

Widening General Higher Education or Turning to Vocational Education in Saudi Arabia: A Systematic Review

Abdulaziz Salem Aldossari*

*Educational Policies Department, College of Education, King Saud University,
Riyadh, Saudi Arabia, P.O Box 2458 Riyadh 11451
Phone: 00966542242838, Fax: +966114674856, E-mail: aldossa6@gmail.com
ORCID: 0000-0002-9465-2039*

KEYWORDS Educational Transformation. Saudi Education. Saudi Vision 2030. Training. Universities

ABSTRACT The educational landscape in Saudi Arabia has undergone substantial changes as a result of Vision 2030, which aims to promote economic diversification. The Saudi government has been confronted with a critical choice in its efforts to bring about this transformation, that is, whether to prioritise the expansion of general higher education possibilities or to prioritise the development of vocational education in order to align with the changing demands of the labour market. By using a systematic review, 12 related studies to general higher education and vocational education were described and analysed. The findings highlight that allocating the largest share of financial resources to prestigious educational institutions as well as making vocational education a second option for failed students have significant impacts on the unwillingness to enrol in it. Some traditional works have been replaced by machines. Therefore, focusing on integrating both general and vocational pathways to achieve digital transformation has become an important requirement to achieve the requirements of Vision 2030.

INTRODUCTION

The advantages of general and vocational education over each other have been a matter of debate among philosophers and policymakers for decades now (Malamud and Pop-Eleches 2010). These debates and philosophical arguments tried to find which of the two education methods has greater value for generations to come. John Dewey and Charles Prosser, instrumental figures in American educational philosophy and pedagogical theory, had different views toward general education. Prosser has always been an advocate of vocational education, criticising general education as becoming dangerously close to becoming elitist in the sense that it tended to prepare students more for academia and its cerebral culture. However, Dewey's philosophy holds that vocational education might inhibit intrinsic motivation and the development of a person's natural

interests, which may lead students into specific career paths and restrict them to these specialisations (Orkodashvili 2009).

In addition, several recent studies have given the importance to study the issues of vocational and general education and their problems. Kromydas (2017) sees general higher education as mainly detached from the logic of economic benefits. Agasisti and Bertolotti (2022) found that general higher education does not affect regional Gross Domestic Product or GDP per capita in any great measure because of the lack of significant relationships between universities and human capital. They assert that vocational education with related subjects and courses is an intelligent way to prepare students for a change and for possible alternative careers.

The results of some studies indicated that vocationally educated individuals often find employment sooner after school than those with a general educational qualification (Forster et al. 2016; Aldossari 2020). Despite the opportunities offered by vocational education, general education is still preferred, which has led to the former's failure to expand (Aldossari 2020). Vocational education provision in most countries of the world is being driven less by governmental and institutional planning than by industry and labour market demand.

Address for correspondence:

Abdulaziz Salem Aldossari
Educational Policies Department,
College of Education, King Saud University,
Riyadh, Saudi Arabia
P.O Box 2458 Riyadh 11451
Phone: 00966542242838
Fax: +966114674856
E-mail: aldossa6@gmail.com

Moreover, it has traditionally been developed as an alternative to general higher education, and this has led to students refraining from vocational education and choosing general education (Anderson et al. 2020). Furthermore, Powell and McGrath (2019) argued that the widening of general higher education participation can create a hyper-inflation of credentials, causing their serious devaluation in the labour market. This may create a false impression that a higher degree is a prerequisite for a job and therefore, induce individuals to undertake them only for the sake of getting a job.

Within the educational framework of Saudi Arabia, a notable discourse has emerged on the deliberation between augmenting the availability of general higher education or directing greater attention towards vocational education (Alshahrani et al. 2023). The significance of the decisions made during this transformative journey towards economic diversification and social advancement holds great importance for the Kingdom (Singh et al. 2022). Saudi Arabia is currently undertaking the ambitious task of transitioning its economy from a heavy reliance on oil to a more diversified and knowledge-based model, as outlined in its Vision 2030 project (Allmnakrah and Evers 2020). In order to effectively manage this shift, it is imperative to possess a staff that is proficient and capable of adapting (Al-Fehaid and Shaili 2021). Individuals should possess the capacity to make significant contributions to burgeoning sectors such as technology, tourism, and finance (Schneider 2021). Consequently, the education system is confronted with the imperative of guaranteeing that its populace possesses the requisite competencies and proficiencies essential for thriving in the contemporary dynamic economic landscape. The decision about whether to prioritise the expansion of general higher education possibilities or the promotion of vocational education is a critical one that necessitates careful consideration.

The rationale for undertaking this systematic evaluation stems from the existence of several pertinent inquiries that necessitate resolution. To what extent does the proliferation of conventional higher education contribute to the cultivation of a knowledge-centric society and economy? What advantages does vocational education offer in terms of skill development and alignment with the labour market? How can the aforementioned decisions demonstrate a connection to overarching

socio-economic objectives, such as the reduction of unemployment rates and the enhancement of social mobility? Furthermore, it is crucial to recognise the possible challenges that may be encountered with each strategy as Saudi Arabia endeavours to accomplish its Vision 2030 objectives. This will furnish significant insights to inform policy creation, educational establishments, and stakeholders engaged in the decision-making process.

The rationale extends to the broader societal implications of these choices. The study recognises the role of education in shaping cultural perceptions and aspirations. It will investigate how these choices impact societal attitudes towards different educational pathways, potentially influencing enrolment patterns and the value attributed to various educational pursuits.

