

A Focus Group Discussion on Creation of Knowledge Economy in Punjab, Pakistan

Babak Mahmood, Sajida Parveen*, Ayesha Ch.

Department of Sociology, Govt. College University, Faisalabad

*E-mail: Sajida4zafar@gmail.com

Mobile No. 0334-6676946

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Abstract

World is moving from traditional economy to modern economy with more focus on knowledge. The creation of new knowledge is mandatory for developing any country economically. Institutions play important role in this transition. Especially educational institutions are momentous to bring change in existing system and are a major source to create new knowledge. Inductive method is used to understand the state of knowledge creation through educational institutions in Pakistan. Focus group discussions were arranged to collect the data. It is found that the educational institutions of Pakistan are slowly moving towards creations of knowledge economy. Improvements are needed to reform the educational system to create knowledge economy.

Keywords: Knowledge economy, creation of knowledge economy through educational institutions, hurdles in creation of knowledge economy

Introduction

World is an ever changing place, historical study of world explains how world move from one stage to the other. These changes can be seen in different spheres of society like social, economic, and cultural. The rate of change depends on the working of institutions of any society. Modern world introduce us to the new ways of living in which science and technology plays central role. These innovations are possible only when someone have knowledge. Use of knowledge in production is not a new idea, but it is pivotal in modern world of production. The term knowledge economy best describes the use of knowledge for economic development.

Knowledge has been at the heart of economic growth and the gradual rise in levels of social well-being since time immemorial, observed by David & Foray (2002). The ability to invent and innovate, that is to create new knowledge and new ideas that are then embodied in products, processes, and organizations, has always served to fuel development of economy. And there have always been organizations and institutions capable of efficiently creating and disseminating knowledge: especially educational institutions are performing central role in creation of knowledge with collaboration of industry.

To explore the role of education in creation of knowledge, focus group discussions conducted across the Punjab with participants from educational institutions and its main stakeholder, parents. The purpose of the focus groups was to investigate the functions performed by educational system in creation of knowledge. The groups were also asked to suggest new ways to increase creation of knowledge which can be used for economic development through education.

Review of Literature

Educational institutions play important role to run the system of society. This institution is focusing on educating the persons by providing them knowledge about basic facts, job skills and cultural norms. Education trains the people for economical activities through providing them job skills. Educational institutions and economic institutions are interdependent and interrelated. The relation between educational institution and economic institution can be defined through the functions performed by educational institution.

The five major functions of educational institution are described by Macionis (2012). First, socialization, in primitive society, families were responsible to train their children for social life, now this responsibility is shifted to the educational institutions to socialize the children for all spheres of life. Second, colleges and universities are the major sources of cultural innovation. Advancement in science and technology are the major innovations of educational institutions. Third, educational institutions play a vital role to integrate the people with their social life. Fourth, social placement is done by educational institutions. Fifth and final, some latent functions are performed by educational institutions such as students get familiar with students of different backgrounds, have friendship with them, etc.

The works of different authors were reviewed by Peters (2015) to grasp the concept of knowledge economy. A brief review of all scholars' ideas is given here to gush out the concept of knowledge economy. These researchers provide different strands of the concept which are diverse. Some of them used parallel terms for the concept as "knowledge society" and related the concept to the broader changes in the nature of production, modernity, and global economy.

The term knowledge economy is coined by Peter Drucker in 1969 and he emphasized the role of knowledge workers. He is also founder of the field of knowledge management. The link between knowledge and economics is highlighted by focusing on economic value of knowledge and its production and distribution. Human capital development and education are central to create knowledge economy. According to sociological explanation, theoretical knowledge and the new science-based industries are crucial for postindustrial societies. Knowledge economy is also described as programmed society which based on information social networks.

Postindustrial society's production is based on knowledge that gives birth to a dispersal and complex economy. Cultural and social capitals are influential for knowledge economy. Innovation in science and technology is a driving force economic growth. Policy model to enhance knowledge based economy are needed. Knowledge is a global public good and education reforms are needed to create knowledge for economic development. Scholars from different disciplines made various attempts to describe the attributes of new economy. All cannot be discussed here only hints suffice the purpose and give way to other researchers.

