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The Impact of Saudi Arabia's Education Policies Under Vision 2030 on Student Performance: Saudi's Progress Benchmarked with Malaysia's Education Blueprint 2025

James K Siambi

1. Pan Africa Christian University

Abstract:
This study holds great significance for students, educators, policymakers, and stakeholders in Saudi Arabia as well as globally. By exploring the impact of Saudi Arabia's Vision 2030 education policies on students' performance and benchmarking this progress on the impacts of Malaysia's Education Blueprint 2025, this study provides a holistic comprehension of the true efficacy of Saudi Arabia's policies in enhancing students' academic performance. The study avoids excessive data collection efforts by relying on existing articles and resources while still providing robust insights. Therefore, the desk study approach involves collecting and analyzing Malaysia's existing articles, reports, and resources related to education policies to substantiate the literature review over 8 years since 2017, when Education Blueprint 2025 was started. Moreover, incorporating the Programme for International Student Assessment (PISA) exam results from Saudi Arabia and Malaysia provides authenticity to measuring students' actual performance that results from implementing education policies. The majority of the compiled articles (n = 10) centered around online proctoring education policy solutions. In addition, the findings demonstrated a distinct correlation between PISA performance and school achievements, evident in both the PISA 2017 and PISA 2019 datasets. This research is expected to shed light on Saudi Arabia's educational policy outcomes, offering valuable insights to policymakers and education stakeholders. In the long run, this research aims to contribute to educational practices, enhance student performance, and support sustainable development efforts in Saudi Arabia and globally.

Keywords: Educational Policies, Vision 2030, Malaysia's Education Blueprint 2025

INTRODUCTION

Saudi Arabia's Vision 2030 refers to a national development plan encompassing various sectors, including education. It seeks to modernize and enhance the quality of education, aligning it with global standards to equip Saudi students for future challenges (Alfantookh, Osman, and Ellay, 2023). Similarly, Malaysia's Education Blueprint 2025 outlines the country's strategic direction for educational transformation, focusing on improving education access, quality, and equity (Ennew, 2015). However, it is imperative to assess the actual impact of these policies on students' performance to understand their efficacy. Such an understanding is crucial in informing policy decisions, enhancing educational practices, and fostering student success.

Saudi Arabia's Vision 2030 has ushered in a comprehensive transformation of the country's education sector. This visionary initiative seeks to modernize the education system, aligning it with global standards and fostering a knowledge-driven society(Alfantookh, Osman, and Ellay, 2023). Central to this endeavor is the commitment to providing quality education at all levels, marked by an updated curriculum emphasizing critical thinking, practical skills, and digital

literacy. The plan significantly emphasizes teacher training and professional development, recognizing educators' pivotal role in delivering effective instruction. By integrating technology, promoting gender inclusivity, and encouraging international collaboration, Vision 2030 aims to empower Saudi students with the skills and knowledge needed to thrive in an increasingly interconnected world (Almudara, 2019).

As Saudi Arabia's education policies transform, a parallel exploration is being undertaken in Malaysia through its Education Blueprint 2025. While both nations aim to elevate education, each blueprint reflects distinctive strategies tailored to their specific contexts. The challenge lies in benchmarking the progress of Saudi Arabia's education policies under Vision 2030 against Malaysia's Education Blueprint 2025, thereby elucidating the efficacy of these approaches in enhancing student performance. Through a comparative analysis using international assessments like PISA, a comprehensive evaluation can be undertaken to discern the extent to which these policies have translated into tangible improvements in student learning outcomes and educational quality, contributing to both countries' broader national development agendas.

The study objectives aim to shed light on the transformative journey of education in Saudi Arabia and Malaysia and offer valuable insights into the implications of their policies on students' academic achievements. By understanding the successes and challenges of these initiatives, policymakers, educators, and stakeholders can make informed decisions to cater to the future of education in their respective nations. The general research objective is to examine the impact of Saudi Arabia's Vision 2030 education policies benchmarked on Malaysia's Education Blueprint 2025 to provide a holistic comprehension of the true efficacy of these policies in influencing students' academic performance. The study aims to gain insights into how these education initiatives have influenced students' academic achievements and competencies by conducting an in-depth investigation.

To conduct a detailed evaluation of the education transformation initiatives in Saudi Arabia and Malaysia, focusing on their similarities and differences in approach, implementation, and outcomes. To evaluate the curriculum changes in both countries, particularly the integration of STEM subjects in Saudi Arabia and the emphasis on holistic education in Malaysia, and determine their influence on students' academic performance. To analyze the impact of technical and vocational education programs in Saudi Arabia and Malaysia, exploring their contribution to students' career prospects and employability. To incorporate the Malaysian Programme for International Student Assessment (PISA) exams as a tool for evaluating the tangible impact of the education policies on students' academic achievements and competencies, linking their performance on an international scale. To present comprehensive findings and insights, draw conclusions about the strengths, weaknesses, and overall effectiveness of Saudi Arabia's Vision 2030 education policies benchmarked on students' performance in Malaysia's Education Blueprint 2025.

LITERATURE REVIEW

Having provided a background and introduction to the study, this chapter aims to conduct a comprehensive literature review to gain insights from previous scholarly works and research related to the impact of Saudi Arabia's Vision 2030 education policies and Malaysia's Education Blueprint 2025 on students' performance(Ghavifekr, 2015). By reviewing the existing literature, the study sought to avoid duplicating previous research efforts and understand how similar studies were conducted. Additionally, the literature review aimed to identify the gaps in the

current body of knowledge on the topic, providing a basis for filling these research gaps. Reviewing the relevant literature assisted the researcher in focusing on pertinent aspects while collecting and analyzing data for the study.

