

# **TRANSFER OF TECHNOLOGY-AN INEVITABLE RISKY PROCESS TO NEPAL**

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## **INTRODUCTION**

Nepal is a small developing nation, just stepping towards industrialization. Her economy is almost agro-based. Literacy percent is not very high. The mass of the people involved in science and technology is very small, almost negligible. Research facilities are very nominal whether it is in the government organizations or in the academic institutions. There is a need of the production of critical mass of Scientists and Technologist who can influence and drive the nation towards the fast development process to fulfill the need to of the people. Unless and until, a country cannot produce the critical mass of own professional Scientists and Technologists, the nation cannot fulfill the goal and survive with its own. In such case already proved and practiced Technology has to be transferred and utilized to build a nation.

## **THE PROCESS OF TECHNOLOGY TRANSFER**

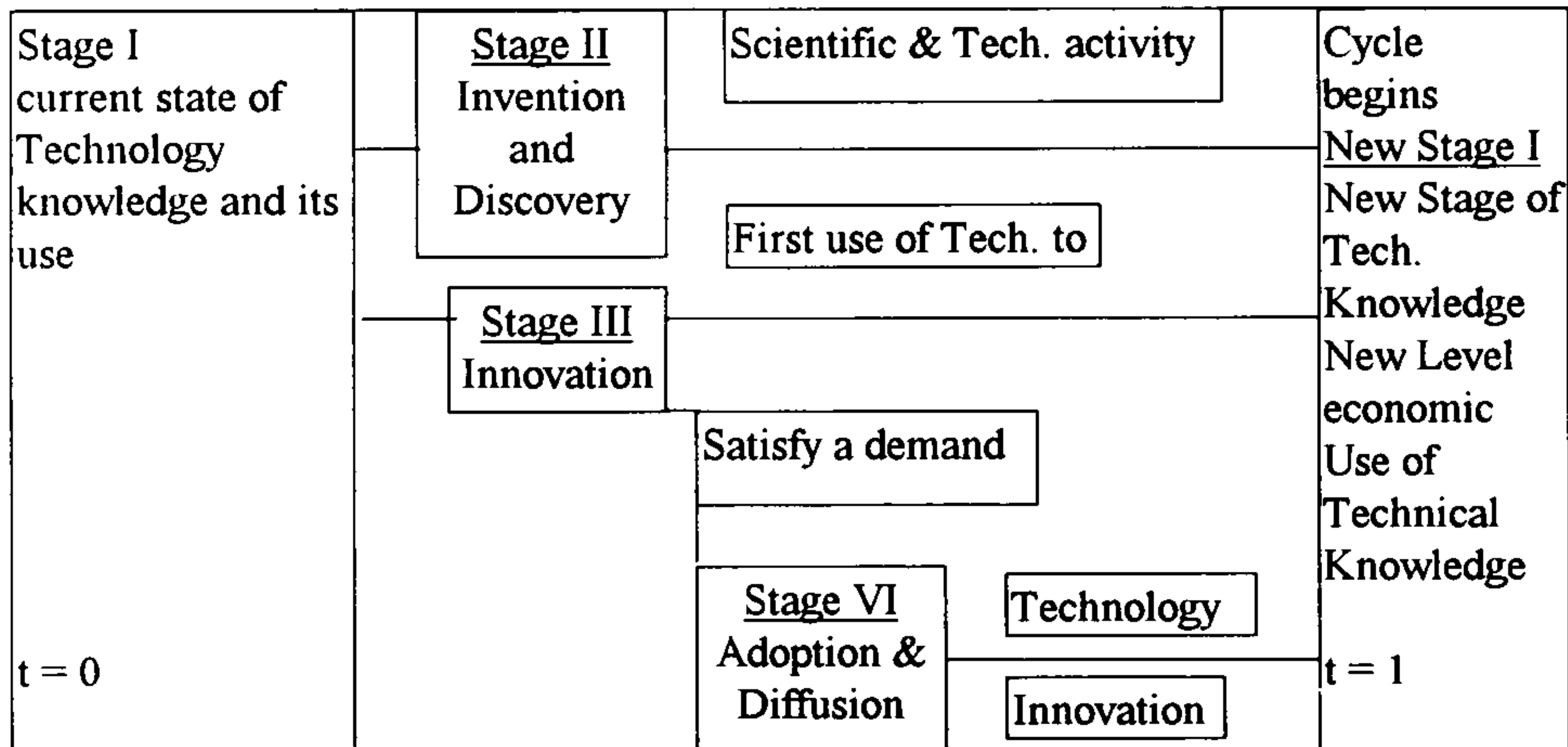
Most commonly, Technology is perceived as the ground between science and business. Science aims to increase knowledge of Universal truths, that knowledge (or techniques) if used for making profit or commercialised successfully, or made more profitable by making some small improvement, is known as technology transfer. So

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the benefit of knowledge only emerges when it is converted to a usable form. Technology is the conversion or commercialization of new knowledge into enhanced products and services. Technology can be made more advanced through commercialization which takes time and money. During the transition from knowledge to product, technology undergo revolutionary change, until it becomes a product or service. According to W.H. Gruber and D.G. Marquis, knowledge can be commercialized by seven formal steps, that can be performed on an individual basis or a group of professional Scientists working in the laboratory. Those seven commercialization steps or tasks are what is called the technology transfer.