In the conclusive remarks of Peter (2015), further conceptual development is needed to define the term of knowledge economy. He defines the knowledge economy in three categories, the learning economy, the creative economy, and open knowledge economy. These three categories are described in proceeding portion.

The Learning Economy

A Swedish economist from Aalborg University, Lundvall (1994) coined the term of learning economy first time in a new context for European innovation policy. Education, particularly universities are emphasized to develop learning economy to meet the target of competitiveness in a divers environment. Technological change, innovation and institutional learning are serving as important element for developing learning society and economy. European countries are paying

attention to develop link between education, science industry, and market. The refined form of knowledge economy is known as learning economy.

The Creative Economy

Creative economy refers to the services and goods produced by creative industries and institutions which is a key component of rapidly growing knowledge economy. These industries are designed by the individuals with talent, skills, and creative mind. These persons have potential to develop and exploit the intellectual properties to generate wealth and to create jobs. Charles Landry, John Howkins and Richard Florida explained the idea of creative economy and provided policies in the late 1990s and early 2000s. The concept of creative economy should be promoted through education at all levels both in terms of the development of creative minds, the creative curriculum and universities as creative institutions.

The Open Knowledge Economy

The term information democracy indicates the public world of information developing globally that every person can access through a PC. Gates (2006), said that information should be free while knowledge is much “stickier” and harder to define and communicate, and more subjective. Charles Landry, John Howkins and Richard Florida indicated that if software gets smarter it will help people to manage and synthesis knowledge. In short information technology should be used to enhance business and for the growth of knowledge economy and it can be foster by the collaboration and participation of education.

The literature review helped to understand the different kinds of knowledge economy and the importance of educational institutions in creation of knowledge economy. Further, it directs the researcher to formulate the research questions for further inquiry. The research questions formulated by the review are discussed in methodology.

Methodology

Although the problem is not new to the world, but for Pakistan it is novel; hence problem is not clear so inductive form of inquiry is used to collect the information. There are four provinces of Pakistan, Punjab, Balochistan, Sindh, and Khyber Pakhtun Khwa (KPK). Punjab is most populous and second largest province in Pakistan by area. Since the 1950s, Punjab industrialized rapidly and agriculture continues to be the largest sector of Punjab's economy.

Punjab province rank high in contribution of Pakistan's GDP. Keeping in view the current economic state of Punjab, Punjab province is selected as universe. Three big cities, Rawalpindi, Faisalabad, and Multan and three small cities, Chakwal, Gujranwala, and Khanewal are selected purposefully to represent the population of North, Central, and West Punjab. From each city two schools (Public and Private) and two colleges (Public and Private) are selected conveniently. From each big city two universities (Public and private) are also included in sample.

Teachers, administrators, and parents were recruited as participants. The letters and emails were sent to the selected institutions to ensure the availability of the respondents. Overall positive response was received from them. Approximately 10 to 12 respondents participated in each discussion. Data is collected through focus group discussions. Checklist is used as tool of inquiry and carried the following points:

1. Awareness about knowledge and knowledge economy
2. Role of educational institutions in creation of Knowledge economy (kind of knowledge being created, sources to create knowledge, current educational institutions and innovation)
3. Hurdles in creation of Knowledge economy (syllabus, infrastructure, availability of funds)

4. Ways to improve educational institutions to create knowledge economy (suggestions)

Throughout the discussions these above mentioned points are discussed. Discussions lasted approximately two hours each. Data was recorded on tape recorder and interview protocols contained relevant information about the interviewee such as, their name, designation, department, and duration of services.

Awareness about Knowledge and knowledge economy

The discussions were started in a friendly manner. Some questions, name of participants, their hobbies, and liking and disliking, were asked to get familiar with participants. When participants felt comfortable the discussion was started with the beginning question to know about the awareness level of the participants.

Knowledge

The concept of knowledge is defined in different ways by the participants. According to them knowledge refers to the fact or condition being aware of something through experience. Knowledge is information and understanding about a subject. To know about things existing in the world is called knowledge. Understanding, addition in existing knowledge, creation of ideas through innovation is called knowledge. Being aware about the things and predict about the future on the basis of available information is called knowledge. As explained by one of the respondent: *Awareness about anything is called knowledge which we gain through everyday experience.*

Knowledge is what is known; the confident understanding of a subject, potentially with the ability to use it for a specific purpose.

