
IMPACT OF GLOBALIZATION ON TECHNICAL EDUCATION SYSTEM

Abid Ali

PhD Scholar,

Department of Education, University of Karachi,

Sindh, Pakistan

Email: abidjokhio2001@gmail.com

ABSTRACT

Technical education plays vital role in economic development of world. States consider youth as assets for nation. Therefore developed countries give more emphasis to youth's education and training to prepare them to world of work. Technical education and vocation training starts from secondary level in developed counties. Now developing counties making remarkable progress in technical education to able their youth to contribute in national socio-economic development. There is a need to give more importance and emphasis to technical education and vocational training to prepare youth to world of work. This paper highlighted the importance of vocational and technical education. Technical educational development report of South Asian counties is discussed as well impact of globalization on technical education elaborated. The issues and flaws in technical education of Pakistan are highlighted. Finally recommendations are presented to develop globally accepted technical education system.

KEYWORDS

Technical Education, Vocational Training, Globalization, Economy, Labour

INTRODUCTION

Ministry of education of Pakistan defined technical education as a study program and technical training that offered after secondary school to produce technicians and supervisory staff, while vocational training referred to lower level of education and training that aimed prepare skilled or semi- skilled worker for industry, vocational training does not enhance general education level or certification (MOENT, 2017). Shaikh M.A., (2009) stated that technical education and vocational training (TVET) system could provide skills to youth for gaining employment. Moreover Ministry of education of Pakistan explained that technical and vocational education & training is skill development program of labour working in industry and it is economically relevant education for people (MOENT, 2017). The purpose of training is to prepare someone for efficacious performance, with respect of past, present and future (Spöttl

& Loose, 2015). Banad & Talawar (2011) argued that in today's world individuals get education for better employments, which leads them to a better lifestyle and status. After the industrial revolution demand of skilled labour increasing day by day. Mustafa et al., (2005) stated that the demand of technically educated and skilled human resource increasing in rapidly growing industries and production units. Shaikh (2012) believe that the developed countries use technical education and vocational training as a tool to control unemployment and Poverty. Vocationally trained labour could participate in economic growth of country.

The world financial crises are arising, not only the developing but the developed countries are also feeling the aftershocks of financial crises, especially due to the coronavirus pandemic (COVID-19). In previous two decades world faced two major crises, the first was financial crises of 2008 and second was COVID-19. These both crises trembled the world economy. The unemployment ratio were increased during the said crises. In this scenario the government of both developed and developing countries focused on youth to train them for labor market (Chamadia & Mubarik, 2021). The youth of 15-24 years age group is ideal to prepare them for labor market, because the large number of this age group youth either is not enrolled in educational institutes or still jobless. Technical education and vocational training could be beneficial option to motivate youth regarding their further education, bright future and make them able to play their part in labor market. The studies shows that the TVET program helps counties to create new job opportunities and reduce unemployment rate (Chamadia & Mubarik, 2021).

LITERATURE REVIEW

Rapidly changing labour market requires more knowledge and skilled workers, as well understanding of international languages, cultures, values and business methods are required. In the global world there is a close relation of capital and skills. Capital could be generated by effective use of skilled labour force and capital would be invested in developing new industries and technology imports (Mustafa, et al., 2005). The nature of businesses are changed by globalization. Companies are employing individual from different part of counties to conduct business globally. As the only change is constant in the universe, we should accept the process of change in our individual lives as well all the walk of life. With the context of job security, job required skills are changing day by day, specially in technical and vocational field it is necessary to learn new skills and make up to date to meet new challenges (Spöttl & Loose, 2015). Globalization has changes the working practices in engineering field. These changes are due to different languages, culture, norms, customs, regulations and customer inclinations. These kind of practices would increase the quality of working with international perspectives. By the rapid change in technology the skills that are useful today, may be useless tomorrow. In this case people without training always are afraid about future and job

security. At this point technical education and vocational training plays its role to make skilled persons up to date to meet the market demand. Being a part of global world now education should teach about issues that cross national boundaries. By the rapid development in information technology world become a global village, therefore it is necessary that youth should be taught with mind of international trends and programs. Globalization provided an opportunity to underdeveloped countries to develop their education and other systems as international level. Banad & Talawar (2011) stated that the challenges of technical education system has been changed in 21st century. Students expected from technical education to make able them to compete global labour market. Although the objectives of technical education determined by the national goals but quality of knowledge and skills requires as international standers and demands. It is the responsibility of technical education institutes to fulfil the demand of global world. Numerous studies were conducted to evaluate the benefit of technical education and vocational training with regard of employment opportunities and level of income. The studies showed that the technical education and vocational training played effective role in increasing the employment and earnings ratio (Bellakhal & Mahjoub, 2015).