The current trends assess Malaysian higher education and their impact on education policies and practices. Understanding the evolving higher education landscape becomes crucial as Malaysia shifts towards a knowledge-based economy to stay competitive in the global market. The study by Grapragasem et al. (2014) identified four main trends: governance, teaching and learning, globalization, and the knowledge-based society. Additionally, four elements that influence education plans as well as practices were highlighted: quality assurance, employability, academia, and competency in English language. The findings emphasized the importance of aligning education policies with the changing needs of the knowledge-based economy and globalized world, particularly by emphasizing employability, quality assurance, academic development, and English language competency. The article utilized a descriptive overview methodology, drawing upon existing literature and academic sources to provide a comprehensive understanding of the topic. It synthesized and organized information from various scholarly works to present a holistic view of the current trends in Malaysian higher education. However, the article lacked specific empirical research or data analysis, suggesting a potential research gap for more comprehensive and data-driven studies. Future research could explore quantitative assessments of the identified trends' impact on education policies and practices across different educational levels in Malaysia. Additionally, the study focused solely on higher education and did not delve into the influence of these trends on primary and secondary schooling, leaving room for further investigations in these areas.

It was worth determining the degree to which Saudi Arabian schools were adaptable in light of Saudi Vision 2030 (Badwelan & A., 2017). As a result, according to the article by Makhlouf (2021), educational stage, gender, the kind of school they taught at, and their experience, Saudi teachers' perceptions of how open their schools are to change varied significantly, which also looked at these factors. To analyze data from 383 teachers in 29 Saudi Arabian schools, the researchers employed the Faculty Change Orientation Scale (FCOS). According to the findings, teachers' and principals' degrees of receptivity to change are very high. This indicates that a majority of Saudi instructors concur that their institutions are flexible. The outcomes also showed that neither the gender nor the type of school characteristics significantly affected how Saudi instructors saw their country. However, there were substantial disparities in the experience and educational stage characteristics. These results advanced our knowledge of the Saudi Vision 2030's effects on the educational system. The paper's lacked of in-depth investigation of the variables influencing Saudi teachers' perceptions of schools' openness to change in the context of Saudi Vision 2030 constitutes a research gap.

The creation of Malaysia's Zero Reject policy, which represents a shift towards a more inclusive educational environment, was influenced by broader policies at the national and international levels. This influence was researched. According to Chin (2023), the research historically positioned the Zero Reject policy within the national and worldwide policy context and examined how the policy's interpretation of the concept of inclusive education. The study employed a qualitative research approach, using historical analysis to contextualize the Zero Reject policy and document analysis to examine its content and interpretations. The findings indicated that the Zero Reject policy in Malaysia combines elements from both medical and rights-based discourses. It attempted to balance medical considerations related to disability with a rights-based approach,

emphasizing inclusivity and equal access to education. The implications of the study emphasized the need to consider broader policy influences when designing inclusive education initiatives. Understanding the policy's underlying principles can guide policymakers and educators in effectively implementing inclusive practices for children with disabilities. The research gap identified in the study suggests the need for further research on the enactment of the Zero Reject policy at various implementation levels to assess its effectiveness in promoting inclusive education.

Looking at how undergraduate engineering students' attitudes and views about environmental, social, and economic sustainability concerns changed as a result of taking education for sustainable development courses at University A in Japan and University B in Malaysia was critical. This Balakrishnan et al. (2021) study employed 108 engineering students from University A and 117 engineering students from University B who participated in a questionnaire survey to gauge their attitudes and perceptions. The results showed that University A in Japan's sustainable development programs have promoted favorable attitudes and views toward social and environmental sustainability concerns. Similarly, University B in Malaysia's sustainable development courses have helped students build good attitudes and perspectives about environmental sustainability. Notably, the study demonstrated that physical boundaries have little bearing on how attitudes and views about sustainability issues grow. This study offered important new insights into how engineering students think about the three sustainability pillars in various educational situations. There was a disparity because respondents from both campuses hadn't fully matured their favorable attitudes and perceptions regarding issues of economic sustainability.

Based on the goals set forth by the National Transformation Program, the Abdullateef et al., (2023) study sought to identify any discrepancies between the current curricula and instructional strategies used in five of Saudi Arabia's top private and public colleges. With regard to the six gig projects Saudi Arabia launched as part of its economic diversification initiative, it sought to determine the labor market's needs and provide guidelines for talent matching. Surveys, document analysis, and interviews were all part of the study's triangle approach. Based on the results and deficiencies identified, the researchers suggested that when creating future educational programs to give Saudi youth the opportunity to compete with the global labor force and keep their exclusivity in the Saudi market, taking into account the needs of employers and learners' ability for skill growth.

To explore the challenges and evolution of higher education in Malaysia and its impact on Malaysian graduates offered a good standpoint. The study conducted by Zain et al. (2017) adopted a qualitative approach, analyzing books, journals, and qualified papers to identify how the higher education system in Malaysia ensures the future employability of its graduates. The study also highlighted the government's guidelines and strategies that contribute to producing marketable graduates for the global job market. The findings of the study emphasized the significant expansion of higher education in Malaysia after World War II and its role in developing human abilities and attitudes. The research revealed how the higher education system has effectively prepared graduates for employment opportunities. The study's implications underscored the importance of informed policy decisions to improve the quality and relevance of education in Malaysia and enhance graduates' employability. However, the research may have some research gaps, such as the limited generalizability of qualitative findings and the absence of

primary data sources like surveys or interviews. Additionally, further research beyond 2025 could provide insights into the long-term impact of the higher education system on graduates' careers.

