

**Impact of CPEC on Sustainable Development in Public Sector Education,
A Case Study of Education Development Programs of CPEC in the
Region**

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Abstract

Introduction:

CPEC is Pakistan's path to unparalleled success in business, IT, infrastructure, and regional peace and unity. This study investigates how CPEC influences regional education, highlighting its importance to sustainable development. The purpose is to analyze CPEC's impact on public education and regional educational growth.

Problem Statement:

The study highlights the urgent need to understand how CPEC affects regional education. It recognizes the complexity of educational issues and seeks to understand how CPEC efforts affect education. The research hopes to shed light on CPEC region initiatives to improve education.

Methodology: The qualitative study uses a case study design to collect and analyze data. Twenty CPEC stakeholders were selected using convenient sampling. In-depth interviews capture stakeholder viewpoints and data. Document analysis also uses accurate information from the Internet, newspapers, government offices, and project offices.

Results: The data shows that CPEC has a good impact on regional education. CPEC initiatives prioritize education, resulting in the creation and maintenance of several educational institutions. These

The data shows that CPEC has a good impact on regional education. CPEC initiatives priorities education, resulting in the creation and maintenance of several educational institutions. These schools have basic amenities from elementary to higher education. CPEC projects emphasize vocational and technical education. To promote comprehensive educational development, technical and vocational education institutes, business schools, agro-farming centers, handicraftacademies, and animal preservation labs were established.

Recommendations:

CPEC stakeholders and governments should priorities educational development, the findings show. Educational institutions should be maintained and upgraded to meet student needs. Priorities vocational and technical education with specialized institutes and centers. Regional education will grow sustainably through CPEC initiatives with these recommendations.

Keywords: *Impact of CPEC, Sustainable Development & Public Sector Education*

Introduction

There is a long and enduring tradition of friendship between Pakistan and China, which has been a significant contributor to the rapid development of the economy and has ensured that both countries are working together to promote peace and concord in the area. In accordance with Rizvi (2015), the China Pakistan Economic Corridor (CPEC) is the pinnacle of success for China until and unless peace and concord are achieved in the region for the purpose of expanding commerce and business throughout the belt. According to Ali and Qazi (2018), China is the largest trade mogul in Central Asia, the Middle East, and the Gulf area. As a result, China has announced its intention to shorten the distance through the China Pakistan Economic Corridor (CPEC) Pakistan via the Gwadar sea route. This will allow both nations to mutually facilitate strategic suitability and peaceful access to China. In addition to this, it strengthens China's position in deep sea boundaries, such as Iran, which is located less than an hour's distance from the shore of Gawader, and it helps China maintain its important competitive dominance in commerce in front of Western Business Corridors. Through the expansion of Pakistan's educational system, the China Pakistan Economic Corridor (CPEC) initiative intends to achieve both technological and economic efficiency. Maekae (2013) notes that both parties have made a comprehensive observation on the nations that have comprehended the significance of education. This is due to the realisation that education is essential to the nation's quality and socioeconomic prosperity, as well as the advancement of science and technology and the enhancement of resources.

The year 2012's Afolabi and Loto China is the sponsor of the Belt and Road Initiative (BRI), which encompasses the development of infrastructure, energy, and investment in over 152 countries. China is also planning a worldwide development plan. As a result of the globalisation of Chinese commerce and business, the Belt and Road Initiative (BRI) aims to enrich a number of Asian nations (Benard, 2020). Additionally, the BRI has increased the

demand for professional and technical workforces in order to defend against obstacles and crises that may arise during the implementation of the project (Salman et al. 2019). As a component of the Belt and Road Initiative (BRI), the China–Pakistan Economic Corridor encompasses a new commercial and transportation corridor that extends from Kashgar to Gwadar. Additionally, it incorporates special economic zones (SEZs) along the route, which are facilitated by power plants and military facilities (Ahmad 2020). In order to alleviate poverty, unemployment, and instability in the region, the China- Pakistan Economic Corridor (CPEC) plans to make a significant contribution to the per capita productivity and youth participation rates. There are about one million employment created as a result of this project in a variety of trade and development industries (Haq & Farooq, 2016; Akram, Khan & Ahmad, 2022; Ali et al., 2020).

Education is the sole source and direction that may help a person acquire self-esteem, teach innovative skills and information, and strengthen the likelihood that young people will find employment, which is essential for the improvement of socioeconomic conditions. In addition to establishing a standard of living, ethics and conventions, and the development of personality, education also contributes to the construction of a prosperous and civilized society in which individuals seek to realize their fundamental requirements, such as the provision of water and sanitation, medical assistance, shelter and clothes, and education. As an additional benefit, education helps people develop the mentality necessary to make decisions on family planning, the bright future of children, and the welfare of society (Walter, 2002).

