



Perspective

Philosophy of Gerontology with Science and Technology: Personal View of Bioethics & Gerontology in Advanced Future

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Abstract

Gerontology, as the study of aging, is not only an interdisciplinary and intra disciplinary study, but also an international and inter-professional study, to create awareness on the concept among people, throughout the globe. The philosophy of Gerontology is a practical philosophy to explore the nature of humanity itself and to practice learning. Gerontology is a science as well as human philosophy. That is to say, studies of practical application, seeking various ways of life that can help human beings live in peace and tranquility. When the scientific studies are approached globally in various languages and cultures, seeking the true meaning of life, people can be of one and the same ideal. Gerontology is also part of Science and Technology.

Keywords: Bioethics; Cultures; Gerontology; Human philosophy; Life science; Technology

Introduction

Gerontology is based on the comprehensive studies of aging, which are not only interdisciplinary and intra disciplinary study, but also international and inter-professional to create awareness on the concept

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among people, throughout the globe. According to the Association of Gerontology in Higher Education, “Gerontology is the study of the aging processes and of individuals as they grow from middle age through later life. It includes: 1) the study of physical, mental and social changes in older people as they age 2) the investigation of the changes in the society resulting from our aging population, 3) the application of this knowledge to policies and programs”.

Geriatrics is 1) the study of health and disease in later life 2) the comprehensive health care of older persons and the well-being provided by their informal caregiver. Therefore, it must be emphasized that the geriatric medicine is very important aspect of gerontology, as well. This article contains only preliminary, associations about the issue whether gerontology should be developed in the direction of a philosophical discipline in connection with the philosophy of science and technology.

The philosophy of Gerontology is not just philosophy, but also practical knowledge to explore the nature of humanity itself and to apply the learning widely and deeply in topics and issues related to human life span development. The learning requires the collection of information and practical application. Gerontology is science and human philosophy. That is to say, studies of practical application, seeking various ways of life that can help human beings live with peace and tranquility. The word “Gerontology” derived from the book that Ilya Metchnikoff wrote, called “the nature of man” in 1903 as follows, “Recognition of the true goal of life, and of science as the only means by which that goal may be attained would group themselves around that, as in former days men were held together by religion. I think it extremely probable that scientific study of old age and of death, two branches of science that may be called gerontology and thanatology, will bring about great modification in the course of the last period of life” [1]. Metchnikoff is known as a zoologist and microbiologist. When the studies are approached globally with various languages and cultures and seeking the true meaning of life and science, people can be one with the same ideal. Gerontology is also related to Science and Technology which is called Gerontechnology [2,3]. It is necessary to develop Philosophy of Gerontology within Science and Technology together. Stanford Encyclopedia introduces Philosophy of Science and Technology as follows: “It may come as a surprise to those fresh to the topic that the fields of philosophy of science and philosophy of technology show such great differences, given that few practices in our society are as closely related as science and technology. Experimental science is nowadays crucially dependent on technology for the realization of its research setups and for the creation of circumstances in which a phenomenon will become observable” [4]. According to wikipedia the phrase “philosophy of technology” was first used in the late 19th century by German-born philosopher and geographer [5]. This paper considers perspective values of Japan Advanced Institute of Science and Technology (JAIST) towards advanced future.

What is JAIST?

Japan Advanced Institute of Science and Technology (JAIST) was

founded in 1990 as the first independent national graduate school, to carry out graduate education based on research at the highest level in advanced science and technology. JAIST aims at establishing an ideal model of graduate education for Japan. The Mission of JAIST is as follows: “JAIST endeavors to foster leaders capable of contributing to the creation of a future world by teaching science and technology, through its most advanced system of education and research methodology in an ideal academic environment”.

The Goals of JAIST are as follows:

- JAIST develops leaders in the society or industry who hold credible expertise in the frontier science and technology, broad perspectives, high level of autonomy and communication ability, through its systematic advanced graduate education
- JAIST, to contribute to societies with research outcomes, creates a center of excellence for advancement of researches for solving problems of our world and society and develops new fields through a variety of basic researches
- JAIST fosters active global human resources by promoting faculty and student exchanges with leading institutes overseas and globalizing its education and research

President Tetsuo Asano states vision to 2020 as follows: JAIST broadly accepts people with diverse backgrounds from all sections of society and contributes to creating innovations in education and local community development, by taking advantage of its characteristics as a graduate university, developing global human resources, taking an active role in industry and the world and pursuing research for the resolution of social issues in a multidisciplinary setting.