The illustration of the role of knowledge in the process of technology transfer is given below:



Source: factors in the transfer of Technology (W.H. Gruber and D.H Marquis)

Sometimes technology is expressed as a wisdom of "do it yourself" commercialization process. But in fact it is not possible to complete the commercialization process of Technology by an individual or a single organization. Therefore technology transfer is a shared responsibility of wise persons of the subject for commercialization of it for the benefit of the nation or human kind.

The technology transfer is an ungoing evolutionary process. Starting as a concept, technology undergoes a lengthy series of changes until it can be utilized by the end users. This evolutionary long process is called the " Technology life cycle."

The process of transfer of technology should be greatly simplified during the commercialization process. Research in Science increases the world's storehouse of knowledge for conversion into technology which enhances all products and services destined for the market place. If we talk of Nepal, have we sufficient invest on research in sciences, a question arises. Without the base of science how technology can be flourished ? How transfer of technology could possible in our country without the knowledge of science and technology ? How the country's economy could be bust up ? When will our government seriously feel this responsibility ?

### **FACILITATORS FOR TRANSFER OF TECHNOLOGY**

Technology transfer is a game for which there is no recognized set up rules for the players. Interested persons or group of persons or Organizations may decide according to their capability, need, environment and their interests. The following sectors are comprised of individuals as well as groups who may play, an active role for the process of the transfer of technology in a country: such as:

- a. Government Agencies & departments
- b. Universities and Educational Institutes.
- c. Corporations and Private industries, Including Small Business.
- d. Facilitators in the Public and Private Sectors.

In the developed countries like USA & Japan, corporations take a lead for deep research, for them technology transfer is a big business about profitability and is a focal point for business competition. They always become competitive by increasing the research facilities for technology transfer. Japan, South Korea and so many other countries have shown their ability to do so in the past years and have come to exist themselves as the most developed countries within a short span of time.

Our Government agencies should initiate or create an environment for transfer of technology in order to enhance the health, safety and welfare of its citizens: Literacy percentage has to be increased. A great deal of investment in the Research and development facility in the field of Science and Technology on the basis of priority area, is the present need of the country. The poverty, unemployment, malnutrition, environmental degradation etc. are the subject of prime considerations.



Educational Institutions must have significant interest in technology transfer, their primary goal is to transfer the knowledge from classroom and laboratory to the industries and Corporations. Transferring knowledge is synonymous with discovering new knowledge to us. Transfer of technology is also a process of transferring practical sustainable knowledge which keeps the reputation of the academic institutions. R.& D funds should be provided to the educational institutions they are being non-profit making organizations. But is there any facilities given to the Scientists and Technologists of this country ? Whether the facility is sufficient to do so ? Is there any initiation taken by the responsible persons ? Who are the responsible persons first ? there, may arise a series of questions un-answered in our case.

Facilitators can play a very important role in the process of technology transfer, they make it more efficient and profitable. These facilitators must be a professional's population, experts in any field in the technology transfer mechanism. They may provide information, plan conferences, help or create technical organizations so and so forth. In our case, RONAST, NCST & RECAST may perhaps be specially called as the facilitator's organizations. But are we satisfied with the past activities of these Organizations ? Is there any fruitful impact, that has caused any help of commercialization process of technology transfer in the society, if not what may be the causes of not being able to give any thrust in the development process by these organizations.

There is a risk also in a new form or organizations in transfer of technology. There should be a detailed study about " does it work, or does it make a profit/loss analysis." But without risk, there is no gain. Nepal should take the risk for transfer of technology for the fast development of the country.

## **CONCLUSION**

Nepal cannot afford a large amount of money for the basic and high level research in the field of basic Science and Technology. And, therefore, already proved technology has to be transferred and utilized. In the meantime, selection of appropriate technology for the successful implementation in our conditions is a very difficult task. Academic institutions has to take responsibility for the selection of appropriate technology in our situation. But, Politicians, Planners and the high level decision makers should have their sincere determinations and commitments to fulfill the requirements of R&D facilities in the selection and transfer of technology.

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