The influence of education is almost greater, and it contributes to the accomplishment of the CPEC project at the same time. The Chinese government allocates a sizeable percentage of its resources to the monitoring and development of the education and skills of the masses of Pakistan. In the beginning, it has been providing training and development of labour forces, training for the military, and education in rural areas, such as agriculture and animal farming, with the goal of increasing the earnings of the workforce and reducing the level of poverty in the region, as well as in Pakistan in general (Orazem et al., 2007). According to Psacharopoulos and Patrinos (2018), a large number of primary schools were quickly established in the region of Gwadar and Pasani in response to the emergency situation. According to Appiah and McMahon (2002), a worldview shift is taking place that is both intriguing and challenging. This shift is coming about because poverty is no longer regarded as a need for economic resources, health, and education. According to Afzal et al. (2012), a study was conducted to investigate the significance of well-educated labour that is capable of disseminating current inventive techniques to accomplish tasks and activities. This is an essential component in the economic development of Pakistan. In addition, education eliminates discrimination based on gender, reduces the rate of criminal activity and child labour, and manages the terrible effects of poverty. According to Krueger and Maleckova (2003), individuals commit these infractions because they are unable to satisfy the fundamental requirements of existence within themselves (Menhas, et al., 2023).

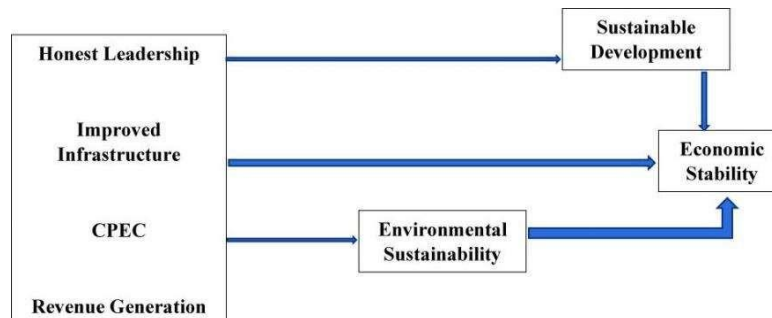
Review of Related Literature

Sustainable Development Project

According to Amin et al. (2012), the government of Pakistan, with the sponsorship of the government of China, established skill development centres. These centres housed technical experts' teams and freelancers' experts who would conduct workshops, provide support from several disciplines, and facilitate the atmosphere of the real world. (Audu et al. 2013; Mendell and Heath 2005; Hill and Epps 2010; Earthman 2002; Uline and Tschannen-Moran 2008) Chichness programmes are striving to improve the teaching and learning environment, as well as the facilitation of the institution, and to ensure that it is properly franchised in various parts of the CPEC region. For the purpose of conducting experiments on ocean water and marine biology in the Gwader and Ormara regions, institutes are providing cutting-edge equipment and tools, as well as the establishment of laboratories. In order to enhance the teaching and learning process, Suleiman and Hussain (Suleman et al. 2014) conducted an analysis that revealed that a classroom that is both innovative and modern was put up. It is the intention of insufficient training workshops and skill development sessions to impede the practical need and necessity of skills and field knowledge. In their 2016 study, Akomolafe and Adesua investigated the fact that various school structures, such as classrooms, libraries, recreational equipment, and other structures, are planned in order to improve academic accomplishments (Imran, et al., 2023; Jabeen, Ali & Ahmad, 2023).

Under the umbrella of this project, there are a variety of other projects that have been initiated since 2016. These projects include the Hydropower Station, Gwader Modal town, Gawdar University, Gwadar hosing society, and mega sports complex, all of which are estimated to cost approximately \$62 billion. CPEC is one of the Belt and Road projects. According to Mobley (2019), the China-Pakistan Economic Corridor (CPEC) is increasing the size of Gwadar harbour and constructing electricity pipelines, energy facilities, hundreds of miles of road links, fast track railroads, fiber-optic cables, and Special Economic Zones. With the goal of expanding Chinese commerce and business through land and sea routes, both countries are focusing their attention on their respective interests and have committed approximately \$46 billion in the construction and installation of an industrial zone. Through the China-Pakistan Economic Corridor (CPEC), China will be able to gain access to Arabian Sea routes, which will allow it to engage in commerce with Middle Eastern and Gulf states. As part of the China-Pakistan Economic Corridor (CPEC), China developed Gwadar Harbour and the Gwadar-Kashgar gas pipeline (Aman, et al., 2023; Aslam, Iqbal, & Ahmed, 2022). This pipeline will connect the Bay of Bengal to the Yunnan Area in China by way of Myanmar. Since the country's foundation, Pakistan has been plagued by political and social instability, which has been caused by proxy wars, terrorist operations, and anti-state moments. As a result, Pakistan has been unable to establish itself in the areas of economy, infrastructure, and contemporary technology. The Chinese government is working hard to establish a stable political system and strong leadership in Pakistan in order to foster a calm and healthy

atmosphere in the region, which might potentially stimulate commercial and economic activity. Developed nations such as China and the United States of America aimed to gain access to Pakistan because it is believed to be the largest market in the corporate world. It is impossible for Pakistan to achieve development and prosperity without first undergoing educational reform and development. As a result, the Chinese government is working to establish a variety of technical and vocational institutes in the region in order to increase the amount of trade and



commerce with Arab state states and South East Asia (Rakisits, 2019).