Aim and Objectives

This study aims to systematically review and analyse the implications of the choice between widening general higher education participation and promoting vocational education within Saudi Arabia, providing evidence-based insights for informed decision-making.

Objectives

The objectives of the study are:

1. To assess the current landscape of higher education in Saudi Arabia by evaluating the benefits and challenges of expanding general higher education participation and examining the advantages and drawbacks of prioritising vocational education.
2. To propose strategies to effectively integrate both approaches for optimal educational outcomes.

Theoretical Framework

This study is grounded in two primary theoretical viewpoints, namely Human Capital Theory and Social Mobility Theory. The aforementioned perspectives are interrelated and serve as a theoretical framework for the investigation. The utilisation of theoretical frameworks aids in comprehending the intricacies and ramifications associated with the decision-making process between the expan-

sion of higher education participation and the promotion of vocational education within the context of Saudi Arabia.

The Human Capital Theory, originally posited by Gary Becker, posits that individuals can augment their productivity and achieve economic prosperity by investing in education and training (Becker 2009). This study highlights the theoretical framework that underscores the potential benefits associated with the expansion of both higher education and vocational education. Based on the forecast, an increase in the accessibility of vocational education may lead to the cultivation of enhanced skills, knowledge, and capabilities (Gillies 2015). Ozyilmaz (2020) states that labour market imperfection increases the need and supply of vocational education. Consequently, this would make a significant contribution to both economic growth and innovation, which achieves the goal of Vision 2030 of equipping distinctive competencies and strengthening the nation's economy through diversification in investments. Similarly, individuals perceive vocational education as a means to enhance their pragmatic competencies and fulfil the distinct requirements of various sectors (Billett et al. 2022). This observation aligns with the evolving dynamics of the labour market. The framework assesses the impact of each decision on skill development, job prospects, and the formation of a workforce that can contribute to Saudi Arabia's objectives of economic diversification.

The theory of social mobility places emphasis on the significant role that education plays in facilitating upward social mobility and reducing societal inequality (Brown 2017). Although the expansion of general higher education has a role in social mobility, social inequalities persist and even become wider (Brezis and Hellier 2018). Bourdieu (1984) emphasises that certificates and diplomas are neither indications of academic or applied to the labour market knowledge, nor signals of competences but rather take the form of tacit criteria to identify people from a particular social origin. The aforementioned hypothesis holds significant relevance in light of Saudi Arabia's pursuit of enhanced social mobility through its Vision 2030 project. The present paradigm aims to investigate the potential impact of expanding access to general higher education on enhancing individuals' educational attainment and attaining improved socio-economic outcomes within society. Simultaneously, this study

examines the possibility of vocational education in facilitating upward social mobility by providing avenues for individuals to seek specialised professions, hence potentially mitigating economic disparities. By taking this perspective into account, one enhances the comprehension of the impact of different educational approaches on societal fairness and inclusivity.

The utilisation of a theoretical framework facilitates the execution of a methodical examination, thereby elucidating significant findings. These aforementioned insights can thereafter be utilised to inform decision-making processes grounded on empirical facts, hence facilitating the advancement of Saudi Arabia's educational and socio-economic objectives.

METHODOLOGY

General Context

The systematic review was used to comprehensively investigate the discourse around the expansion of higher education access and the advancement of vocational education in Saudi Arabia. According to Bearman et al. (2012), systematic reviews aim to identify, evaluate, and summarise the findings of all relevant individual studies, thereby making the available evidence more accessible to decision makers.

Eligibility Criteria

The selection criteria employed in this systematic review are intended to ensure the inclusion of pertinent, rigorous, and thorough literature.

Inclusion Criteria

Studies published in peer-reviewed journals, conference proceedings, reports, and official government documents are selected for this systematic review. The researcher seeks scholarly research that has been undertaken inside the geographical boundaries of Saudi Arabia, or that specifically concentrates on the unique sociocultural, political, economic, or environmental aspects of higher and vocational education. Those studies are included that explore diverse facets of higher education and vocational education. This encompasses a range of elements such as policies, practices,

outcomes, difficulties, and trends within various domains.

To ensure the incorporation of the most recent research findings, the researcher incorporates papers published within the past 8 years, that is, from 2016-2023. Meanwhile, those research papers are included that are accessible in English languages.

Exclusion Criteria

Those studies that extend beyond the realms of higher education or vocational training are not included. The research studies that exhibit deficiencies in their methodology or lack credibility are also subtracted. Meanwhile, the studies that lack sufficient empirical evidence from real-world contexts and fail to provide comprehensive analytical insights, and the studies that have been published either prior to 2016 are excluded. Moreover, studies that are not accessible through reputable academic databases or sources are not sought.

Information Sources

The researcher conducts a comprehensive search across many academic databases, including Google Scholar, PubMed, ERIC and Scopus. The objective is to locate scholarly works that have undergone peer review and conference proceedings. These databases are widely recognised for their extensive collection of scholarly research and profound insights pertaining to educational policies, practises, outcomes, and issues. Furthermore, a thorough search on official government websites and institutional platforms is also conducted in order to collect significant reports, policy documents, and publications directly from credible sources within Saudi Arabia. The use of grey literature, such as conference proceedings and reports from respectable research bodies, enhances the inclusiveness of perspectives and expands the breadth of the review.

Search Strategy

The search strategy for this systematic review involves a deliberate and structured approach to gather a broad spectrum of relevant studies that contribute to the understanding of the choice between widening higher education participation and

promoting vocational education in Saudi Arabia. Through the utilisation of carefully selected keywords and Boolean operators, the search aims to uncover pertinent literature from various reputable academic databases.