Knowledge economy

Knowledge economy addresses how education and knowledge can serve as productive asset. The knowledge economy is a system of consumption and production that is based on intellectual capital. This economy is based on creating, evaluating, and trading knowledge. In knowledge economy labor costs become progressively less important. An economy in which growth depends on the quantity, quality and accessibility of the information available. One said Knowledge related to economy is called knowledge economy. Many respondents were unaware about the term knowledge economy and have no idea about this sort of knowledge.

One teacher expressed his ideas in native language that: I heard about this term first time.

Parents and administrative staff were also having little know-how about the concept. Even most of them were unaware of the term knowledge economy. The concept of knowledge economy was briefly described to the participants as explained by the following scholar. Because without having clarity of concept, further discussion was not possible.

Adam Smith said that knowledge which is useful economically called knowledge economy. Knowledge economy includes distribution, trading, and creation of knowledge. After discussing the beginning concepts the major functions of educational institutions were discussed. As explained by Friedrich that the infrastructure and institutions contribute to the development of productive forces through the creation and distribution of knowledge.

Role of Educational institutions in creation of Knowledge Economy

Schools, colleges, and universities historically exist as institutions for the creation and dissemination of knowledge. But now students enter into universities to prepare for career only. Number of students increase day by day but quality of knowledge is decreasing day by day.

An educational institution is a purposefully organized institution which is founded by the state or local council or other private body employing the professional pedagogical staff to attain the

goals of education. It is the prime duty of educational institutions to provide knowledge for the development of nation.

The concept of creation of knowledge through educational institutions (school, college, and university) was a positive and acceptable one for most participants but the current educational system is not supportive for creation of Knowledge economy. For many participants the educational institutions are training the students for different jobs but not creating new knowledge and new fields.

Parents sent their children to schools, colleges, and universities so that they can prepare to get a suitable job.

Almost all the participants were agreed that the prime task, creation of knowledge, is ignored by the educational institutions.

One participant said that we are producing followers not creators through our educational system.

Kind of knowledge is being created by educational institutions

Knowledge has no boundary but in our institutes knowledge is bounded. Students just get familiar with specific contents. Participants stated that the current educational system is providing knowledge about basic facts and practical knowledge is being ignored by the institutions. As universities are considered the main source of creation of new knowledge but in Punjab, universities are creating only academic knowledge its application is totally ignored.

We are producing job hunters not job creators, said by a participant.

Vocational training centers are also providing skills which are not highly paid.

Many participants acknowledged the need for practical knowledge that is inherent to the concept of knowledge creation, suggesting that educational institutions should provide environment for creation of new knowledge and its economical use should also not be ignored or overlooked.

Sources to create new knowledge in educational institutions

Use of Science and technology in educational institutions is key component for creation of knowledge economy. There is a main role of science and technology in educational institutions as this kind of knowledge is necessary to meet the current challenges of modern world because every field of life is related to science and technology.

Basic education in science and technology in modern society is characterized by numerous scientific and technological issues and inventions that play an increasingly important role in everyday life. The role of science and technology in educational institutions is of great importance. Science and technology are backbone of educational institutions.

The current state of science and technology in educational system of Punjab, Pakistan is not satisfactory. In public schools and colleges students are not much familiar with the use of information technology. Most of the schools and colleges even not have the computer and science labs. Few which have the labs were not properly equipped. Private institutions providing all advance facilities but these institutions are not affordable for all.

The participants were agreed that all have not equal access to higher education. The use of science and technology varies in both private and public educational institutions. In Govt. institutions there is lack of equipment and proper infrastructure for science based activities.

Current educational institutions and innovation

Participants have different ideas about the role of educational institutions in innovation. Participants from public sector were said that current educational institutions are not providing environment for innovation. Their focus is only to revise the previous researches. There is not any scientific environment and equipped labs.

Educational institutions are playing no role in innovation.

There is restricted environment for innovation in educational institution.

We are facing lack of resources which is a great hurdle in innovation process.

We are facing ethical issues as well in innovative procedure.

Educational institutions are not providing favorable environment for innovation.

Participants from private sector were with the idea that current educational institutions are providing better environment for innovation by building new labs and libraries according to the update knowledge and providing accurate equipments. Participants with optimistic approach said that current educational institutions are trying to update their educational environment up to the international mark by building new and functional equipments regarding latest technology applications.