Figure 1. CPEC Developmental Framework

CPEC Manifestation for Poverty Reduction Commitment

The population of Pakistan is around 216.57 million, and 24 percent of the population lives below the poverty line. The total poverty rate in Pakistan ranges from 24 percent to 24 percent. Of the population, 31 percent lives in rural areas, while 13 percent lives in urban areas. To add insult to injury, the multidimensional poverty index (MPI) indicates that 38.8% of the population is poor, with 2.54% of the population living in rural areas and 9.4% living in urban areas (Asad & Harris, 2019; Naeem, Ali & Ahmed, 2022). According to Chiswick and Mincer (1972), the China Pakistan Economic Corridor (CPEC) is comprised of a variety of skill development projects as well as vocational and technical services for the general public. These initiatives aim to alleviate poverty among the general population, which in turn leads to an increase in the Gross National Product (GNP) and Gross Domestic Product (GDP).

Through vocational and technical education, which promotes living standards and values, as well as enhances the potentials of skills, poor people are given the ability to become more self-sufficient (Anwar & Qureshi, 2002; Dilshad, Shah, & Ahmad, 2023). It is estimated that a significant portion of Pakistan's population resides in rural areas. With the goal of compensating the demand and necessity through agro farming and livestock, the China-Pakistan Economic Corridor (CPEC) makes it possible to maximize dairy preservation and livestock mutations while also facilitating modern farming. In order to produce an abundant supply, it offers free seeds, insecticides, and medications among other things. Additionally, it brings the product and the crops to the attention of consumers in foreign marketplaces (Otsuka & Yamano, 2008). The development of inventive skills leads to an increase in compensations and effective utilization in non-farm exercises. According to the findings of a study, Pakistan has seen a rise of 7.3% in monthly wages as a result of the country's efforts to improve education

on an annual basis (Hafeez, Iqbal, & Imran, 202; Ali et al., 2023; Ahmad, Sewani & Ali, 2021). This has resulted in a significant boost in the winning potential of the impoverished, who have ultimately become productive.

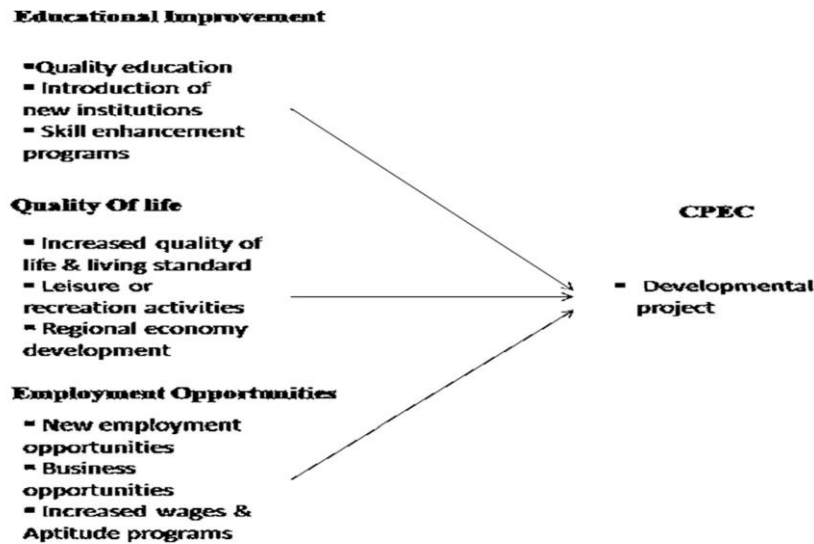
Role of CPEC in the Region

According to Burki and Burki (2019), China has emerged as an economic tycoon of the 21st century. China is the nation that exports the most goods in the world and has the second most powerful economy. Therefore, in order to maintain its position as the leading economic power, China is bringing together emerging countries through the engagement of mutual investment, financial aid, and the construction of infrastructure. According to Hussain et al. (2016), China has established a Belt One Road that connects Africa, South East Asia, the Middle East, Central Asia, and Central Europe. Additionally, China has established connections with the rest of the world by constructing new highways, trains, sea ports, gas pipelines, and other infrastructure. It established the Asian Infrastructure Investment Bank (AIIB), which caters to the infrastructure needs of friends. It also facilitates loans to developing countries in order to develop the infrastructure and potential development of the country. For example, the Chinese government provides loans and mega financing to Pakistan, and it even compromises on leases of assets and capital in order to develop the infrastructure of Pakistan. The agreement between China and Pakistan about scholarships and other forms of financial assistance for Pakistani students was also signed by China by Pakistan. 200 students have just left Pakistan to participate in the China Pakistan Scholarship programme. Since 2014, the programme has also helped more than 130,500 students through its various scholar programmes.