The primary keywords “higher education” and “vocational education” are combined with the specific geographical focus on “Saudi Arabia”. This combination ensures that the search results are contextually aligned with the study’s objectives. Furthermore, the search is refined by incorporating terms such as “policies”, “practices”, “outcomes” and “challenges” with Boolean operators such as AND or OR to capture studies that delve into different aspects of the education system.

Additionally, a snowballing technique is employed to expand the search’s scope. References from identified relevant articles are explored to identify potential sources that may not have surfaced in the initial searches. This iterative process enhances the review’s comprehensiveness and ensures that valuable contributions are not overlooked.

Study Risk of Bias and Quality Assessment

Evaluating the potential for bias and the overall quality of research is of paramount importance in order to ascertain the credibility and dependability of the findings presented in this systematic review. The researcher engaged in a risk of bias evaluation utilising techniques that have been purposefully developed to examine the study designs observed in the existing literature.

In the context of randomised controlled trials (RCTs), scholars employ the Cochrane Risk of Bias tool to evaluate critical elements such as the method of participant allocation, the concealment of allocation, the blinding of the study, and the reporting of outcomes. The assessment of non-randomised studies involves the utilisation of a methodological instrument known as ROBINS-I, which stands for Risk of Bias in Non-Randomised Studies of Interventions. This tool facilitates the evaluation of potential biases that may have arisen as a result of factors such as confounding, selection, and other plausible sources of mistake. The review presented offers a thorough assessment of the aforementioned possible concerns.

The quality of each study is assessed using predetermined criteria. The evaluation encompasses

es criteria such as the clarity of study aims, appropriateness of methodology employed, validity of data collection and analysis, and transparency of reporting. The evaluation of studies is conducted by researchers through the utilisation of scoring or categorisation methods based on predetermined criteria. This methodology facilitates the provision of an impartial evaluation of their overall calibre.

Moreover, research that exhibits a lesser risk of bias and employs superior quality methodologies are prioritised. Nevertheless, it is important to acknowledge that research characterised by a greater risk of bias may include certain limitations. Through the process of conducting this synthesis, a more comprehensive comprehension can be attained regarding the strength and reliability of the evidence offered in the review. This facilitates the derivation of more precise inferences and enhances comprehension of the study's ramifications.

Meanwhile, to mitigate potential bias and preserve a standardised evaluation procedure, an independent panel of reviewers is engaged in conducting assessments of both risk of bias and quality. The members of the review team engaged in collaborative discussions aimed at resolving any existing differences or uncertainties. The objective is to achieve a consensus on these concerns.

RESULTS

Study Characteristics

Thematic-based Synthesis/Analysis

Vision 2030 and National Development Goals

One prominent observation derived from the studies pertains to the substantial influence exerted by Saudi Arabia's Vision 2030 and its national development objectives on the higher education and vocational education system. The literature regularly examines this topic, providing a comprehensive comprehension of how the vision impacts educational policies and practises inside the nation. Based on the Table 1, five out of six selected studies on Saudi education indicate that Vision 2030 is assumed to have a significant impact on the implementation of reforms and the promotion of growth within the realm of higher education. The objective is to establish congruence between

educational priorities and broader objectives, including economic diversification, skill enhancement, and the advancement of human capital (Almoaibed 2020). Mohiuddin et al. (2023) demonstrate the influential impact of the vision's policies on the academic excellence of Saudi universities, the production of highly proficient graduates, and the consequential contribution to the economic prosperity of the nation. According to Abdullateef et al. (2023), the objective of the National Transformation Programme is to effectuate a comprehensive overhaul of the education system in Saudi Arabia. The primary emphasis lies on enhancing recruiting strategies, training programmes, curriculum, and value systems to empower Saudi youth and augmenting their employability prospects. The aforementioned findings indicate that Vision 2030 assumes a pivotal role in providing guidance to the higher education sector in order to cultivate a proficient labour force that aligns with the evolving demands of the employment landscape. The aforementioned studies underscore the significance of higher education institutions harmonising their strategies with the objectives of the overarching vision. But it is important to realise that rapid movement in achieving the vision's goals requires a radical change in general higher education policies or a shift to vocational education that focuses on the skills required in the labour market. Pavan's (2016) study includes that since the economic movement in Saudi Arabia has become dramatically rapid, decision-makers should recognise the importance of focusing on practical skills that can be used on jobs rather than academic education.

Challenges and Opportunities in Vocational Education

The studies included in the collection effectively elucidate the underlying issue, enhancing the comprehension of the multifaceted dimensions of vocational education in Saudi Arabia. The empirical research indicates that vocational education possesses significant promise as well as certain obstacles. Almoaibed (2020) elucidates the significance of vocational education in facilitating the economic growth and employment initiatives of Saudi Arabia. Nevertheless, convincing young Saudi individuals to choose vocational education over general higher education is a formidable task, mostly due to the comparatively low rates of enrol-

Table 1: Systematic review details
(papers' titles and journals' details can be accessed in the 'references')