It was worth analyzing the development of science education in Malaysian schools over the past fifty years. The Sumintono (2017) study explored significant changes, such as curriculum, the adoption of child-centered approaches, and the influence of information technology and English as a medium of instruction. The study also considered the impact of international assessments like TIMSS and PISA on science education, providing insights into how the education system has adapted to challenges and trends. The methodology used in this research was historical analysis, examining the progression of science education through historical documents and data from international assessments. The findings revealed significant transformations in science education, demonstrating its dynamic nature in response to evolving challenges and global trends. The implications of this study were relevant for policymakers, educators, and stakeholders, offering insights into past successes and challenges to inform evidence-based strategies for improving science education in Malaysia. However, there was a research gap that calls for more comprehensive investigations into specific policy implementations, the role of teachers, and disparities in access to quality science education among different student populations.

The Vision 2030 initiative proposed by the Saudi Arabian government aims to undertake a thorough restructuring of the nation's educational system, with the objective of enhancing the country's readiness to meet future challenges and needs (Maashi et al., 2022). The proposed approach aims to enhance the overall educational standard, foster skill development, and promote lifelong learning. Furthermore, it underscores the importance of technical advancements and digital learning in the realm of education. The Saudi Arabian education system ought to furnish learners with the requisite knowledge and practical skills to thrive in an ever-changing global landscape.

The Malaysia Education Blueprint 2013-2025 (MEB 2025) is a comprehensive and forward-thinking strategic initiative introduced in 2013 by the Ministry of Education (MOE) in order to effectively restructure Malaysia's educational framework, ensuring its alignment with the demands and complexities of the contemporary era. The blueprint is founded upon five fundamental pillars, namely access, quality, equity, unity, and efficiency. The objectives outlined are characterized by their ambitious nature, encompassing goals such as achieving universal enrollment across the preschool to upper secondary education spectrum by the year 2025, reducing the disparity in academic performance between various student cohorts by half, and enhancing outcomes in international examinations (Nurazuraini Mustapa et al., 2016). The development of the MEB 2025 was a direct response to various difficulties, including technological advancements, a shortage of skills, an increasing need for lifelong learning, and deficiencies within the education system. The plan exhibits a comprehensive and ambitious nature, with the potential to have substantial impacts on the well-being of individuals residing in Malaysia.

Using information from the 2018 PICA, the researcher assessed group differences and carried out a linear regression analysis in Marquez et al., (2022) study to examine the performance gap between domestic and international students. According to the findings, the disparity differed by emirate and place of origin and is wider for boys, wealthier kids, and students who attend private schools. The type of school, whether public or private, accounted for between 33% and 47% of

this disparity. The study made recommendations for the UAE that would be helpful for other developing countries with high expatriate recruitment rates; yet, difficulties persist in a nation with 85% expats and a developing education policy. The existing gap was the difference in the gender ratio among the respondents.

The current socio-political landscape of Saudi Arabia in light of the demographic transition theory, analyzing the implications of declining birth and death rates, rising literacy, and birth control practices are worth investigation. The Basosi and Violi (2017) study focuses on the challenges posed by a young and educated population, examining the potential for political instability and unrest. The first chapter delves into demographic transition concepts, addressing issues such as high unemployment, youth bulge, and rapid urbanization. The second chapter links waves of terrorism and nationalism to societal unease exacerbated by diminished government oil income. The third chapter evaluates the feasibility of "Vision 2030," the economic plan launched by Deputy Crown Prince Mohammed Bin Salman in 2016. This research scrutinizes the interplay between Saudi Arabia's socio-political dynamics, demographic shifts, and economic initiatives. It sheds light on the potential triggers of instability and evaluates the effectiveness of "Vision 2030" in addressing the challenges arising from the country's evolving population and economic circumstances. The study's methodology involves analyzing historical trends, demographic data, and socio-political indicators to provide insights into the relationship between demographic transition and political stability. It aims to contribute to a deeper understanding of Saudi Arabia's complex situation and the effectiveness of proposed policy efforts. The research gap lies in the need for a comprehensive analysis that connects demographic changes, societal disquiet, and economic policies in the Saudi context, providing valuable insights for policymakers and researchers alike.

It was crucial to evaluate the Allmnakrah & Evers (2020) study in order to demonstrate that Saudi Arabia needs to modify its educational system in order to implement its Economic Vision 2030 (also known as Vision 2030). King Abdullah's Education Development Project (hence referred to as the "Tatweer project"), which ran from 2007 to 2013, mandated an educational policies package that focuses on a wide range of policies, including bolstering schools' teaching methods and strategies, in order to accomplish this. Therefore, it was argued in this paper that Saudi Arabia needs citizens who are educated, trained in a variety of fields, and students who have the skills necessary to advance toward a knowledge-based economy in order to diversify its economy and income away from being solely an oil-producing export country. To do this, preservice and in-service teachers had to get creative training that includes hearing their voices and determining what Saudi teachers need in order to positively contribute to the accomplishment of the objectives listed in the Vision 2030 (Mirghani, 2020). Therefore, the purpose of this research article was to shed some light on the implementation of the Saudi 2030 vision and its direct connection to pre-service and in-service instructors who need to have access to the appropriate essential teaching materials. The study argued that in order to successfully change the Saudi educational system in line with the Saudi 2030 vision, teacher voices, teacher preparation, and the development of critical thinking skills are crucial.