China-Pakistan Economic Corridor (CPEC) is the most significant development plan for Pakistan-China relations, which connects China to the entire world through the Gwadar Sea port. This route is the shortest way for China to export goods and services to the rest of the world. This is due to the fact that containers that depart from the shores of Shanghai take three months to reach the Persian Gulf, which is a distance of 4252 miles. This distance reduces and encourages China to start mega projects for the purpose of creating a social economic hub through sea ports, roads, and railways via Pakistan. Through its Belt and Road plan, China urges its neighbouring countries, such as Sri Lanka, Bangladesh, and Nepal, to engage in reciprocal investment. According to Javed and Ismail (2021), this may be a massive revival for the economy of Pakistan, with the goal of eliminating socio-economic disparities in the provinces and reducing the amount of space available for elements that are anti-Pakistan.

It is possible that the economic corridor that connects China and Pakistan will not only be advantageous to China and Pakistan, but also to Iran, Afghanistan, India, the Central Asian Republic, and the region as a whole. In addition to this, it has the potential to disrupt the geographical connections that are created by the transportation of commodities via air, rail, and various modes of transportation. It exerts a considerable influence on the creation of knowledge, as well as academic and cultural advancements. Globalisation of commerce and business in China can be achieved through the establishment of the China-Pakistan economic

corridor, which is a road towards economic regionalization. It is a project that turns out to be beneficial for all parties involved, especially Pakistan that is involved. In their 2019 publication, Burki and Burki assert that the China Pakistan economic corridor is the sole glimmer of optimism for the region's prospects for development. A corridor of this kind not



only brings about significant socioeconomic regeneration, but it also brings about peace and harmony through its presence.

Figure 2. Role of CPEC in the Region

Research Methodology

The qualitative method is used to collect data from stakeholders who are educated within the general population. These stakeholders include the pro vice chancellor, professors, stakeholders, and team leaders of workforce and students. In spite of the fact that participants are well aware of the China-Pakistan Economic Corridor (CPEC) and its initiatives connected to educational development in the region, data is collected from educational participants who have well-established experiences. Before beginning the data gathering process, consents are initially obtained from both the institutions and the participants. An adequate amount of time was provided for participants to express their opinions regarding the associated study. Despite the fact that the participants were reliable in terms of the information they provided, the participants were chosen using a technique called convenient sampling. Data were acquired from the twenty participants through interviews, and interviews were recorded as a significant source of research. For the purpose of the study, documents concerning the educational growth of the CPEC in the region were gathered from the projects, the government, the internet, and publications. These documents were then carefully analyzed, which made them a meaningful source.

Research Objectives

1. To analyze the impact of CPEC on education in the region
2. To examine the sustainable development programs & projects of CPEC in the region
3. To analyze the educational development in the region through CPEC

Research Questions

1. What is impact of CPEC on education in the region?
2. What sustainable development programs & projects are started by CPEC in the region?
3. What is educational development of CPEC in the region?

Findings of the Study

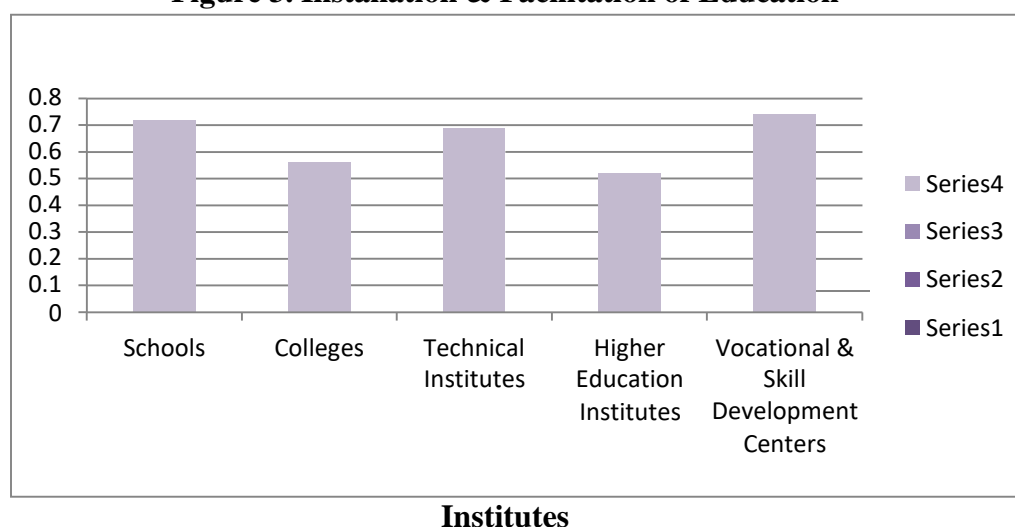
The data that were collected were analyzed using thematic analysis, and then they were prepared and interpreted within the framework of the meaningful.