<i>Article</i>	<i>Author and Year</i>	<i>Aim</i>	<i>Findings/Results</i>
1	Mohiuddin et al. (2023)	Investigate higher education development in Saudi Arabia within the framework of Vision 2030.	The study finds that higher education institutions' potentialities and priorities significantly contribute to the progress of Vision 2030. It emphasises factors like educational infrastructure, human capital, technology, and government institutions as key contributors to achieving the Vision's objectives. The study also highlights the importance of modern curriculum, foreign collaboration, scientific research, and skilled graduates in the higher education system's development. Saudi universities are achieving academic excellence, producing over 50 percent female graduates, and enhancing digital transformation efforts. The study emphasises the need to consider these aspects for quality improvement and sustainable higher education development.
2	Almoaibed (2020)	Explore the role of structure and agency in young people's perceptions of technical and vocational education in Saudi Arabia.	The research indicates that the goals of Vision 2030 require expanding vocational education to stimulate economic growth and increase the employment of young Saudi. However, young people's choices in vocational education are influenced by structural and cultural factors, such as social networks, family, and gender. Choices often align with social acceptability, and the study highlights the challenges young people face in navigating these influences while making education-to-work transitions. The study underscores the importance of understanding individual and structural challenges that impact vocational education decisions in Saudi Arabia.
3	Pavan (2016)	Examine challenges posed by recent developments in Saudi Arabian higher education policies.	The paper addresses challenges within Saudi Arabian higher education policies related to religious values, heritage, globalisation, tradition, culture, beliefs, and social change. It explores the complex interplay between educational policy and cultural and economic dynamics, highlighting the need to reconcile tradition with globalisation and consider the social implications of higher education expansion. Since the economic movement in Saudi Arabia has become dramatically rapid, decision-makers should recognise the importance of focusing on practical skills that can be used in jobs rather than academic education.
4	Bin Othayman et al. (2022)	Examine problems with the Training Needs Assessment (TNA) system in Saudi Arabian higher education.	The study identifies challenges with the TNA system in Saudi Arabian higher education, including insufficiently experienced HR directors, poor engagement, favouritism in candidate selection for training, and misused resources for training and development. These issues affect the effectiveness of Training and Development (T&D) curriculums and impact the growth potential of universities as aligned with Vision 2030. The study sheds light on procedural differences, managerial discretion, and unequal access to HRD programs, raising questions about equality policies.

Table 1: Contd...

<i>Article</i>	<i>Author and Year</i>	<i>Aim</i>	<i>Findings/Results</i>
5	Rivera et al. (2022)	Analyse labour market outcomes of technical and vocational training graduates in Saudi Arabia.	It finds positive returns to vocational education sustained over time and enhanced by program completion. The research also highlights challenges and opportunities to improve graduate outcomes, such as reducing gender gaps and addressing vertical mismatch in field-of-study and occupation.
6	Kovalchuk et al. (2022)	Analyse the challenges of digital transformation in vocational schools.	The research explores the impact of digital transformation on vocational schools, emphasising the importance of digital competence, modern equipment, and collaborative efforts between educational institutions and employers. It underscores the need for flexible curriculum and improved digital competence among teachers.
7	Abdullateef et al. (2023)	Investigate the role of educational transformation in achieving the aims of Saudi Vision 2030 by assessing gaps in curricula and teaching methods	The findings emphasise the importance of aligning educational programs with the evolving demands of the labour market and the goals of Saudi Vision 2030. The researchers recommend that future educational programs prioritise the enhancement of skills that cater to employers' needs while empowering Saudi youth to compete internationally and contribute to the nation's economic growth.
8	Korber (2019)	Investigate the career-long advantage of vocational education graduates.	The research compares labour market outcomes of vocational education graduates to those with lower education levels. It finds that vocational education graduates maintain advantages in terms of both employment and wages over their entire careers.
9	Wang and Wang (2023)	Compare labour market outcomes of academic and vocational graduates	It reveals that vocational graduates earn less, have lower chances of obtaining high-skilled positions, and face higher job precariousness compared to academic graduates. The research highlights economic inequality resulting from the hierarchically stratified post-secondary education system.
10	Berk (2022)	Analyse the role and future of vocational education in comparison to general education.	It discusses the significance of vocational education in providing skilled workers, addressing challenges of cost, curriculum differentiation, and program offerings. It suggests transforming vocational education institutions into lifelong learning centres, fostering partnerships, and aligning offerings with evolving labour market needs.
11	Schulz et al. (2023)	Explore skill use across career stages in vocational and tertiary-educated workers.	It finds small to modest skill-use differentials and stable skill-use changes across career stages, partially challenging the vocational skill trade-off thesis. Occupational mobility and unemployment contribute to observed skill-use changes.
12	Schendel and McCowan (2016)	Discuss challenges of expanding higher education in low- and middle-income countries.	It highlights the importance of quality assurance, equity considerations, and the role of higher education in development. The study emphasises the complexities and trade-offs involved in expanding higher education in diverse socioeconomic contexts.

ment and the perceived societal standing of vocational school. Bin Othayman et al. (2022) undertake an investigation into the intricacies of the Training Needs Assessment (TNA) framework. The aforementioned study reveals challenges in effectively discerning training requirements and raises issues over the HR directors' limited expertise and probable predisposition in the process of candidate selection for training. They confirm that higher education policies had a role in reducing the importance of vocational education in societies, such as making vocational education a second option for those who were not accepted into general higher education or who were unable to complete their academic studies. In addition, labour market policies in reducing the salaries of vocational education graduates had an impact on their desire to choose general education.