The basic education named as general education without any specialization, as well the education attained from home or work in called informal education, and the vocational education could be attained from internship programs or on job training (Chamadia & Mubarik, 2021). The technical education is considered the substitute of academic education, it channelize the individual toward national sustainability. By the rapid development in technologies the new comers need to fully equip them with all new technological skills to meet the requirement of global market, as well who are working in the field also need to get training on new high-tech-skills. The technical education and vocational training (TVET) educational system offers the in-class learning (theory) and on-job training (practical) to train the individual to meet the required skills and attitude of specific occupation (Alagaraja & Mensah, 2013). Youth population is considered as imperative asset for any nation. As an atomic country Pakistan is eminently equipped to become a global leader. Pakistan is the 6th most populated country of the world with 55% of youth between 15-24 years of age. Unfortunately only 20% of Pakistani youth complete secondary education whereas a very tittle amount of acquires hand skills. Shaikh (2012) reported that the majority of Pakistani youth is illiterate, less educated or unskilled and facing problem to join labour market. The other causes of unemployment in youth are structural mismatch, deviation of urban and rural areas, lack of experience and discrimination in provision of jobs (Qayyum, W. 2007). Agrawal and Agrawal (2017) measured the effectiveness of TVET institutes by reducing school dropout and enroll the dropouts in TVET programs to equip them with employable skill to meet the market requirements. The educational policy makers should give more importance to the school dropouts and

introduce the “second change program” to facilitate them and well equip them to enter into the labor market. It would contribute in economic growth of country (Chamadia & Mubarik, 2021). About 52.4% of youth are not part of labour force in Pakistan (Raza & Muhammad, 2017). The India and Pakistan are very similar in context of culture and socioeconomic. The study on effect of TVET education conducted in India, as result the researcher found the technical diploma holders more earning persons as compare to college graduates, as well the rural residents got more benefits from TVET programs as compare to urban residents (Duraisamy 2002). In Pakistan a very little amount of youth choose technical education and vocational training after completing secondary examination (Shaikh, 2012). Chamadia and Shahid (2018) reported 1,647 technical education and vocational training institutes in Pakistan under the federal and provincial government. As well the number of private institutes are contributing in TVET program to meet the market demand. Chamadia & Mubarik (2021) conducted a study and found that the training programs directly impact on individuals earning, as well it motivates individual to enhance his skills in particular occupation and make it a career. As educationist and parents we believe that the child first must obtain general education before the vocational development. As well most of educational systems are also developed on this mindset to after the completion of general education individual can avail the technical education or vocational training (Spöttl & Loose, 2015). This approach seems to be wrong. The general education and vocational training should be continued side by side. Young minds must be given the opportunities to develop their vocational choice. Although it is also possible to young minds engage in fantasy choices but the by the time and their cognitive development individual would be cleared about the appropriate occupation. Likewise a boy love to drive car and want to become a driver in young age but after the cognitive development he would want to be an automobile engineer (Spöttl & Loose, 2015). The development of country not only depends on availability of resources but on effective utilization of these resources. The process of development of nation could be accelerated by providing effective technical education to youth. Vocational development is a continue process, from the early age to retirement from the field. However, it could be segregated in different phases from initial development to expertise, but the important is to support and guidance individuals on every stage of vocational development (Spöttl & Loose, 2015). There is a need to develop lifelong advanced occupational standards with respect of all stages or levels of vocational training, from prevocational stage to high professional stage. This program would be comprised of 3 to 4 years of intensive training along with time to time other crash, refresher, capacity building and professional courses (BWP, 2010). Dewan & Sarkar (2017) conducted a study with collaboration of UNICEF on Preparing South Asian Youth for the World of Work, in this report authors presented overview of TVET system, I am referring this report in my study.