Vision: By 2020, JAIST will establish itself as a needs-oriented research university with its integrated graduate school approach, and will create an environment where graduates, with their master’s or doctoral degrees and the intellectual toughness they develop at JAIST, will be able to take the core active roles in all fields and industries throughout the world [6].

JAIST characterizes the following five points such as:

- Flexible, High Function
- Regional Relation
- Open Campus, Open Network
- Nature Neighborhood
- High Tech, High Touch

It is clearly understood from President Asano’s message for JAIST inaugural ceremony entitled ‘Important for changing something’ on April 4th in 2014 as follows:

“The US society gave high evaluation on curriculum vitae of those who graduated several universities with degrees. It is wonderful that all of you, JAIST master course students have come here from different universities in different environments with respect... Since the world’s situation is continuously change variously, we all need to accept such change for applying into the society to see success for ourselves; even President Asano has been changing his specialized fields with his desire”. President Asano additionally said, “All of you desire to idealize yourselves. When you get a compromise feeling, remember why you had come to JAIST. If

you have a weak field, what you need is easy thing to do. That is keep in your study for expanding to open up your academic fields. Please communicate with various people for developing yourself to be a better human being. Please enjoy spending your time for your academic life.” [7]. JAIST has awarded total 882 Doctoral degrees as follows: 342 (43 in English) Doctor of Philosophy (Information Science), 180 (23 in English) Doctor of Philosophy Knowledge Science, 360 (40 in English) Doctor of Philosophy Materials Science. Since JAIST has been involved with bio-science and biotechnology, it is important to consider bioethics for educating scientists and educators because all studies are related to human natures and values. The next chapter discusses about Science and Technology in Bioethics.

Science and Technology in Bioethics

There are several definitions of Bioethics from various dictionaries such as:

- “A field of study concerned with the ethics and philosophical implications of certain biological and medical procedures, technologies and treatments, as organ transplants, genetic engineering and care of the terminally ill”. “The study of ethical problems arising from biological research and its applications in such fields as organ transplantation, genetic engineering, or artificial insemination” [8,9]
- “Biology combined with diverse humanistic knowledge forging a science that sets a system of medical and environmental priorities for acceptable survival” (U.S. biochemist Van Rensselaer Potter II (1970)
- “The study of the ethical and moral implications of new biological discoveries and biomedical advances, as in the fields of genetic engineering and drug research”
- “The study of the ethical and moral implications of medical research and practice” [10]

“The application of ethics to the science and practice of biology, especially as modern science is applied to human life and reproduction” [11]. Fritz Jahr is the inventor of bioethics which was introduced in 1927 [12,13]. Potter introduced Fritz Jahr’s work in English from Germany [14]. Macer stated Bioethics for both a word and a concept as follows: “The word comes to us only from 1970, yet the concept comes from human heritage thousands of years old [14-16]. It is the concept of love, balancing benefits and risks of choices and decisions. This heritage can be seen in all cultures, religions and in ancient writings from around the world. We in fact cannot trace the origin of bioethics back to their beginning, as the relationships between human beings within their society, within the biological community and with nature and God, are formed at an earlier stage than our history would tell us”.

Macer (1998) described at least three ways to view bioethics as follows[16]:

- Descriptive bioethics is the way people view life, their moral interactions and responsibilities with living organisms in their life
- Prescriptive bioethics is to tell others what is ethically good or bad, or what principles are most important in making such decisions. It may also be to say something or someone has rights and others have duties to them

- Interactive bioethics is discussion and debate between people, groups within society and communities about 1 and 2 above [15]

Bioethics could be considered as Philosophy of Gerontology itself because it is also human related, applied inter and multidisciplinary study. In other word, Gerontology is love of life. Love could be stated as L = Lives命 (Inochi) which is symbolized wearing sacred hat to offer special prayer to the almighty on the sacred prayer altar. O = The name of the Phoenician letter was “eyn”, meaning “eye” and indeed its shape originates simply as a drawing of a human eye (possibly inspired by the corresponding Egyptian hieroglyph. Moreover, Om which is a sacred sound and a spiritual icon 目(Me) symbolized, V=Virtue徳 (Toku) symbolized power of Man with heart and ambition and E = Essence源 (Minamoto) symbolized Source of waterfall. From the above Love means “Lives of Single Eye Glory of Essence”.