Installation & Facilitation of Education Institutions

There are roughly 203 elementary schools, 24 secondary schools, 21 higher and higher secondary schools, 12 community colleges, 3 private colleges, and 5 government institutions in the region of Gwadar, Pasni, and Ormara, according to the findings of the study. Additionally, there are 21 higher and higher secondary schools. Finally, there are five government colleges. These educational institutions are provided with the required facilities and are facilitated. It is decided to put into operation the following establishments: two universities, three technical colleges, and two centres for the development of skills. Seventy-one percent of elementary schools, sixty-eight percent of middle schools, and fifty-eight percent of high schools have access to information. Seventy-two percent of primary schools are equipped with boundary walls and drinking water that is free of contamination or contamination. It is estimated that approximately 53 percent of elementary and secondary schools have access to different types of restrooms. 58% of these educational institutions have access to buildings, water coolers, furnishings, and restrooms. In addition, there is a provision of such amenities. An increase of 71% in literacy has been seen at the elementary level, an increase of 56% at the secondary level, and a 39 percent gain at the college and university level. This is the final consequence of the efforts that have been made. Additionally, kids in primary school are eligible to receive aid in the form of uniforms and monthly stipends in order to receive need-based and poverty reduction scholarships. At the university level, scholarships are awarded to 73056 students who are enrolled in a variety of programmes leading to graduation, master's degrees, and doctoral degrees (PSLM, 2012 - 2013). Since the year 2016, over 2194 graduates from the respective regions have been sent to other countries to pursue higher education programmes. Within the areas that are the focus of CPEC, there has been a 34% increase in the number of females who are literate. The China-Pakistan Economic Corridor (CPEC) initiatives have resulted in the establishment of seven educational institutes that are specifically designed for young women. Facilities such as bathrooms, drinking water facilities, furniture, access to electricity, and solar power projects have been provided to these establishments as part of their

standard amenities. There are three libraries and a laboratory that is fully operational that are available to colleges and schools that cater to female students. In addition to providing students with access to text materials, these libraries ensure that they have all of the required equipment and apparatus at their disposal. In universities, there are only two playgrounds that are designed for mixed-gender students, however in colleges, there are three playgrounds specifically designed for female students. In addition to providing the sound amount to each tourist, the China-Pakistan Economic Corridor (CPEC) also provides funds for educational visits and tours for male and female students who are enrolled in schools and universities located here. Promotion of the Commonwealth Games is being carried out all throughout the region in order to accomplish the objective of promoting true sportsmanship among the general population as well as educational institutions. It is ensured that sufficient funds and budgets are allocated at both the national and international levels for the purpose of organising athletic events and promoting competitions for female athletes.

Figure 3. Installation & Facilitation of Education

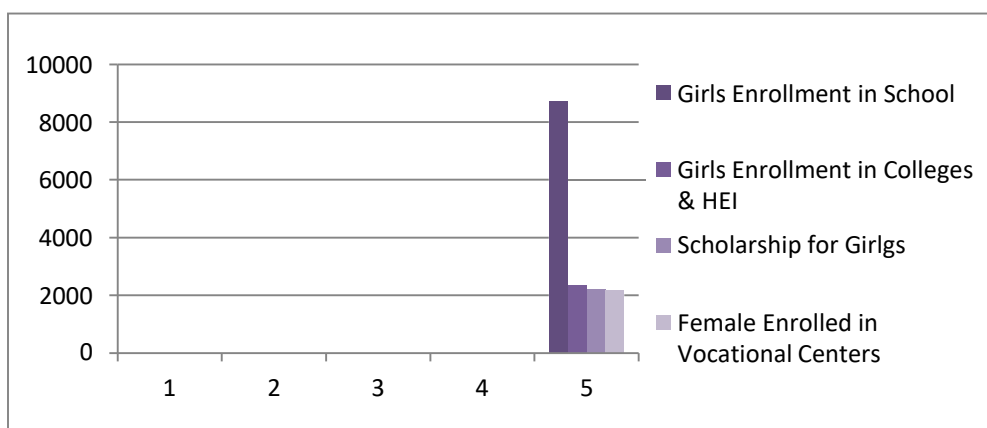


Female Literacy & Educational Development Programs through CPEC Project

In light of the findings of the survey, it has come to light that the China-Pakistan Economic Corridor (CPEC) is extremely dedicated to spreading literacy and education among women. The number of girls who are currently enrolled in elementary, middle, and secondary schools has increased to 8723 as a direct consequence of this issue. Girls are provided with an education at thirteen separate secondary and upper secondary schools that have been built specifically for the aim of providing them with an education. The responsibility of providing a variety of education development programmes falls on the shoulders of schools. These programmes include various education institutes that vary from the most fundamental level to their college education. There is a significant emphasis made on encouraging girls to seek higher education through the implementation of the China-Pakistan Economic Corridor

(CPEC). It is estimated that there are currently approximately 2345 female students enrolled in higher education institutions, and there are 2168 scholarships available to female students in order to assist them in advancing their education. In the present moment, there are around 2167 young women who are enrolled in vocational and skill development centres. These centres not only provide a monthly stipend to the students who are enrolled in them, but they also provide trainings to the students who are registered in them. A small industrial project for women is supported by the China-Pakistan Economic Corridor (CPEC), which also permits multi-microfinancing. The goal of this programme is to encourage the development of handicrafts and vocations in the nearby region.