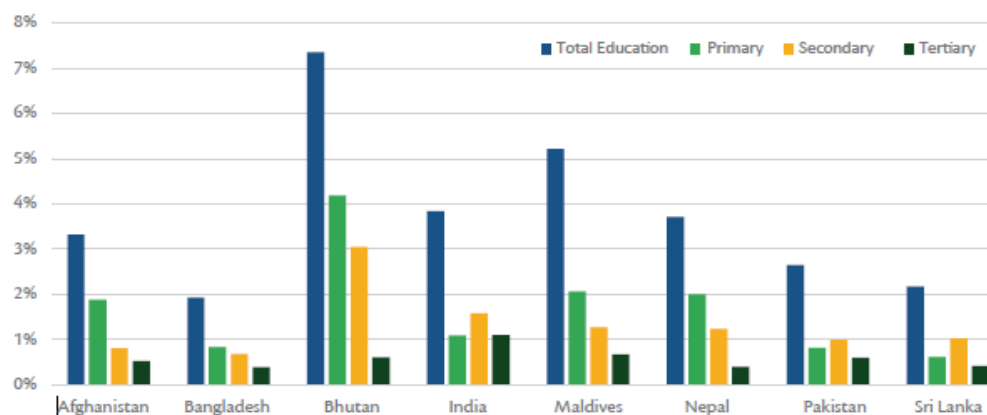
Fig. 1.**Youth Population in South Asia, 2015**

Country / Region	% Population under 24	% Total Population (15-24)	% of Youth (15-24) Employed
South Asia	48%	19%	–
Afghanistan	65%	21%	–
Bangladesh	49%	19%	44%
Bhutan	47%	20%	30%
India	47%	18%	31%
Maldives	47%	19%	31%
Nepal	54%	21%	63%
Pakistan	55%	20%	–
Sri Lanka	40%	15%	26%

Source: Authors' calculation based on data from the United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision, custom data acquired via website and World Bank Data

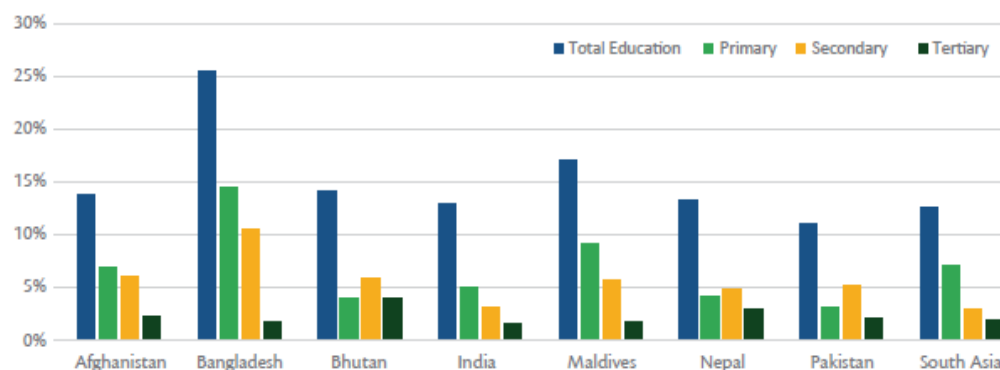
Expenditure on Education

Expenditure on education is very important factor in overall country development. Bhutan spend highest 7.5 percent of GDP among South Asian counties, while Bangladesh spend lowest 1.9 percent on education. Pakistan Spend 2.7 percent on overall education (Dewan & Sarkar, 2017).

Fig. 2.**Government Expenditure on Education as a % of GDP, 2015***

* Data for India and Bangladesh are for the years 2013 and 2016 respectively.

Source: Data Centre, UNESCO Institute of Statistics. Date Accessed: 10th August 2017

Fig. 3.**Government Expenditure on Education, as % of Total Government Expenditure, 2015⁺**

⁺ Data for India and Bangladesh are for the years 2013 and 2016 respectively.

Source: Data Centre, UNESCO Institute of Statistics. Date Accessed: 10th August 2017

Enrollment Ration

Sri Lanka is on highest primary enrollment with 98.94 percent, while other counties are also above 90 percent enrollment in primary education, hence Pakistan has 73.85 percent enrollment in primary. The alarming situation for Pakistan is on secondary level with only 43.96 percent enrollment while this figure more decrease on tertiary level by 9.93 percent. This is the lowest figure after Afghanistan (Dewan & Sarkar, 2017).

Fig. 4.**Net Enrolment Ratio, 2015 - 2016**

Source: Data Centre, UNESCO Institute of Statistics, Date Accessed: 18th July 2017

Secondary Education Completion Ratio

Sri Lanka is on highest level on secondary education completion ration by 88 percent. While Afghanistan is on lowest level by 23 percent. Pakistan also have low secondary education completion ration by only 48 percent (Dewan & Sarkar, 2017).