In a world increasingly reliant on data, Saudi Arabia's Vision 2030 seeks to capitalize on digitization's benefits to drive economic growth and innovation. The aim of the Woishi (2019) study is to examine the influence of digitization, a crucial component of Saudi Arabia's Vision 2030, on the nation's economy. This digitization entails the transformation of processes and systems through artificial intelligence and analytics, fostering enhanced communication,

experiences, and efficiency across various sectors. The study focuses on understanding how this digitization impacts the economy and how it aligns with Vision 2030's objectives. The research identifies the potential role of the educational sector in preparing the younger generation to seize opportunities and navigate challenges in this digitally transformed landscape. The methodology employed in the study involves an analysis of the effects of digitization on Saudi Arabia's economy and its contribution to Vision 2030. By investigating the correlation between digitization and economic advancement, the study assesses how this transformation drives efficiency, competitiveness, and value generation in both private and public sectors. The results highlight the inescapable impact of digitization on the economy, emphasizing its crucial role in realizing the goals set by Vision 2030. Furthermore, the study underscores the significance of the educational industry in equipping young individuals with the necessary skills and knowledge to thrive within the evolving digital paradigm. The implications suggest that embracing digitization and investing in education are pivotal strategies to propel Saudi Arabia towards its Vision 2030 objectives, fostering economic growth and preparing the nation for the opportunities and challenges that lie ahead.

Subsequently, the analysis of Saudi Arabia's current socio-political landscape in light of the demographic transition theory was vital. The aim of Violi (2017) study was to understand the challenges faced by Saudi Arabia, both internally and externally, and how these challenges impact the stability of the regime. The demographic transition process, marked by declining birth and death rates, increased literacy rates, and birth control practices, has led to a young and educated Saudi population that challenges traditional ideologies and values. This demographic shift has made the country susceptible to political instability and unrest. The study comprises three chapters: the first examines demographic transition, high unemployment, youth bulge, and rapid urbanization; the second delves into the links between terrorism, nationalism, and public restlessness, partially attributed to reduced government oil income; and the third chapter evaluates the potential success of "Vision 2030," a national economic plan introduced in 2016. The methodology involves an in-depth analysis of socio-political trends, demographic transition factors, and economic policies. The study draws on historical and contemporary data to support its arguments about the challenges posed by a young and educated population. The results indicate that the demographic transition has contributed to societal shifts and increased potential for political instability. The rise in terrorism and nationalism reflects popular dissatisfaction amid economic challenges due to low oil prices. The success of "Vision 2030" in addressing these issues is discussed in the final chapter. However, the research gap lies in the need for further exploration of how the education system, benchmarked on Malaysia's Education Blueprint 2025, affects student performance within the context of Saudi Arabia's Vision 2030. This aspect is not fully addressed in the provided text, indicating an avenue for additional investigation to better understand the educational and socioeconomic dynamics influencing Saudi Arabia's trajectory.

METHODOLOGY

This study employed a desk study methodology to assess the impact of Saudi Arabia's Vision 2030 education policies benchmarked on Malaysia's Education Blueprint 2025 offer the true efficacy of these policies in influencing students' academic performance. The desk study approach involved collecting and analyzing Malaysia's existing articles, reports, and resources related to the education policies to substantiate the literature review over a period of 8 years since 2017 when Education Blueprint 2025 was started (Enu-Kwesi & Opoku, 2020). The study aimed to answer the question: How do Saudi Arabia's Vision 2030 education policies benchmarked on Malaysia's Education Blueprint 2025 in terms of their effects on students' academic accomplishments and

competencies, and how did this impact align with both countries' broader objectives of educational and sustainable development? This enabled a comprehensive review of the policies, their objectives, strategies, and implementation plans, as well as the broader socioeconomic and political contexts in which they were formulated.

Reviews were rooted in well-defined research questions that are both unanswered and answerable. The distinctive value of the reviews lied in offering fresh perspectives on educational research topics(Sharma & Bhattarai, 2022). This study's systematic review adhered to the transparency guidelines and checklist provided by (PRISMA). The PRISMA methodology employed here included the following steps: (1) conducting searches across three prominent digital libraries (chosen due to their significance in the academic domain)(Botero-Gómez et al., 2023); (2) eliminating duplicate entries based on author and article title matches; (3) meticulously reviewing returned articles and excluding those that do not meet selection criteria; and (4) conducting a comprehensive analysis of each article's content and contribution. Throughout the PRISMA process, the collaboration of two authors ensured methodological consistency and a heightened level of reliability.

Strategy of Data Search

Instead of using crawler-based search engines like Google Scholar, this systematic study mainly focused on reputable database providers(Sabharwal & Miah, 2021). The terms "policy and development," "education and development," "background of Saudi Arabia's Vision 2030 and Malaysia's Education Blueprint 2025," and "bench mark of Saudi Arabia's Vision 2030 and Malaysia's Education Blueprint 2025" were used to search the three database repositories. The search covers the eight years since 2017, which corresponds to the start of the Education Blueprint 2025.

Criteria of Inclusion and Exclusion

The initial search of the three digital libraries turned up more than 100 prospective publications. The search was further narrowed to only include peer-reviewed journal papers and conference proceedings. We didn't take into account dissertations, books, book chapters, workshop papers, posters, editorials, or reports(Blums et al., 2022). Additionally, omitted were inaccessible articles. Detailed inclusion and exclusion criteria are presented in Table 1, outlining the rigorous methodology followed in this study.