In addition, Rivera et al. (2022) and Berk (2022) have discussed the impact of the employment market on vocational education graduates. The authors acknowledge that these individuals typically encounter favourable results upon completing their education, although they also highlight that the particular emphasis of the vocational curriculum and the prevailing economic circumstances during that period can exert an influence on their earnings. These studies underscore the significance of aligning the educational curriculum with the demands and requirements of various businesses. Additionally, there is an emphasis on the significance of offering enhanced help in profession selection and tackling the prevailing negative perceptions around vocational education. Despite encountering several obstacles, it is evident that vocational education has the capacity to effectively tackle the skills gap and assume a substantial role in fostering economic development. The findings underscore the significance of shifting perspectives, optimising resource allocation, and fostering effective collaboration between educational institutions and companies. This will enable one to capitalise on the opportunities presented by vocational education in Saudi Arabia.

Equity and Inclusion

The research highlights the importance of "equity and inclusion" as a focal point, emphasising the necessity of ensuring equitable access to quality education for all segments of Saudi society.

These studies demonstrate the existence of substantial obstacles pertaining to disparities in educational opportunity and outcomes. Schulz et al. (2023) highlight the potential for economic inequality to arise as a consequence of the expansion of general higher education. This phenomenon can be attributed to the disproportionate allocation of financing, wherein a significant portion of financial resources is directed towards prestigious educational institutions, hence resulting in a scarcity of resources for other schools. The aforementioned research also investigates the disparities between genders. Wang and Wang (2023) discovered that there exist discrepancies in employment and income levels among vocational and academic graduates, with these disparities being influenced by gender. Abdullateef et al. (2023) emphasise the significance of implementing modifications to the educational framework to provide assistance and enhance the well-being of Saudi adolescents, particularly those who experience marginalisation. The importance of bridging gaps and fostering chances for all pupils is emphasised. The significance of enacting policies that provide equitable access, increase teacher training and professional growth, and boost foundational skills is emphasised. This subject emphasises the necessity of implementing proactive measures to tackle the disparities in educational opportunities and outcomes that arise from factors such as gender, socioeconomic class, and geographical location. Based on the findings of several studies, it appears that a complete approach is necessary for the attainment of equity and inclusion. This entails the implementation of policies that promote diversity, eliminate barriers to entry, and establish a supportive educational setting. Saudi Arabia is diligently striving to enhance its education system in accordance with the objectives outlined in Vision 2030. Ensuring equitable access to education and fostering the promotion of inclusive education are of paramount importance. This measure will enable the nation to optimise the utilisation of its highly skilled individuals.

Quality Assurance and Curriculum Development

The issue of upholding rigorous educational standards in both vocational and higher education domains in Saudi Arabia is prominently emphasised throughout the research, underscoring its paramount importance. The consensus across

many studies underscores the significance of robust quality assurance mechanisms and adaptable curriculum development methodologies. In this manner, it is possible to ensure that graduates possess the appropriate skills that are both contemporary and advantageous. The study conducted by Kovalchuk et al. (2022) examines the process of digital transformation occurring in vocational institutions. The authors underscore the importance of equipping educators with digital competencies and integrating contemporary technology into the curriculum. Schulz et al. (2023) underscore the paramount importance of upholding quality standards during the expansion of higher education. The authors emphasise the importance of maintaining uniform standards, particularly in view of the fast expansion occurring within this industry. Bin Othayman et al. (2022) examine the challenges that arise in the Training Needs Assessment procedure. Their primary focus lies on addressing issues pertaining to curriculum alignment and identifying the requisite training needs. These studies underscore the significance of developing courses that are adaptable to the demands of the industry. The possession of requisite skills is of utmost importance for graduates in order to thrive in an ever-evolving labour market. The basic premise of this argument is the critical significance of collaboration between educational institutions and commercial enterprises. It is imperative for educators to develop instructional strategies that integrate theoretical knowledge with practical competencies. This initiative will facilitate the development of a labour force that possesses the ability to adjust, contend, and make valuable contributions to the desired economic expansion anticipated by 2030.

Interaction Between Education and the Labour Market

The theme holds significant importance throughout all the research, as it aids in comprehending the intricate interplay between educational attainment and the characteristics of Saudi Arabia's labour market. Pavan (2016) examines the challenges associated with reconciling the forces of globalisation and the imperative to safeguard traditional values within the higher education framework in Saudi Arabia. The author emphasises the impact of the rapid expansion of higher education on societal transformations and the intricacies of the job market. Korber (2019)

and Rivera et al. (2022) undertook an empirical investigation to examine the labour market outcomes of vocational education graduates. The researchers discovered that vocational education plays a significant role in enhancing employment prospects for graduates and facilitating the efficient use of their acquired abilities. The study additionally emphasises the influence of the vocational program's particular emphasis on the wages obtained by its alumni. In a similar manner, the study conducted by Wang and Wang (2023) investigates the outcomes in the labour market pertaining to individuals who have successfully finished both academic and vocational degrees. The analysis underscores disparities between the aforementioned groups with regards to employment and salaries, placing particular attention on the pivotal role that education plays in shaping individuals' achievements within the workforce. This subject underscores the significance of educational programmes that impart skills that align with the evolving demands of the labour market. These activities facilitate the professional exploration and advancement of recent graduates, thereby fostering the economic and social progress outlined in Vision 2030. The research emphasises the strong correlation between education and the labour market. The importance of the type of education in enhancing employment opportunities and facilitating upward social mobility is underscored by proponents. Simultaneously, it is recognised that the labour market exerts influence in shaping the advantages associated with educational investments.

DISCUSSION

The findings provide significant insights that address the study inquiries and furnish knowledge regarding the present state, benefits, challenges, and potential strategies for general higher education and vocational education in Saudi Arabia.