Hurdles in creation of Knowledge economy

Current syllabus and creation of new knowledge

It is stated by the participants that the current syllabus is not of that level to produce the creative sense in students. It is not activity based. Much of the syllabus contents are theoretical. It is not able to polish observation power of students. If students are not able to observe things deeply than how can they create knowledge?

(We taught them text books which provide them fundamental knowledge).

The new generation is being taught the same syllabus which was taught to us and our forefather. That syllabus could not fulfill the requirements of modern era.

Some participants were agreed that theoretical knowledge of concepts provided by current syllabus directs to create new knowledge.

Participant expressed that current syllabus is an academic document that communicates course information and defines expectations and responsibilities. Most of the participants were showed there concerned that the existing syllabus is not cabal to create new knowledge and could not face the challenges of future.

Infrastructure and Creation of Knowledge economy

Most of the respondents showed their concern over the non supportive infrastructure of educational institutions for creation of knowledge economy. The non equipped labs for experiments and innovation is a major hurdle in creation of knowledge economy. Both public and private sectors are suffering from this problem. The equipments are not affordable for institutions. Some reported that the available equipments are not properly maintained and access to equipments is also restricted. In such restricted environment student could not perform well.

Availability of funds for creation of Knowledge economy

Innovation and research demand for huge amount of funds. The educational institutions failed to fulfill this requirement. If funds are allocated by the Govt., they are not distributed properly among the institutions. Higher education is not accessible for all. Those who have talent to create knowledge economy could not reach to the end due to non availability of fund. Public institutions are providing scholarship but in a very limited number. Private educational institutions are not providing such facilities to their students and demand for high fee which is not affordable for all.

Ways to improve educational institutions to create knowledge economy (Suggestions)

Participants suggested following ways to improve educational institutions for creation of knowledge economy.

- Educational institutions should change its format for making it supportive for creation of knowledge economy. This idea is also favored by Reich (1991), in his view the fate of

nations would be determined by the national education and training systems, rather than national economies. Pakistan has to reform its educational system to determine the future of its nation.

- Awareness campaigns should be arranged to define knowledge and knowledge economy to make this concept widely familiar to all. Less wealth and capital is not only the reason but less knowledge is one of the major reasons to create gap between the developing and developed countries in respect of socioeconomic growth, explained by Omar (2003). To meet the challenges of world's economy Pakistan has to enhance its economy by promoting and creating knowledge.

- It is suggested that the creation, distribution and application of knowledge is the prime responsibility of educational system. Education, especially higher education has potential to enhance productivity through research and is seen as global remedy to make better economic remedies, observed by Peters (2003). Governments, both in developing and developed countries are investing to restructure the education system to promote knowledge economy. Pakistan should follow the same model to enhance its economy.

- A successful knowledge economy is successful by close links between science and technology for economic growth and development. It is done by lifelong learning and great investments are required in research and development through education. A brief overview is given by Mian, *et al.* (2010), in which they stated the socio-economic position of Pakistan and explained that science and technology data shows that country faces numerous challenges in its transition to Knowledge economy. Development in education workforce and enabling environment for research and innovation was neglected in past. Furthermore, country should strive for advancing education system with focus on science and technology by using its latent human resources to catch up with economic development.

- Educationists should be trained through workshops, seminars, and internships. Chandra & Yokoyama (2011) stated that highly qualified human resources, excellent information, communication technology infrastructure (ICT), and a capable scientific infrastructure for innovations is key for developing knowledge economy.

- Structural barriers in educational institutions in creation of knowledge economy should be removed. Weber (2011) said that education and universities are often mentioned without in-depth critical analysis in discussions of modern knowledge economies. The infrastructure needs more attention for making it suitable for creation of knowledge economy.

- Language plays important role in education. As globalization connected the whole world, people from different regions, using different languages are in relations. Pakistani students faced difficulty in learning English language, whereas, that language is important in educational system of Pakistan. It was suggested by the respondents that special attention should be paid to the learning of languages at all levels of education. Williams argues that language plays important role in construction of social reality. Command over language is needed for creation of new knowledge.