Figure 4. Female Literacy & Educational Development in CPEC Region



Vocational & Technical Education Programs through CPEC

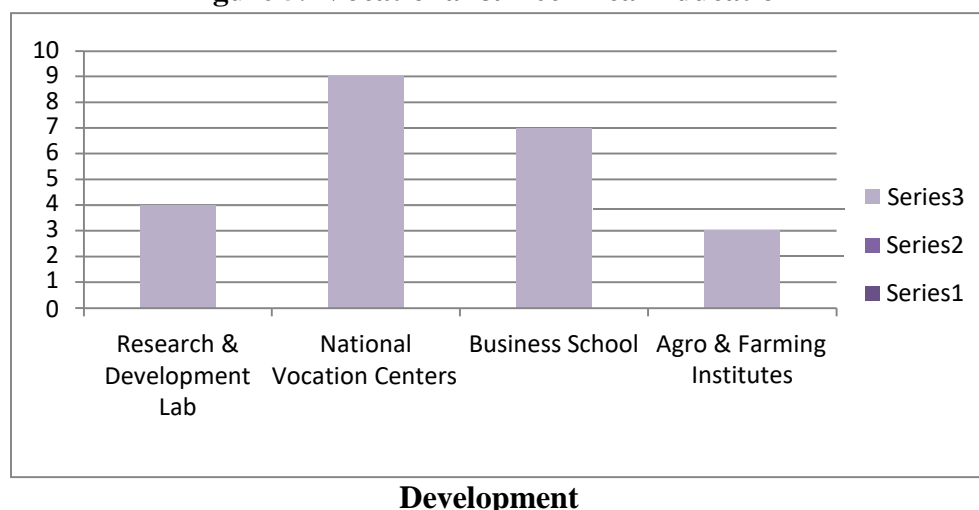
The viewpoints of the participants reveal that the China-Pakistan Economic Corridor (CPEC) provides a number of opportunities to young people who are unable to continue further education. This is something that is seen via the perspectives of the participants. In the vocational and technical institutes that were founded as a result of the project, there are now 2341 students who are registered as students. Professional skills such as fashion and design, architecture and art, electrical and construction abilities, handy craft and manufacturing, and textile competences are among the areas of expertise that are taught at these colleges. Students are not only provided with a monthly stipend by the government, but they are also given the option to participate in a variety of CPEC projects as trainees and applicants for internships. In order to build a career in fishing and hunting in their respective regions, they are provided with the infrastructure that is necessary.

04. The establishment of a research and development laboratory is carried out with the intention of focusing on marine biology and fisheries in order to achieve the highest possible level of production and the greatest potential market share. Small households and manufacturing companies are given the opportunity to thrive and are strongly encouraged to do so with the assistance of microfinancing that is made available to the general public. Seed and fertiliser are distributed on a seasonal basis in order to alleviate some of the stress that

those who work in agriculture are under. The China-Pakistan Economic Corridor (CPEC) project offers a substantial amount of assistance to the agricultural sector. In order to cultivate the field utilising modern techniques, people are provided with all of the technology and equipment that is currently available. Farmers and landlords are supplied with training and agro professional development competencies in order to achieve the goal of increasing crop production to its maximum potential. The indigenous people are mostly dependent on cattle ranching and livestock as a result of the China-Pakistan Economic Corridor (CPEC), which is being supported by China. As a consequence of this, the CPEC offers training and the development of skills with the intention of assuring the healthy mutation of livestock. Additionally, it provides feed and treatments for the livestock, and it pushes the region to produce as much dairy milk and meat as it possibly can during the time period in question.

The National Vocational and Technical Training Commission (NAVTTTC) provides training in 38 technical centres and guides about the CPEC-specific crafts in 197 sectors across Pakistan. This is because the objective of the China Pakistan Economic Corridor (CPEC) is to produce a team of trained workers in the country. In order to accomplish this goal, the NAVTTTC is providing training (Ali, 2023; Ahmad et al., 2023; Ali et al., 2023). In order to provide individuals with the modern skills that are required for the operation of machinery that belongs to the Pakistani government at the port, the training is intended to be provided. The China Pakistan Economic Corridor (CPEC) has established the Pak-China Technical and Vocational Institute in Gwadar. This institute is a training and development institution that was established by the economic corridor. There is an estimated expenditure of roughly 943 million Pakistani Rupees for the establishment of this institute. As a further point of interest, in the year 2017, famous business schools in China 08 and Pakistan 09 were established in order to improve the performance of the Higher Education Commission (HEC) of Pakistan (Jawad, 2018; Thomas, Khan & Ahmad, 2022; Ali, Shah & Ahmad, 2023). These schools were established in order to strengthen the higher education system in Pakistan.