The selected studies provide a comprehensive insight into the present condition of the educational system in Saudi Arabia. The authors demonstrate the significant influence of Vision 2030 on the higher education and vocational education sectors within the nation. Mohiuddin et al. (2023) underscore the significant role that higher education institutions assume in the attainment of the objectives outlined in Vision 2030. The authors emphasise the importance of the alignment be-

tween Saudi universities and the objectives of economic diversification outlined in the vision. Similarly, Al-Fehaid and Shaili (2021), stated that Saudi Arabia must change the policies of higher education by providing distinguished and practical education that enables skilled competencies to achieve the goals of Vision 2030. Almoaibed (2020) and Bin Othayman et al. (2022) emphasise how Technical and Vocational Education and Training (TVET) can contribute to economic growth and job opportunities. The finding agrees with Billetts et al.'s (2022) results that individuals perceive vocational education as a means to enhance their pragmatic competencies and fulfil the distinct requirements of various sectors. This is confirmed by the Human Capital Theory that human beings can increase their productive capacity through greater education and skills training.

The results shed insight on the benefits and challenges associated with the expansion of higher education enrolment. Schulz et al. (2023) explore the balance between equity and quality when it comes to expanding higher education. The significance of ensuring universal access to education while upholding rigorous educational benchmarks is underscored. Pavan (2016) examines the benefits and challenges associated with the phenomenon of globalisation in the context of higher education. They emphasise the significance of balancing internationalisation with the preservation of traditions and values. These insights provide a fair viewpoint on the benefits of increasing access to higher education, while also acknowledging the potential issues regarding quality. On the contrary, quality in achieving skilled vocational education outcomes will not be achieved when the financial support provided is little compared to general higher education. Schulz et al. (2023) found that disproportionate allocation of financing, wherein a significant portion of financial resources is directed towards prestigious educational institutions, led to shortage of skilled manpower. Policies of inequality in the distribution of resources may marginalise vocational education and reduce the social perception of it.

The collective body of research examines the advantages and disadvantages associated with prioritising vocational education. Rivera et al. (2022) show how vocational education graduates experience positive results in the job market. The authors emphasise the benefits of integrating theo-

retical knowledge with applied competencies in schooling. In their study, Wang and Wang (2023) discuss how there are differences in vocational education outcomes based on gender. They argue that more focus should be placed on addressing these disparities to promote fairness and equality. The findings show that vocational education has the potential to help with skills gaps. However, they also emphasise the importance of having comprehensive policies in place to make sure that everyone has equal opportunities and outcomes.

In addition, these studies offer valuable insights on how to effectively combine general higher education and vocational education methods. According to Kovalchuk et al. (2022), they highlight the importance of digital transformation in vocational education. They suggest that incorporating technology can make the curriculum more relevant. Some traditional works, including the manufacturing sector, have been replaced by machines. Therefore, focusing on integrating general education and vocational education to achieve digital transformation has become an important requirement to achieve the requirements of Vision 2030. Preparing competencies capable of programming and manufacturing will contribute to reducing unemployment that arose from replacing some employees by relying on modern technologies. According to Schulz et al. (2023), it is recommended to have curricula that can be adjusted and customised to meet the diverse needs of students and the economic requirements of the government. These insights suggest ways to make the most of both approaches. This includes making sure that what is taught in schools matches what industries need, providing opportunities for lifelong learning, and making sure that educational systems can adapt to changes in the job market. This result is consistent with the study of Agasisti and Bertolotti (2022) that the impact of the outcomes of general higher education on the (GDP) per capita is not high due to the weak relationship between the outcomes of general higher education and human capital. Therefore, it is important to develop new programs with a cognitive and professional connection to prepare students for future professions.

Strengths and Limitations

The studies that were part of this systematic review provide valuable insights into the intricate

world of higher education and vocational education in Saudi Arabia. They excel in using various methods, conducting thorough analyses, and making valuable contributions to the understanding of the complex issues and possibilities within the education system.

One of the impressive aspects is that several studies are aligned with Saudi Arabia's Vision 2030, which allows for a focused perspective on educational advancements. For example, in their study, Mohiuddin et al. (2023) take a close look at the Vision's framework and provide a thorough analysis of how higher education contributes to its goals. Abdullateef et al. (2023) also highlight the importance of transforming education in order to achieve the goals outlined in the vision. Their analysis provides a deeper understanding of this topic.

In addition, these studies all contribute to real life evidence about how different educational paths affect people's job prospects. Rivera et al. (2022) and Wang and Wang (2023) provide valuable information about the advantages and difficulties experienced by vocational education graduates. Their research helps better comprehend how education and employment intersect in Saudi Arabia.

However, it is important to note that these studies do have some limitations. Certain studies, although they provide valuable qualitative insights, might not have enough quantitative rigour. This could potentially restrict the applicability of their findings to a broader context. In addition, it is important to note that when focusing on certain sectors or regions in Saudi Arabia, the findings may not be applicable to the entire country as a whole.

Implication of the Findings

The findings of the systematic review have important implications for education and policy-making in Saudi Arabia. The ambitious goals of Vision 2030, which aim to promote economic diversification and social progress, are closely connected to the growth and improvement of higher education and vocational education sectors. The review highlights the importance of making sure that educational programmes are in line with the country's economic goals, while also keeping cultural values intact. Kovalchuk et al. (2022) emphasise the importance of incorporating digital technology into vocational education. This highlights the necessity of providing learners with the necessary skills for the digital era.