The American University of Sovereign Nations (AUSN) is mainly focused at such Bioethics including Science and Technology. Professor Darryl Macer is the founder of AUSN. Dr. Macer had served in UNESCO for about 9 years as the Regional Adviser for Social and Human Sciences in Asia and Pacific. Professor Macer was responsible for UNESCO’s programs in bioethics, ethics of science and technology, philosophy, gender studies, youth and social development for an area including two thirds of the world’s population [17]. AUSN is introduced as follows: “AUSN has only gained its license for degree programs in April 2014, already two postgraduate degree programs, the Masters in Bioethics and Global Public Health (MBGPH) and the PhD in Bioethics, Sustainability and Global Public Health (Specialization 1: Bioethics and Global Public Health; or Specialization 2: Sustainability, Peace and Global Development), are the largest Masters and Doctoral programs in Bioethics in the world in terms of student enrollment. Abroad perspective from cultures and people all around the world is taken. AUSN is able to continue with due thanks to the goodwill of 80 faculties all around the world” [18]. It is important to consider such field into all the related research science and education in the JAIST, as well.

The Mission of American University of Sovereign Nations (AUSN) is “to advance the education, health, safety, welfare, well-being of populations, and the environment throughout the world, by providing our graduates with the highest level of knowledge, skills, creative and analytical critical-thinking ability, necessary to become future leaders, academicians, scholars and clinical practitioners, who are dedicated to the promotion of respect for human rights, fundamental freedoms, peace, the sense of human dignity and the promotion of understanding, tolerance and friendship amongst all nations and all Peoples”. With the above understanding of human values the one can develop one’s own philosophy of living for their life and career since people can learn continuously. This study is called Gerontology. The next section will introduce about Philosophy of Gerontology [19-23].

Philosophy of Gerontology

Gerontology teaches creative learning focused on the multidisciplinary fields including the interdisciplinary, international and interdisciplinary perspectives. The first approach of learning begins with listening, and learning through the processes of some experiences; by communicating with various people, reading, research and applied practice. It’s considered that the reserve of the knowledge cultivates applied skill and become a universal power as “wisdom”. It means that

Gerontology is a creative learning to find out the possibilities. Dr. David Peterson explains Gerontology by using five characters as “HILLS” as follows “Health”, “Intelligence”, “Leadership”, “Love”, and “Service”. He also says that the life grows with happiness when this principle is applied to all people. All 5 categories require the power of “tenderness” and “awareness” [24]. Birren and Schroot introduced A History of Geropsychology in Autobiography that is included a part of Philosophy of Gerontology, as well [25]. In this point, it is important to figure out relationship among Philosophy, Science and humanities. According to the Wikipedia (2018), “Philosophy is the study of general and fundamental problems concerning matters such as existence, knowledge, values, reason, mind and language”. Science (Wissenschaft: Age + Aging) is ‘a systematic enterprise that builds and organizes knowledge in the form of testable explanations and predictions about the universe.’ And Humanities (Human Science) is ‘academic disciplines that study aspects of human society and culture. Nowadays, the humanities are more frequently contrasted with natural and sometimes social sciences as well as professional training.’ Philosophy of Gerontology is not only such above Philosophy meaning, but also applied learning and studying process of Science and Humanities. That required not only theoretical studies, but also applicable action for making or to create a life with better aging through applied Science, as well.

Philosophy of Gerontology is all age related practical pedagogy, which draws forth the significance of human existence with practical science for applying into Budo for various age persons with various conditions. “Gerontology” is generally translated as 老年学 in Japan [26-28]. 老 (Rou) means Old. 年 (nen) means Year. 学 (Gaku) means science. Even before modern University was established in Japan Ekken Kaibara (1630-1714) introduced Gerontological Concept through the Book of Yojokun [29,30]. It is also translated as “創齡学 (Soureigaku)”. This was originally created by Nippon Care-Fit Education Institute [31]. Ansello addressed on The Clark Tibbitts Lecture, given at the 37th annual meeting of the Association for Gerontology in Higher Education, entitled: What colors would we add? The curriculum palette as follows: “The democratization of aging has spread across the world and the so-called globalization of aging has brought yet another lens to examine what we teach [32]. Under the guidance of Dr. Ryo Takahashi of the nonprofit Nippon Care-Fit Service Association, a number of Americans began collaborating with Southeast Asian colleagues about 2003, with the grand vision of bringing a set of curriculum standards to Japan. Although the overwhelming majority of Japan’s medical schools had established geriatrics departments, there was at the time only one university with an educational gerontology program. Soon invited to help initiate or advance educational gerontology in Tokyo, Okinawa, Andhra Pradesh and Abu Dhabi, I found myself more Marginal Gerontology critically examining core subject matter.... In India our hosts at Andhra University wished to initiate a yoga gerontology program, incorporating not our American concept of yoga as exercise but the sense of meditation, internal communion with a spirit, acceptance rather than resistance. I became aware that our content (subject matter), our methods (research studies) and our values (aging as decline) had limitations. Quantitative studies and descriptive statistics appraise the normative characteristics of groups, the collective of acquired behaviors and lifestyles”. “創 (Sou)” in “創齡学” consists of “倉 (Kura)” and “刀 (Katana)”. “倉” means “path finding” or “pioneering”. “刀” has means “sword”, which stands for the action “to open the way”. “齡 (Rei)” consists of “齒 (Ha)” and “令 (Rei)”. “齡” stands for “age”. This originated