Fig. 5.

Secondary Education Completion Rates, South Asia

	Lower secondary completion rate, both sexes (%)	Lower secondary completion rate, female (%)	Lower secondary completion rate, male (%)	Lower secondary completion rate, gender parity index (GPI)
Afghanistan (2011)	23	12	35	0.33
Bangladesh (2014)	55	56	54	1.03
Bhutan (2010)	39	38	40	0.94
India (2006)	59	53	66	0.8
Maldives (2008)	78	83	72	1.15
Nepal (2011)	60	55	66	0.83
Pakistan (2012)	46	41	50	0.82
Sri Lanka (2006)	88	90	86	1.05

Source: UNESCO Institute of Statistics

Drop-out Rate

Bhutan has high drop-out rate to the last grade of lower secondary General Education by 17 percent, and India has lowest drop-out rate by only 4 percent. Pakistan has 10 percent drop-out rate to the last grade of lower secondary general education (Dewan & Sarkar, 2017).

Fig. 6.

Cumulative Drop-out Rate to the Last Grade of Lower Secondary General Education Alone (%)

Country	Year	%
Afghanistan	–	–
Bangladesh	2010	16
Bhutan	2013	17
India	2014	4
Maldives	2013	5
Nepal	2015	6
Pakistan	2014	10
Sri Lanka	2014	8

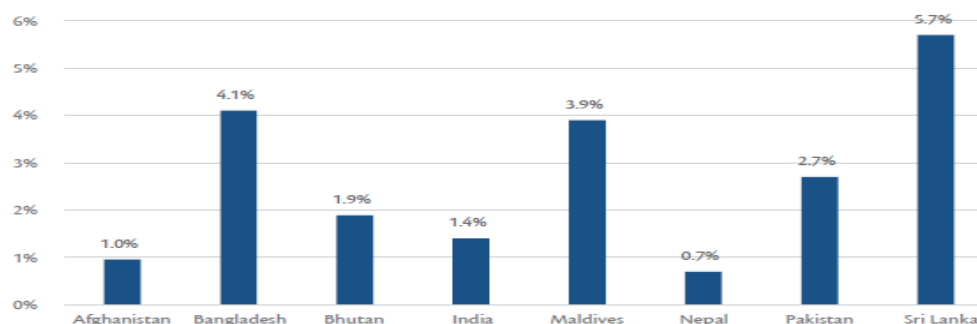
Source: UNESCO Institute of Statistics

Enrollment in Vocational Programs at Secondary Level

Nepal has very lowest percentage of secondary education student enrolled in vocational programs by 0.7%. While Sri Lanka has highest percentage by 5.7. Pakistan have 2.7 percent secondary students that enrolled in vocational programs (Dewan & Sarkar, 2017).

Fig. 7.

Percentage of Students in Secondary Education Enroled in Vocational Programs, 2014 - 2015



Source: UNESCO Institute of Statistics

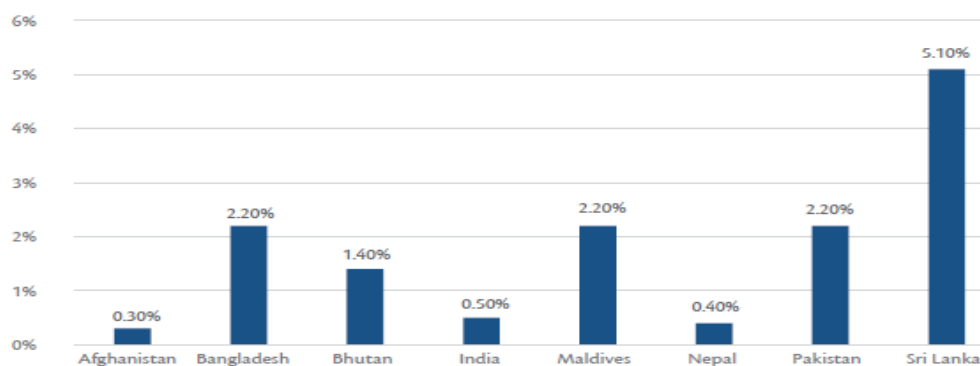
Note: Data for Maldives and Nepal are for 2004 and 2008 respectively

Female Enrollment in Vocational Programs at Secondary Level

Sri Lanka has highest percentage of female secondary education student enrolled in vocational programs by 5.10%. While Nepal has lowest percentage by 0.40. Pakistan have 2.20 female secondary students percentage that enrolled in vocational programs (Dewan & Sarkar, 2017) (See Figure 8).