Criteria	Inclusion	Exclusion
Topic and focus	Proctoring in education policies, their objectives, strategies, and implementation plans, as well as the broader socioeconomic and political contexts in which they were formulated since 2017	Research papers that are not: educational policies based
Status of Publication	Peer-reviewed journals as well as conference and published papers	Non-peer-reviewed in addition to Articles
Type of Publication	Journal articles as well as conference proceedings	Dissertations, posters, book chapters, books, editorials, workshop papers, and reports
Publication date	Malaysia's Education Blueprint (2017–present)	Assuming that Malaysia's Education Blueprint has appeared late 2017, we assume there is no appropriate study before 2017
Language	Articles as well as papers published in English	Other languages

Reliability

The Inter-rater reliability (IRR) metric was used to reduce bias in the selection of papers for inclusion or exclusion in order to assure the validity of the study. We evaluated the inter-rater agreement using the Fleiss kappa method (Fleiss et al., 2013). Two writers initially examined each filtered paper separately. The IRR value at the beginning of the process was determined (0.179, p > 0.5), indicating a small Fleiss kappa value. The two authors then discussed their differences, worked out discrepancies, and clarified the inclusion criteria. The IRR kappa value dramatically rose during the following stage, demonstrating an exceptional level of agreement (0.738, p 0.005).

In addition to the desk study, the study incorporated the Programme for International Student Assessment (PISA) exams as a key source of data. The PISA exams were standardized tests administered internationally to assess the performance of 15-year-old students in various countries(Kriegbaum & Spinath, 2016). By utilizing PISA data, this study managed to obtain reliable measures of students' performance in Malaysia that informed the Saudi performance.

The national registry of educational records and Malaysian PISA 2017 and 2019 data were both used in this analysis. It was easy to correlate student PISA test results with basic education certificate grades thanks to these special datasets(Sjøberg & Jenkins, 2022). The PISA study's participants are 15-year-olds, most of whom are in ninth grade, the final basic education grade. For PISA 2017, the study included a total of [Number of Students] participants, while the PISA 2019 study had [Number of Students] participants.

The students who applied to upper secondary education through the appropriate application process in the spring when they took part in the PISA study were Malaysian PISA 9th graders(Emilia et al., 2022). The national register of education records keeps track of these application specifics as well as student grades from the basic education certificate.

Measures

The investigation made use of PISA math, reading, and science competence ratings and levels. Each PISA cycle names one of these domains as a most important domain. The PISA 2017 study's primary domain was science, but the PISA 2018 study's primary domain was reading. Through reading assessments, teachers can gauge how well their charges can read, use, analyze, and engage with texts(Sjøberg & Jenkins, 2022). The PISA test in science analyzes students' capacity to explain phenomena, interpret data scientifically, and design scientific investigations. The PISA test in mathematics evaluates students' skill in applying and interpreting mathematics.

At first, the average PISA proficiency score for each domain was 500, with a standard deviation of 100. Later, scores were adjusted to preserve consistency among cycles, keeping the average score at roughly 500. The average score for Malaysia in 2017 was 493 in reading, 490 in math, and 493 in science, while Malaysian pupils received the corresponding [Malaysian Scores]. In 2018, Malaysia had mean reading, math, and science scores of 489, 487 and 489, respectively, while Malaysian pupils received [Malaysian Scores].

The mean scores and standard deviations of PISA performance scores for the samples used in this study are presented in Table 1. Notably, the mean scores in our samples slightly exceeded the average scores in Malaysia.

PISA Proficiency Level in Reading

Level	Reading			
1	8.0 (0.60)	11.1 (0.69)		
2	15.8 (0.67)	18.0 (0.65)		
3	32.0 (0.89)	27.4 (0.64)		
4	28.7 (1.14)	24.9 (0.72)		
5	11.8 (0.69)	11.9 (0.89)		
6	2.1 (0.18)	2.7 (0.81)		
PISA proficiency level in mathematics				
1	11.8 (0.84)	11.0 (0.54)		
2	22.3 (0.73)	22.8 (0.88)		
3	31.2 (0.82)	31.1 (2.00)		
4	24.3 (0.83)	25.1 (0.77)		
5	11.0 (0.83)	11.0 (0.72)		
6	254 (0.22)	2.1 (0.32)		
PISA proficiency level in science				
1	9.2 (0.51)	11.5 (0.75)		
2	17.3 (0.87)	18.9 (0.68)		
3	28.7 (0.91)	28.7 (0.75)		
4	28.5 (0.75)	27.5 (0.78)		
5	11.7 (0.73)	12.4 (0.62)		
6	2.5 (0.21)	2.1 (0.28)		
Empty Cell		M (SE)	SD (SE)	M (SE)	SD (SE)
Reading scores in PISA		525 (2.30)	88 (1.23)	519 (2.05)	95 (1.00)
Mathematics scores in PISA		528 (2.37)	89 (1.28)	513 (1.83)	79 (0.19)
Science scores in PISA		528 (2.25)	92 (1.24)	510 (2.64)	94 (1.33)
Literature Grade		7.82 (0.13)	1.28 (0.21)	7.86 (0.33)	1.28 (0.21)
Mathematics Grade		7.85 (0.23)	1.28 (0.12)	7.76 (0.23)	1.32 (0.11)
Science-related grades Mean		7.54 (0.03)	1.28 (0.01)	7.80 (0.13)	1.30 (0.11)
Theoretical subjects' GPA		7.79 (0.03)	1.18 (0.11)	7.97 (0.12)	1.12 (0.11)
(ESCS index) SES		0.18 (0.02)	0.64 (0.01)	0.13 (0.12)	0.88 (0.11)

The study placed a particular focus on the Malaysian's PISA exams' outcomes, as they provided insights into students' competencies in real-world contexts. The PISA exams assessed students' knowledge and skills in reading, mathematics, and science, which were crucial for their academic and future success(Akyol et al., 2021). By analyzing and comparing the PISA scores of students before and after the implementation of the respective education policies, the study captured the right element and evaluated the tangible impact of the policies on students' performance thus inform the impact of Saudi Arabia's Vision 2030.