Figure 5. Vocational & Technical Education



Conclusion

According to the findings of a study, the China Pakistan Economic Corridor (CPEC) project is an important milestone that not only has a substantial impact on the educational system but also on the social and economic conditions of the region. A number of educational, vocational, skills development, and research development laboratories have been constructed as part of the Belt and Road Initiative (BRI) project. These laboratories have resulted in the creation of a wide variety of opportunities and career paths for the educated youth. For the purpose of ensuring the compatibility of the project, the China-Pakistan Economic Corridor (CPEC) created a sea port, airports, highways and roads, and tunnels to connect the Gulf nations, the middle east, and Europe. This expands the frontiers of trade and commerce. This is a once-in-a-lifetime chance, particularly for Pakistan, to maintain its infrastructural, commerce, and information technology share with developed countries such as China, Iran, and Turkey. Literacy rates in the region have improved as a result of the establishment of educational and technical schools, which has also contributed to the improvement of the quality of education in the CPEC region.

In the region, the implementation and functioning of the China-Pakistan Economic Corridor (CPEC) faces a number of obstacles and issues, including concerns of security, peace and prosperity, poverty, and illiteracy. In order to achieve a high rank in the trade and business sector across the globe, as well as to clean sweep the business market and hit high to the monopoly of Europe and the United States in the global arena, China is working towards the establishment of peace and harmony through the collaborative efforts of Iran and Pakistan.

Recommendations

1. India tries to restrict the CPEC development therefore Pakistan needs to negotiate on the critical issues like borderline issue and Kashmir with India and China should play moderating and mediating role to resolve the critical situation in South Asia if it really wants to see the CPEC as successful dream.
2. Peace and prosperity of the region is mandatory to execute the integrated projects of CPEC successfully.
3. Government of Pakistan coordinate with Chinese government specially in educational development projects specially coordinate which CPEC representatives in the region
4. First and most important focus should be given to education and social development of the region because the success of other integrated projects and developments are not possible without development and reformation in education sector.

References

1. Afzal, M., Malik, M. E., Begum, I., Sarwar, K., & Fatima, H. (2012). Relationship among education, poverty and economic growth in Pakistan: An econometric analysis. *Journal of Elementary Education*, 22(1), 23-45.
2. Ali, Z. (2023). The CPEC Projects and the Entrepreneurial Opportunities in Pakistan. Essays and Perspectives on the China-Pakistan Economic Corridor and Beyond, 84.
3. Ali, Z., Shah, R., & Ahmad, N. (2023). Determining The Science, Technology, Engineering, And Mathematics Teaching Capabilities Of Educators In Karachi, Pakistan. *Journal of Positive School Psychology*, 7(4), 11–28.
4. Ali, Z., Ullah, N., Ahmad, N., Yaqoob, N., & Saba, F. (2023). Teachers' Perceptions of Curriculum Change and the Need of Professional Development for Effective Teaching Practices. *Multicultural Education*, 9(1), 83–90.
5. Ali, Z., Younis, S., Ahmad, N., Saba, F., & Ullah, N. (2023). Teachers' Perspective of Technology Integration Effects on Students Learning At University Level. *GRADIVA*, 62(5), 29–38.
6. Ali, Z., Thomas, M., Ahmed, N., Ahmed, I., & Ahmed, I. (2020). Assessment of Pre Service Teacher's Perceptions on Technological Pedagogical and Content Knowledge (TPACK) in Karachi Pakistan. *International Journal of Scientific and Engineering Research*, 11(3), 1402–1407.
7. Akram, M., Khan, A. Y., & Ahmad, N. (2022). Exploring Influence of Learning Management System On Management Functions Of E-Leadership. *Webology*, 19(2), 9550–9575.
8. Aman, J., Abbas, J., Shi, G., Ain, N. U., & Gu, L. (2022). Community wellbeing under China-Pakistan economic corridor: role of social, economic, cultural, and educational factors in improving residents' quality of life. *Frontiers in Psychology*, 12, 816592.
9. Amin, M. (2012). *After the spring: Economic transitions in the Arab world*. OUP USA.
10. Ahmad, R., Mi, H., & Fernald, L. W. (2020). Revisiting the potential security threats linked with the China–Pakistan Economic Corridor (CPEC). *Journal of the International council for small business*, 1(1), 64-80.
11. Ahmad, N., Rashid, S., & Ali, Z. (2023). Investigating Primary School Teachers' Perceptions about Professional Development and its Impact on Students Achievement.