The challenges and opportunities in vocational education are just as important. It is really important to make sure that outcomes are fair and equal for everyone, regardless of gender. Wang and Wang (2023) really emphasised this in their work. It is something that policymakers should definitely take into account. Rivera et al. (2022) shed light on the advantages of vocational education, which offer a way to tackle skill shortages and enhance employment prospects. By combining both approaches and incorporating flexible curricula and responsive policies, one can find a strategic way forward that aligns with the research's focus on adaptive education.

In general, the systematic review highlights the complex connection between education and national development. It supports the idea that policies should focus on both providing access to education and ensuring its quality. In order to achieve the goals of Vision 2030, it is crucial to focus on maintaining high-quality education, ensuring that everyone has equal access to education, and aligning education with the changing needs of the job market. The review provides guidance for policymakers, educators, and stakeholders on how to navigate the relationship between higher education and vocational education. It aims to create a better future for Saudi Arabia that is both prosperous and fair.

CONCLUSION

The rapid development movement in the fields of industry and the diversity of investments in Saudi Arabia in the current era has led to the need to make rapid changes in educational systems to ensure the achievement of the goals of Vision 2030. This period has seen the extensive expansion of post-secondary education as well as a comprehensive transformation to an open labour market, which entails the expansion of options for general higher education or the adoption of vocational education. Upon conducting an analysis of twelve studies, a thorough knowledge of the problems, opportunities, and consequences of educational paths in Saudi Arabia's Vision 2030 was derived. This understanding was facilitated by the identification of five primary themes. Upon examining these themes in connection with the study inquiries, it becomes evident that decision-making assumes a pivotal role in moulding the educational

landscape of Saudi Arabia. The process is intricate and encompasses multiple aspects and considerations. Since the goal of Vision 2030 focuses on empowering the labour market with competencies that can contribute to achieving it, it is necessary to radically change general higher education policies to move to vocational education.

As it is known, vocational education represents advanced skills in the labour market, but it is not desired by most people in Saudi society. Limited interest in vocational education reduces its status in society, which inhibits the opportunity of such youth by fostering compliant work attitudes and an acceptance on their part of low status employment. Such labour market policies as income inequality, have had the effect of reducing society's perception of vocational education. Allocating the largest share of financial resources to prestigious educational institutions as well as making vocational education a second option for failed students have significant impacts on the unwillingness to enrol in it.

The consequences of these discoveries have wide-ranging significance across multiple domains. The significance of highlighting the necessity for higher educational policies that are adaptable and tailored to accommodate the varied requirements of learners should be underscored. The incorporation of digital technology into vocational education is widely recognised as a crucial measure in equipping learners with the necessary skills and knowledge to meet the challenges of the contemporary digital era. The research emphasises the need for early intervention in addressing skill gaps and gender inequities. Furthermore, it is imperative to underscore the necessity of fostering collaboration among governmental bodies, educational establishments, employers, and the broader population in order to formulate efficacious policy proposals.

RECOMMENDATIONS

Policymakers should be aware of the labour market needs for future professions that strengthen the nation's economy and reduce unemployment rates. In addition, decision-makers are required to work on the factors that contribute to improving the social perception of vocational education by promoting the principles of justice and equality. Due to the rapid advances in technology, the role

of human capital may be less than it used to be. As a result, it is important to equip displaced workers with the necessary skills for the new jobs created by technological innovations, such as information technology and artificial intelligence.

STATEMENTS AND DECLARATIONS

COMPETING INTERESTS

There are no conflicts of interest to declare.

FUNDING

No funding was received for conducting this study.

ACKNOWLEDGEMENTS

The author extends his appreciation to the King Saud University and the Research Centre in the College of Education for supporting this work, and special thanks to all participants who contributed to improve the quality of this study.

DATA AVAILABILITY STATEMENT

Not applicable.

AUTHOR CONTRIBUTIONS

Conceptualisation, methodology, formal analysis and investigation, writing the original draft preparation, writing the review and editing were conducted by the author. The research was presented to an expert in the same field for revision and editing, and the author made the required editing.

REFERENCES

- Abdullateef S, Musa Alsheikh R, Mohammed B 2023. Making Saudi vision 2030 a reality through educational transformation at the university level. *Labour Ind*, 33(2): 231-246. <https://doi.org/10.1177/0034523719851>
- Agasisti T, Bertolotti A 2022. Higher education and economic growth: A longitudinal study of European regions 2000-2017. *Socio-Econ Plan Sci*, 81: 100940. <https://doi.org/10.1016/j.seps.2020.100940>
- Aldossari AS 2020. Vision 2030 and reducing the stigma of vocational and technical training among Saudi Arabian students. *Empir Res Vocat Educ Train*, 12(1): 1-24. <https://doi.org/10.1186/s40461-020-00089-6>