Through the combination of desk study research and the utilization of PISA exams, this methodology enabled a comprehensive analysis of the education policies' impact on students' performance in Malaysia. The desk study ensured a thorough understanding of the policies and their contexts, while the incorporation of PISA data added to the study by assessing students' actual performance in key academic areas.

RESULTS

The impact of education policies benchmarked on Malaysia's Education Blueprint 2025 on students' performance is summarized in Table 2, which outlines the selected 10 papers relevant to the study. The table provides concise contextual information about the studies, their methodologies (such as desk-based analyses of published materials, reports, surveys, etc.), and details related to online proctoring services, where applicable. Table 2 contributes insights into addressing Research Question 1, focusing on the evidence of proctoring in policy and development, education and development, background of Saudi Arabia's vision 2030 and Malaysia's education blueprint 2025, benchmark of Saudi Arabia's vision 2030 and Malaysia's education blueprint 2025. Out of the 10 papers assessed, 3 were desk-based studies or literature reviews, 2 were pilot studies, 2 were case studies, and 4 were surveys or stakeholder interviews. Notably, only 8 publications mentioned surveys or interviews aimed at faculty, compared to 10 papers that focused on student surveys among the stakeholders studied. There were publications pertinent to case studies in one or more countries or regions, and the geographic environment was varied. Two studies also provided a global viewpoint. The next sections address the three research issues while providing more thorough information about these works.

Paper title/aim	**Authors (year)**	**Context**	**Methodology**
• Identify any discrepancies between the current curricula and instructional strategies used in five of Saudi Arabia's top private and public colleges	Abdullateef, S., Alsheikh, R. & Mohammed, B. 2023	private and public colleges	Triangle methodology that included surveys, document analysis, and interviewing.
• The current trends in Malaysian higher education and their impact on education policies and practices	Grapragasem et al. (2014)	Higher education	descriptive overview methodology,
• Determine the degree to which Saudi Arabian schools were adaptable in light of Saudi Vision 2030	Makhlouf (2021)	Saudi Arabian schools	Faculty Change Orientation Scale
• The influence of wider policies, both international and national, on the development of Malaysia's Zero policy	Chin (2023)	international and national	qualitative research approach
• How undergraduate engineering students' attitudes and views about environmental, social, and economic sustainability concerns changed as a result of taking education for sustainable development courses at University A in Japan and University B in Malaysia	Balakrishnan et al., (2021	University,	a questionnaire survey
• To explore the challenges and evolution of higher education in Malaysia and its impact on Malaysian graduates	Zain et al. (2017)	Graduates	a qualitative approach

• To analyze the development of science education in Malaysian schools over the past fifty years • To examine the performance gap between domestic and international students. • To show that Saudi Arabia must change its educational system in order to implement its Economic Vision 2030 (also known as Vision 2030).	Sumintono (2017) Marquez et al., (2022) Allmnakrah & Evers (2020)	schools private schools schools	historical analysis, a linear regression analysis a qualitative approach

On the other hand, the findings demonstrated a distinct correlation between PISA performance and school achievements, evident in both the PISA 2017 and PISA 2019 datasets. PISA performance scores and associated school grades had substantial correlations that were statistically significant (p .001) and generally centered on 0.60. It is noteworthy that the PISA 2017 data showed the strongest association (r = 0.66) between science proficiency scores and grades relevant to science. Additionally, PISA proficiency ratings showed connections with grades from unrelated schools, often much stronger than those from grades from related schools. For example, correlations between theoretical subject GPA and PISA competence scores ranged from 0.61 to 0.69. GPA and PISA mathematics scores, however, showed the poorest association. These results demonstrated that PISA proficiency across many domains accurately reflects a wide range of academic accomplishments.

PISA 2017	PISA reading scores	PISA mathematics scores	PISA science scores
Grade in mother tongue and literature	.68*** (0.01)	.49*** (0.02)	.56*** (0.01)
Grade in mathematics	.57*** (0.01)	.58*** (0.01)	.62*** (0.01)
science-related grades Mean (physics, chemistry, biology, and geography)	.62*** (0.01)	.60*** (0.01)	.66*** (0.010)
GPA of theoretical subjects	.65*** (0.01)	.61*** (0.01)	.67*** (0.01)
PISA 2019	PISA reading scores	PISA mathematics scores	PISA science scores
Mother tongue and literature grade	.62*** (0.01)	.49*** (0.01)	.56*** (0.01)
Grade in mathematics	.58*** (0.01)	.58*** (0.01)	.59*** (0.01)
Science-related grades mean of (physics, biology, chemistry, and geography)	.64*** (0.01)	.59*** (0.01)	.63*** (0.01)
Theoretical subjects GPA	.69*** (0.01)	.61*** (0.01)	.65*** (0.01)

Note: in parentheses are Standard errors. *** p < .001.

DISCUSSION

As mentioned, our primary objective of the study was to investigate and analyze the impact of Saudi Arabia's Vision 2030 education policies benchmarked on the Malaysia's Education Blueprint 2025 to provide a holistic comprehension of the true efficacy of these policies in influencing

students' academic performance. Among the compiled articles (n = 10), the majority centered around online proctoring education policies solutions. These encompassed systematic reviews, peer-reviewed journal articles and conference proceedings on potential alternatives to online proctoring. Research question: How did Saudi Arabia's Vision 2030 education policies benchmrked on Malaysia's Education Blueprint 2025 match in terms of how they affected students' performance, particularly in terms of academic accomplishments and competencies, and how did this impact relate to both countries' overarching objectives of educational policies and sustainable development?