Fig. 8.

Percentage of Female Students in Secondary Education Enroled in Vocational Programs, 2014 - 2015



Source: UNESCO Institute of Statistics

Note: Data for Maldives and Nepal are for 2004 and 2007 respectively

Global Business Coalition for Education (GBC-Education) and The Education Commission arranged South Asia Youth Skills and Solutions Forum on 29-30 October 2019 in Mumbai. Forum shared skills scorecard of children on track to complete secondary school and learn skills from current to projected score by 2030. According to their scorecard Sub-Saharan African secondary school children having basic skills are 9% and it would be reached on 17% till 2030.

Middle East and North African children are on 36% and would be on 57% by 2030. South Asian Children are on 26% and would 46% children would have basic skills by 2030. Latin American secondary children currently have 37% basic skills and it would be 50% till 2030. In East Asia and Pacific 30% secondary pass students have basic skills and it would be 79% by 2030 (GBC-Education, 2019) (See Figure 9).

Fig. 9.

2030 Skills Scorecard

Children on Track to Complete Secondary School & Learn Basic Skills by 2030

Based on current trends ⁴

Region	Today	2030 Projection	School-Age Children in 2030
Sub-Saharan Africa	9%	17%	426 Million
Middle East and North Africa	36%	57%	102 Million
South Asia	26%	46%	404 Million
Latin America	37%	50%	102 Million
East Asia and the Pacific	30%	79%	325 Million

(GBC-Education, 2019)

According the GBC-Education forum overall South Asian currently secondary school students who have basic skills are 26% and it would be increased only 20% till 2030 and would be 46%. This is second lowest figure after Sub-Saharan African projected score. Among south Asian countries Nepal is on lowest basis skill student rate by 13% and would be 46% by 2030.









While Sri Lanka is on 61% and project figure is 68% by 2030. Pakistani students have 18% basic skills and it would be 40% till 2030. Pakistan is on lowest figure in project figure of 2030 by 40%, although school age children in Pakistan would be 64.3 Million by 2030. It is very alarming situation for Pakistan (GBC-Education, 2019) (See Figure 10).

Fig. 10

South Asia Edition

Children in South Asia on Track to Complete Secondary School & Learn Basic Skills by 2030

Based on current trends ⁵

Country		Today	2030 Projection	School-Age Children in 2030
Afghanistan		†	†	13.9 Million
Bangladesh		26%	55%	37.8 Million
Bhutan		47%	81%	0.2 Million
India		19%	47%	309.6 Million
Maldives		16%	46%	0.09 Million
Nepal		13%	46%	7.1 Million
Pakistan		18%	40%	64.3 Million
Sri Lanka		61%	68%	3.8 Million

[†] Afghanistan is not included due to lack of recent learning assessment data at the secondary level. ⁵

(GBC-Education, 2019)

These scores show that the south Asian countries and specially Pakistan is very behind in technical and vocational education. To equip youth with technical skills and able them for world of work it is very important to take benefit from globalization. Band and Talwar (2011) urged that the globalization could be an effective tool to modifying the flaws of education policy on the lines of developed countries that have become economically strong by their technical education system. Scholte (2005) defined globalization as spread of boundary less social activities. The hope for better future in youth could be created by equipping them with skills to earn for peaceful life and it would be attended by vocationalization of general education. (Shaikh, M. A., 2012)

RESEARCH OBJECTIVE

1. The objective of this study was to analyze the impact of globalization on technical education system.

RESEARCH QUESTION

1. What is the impact of globalization on technical education system?

RESEARCH METHODOLOGY

The type of research was qualitative, Intensive literature nationally and internationally on technical education were reviewed to collect the data. The technical educational system of different countries were studied, as well the reports on technical education were also reviewed with respect of globalization and it's impact on technical education system to get better understanding about topic.

DISCUSSION

Impact of globalization on Technical and Vocational Education

Traditional resource and skills are insufficient for globalization, globalization requires best skills (Mayer, 2000). Global financial capital could be attracted by a well-defined educational system and skilled labour force (O'Connor and Lunati, 1999). Skilled labour and quality oriented workforce contribute in successful competition in the global economy (ILO, 1998a). In below lines we are discussing impact of globalization on technical and vocational education.

