applied and cognitive biases have been limited to understanding the implementation of any task. This narrates the idea of how normative decision-making privileges the use of artificial intelligence foundations to support the leaders or experts working in a specific field. In the reviews, the Global Market Insights report (2023), it is forecasted that AI use will increase by 10% from 2023 to 2032 in educational markets. This is a positive opinion for the educational area where the decision-making is under the context of AI, and leadership seems to take advantage of it. The results also agree with this and justify the output provided in the analytical review. It has many advantages in higher education, such as personalised learning at scale, early intervention for student success, operational efficiency, decision-making, increased work efficiency, innovation, support, and proper checking with planning. Hence proved that artificial intelligence has a positive impact on leadership effectiveness in higher

education when efficiency is a mediating variable. The results of this hypothesis support objective # 3.

All the hypotheses are proved as positive. The value dominance and the exploration are narrating the message that all the hypotheses have been in significance. Here, artificial intelligence has a positive impact on leadership effectiveness in higher education. It has been proved for all the other three variables and their connectivity in influence. Artificial intelligence is the independent variable whereas decision making is the dependent variable. The impact has been reviewed for the leadership using mediating variables including ethical foundations, and efficiency for decision-making. This is also supported by the evidence while discussing the concept of the current study. The valued review has been added with in-depth significance and justifications.

Table 13

Hypotheses in Review

Hypotheses	Approval
H1: Artificial intelligence has a positive impact on leadership effectiveness in higher education	Yes
H2: Artificial intelligence has a positive impact on leadership effectiveness in higher education when ethical foundations are mediating variable	Yes
H3: Artificial intelligence has a positive impact on leadership effectiveness in higher education when decision-making is mediating variable	Yes
H4: Artificial intelligence has a positive impact on leadership effectiveness in higher education when efficiency is a mediating variable	Yes

It is summed up that the discussion has been based on the evaluation and understanding of how the content has been supporting the evidence. The variables are tested with the Google survey and PLS software. This has been supported by factual data. The study has used a primary design, which is suitable with the help of positivism philosophy to ensure validity. The data has been taken from the primary respondents to reveal the influence of AI in the decision-making in leadership in higher education.

5. Conclusion AND Recommendations

Higher education has been becoming global support and international universities are trying their best to come on a single page. This is possible if the relevant idea is implemented with the expertise and the study also recommends the use of modern tools in this context with AI use. The last section has concluded the main remarks as the leadership can take advantage of the study as it clearly specifies how AI can be a positive and pragmatic approach.

5.1 Conclusion

AI decision-making means the use of AI technology to identify analyze the data and give a perfect decision to the client. It is done in several parts, such as data input, where the AI analyses the data, and at the end, it gives the best suggestion or decision to the clients. It has many advantages in our daily lives, such as saving time, increasing efficiency, improving strategic planning, being accurate, and providing the best answer (Fatile, 2025). The study has three objectives. They have been reviewed to reveal the context and clearly mention the idea of how it is narrating the elaboration. The first objective has reviewed the impacts of artificial intelligence on higher education leadership. The impact has been found as positive. The significance has been there with the high value in the results for the variables. It proves the idea of how it is justified and narrated as a positive perspective.

AI has many positive effects, but on the other hand, it has a lot of negative effects which cannot be ignored, such as reduced autonomy, lack of training, increased pressure, fear of job loss, lack of knowledge, privacy concerns, and unequal access. The other objective reviewed the decision-making process using AI in higher education leadership. This has been proven as an essential opinion where the content has been supporting the evidence. This is also negotiable when the content has been supporting the evidence and negotiating for good ideas to explore AI. The essential role of decision-making is not avoidable as the expertise needs to support the idea of the impact that can be in the long run in the context of handling the student concerns (Cox, 2021). The study results also agree with this. It has many positive impacts on teachers, such as support for students, improved teaching effectiveness, job satisfaction, reduced administrative workload, innovation, equality in classes and better curriculum design.

The last objective has reviewed some relevant recommendations that are added in the next section of the discussion. All the hypotheses are proved as positive. The value dominance and the exploration are narrating the message that all the hypotheses have been in significance. Here, artificial intelligence has a positive impact on leadership effectiveness in higher education (Abbas, 2023). It has been proven for all the other three variables and their connectivity in influence. There was a literature gap as the previous writers evaluated the impact of AI but the primary studies were limited. This has been elaborated when the study is executed for higher education with the correct variables. The literature has already discussed some parts of the variables however more investigation is needed to elaborate the significance of the study which is done by the review in hand.

5.2 Recommendations

AI is progressing support in the market. This is employed in the current example when the specific discussion has been done, and the hypotheses are proved to justify the

existence of the various reviews. Some recommendations are here. AI should be used in higher education for decision-making and other practical supports, but it is important that valued support and planned actions are taken in the understanding. AI should be explored in the ethical support to encourage practical implementations (Bollaert, 2025). The National University of Singapore, Mohammed bin Zayed University in the UAE, and the University of Melbourne in Australia are exploring AI so it can be used as a practical help.

AI is a guideline and it should be used for decision-making as it provides a roadmap to the leaders to enhance the learning plan and reveal proper working efficiencies. The use of the pragmatic approach can be handled with skilled foundations and the leaders can make better decisions by seeing global examples with ethical support in the Pakistani higher education context. It has many advantages in our daily lives, such as saving time, increasing efficiency, improving strategic planning, being accurate, and providing the best answer. So the leaders can use it in accordance. The negative impacts also exist, so it is important to make sure that the negative things are overcome in this regard. The leadership efforts should be monitored while taking the decision in the context of AI.

Higher education leadership has been extensively discussed by the authors and a comprehensive elaboration is available in the literature. The contribution of AI in this regard seems lacking to an extent, as the relevant discussion on the topic has been lacking in the context of decision-making. The study has a huge scope as it is oriented to support policymakers and leaders in higher education globally. The study is helpful in meeting the aforementioned literature gap and provides an ample and reliable piece of data that supports the evidence for policymakers and managers in the context of higher education with the support of AI.

The study has limitations while exploring the quantitative method at priority that has limited the analysis and provided limited data. The factual review is based on the interpretations of the results that seem limited and based on the generalised data from the respondents only.

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