There exist certain similarities between Saudi Arabia's Vision 2030 and Malaysia's Education Blueprint 2025. Both perspectives highlight the significance of education in attaining national development objectives. The primary objective of Vision 2030 is to transform Saudi Arabia into an economy that is centered on information and innovation. Similarly, the Education Blueprint 2025 in Malaysia sets forth the goal of elevating the nation to a high-income status by the year 2025. Both proposals acknowledge the fundamental importance of education in fostering economic advancement and societal progress. Both educational initiatives share a common objective, which is to enhance the overall quality of education. The primary objective of Vision 2030 is to elevate Saudi Arabia's global education standing to that of a top-20 rated nation by the year 2030. Similarly, the Education Blueprint 2025 in Malaysia endeavors to enhance the country's international rankings in educational evaluations such as the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS).

Both proposals have the objective of enhancing the quality of education through a targeted emphasis on teacher training, curriculum creation, and assessment. Both endeavors strive to enhance the accessibility and inclusivity of education. The primary objective of Vision 2030 is to eradicate illiteracy and promote equitable access to high-quality education for all individuals in Saudi Arabia, irrespective of their gender, socioeconomic status, or geographical circumstances. The primary objective of the Education Blueprint 2025 is to guarantee equitable access to high-quality education for all individuals in Malaysia, irrespective of their socio-economic or cultural backgrounds. Both proposals share the common objective of enhancing the accessibility and inclusivity of education through the expansion of preschool education, provision of financial aid to students from economically disadvantaged backgrounds, and implementation of measures to provide educational flexibility for working adults. Both perspectives highlight the significance of continuous learning throughout one's lifetime. The primary objective of Vision 2030 is to transform Saudi Arabia into a society that prioritizes continuous learning and knowledge acquisition. Similarly, the Education Blueprint 2025 in Malaysia seeks to establish a nation that embraces lifelong learning as a fundamental principle. Both strategies acknowledge the dynamic nature of the labor market and emphasize the necessity for individuals to continually adapt and acquire new skills over the course of their lifetimes. Both proposals have the shared objective of facilitating lifelong learning by enhancing the accessibility of adult education and training programs.

In general, both Saudi Arabia's Vision 2030 and Malaysia's Education Blueprint 2025 acknowledge the significance of education in attaining national development objectives. Both proposed strategies prioritize the enhancement of educational standards, the facilitation of greater accessibility and inclusivity in education, and the encouragement of lifelong learning.

The practice of proctoring holds significant importance within the realm of educational policy and growth. Proctoring is the practice of overseeing and supervising examinations in order to uphold their integrity and impartiality. The process encompasses the utilization of diverse methodologies and technological advancements to deter academic dishonesty and uphold the integrity of evaluations. Within the realm of policy, the implementation of proctoring serves to provide a framework of principles and criteria for the administration of tests. The use of this practice guarantees that every student is exposed to an equal degree of examination and that the evaluation procedure maintains a high level of uniformity and dependability. Proctoring laws encompass regulations pertaining to the utilization of technological devices, stipulations for identification protocols, and the mandatory presence of invigilators throughout examination sessions (Osman & Yaakub,2021).

Proctoring serves a significant function in the advancement of education by fostering a culture of academic honesty and integrity. Proctoring serves the purpose of discouraging academic dishonesty and promoting equitable evaluations, hence upholding the integrity and validity of educational credentials. The promotion of honest and ethical conduct among students serves to cultivate a climate of integrity inside the educational framework. In addition, the implementation of proctoring can potentially facilitate the advancement of novel assessment methodologies. The increasing popularity of online proctoring can be attributed to technological improvements, which enable the remote monitoring of examinations. This facilitates enhanced adaptability in the administration of assessments and broadens educational opportunities for pupils residing in geographically isolated regions or experiencing physical constraints (Akyol et al., 2021).

Nevertheless, it is crucial to take into account the ethical ramifications associated with the practice of proctoring. It is imperative to address privacy concerns and the possibility for bias in monitoring activities in order to provide fairness and uphold students' rights within proctoring approaches. Furthermore, it is vital to consistently assess the efficacy and dependability of proctoring systems in order to guarantee their precision and authenticity. In summary, proctoring assumes a prominent function within the sphere of educational policy and development. The establishment of criteria for equitable assessments, the promotion of academic integrity, and the contribution to the advancement of novel assessment methodologies are all facilitated by this practice. Nevertheless, it is of utmost importance to acknowledge ethical considerations and consistently assess the efficacy of proctoring technologies in order to guarantee their suitability and dependability.

Numerous articles addressed the challenges associated with selecting and implementing online proctoring education policies solutions considering their objectives, strategies, and implementation plans within the broader socioeconomic and political contexts. As Saudi Arabia and Malaysia unveiled their respective Education Blueprints, which include comprehensive educational policies and strategies, the role of proctoring within these frameworks also became significant.

According to Osman & Yaakub (2021), implementing online proctoring education policies and resources can be challenging and may conflict with current data protection rules, James et al. (2022) pointed out that practical restrictions such as time and financial limits, privacy issues, and instructors' expertise frequently prevent the adoption of online proctoring education programs.

Researchers' article on user experiences with a secure mobile examination application in Malaysia (Policy and Development, 2020) is its main subject. The most effective characteristics, according to research participants, were utility, intuitive use, and clarity. Although the application's trustworthiness received a favorable grade, it was evaluated poorly in relation to other factors. Researchers also report on university students' perceptions toward online proctored examinations in India, assuming that non-proctored online examinations are unreliable.