1. World Class Education

Globalization of technical education create a chance of dual degree program. In which the student would get education and training from two or more different counties. It will able student to learn in international environment with international standard (Mariasingam et. al., 2007). Globalization of technical and vocational education will provide opportunities especially to developing counties to update their technical education system as world class level. Collaboration of different counties would play significant role in development of technical and vocational education. By international internships individuals get opportunities to work under and with international members. It would enhance the exposure of individual about working, working norms, customs, working environment and working ethics (Mariasingam et. al., 2007).

2. Labor

Industries always in find of cheap labor, but the rapid development of technology the nature and requirement for technical jobs has been changed, old skilled labor found themselves unqualified or useless with modern technology. The globalization would help local labor to update themselves with new technology. The combination of globalization and technological development enable labor to serve in local and international market. Globalization creates the sense of international team building, by working with individuals from different countries would create the sense of harmony and culture exchange. As well the sense of international competitions would boost the individual to work hard and get high-tech-skills (Mariasingam et. al., 2007).

3. Employment

World class approved technical skills are door to enter in international labor market. These skills are appreciable not only in local but international market as well. Many developing counties are facing local unemployment issues. But new job opportunities would be created by globalization, globalization could reduce world unemployment issue.

4. Market Economy

Globalization contributes in local and international economy. Globalization has

increased economic growth in some counties.

5. Culture Exchange and peace

Information technology become a very important source of communication and transfer of culture, ideas, thinking about work, living and working styles. This change brought global harmony and acceptance in world public.

TVET in Pakistan

As other developing countries Pakistan is also facing several problems in technical education and vocational training programs. Ahmed & Ibrahim (2017) pointed following main problems in technical education and vocational training in Pakistan:

1. Lack of industry-institute linkage
2. Low enrolments
3. Shortage of well trained and qualified teachers
4. Out-dated Curricula
5. Changing requirements for overseas/local employment insufficient budget
6. Small or old buildings
7. Unavailability of latest reading and research material
8. Insufficient practical labs without dated equipment and machinery
9. Lack guidance and counseling
10. Lack of teacher training
11. Lack of linkage with industry
12. Out dated examination system
13. Focus of theory instead of practical approach

RECOMMENDATION

Globalization requires sufficient changes in technical education and vocational training system. These changes will able students to work globally and contribute in socio-economic condition of the nation. Recommendations are given to develop a globally accepted TVET system.

Curriculum

TVET curriculum should be modified and upgraded as demand driven. Worldwide accepted technical and workplace skills should be incorporated. The change in overall system of technical education and vocational training with all aspects is very necessary, the curriculum of TVET should be upgraded time to time (Spöttl & Loose, 2015). Globalization would support the curriculum development. The different countries would get benefit from their best practices of curriculum. The curriculum would be enhanced and upgraded according to international standards (Mariasingam et. al., 2007).

Benchmark and Standards

Benchmark and standards of world best practices should be set. Field related best practices would be beneficial for students to adjust with new work environment.

Marketing

Marketing with aspect of career guidance would be helpful to promote technical and vocational programs. Social marketing is best tool for it.

Facilities at TVET

World class facilities, up to dated technical equipment would play vital role in improving technical education and vocational training.

TVET for Girls

It is need of time to involve females in technical education and vocational training. Majority of population is unaware about TVET career for females.

Linkage with Industry

TVET institutes have very limited resource in their institutes. Therefore opportunities should be given to students to visit and work in industry to make them familiar with industry.