- Journal of Social Sciences Review*, 3(1), 809-823.
12. Ahmad, N., Ali, Z., Saba, F., Yaqoob, N., & Ullah, N. (2023). Teachers' Perceived Knowledge of Self-Concept and Its Influence on Their Teaching Practices. *International Journal of Multicultural Education*, 25(2), 152–166.
 13. Ahmad, N., Sewani, R., & Ali, Z. (2021). Impact of head-teachers' instructional approaches on teachers competencies at campus schools in Karachi. *Pakistan Social Sciences Review*, 5(IV), 131–146. [http://doi.org/10.35484/pssr.2021\(5-IV\)10](http://doi.org/10.35484/pssr.2021(5-IV)10)
 14. Asad, A. Z., & Harris, R. (2019). *The politics and economics of drug production on the Pakistan-Afghanistan border*. Routledge.
 15. Aslam, R., Iqbal, S., & Ahmed, N. (2022). Impact of Entrepreneurship Education on Students' entrepreneurial Inclination: A Case of Public Sector Universities. *Pakistan Journal of Educational Research*, 5(1), 51–65.
 16. Appiah, E. N., & McMahon, W. W. (2002). The social outcomes of education and feedbacks on growth in Africa. *Journal of Development Studies*, 38(4), 27-68
 17. Bano, N., Yang, S., & Alam, E. (2022). Emerging challenges in technical vocational education and training of Pakistan in the context of CPEC. *Economies*, 10(7), 153.
 18. Burki, A. B., Ali, A., & Burki, A. B. (2019). CPEC's Educational Scope in Pakistan. *Global Regional Review (GRR)*, IV, 404-411.
 19. Brett, J. O., Staniszevska, S., Mockford, C., Herron-Marx, S., Hughes, J., Tysall, C., & Suleman, R. (2014). Mapping the impact of patient and public involvement on health and social care research: a systematic review. *Health expectations*, 17(5), 637-650.
 20. Dilshad, S. A., Shah, R., & Ahmad, N. (2023). Implementation of Single National Curriculum at Primary Level: Problems And Practices In District Khushab. *Journal of Positive School Psychology*, 7(4), 465–476.
 21. Hafeez, A., Iqbal, S., & Imran, M. (2021). Impact of Devolution of Power on School Education Performance in Sindh after 18th Constitutional Amendment; *Journal of Development and Social Sciences*, Vol. 2, No. IV, 273-285.
 22. Haq, R., & Farooq, N. (2016). Impact of CPEC on social welfare in Pakistan: A district level analysis. *The Pakistan Development Review*, 597-618.
 23. Hussain, F., & Hussain, M. (2017). China-Pak economic corridor (CPEC) and its geopolitical paradigms. *International Journal of Social Sciences, Humanities and*

- Education*, 1(2), 79-95.
24. Imran, M., Kazmi, H. H., Rauf, M. B., Hafeez, A., Iqbal, S., & Solangi, S. U. R. (2022). Internationalization Education Leadership of Public Universities of Karachi. *Journal of Positive School Psychology*, 6(11), 1175-1188.
 25. Jabeen, M., Ali, Z., & Ahmad, N. (2023). Factor Effecting on Quality Teaching Learning at Public Sector Schools in Karachi Pakistan. *Journal of Educational Research and Social Sciences Review (JERSSR)*, 3(1), 92–98.
 26. Javed, H. M., & Ismail, M. (2021). CPEC and Pakistan: Its economic benefits, energy security and regional trade and economic integration. *Chinese Political Science Review*, 6(2), 207-227.
 27. Krueger, A. B., & Maleckova, J. (2003). Seeking the roots of terrorism. *The Chronicle Review*, 49(39), 6.
 28. Maekae, J. (2013). The role of education in national development: Nigerian experience. *European Scientific Journal*, 9(28).
 29. Menhas, R., Mahmood, S., Tanchangya, P., Safdar, M. N., & Hussain, S. (2019). Sustainable development under belt and road initiative: A case study of China-Pakistan economic corridor's socio-economic impact on Pakistan. *Sustainability*, 11(21), 6143.
 30. Naeem, S., Ali, Z., & Ahmed, N. (2022). Evaluation of the Causes of Interest Decline in the Subject of Chemistry amongst Secondary and Higher Secondary School Students in Karachi Pakistan. *International Journal of Social Science & Entrepreneurship*, 2(2), 175–184. <https://doi.org/10.58661/ijssse.v2i2.48>
 31. Otsuka, K., & Yamano, T. (2008). The role of rural labor markets in poverty reduction: Evidence from Asia and East Africa.
 32. Orazem, P. F., & King, E. M. (2007). Schooling in developing countries: The roles of supply, demand and government policy. *Handbook of development economics*, 4, 3475- 3559.
 33. Psacharopoulos, G., & Patrinos, H. A. (2018). Returns to investment in education: a decennial review of the global literature. *Education Economics*, 26(5), 445-458.
 34. Rakisits, C. (2021). Diplomacy in South Asia: a four-step grand plan for Kashmir. *Australian Journal of International Affairs*, 75(1), 1-9.
 35. Thomas, M., Khan, A. H., & Ahmad, N. (2022). Way forward for post pandemic online teaching: A case of higher education in Pakistan. *Journal of Humanities, Social and Management Sciences (JHSMS)*, 3(1), 1–15. <https://doi.org/10.47264/idea.jhsms/3.1.1>
 36. Walter, B. F. (2002). *Committing to peace: The successful settlement of civil wars*. Princeton University Press.