from the idea that strengthening one's teeth leads to his/her longevity. “令” is a pictograph that shows people gathering and kneeling down to seek enlightenment. These words show that “創齡学 (Soureigaku = Creating Aging Learning or Study)” is a type of learning in which people come together and teach each other ways of happiness and longevity. Gerontology has inter-disciplinary, inter-professional and inter-national features. Given these factors, we sum up the research, application and applied practice of this learning and call it “創齡学 (Soureigaku)” for Gerontology with philosophical understanding in Japanese. Gerontology is for improving quality of life by knowing individual's genealogy. Above all things have been related to Family History.

Gerontology is known his/her values who we are, where we are from, where we will go the life after death. That is reason why it is important to know of the History of ourselves. It is important to keep these pioneers, SOUL as we call again, “Kigatsuku” means “an inner spirit to act without being told what to do”. SOUL can be grown by See, Observe, Understand and Listen to learn each other. The philosophy of Gerontology is a practical philosophy to explore a nature of humanity itself and practice the learning. Thus, the learning requires the collecting information and applied practice with Philosophy [33]. Leonardo da Vinci is a great model that implemented it throughout his life [34]. If we got his leaning as an educational approach, it is regarded as fostering of creative personnel for their entire life.

Leonardo da Vinci's Spirit

Leonardo da Vinci was born on April 15th, 1452, in the town of Vinci which is 40km north away from Firenze, Italy [35]. The marriage of his father who was a public notary and his mother who is a daughter of farmer were unacceptable in public according to the tradition of marriage at the time. However, Leonardo grew up with profound attachment from his mother. He cultivate his creativity of all things from the natural province because he's deeply attached to the nature. When people think about Leonardo da Vinci, he is best remembered as a painter of “The Last Supper” and “Mona Lisa”. But Leonardo also have shown additional ability in architecture, interior decorating, engineering, mathematics, astronomy, weapon, aviation, photology, geology, municipal engineering, anatomy, children's literature, philosophy, nutrition, music and theology. He said “It's possible to know everything.”

Leonard had an anecdote about the learning related to human in his mid-fifties. A solitary old man aged about 100 was hospitalized at the hospital Santa Maria Nuova. When he visited the hospital, he always heard and learned the hopeful reminiscing in youth by the old man and he witnessed the death of the old man. The story was not over here. He took him in and continued to study the human though the anatomy to explore the mysteries of life as the advanced age [36]. That is to say, he explored “What is humanity? What is life? What is health?” under his theme of lifetime learning. In later life, he regretted and apologized to God and humanity that he would die leaving so many unfinished works. On the other hand, he mentioned, “I must be done. I always want to continue being useful existence.” before his death [37]. These, his ideas were the contribution to society and really looked like philosophy of Gerontology. It also means that Leonardo was a pioneer as a Gerontologist. Human existence can grow consistently as far as the human seeks something. Leonardo wrote “Iron rusts from disuse; water loses

its purity from stagnation... even so does inaction saps the vigor of the mind”. He died at Clos Luc, Amboise, France, on May 2nd, 1519 at age 67. JAIST has symbol of the JAIST philosophy in the library. This calls *Novum Organum* by Francis Bacon.