REFERENCES

- Agrawal, T. and Agrawal, A. (2017), "Vocational education and training in India: a labour market perspective", *Journal of Vocational Education and Training*, Vol. 69 No. 2, pp. 246-265.
- Alagaraja, M. and Arthur-Mensah, N. (2013), "Exploring technical vocational education and training systems in emerging markets: a case study on Ghana", *European Journal of Training and Development*, Vol. 37 No. 9, pp. 835-850.
- Banad, M. S., & Talawar, M. (2011). *Impact of Globalization on Indian Technical Education System*. New Knowledge in a New Era of Globalization, 73-96.
- Bellakhal, R. and Mahjoub, M.B. (2015), "Estimating the effect of vocational training programs on employment and wage: the case of Tunisia", *Economics Bulletin*, Vol. 35 No. 3, pp. 1820-1833.
- BWP - Berufsbildung in Wissenschaft und Praxis (BWP) (2010): *Bildung- und Bildungsverläufe gestalten*. 39(5), 1-70.
- Denham, T. (2010). *The 5 Career Stages: Careers and Work Life*. Retrieved from <http://blog.timesunion.com/careers/the-5-career-stages/385/>
- Chamadia, S. and Mubarik, M.S. (2021), "Assessing the effectiveness of vocational training programs in Pakistan: an experimental study", *Education + Training*, Vol. 63 No. 5, pp. 665-678. <https://doi.org/10.1108/ET-04-2020-0085>
- Chamadia, S. and Shahid, M. (2018), "Skilling for the future: evaluating post-reform status of

-
- ‘skilling Pakistan’ and identifying success factors for TVET improvement in the region”, *Journal of Technical Education and Training*, Vol. 10 No. 1, pp. 1-14.
- Dewan, S., & Sarkar, U. (2017). From education to employability: Preparing South Asian youth for the world of work. JJN, UNICEF.
- Duraisamy, P. (2002), “Changes in returns to education in India, 1983–94: by gender, age-cohort and location”, *Economics of Education Review*, Vol. 21 No. 6, pp. 609-622.
- Global Business Coalition for Education (GBC-Education) and The Education Commission (2019), The 2030 Skills Scorecard, Revert from: <https://gbc-education.org/wp-content/uploads/2019/10/GBC-Education-2030-Skills-Scorecard-South-Asia-Edition.pdf> (18 Oct, 2020)
- International Labour Organisation (1998) World Employment Report 1998-99: Employability in the Global Economy, How Training Matters. Geneva
- Mariasingam, M., & Courter, S., & Smith, T., & Moses, G. (2007, June), Globalization And Engineering Education For 2020 Paper presented at 2007 Annual Conference & Exposition, Honolulu, Hawaii. 10.18260/1-2--3022
- Mayer, Jorg (2000) Globalisation, Technology Transfer and Skill Accumulation in Low-Income Countries. United Nations Conference on Trade and Development (UNCTAD). Geneva: UNCTAD. Available: <http://www.unctad.org/en/docs/dp150.en.pdf>. (WIDER Project, No. 150.)
- MOENT . 2017. National Education Policy 2017–2025 . Islamabad: Ministry of Federal Education and Professional Training Government of Pakistan.
- Mustafa, U., Abbas, K & Amara, S (2005): Enhancing Vocational Training for Economic Growth in Pakistan. *The Pakistan Development Review* 44:4 Part II (Winter 2005) pp. 567-584.
- O’Connor, David, and Maria Rosa Lunati (1999) Economic Opening and the Demand for Skills in Developing Countries: A Review of Theory and Evidence. (Technical Paper No. 149.) Organisation for Economic Co-operation and Development, Development Centre, Paris. Available: <http://www.oecd.org/dev/publication/tpla.htm> Abstract at: <http://www.maquilaportal.com/punblic/artic/artic211e.htm>.
- Qayyum, W. (2007): Causes of Youth Unemployment in Pakistan. *The Pakistan Development Review* 46 : 4 Part II (Winter 2007) pp. 611–621.
- Raza, Ahmed, and Muhammad Ibrahim Khalid. "Obstacles in the Enhancement of Technical Education in Pakistan: Views and Reviews." *Bulletin of Education and Research* 39, no. 1 (2017): 117-127.
- Scholte, J. A. (2005). *Globalization: A critical introduction*. Macmillan International Higher Education.
- Shaikh, M. A. (2009): Restructuring of TEVT for Employable Training to Youth in Pakistan, 2nd Meeting of the Working Group on Basic & College Education For 10th Five year People’s Plan 201-15, 4th November, 2009 Organized Government of Pakistan Planning Commission, Planning and Development Division (Education Section).
- Shaikh, M. A. Revitalize: Vocationalization of General Education, Necessary for Youth Employment National Round Table Conference on Technical Education & Vocation Training Organized by NAVTTC in Collaboration with UNESCO, at Islamabad, on 27th – 28th June, 2012.
-

Spöttl, G.; Loose, G. (2015). Transformation and Globalization in Technical, Vocational Education and Training – Which Way Should TVET Take? In: International Journal of Vocational Education and Training, Vol. 23, No. 2, p. 28-45.