- Al-Fehaid Y, Shaili V 2021. Knowledge Economy and its Implications in the Kingdom of Saudi Arabia. From <<https://ssrn.com/abstract=3846918>> (Retrieved on 22 April 2021).
- Allmnaqrah A, Evers C 2020. The need for a fundamental shift in the Saudi education system: Implementing the Saudi Arabian economic vision 2030. *Res Educ*, 106(1): 22-40. <https://doi.org/10.1177/0034523719851>
- Almoaibed H 2020. *Choosing a Career in Saudi Arabia: The Role of Structure and Agency in Young People's Perceptions of Technical and Vocational Education*. PhD Thesis, Published. London: University College London.
- Alshahrani S, Mohamed H, Mukhtar M, Asma Mokhtar U 2023. The adoption of the e-portfolio management system in the Technical and Vocational Training Corporation (TVTC) in Saudi Arabia. *Int J Inf Manag Data Insights*, 3(1): 100148. <https://doi.org/10.1016/j.ijime.2022.100148>
- Anderson D, Brown M, Rushbrook P 2020. Vocational education and training. In: Griff Foley (Ed.): *Dimensions of Adult Learning*. Routledge, pp. 234-250.
- Bearman M, Smith CD, Carbone A, Slade S, Baik C, Hughes-Warrington M, Neumann DL 2012. Systematic review methodology in higher education. *High Educ Res Dev*, 31(5): 625-640. <https://doi.org/10.1080/07294360.2012.702735>
- Becker G 2009. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. Chicago, United States: University of Chicago Press.
- Berk S 2022. General education versus vocational education: Vocational education and its future. In: Birol Akgun, Yusuf Alpaydin (Eds.): *Education Policies in the 21st Century: Comparative Perspectives*. Singapore: Springer Nature Singapore, pp. 131-158.
- Billett S, Hodge S, Aarkrog V 2022. Enhancing the standing and status of vocational education. In: Stephen Billett, Barbara Stalder, Vibe Aarkrog, Sarojni Choy, Steven Hodge, Anh Le (Eds.): *The Standing of Vocational Education and the Occupations It Serves: Current Concerns and Strategies for Enhancing that Standing*. Cham: Springer International Publishing, pp. 19-45.
- Bin Othayman M, Mulyata J, Meshari A, Debrah Y 2022. The challenges confronting the training needs assessment in Saudi Arabian higher education. *Int J Eng Bus Manag*, 14. <https://doi.org/10.1177/18479790211049706>
- Bourdieu P 1984. *Distinction: A Social Critique of the Judgement of Taste*. Cambridge, MA: Harvard University Press.
- Brezis ES, Hellier J 2018. Social mobility at the top and the higher education system. *Eur J Political Econ*, 52: 36-54. <https://doi.org/10.1016/j.ejpolco.2017.04.005>
- Brown P 2017. Education, opportunity and the prospects for social mobility. In: Phillip Brown, Diane Reay, Carol Vincent (Eds.): *Education and Social Mobility*. Routledge, pp. 60-82.
- Forster A, Bol T, Van de Werfhorst H 2016. Vocational education and employment over the life cycle. *Sociol Sci*, 3: 473-494.
- Gillies D 2015. Human capital theory in education. In: *Encyclopedia of Educational Philosophy and Theory*. Springer Science+ Business Media.
- Korber M 2019. Does vocational education give a labour market advantage over the whole career? A comparison of the United Kingdom and Switzerland: Mailys Korber. *Soc Incl*, 7(3): 202. <http://dx.doi.org/10.17645/si.v7i3.2030>
- Kovalchuk V, Maslich S, Movchan L, Soroka V, Lytvynova S, Kuzminska O 2022, March. Digital transformation of vocational schools: problem analysis. *CTE Workshop Proceedings*, 9: 107-123.
- Kromydas T 2017. Rethinking higher education and its relationship with social inequalities: Past knowledge, present state and future potential. *Palgrave Commun*, 3(1): 1-12. <https://doi.org/10.1057/s41599-017-0001-8> p
- Malamud O, Pop-Eleches C 2010. General education vs. vocational training: Evidence from an economy in transition. *Rev Econ and Stat*, 92(1): 43-60. <https://doi.org/10.1162/rest.2009.11339>
- Mohiuddin K, Nasr O, Miladi M, Fatima H, Shahwar S, Naveed Q 2023. Potentialities and priorities for higher educational development in Saudi Arabia for the next decade: Critical reflections of the vision 2030 framework. *Heliyon*, 9(5). <https://doi.org/10.1016/j.heliyon.2023.e16368>
- Ozyilmaz A 2020. Hope and human capital enhance job engagement to improve workplace outcomes. *J Occup Organ Psychol*, 93(1): 187-214. <https://doi.org/10.1111/joop.12289>
- Pavan A 2016. Higher education in Saudi Arabia: Rooted in heritage and values, aspiring to progress. *Int Res in High Educ*, 1(1): 91-100. <http://dx.doi.org/10.5430/irhe.v1n1p91>
- Powell L, McGrath S 2019. *Skills For Human Development: Transforming Vocational Education And Training*. London: Routledge.p
- Rivera N, Azam M, Ajwad M 2022. Tracing Labour Market Outcomes of Technical and Vocational Training Graduates in Saudi Arabia. The World Bank. *Social Protection Discussion Papers and Notes* 168061.
- Schendel R, McCowan T 2016. Expanding higher education systems in low-and middle-income countries: the challenges of equity and quality. *High Educ*, 72(4): 407-411. <https://doi.org/10.1007/s10734-016-0028-6>
- Schneider F 2021. *The Stalling Visions of the Gulf: The Case of Saudi Arabia's Vision 2030*. Washington DC: Washington Institute.
- Schulz W, Solga H, Pollak R 2023. Vocational education, tertiary education, and skill use across career stages. *Eur Sociol Rev*. <https://doi.org/10.1093/esr/jcac074>.
- Singh A, Singh H, Alam F, Agrawal V 2022. Role of education, training, and E-learning in sustainable employment generation and social empowerment in Saudi Arabia. *Sustainability*, 14(14): 8822. <https://doi.org/10.3390/su14148822>
- Wang G, Wang Z 2023. Vocational education: a poor second choice? A comparison of the labour market outcomes of academic and vocational graduates in China. *Oxf Rev Educ*, 49(3): 408-427. <https://doi.org/10.1080/03054985.2022.2096583>

Paper received for publication in October, 2023
 Paper accepted for publication in December, 2023