- Some of the respondents concerned about the religious education and suggested that it should be provided at all levels and develop links between education, economy, and social life through religious education. Islam promotes learning and encourages to gain more and more knowledge even based upon knowledge. The text of the Quran is replete with verses inviting man to use his intellect, to ponder, to think and to know, for the goal of human life is to discover the Truth.

Results

- Many groups expressed confusion regarding creation of knowledge and its use as economy. While most understood that creation of knowledge is essential for development of country both in field of education and economy. The participant from universities were more familiar with

the concept of knowledge economy and its use as economy but expressed that the knowledge created at university level is also not used for economic purposes due to non-recognition.

- There were very few mentioned educational institutions are playing a positive role in creation of knowledge economy. Groups felt that an educational institution represents the future of knowledge economy.

- While participants appreciated the concept of knowledge creation through educational institutions and all groups expressed a concern about a lack of detail pertaining to the enforcement of the policies adopted by Government and regulations associated with creation of knowledge economy via education. Participants felt strongly that creation of knowledge is currently lacking in educational institutions, and believed it to be a significant oversight for future plans.

- It was interesting to note that all participants were with the idea that the current educational system is not supporting for creation of knowledge economy. It suggested by the participants that creativity through education should be promoted. Furthermore, use of science and technology in educational institution for innovation is essential.

Howells, *et al.* (2012) highlights the role of universities as actors within the system and the role of the modern university for creation of knowledge. He shows his concern over the issue that we are placing too much expectation and responsibility on universities and making them into organisational or actor types that are becoming too generalist. Government funding frameworks for educational institutions are not enough for this new role of education in creation of knowledge economy. There is dire need to address these issues by making policy for the new regime of knowledge economy.

- Participants expressed a concern over the ability of the educational institutions to create knowledge economy, as well as predict or anticipate what kind of educational system needed to achieve a long-term outcome;

I'm measuring it by use of advanced technology and science in educational system. Someone else might measure it by quality of syllabus and how it is being taught. I'm looking at the job aspect, the people aspect.

- Many participants acknowledged the need for 'innovation' which is inherent to the concept of knowledge economy, suggesting that science and technology should be a priority; their use in educational institutions should not be ignored or overlooked.

- While technology is popular in creation of knowledge economy, technology is the method by which most participants reported that they would come in contact with information related to science and innovation in educational institutions, as presented in the group discussions.

High level invest is needed in higher education and skills, science, technology, research and development, said by Amjad (2005). Although it is important but raised the important question of whether the development of a well-educated and skilled labor force is sufficient for any economy to graduate from labor-intensive to higher value-added and technologically advanced sectors in Pakistan. The quality of the graduates produced is key issue and need more attention. The quality of education can be promoted through use of advanced science and technology.

Conclusion

The concept of creation of knowledge through educational institutions is acknowledged for most participants, regardless of their level of understanding or familiarity with the term. During discussion it is also found that most of the participants, especially parents, school and college teachers, and administrators are not aware about the term of knowledge economy and agreed that the schools and colleges are not providing any kind of knowledge. University teachers are aware about

the term of knowledge economy and agreed that the universities are creating knowledge through research but the quality of that knowledge is poor one.

Many participants accepted the need for developing new syllabus which can meet the challenges of modern era. Both elements theoretical and practical implementation of knowledge should be covered in syllabus taught at all levels. Furthermore, the knowledge provided by the educational institutions should be related to the knowledge based activities which increase economy of the country. Participants in most groups were not satisfied with the role played by the educational institutions in creation of knowledge economy. Educational institutions are not equipped with science labs. There is great difference between the facilities provided by the public and private educational institutions.

While participants agreed that the knowledge provided by the educational institution is not meet the challenges of modern economical needs. The factual knowledge cannot enough to develop country economically. The activities based on knowledge should be promoted. Participants in all groups had difficulty thinking beyond knowledge economy and its creation through educational institutions. There were very few mentioned that the current educational system is supporting environment for innovation and creation of knowledge useful for economic development.

Many groups expressed confusion regarding use of science and technology in creation of knowledge economy because the current infrastructure of public institution is not supportive for scientific activities. The institutions which are equipped with advanced technology are not affordable for all. Most participants said that educational institutions lacking environment for creation and innovation of knowledge that can be used for economical development. Educational institutions are crucial for creation of knowledge economy through innovation.

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