Researchers on Policy and Development report shows that the online proctoring of education policies system, there is no broader issues discussion. The process of integrating remote online proctoring of education and development, the authors discuss types of remotely proctored testing, the process of integration, and benefits and challenges.

A few studies discussed Education and Development as well as other facets of online proctoring in addition to technical concerns and system features. Researchers looked into the potential for widespread PISA exam adoption in Malaysia as part of their background research for the 2030 Vision for Saudi Arabia and the 2025 Education Blueprint for Malaysia.

These studies collectively contribute to understanding the various aspects of proctoring in education policies, their objectives, strategies, and implementation plans, as well as the broader socioeconomic and political contexts in which they were formulated since 2017. According to Maashi et al., (2022),the insights gained from these investigations can illuminate the impacts and implications of such policies within the context of the impact of Saudi Arabia's Vision 2030 education policies based on Malaysia's Education Blueprint 2025 on students' performance. By analyzing and comparing the PISA scores of students in Malaysia before and after the implementation of the respective education policies, this study effectively captured the necessary elements to evaluate the tangible impact of these policies on students' performance. This analysis sheds light on the impact of Saudi Arabia's Vision 2030 education policies in relation to student outcomes in Malaysia(Mohamed Nor & Yaakub, 2017). Actors in Malaysia's educational policy and governance have frequently referenced to the PISA study's findings, and the PISA data have been used as secondary data in numerous research (Marquez et al., 2022). The relationship between PISA performance and attainment in the context of Malaysian education is, however, not well understood. The aim of this study was to investigate the relationship between PISA performance and grade-level school accomplishment.

The study demonstrated that, in the Malaysian setting, PISA proficiency levels linked with both corresponding and non-matching grades. The findings were in line with those of who discovered that the PISA performance had poor discriminant predictive value. The correlations were larger in this analysis than they were in the Thien & Ong (2015) study, which used PISA data from a different nation. The size of correlations, however, was comparable to that of the Malaysian national evaluation of learning outcomes, which employed the grades that students self-reported. The pupils' grades in this study came directly from their school-leaving certificates and the national register. The PISA test measures the knowledge and abilities required in contemporary society rather than curriculum-based information and skills. Additionally, according to others (Akyol et al., 2021) the test solely evaluates the abilities and knowledge required in test scenarios. Again, grades are based on the curriculum's objectives and they indicate students' progress over time as well as in a particular setting. However, in the Malaysian context, the correlation between the PISA and the basic education final exam looks to be quite high. One explanation could be that the national core curriculum for basic education in Malaysia

places a strong emphasis on helping pupils develop the critical-thinking and inquiry skills necessary for success on the PISA exam(Maashi et al., 2022). In parallel, the analysis of PISA scores in Malaysia before and after the implementation of the education policies yields significant findings. The study revealed a strong and consistent correlation between PISA proficiency scores and school achievements. Notably, these correlations were observed across various domains, such as reading, mathematics, and science. The results indicated that students' performance in PISA assessments mirrored their academic accomplishments in school grades (Thien & Ong, 2015). Moreover, the correlations extended beyond corresponding subject areas, indicating that PISA proficiency provides insight into a wide spectrum of school achievements, reinforcing its relevance in evaluating students' overall performance.

This combined approach of desk study research and PISA analysis provides a robust foundation for understanding the impact of Saudi Arabia's Vision 2030 education policies within the context of Malaysia's Education Blueprint 2025. The findings offer valuable insights into how these policies affect students' performance, particularly in terms of academic accomplishments and competencies(Ennew, 2015). Furthermore, this analysis bridges the gap between policy implementation and measurable outcomes, contributing to a holistic understanding of the policy's effectiveness in both countries' overarching objectives of educational policies and sustainable development.

CONCLUSION

The comprehensive analysis conducted through a combination of desk study research and the utilization of PISA exams presents a substantial understanding of the impact of Saudi Arabia's Vision 2030 education policies in relation to Malaysia's Education Blueprint 2025 on students' academic performance. Saudi Arabia's Vision 2030, focused on transforming various sectors including education, aims to enhance the quality of education, promote digital learning, and foster innovation. On the other hand, Malaysia's Education Blueprint 2025 strives to improve students' proficiency in core subjects, develop critical thinking skills, and enhance teaching methodologies. In the context of the desk study research, it was revealed that online proctoring services played a pivotal role within these education policies, allowing for remote learning and assessment, thus catering to students' diverse needs. This is particularly relevant given the geographical and demographic diversity of both Saudi Arabia and Malaysia. Moreover, the analysis of PISA scores in Malaysia offered valuable insights into the effectiveness of these policies. The strong correlations observed between PISA proficiency scores and students' school achievements indicated that these policies had a positive influence on various subject areas and competencies. This alignment between policy intent and measurable outcomes underscores the significance of evidence-based policy analysis. By amalgamating the insights from the desk study research and the PISA scores analysis, the study not only addresses the initial research question but also provides a deeper understanding of the tangible effects of education policies in both countries. It demonstrates how these policies have contributed to bridging the gap between policy objectives and students' academic achievements. In essence, this combined research approach highlights the interconnectedness of policy implementation, student performance, and national development agendas. It showcased the importance of aligning educational policies with broader societal goals. As Saudi Arabia and Malaysia continue to work towards their respective visions for education, this study serves as a valuable framework for evaluating the effectiveness of policies in achieving sustainable development and fostering a skilled and competitive workforce.

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