Novum Organum by Francis Bacon

Francis Bacon was born on 22 January 1561 and died on 9 April 1626. Francis was known as an English philosopher, statesman, scientist, jurist, orator and author. He had served both as an Attorney General and as the Lord Chancellor of England. After his death, he remained extremely influential through his works, especially as philosophical advocate and practitioner of the scientific method during the scientific revolution. During the Renaissance, Francis Bacon became one of the first modern authors to reflect on the impact of technology on society. *Novum Organum* is known as new instrument of science, which was introduced in the title page. The title page of *Novum Organum* shows a galleon passing between the mythical Pillars of Hercules that stand either side of the strait of Gibraltar which mars the exit from the well-charted waters of the Mediterranean into the Atlantic Ocean. Bacon tried to show that empirical investigator will break out the old scientific ideas and leading to greater understanding of the world and heavens [38]. This tile page was liberally copied from Andrés García de Céspedes published in 1606. The Latin tag across the bottom-Multi pertransibunt & augebitur scientia is taken from the Old Testament, Book of Daniel, Chapter 12 Verse 4 ‘But thou, O Daniel, shut up the words and seal the book, even to the time of the end: Many shall run to and fro, and knowledge shall be increased’ [39]. In other words, it means ‘Many will pass through and knowledge will be greater’. There was Philosophy to choose such mission of JAIST where persons had vision for the future. The next section discusses about foundation of JAIST where it is located in Hokuriku, Japan.

Mount Haku in Hokuriku

JAIST is located in Nomi city, Ishikawa prefecture within the Hokuriku region. That is why JAIST is called Hokuriku Advanced Institute of Science and Technology in Japan. Hokuriku means North Lands. Hokuriku regions are located in the northwestern part of Honshu includes the four prefectures of Ishikawa, Fukui, Niigata and Toyama in the main island of Japan. Nomi Town was established with the creation of the modern municipalities system on April 1, 1889 just one year before JAIST was established. Then, Nomi city was established on February 1, 2005 by collaborating three towns such as Neagari yown, Tatsunokuchi town and Terai town. These towns have been influenced by Mount Haku (Hakusan) faith (2,702m High). Haku means white and San means mountain. Mount Haku has been recognized as Sacred mountain from the ancient time even 717AD. Taichō (July 20, 682 - April 20, 767) was directed to consecrate the Mount Haku as the first person to reach the top of the Mount. According to Priest Munehiro Yamazaki in Shirayama Hime Shrine there are four special characters which cannot see in other mountains [40]. The first character is Mount Haku, the oldest ideology of syncretism of God (Kami) and Buddhas [41]. The second characteristic is God of ShirayamaHime, God of Peace for all people. In Ancient Japanese Record, *Kojiki* God of ShirayamaHime mediated during miscommunicating among God of Izanagi and God of Izanami [42]. The third characteristic in this mountain is known as cleanness not only appearance, but also inside without any garbage by mount climbers. And finally, the fourth characteristic is God of Water which

is created by four big rivers such as Tadori River, Nagara River, Shou River, and Kuzuryu River. These four rivers have enriched many people's lives and have nurtured the soil of high cultural standard [43]. The Mount Haku is the temple of God because of that people to come to worship God by learning experience which is called Shugendo 修験道 [44,45]. In the 7th century En no Gyoja is widely considered as the patriarch or founder of Shugendo with doctrine. Shugendo literally means "the path of training and testing" or "the way to spiritual power through discipline. Such philosophy was already settled within the JAIST area. JAIST is surrounded by such unaccountable nature and philosophy on the Mount Haku is making action for welfare of people's peace and happiness. It is important to make three stakes for making three Godhead like principle in academy such as a person who has a vision in local community, a person who has vision in national and international community and a person who has vision of universal academic curriculum and leadership. The next section discusses from the three characters who have associate to create JAIST towards the advanced future action [46,47].

JAIST in Future Direction

JAIST will be celebrating thirtieth anniversary in 2020. It is important to think of the future advancement, but also to go back to the principle in the beginning. JAIST 20th Anniversary repository informed about history of JAIST how it has been established.

There are three key persons who have worked in each role to magnify this sacred mission. These persons are Mr. Tomonari Matsusaki (1913-1988), Mr. Tominaga Keii (1921-2007) and Mr. Yoshiro Mori (1937-). Mr. Tominari Matsusaki was mayor of Tatsunokuchi Town from 1964-1988 for 24 years. Mr. Matsusaki was raised in a hot spring ryokan (Japanese Style Hotel) established in 1836. Mr. Tominari studied Applied Chemistry at Tokyo Imperial University and returned to work at his ryokan. It is well known that one of the famous Novelist, Kyoka Izumi (1873-1939) used to stay often at this ryokan [48]. Mr. Matsusaki, as Tatsunokuchi Town Mayor raised hand attract a new concept university and Mr. Yoshiro Mori (Chairman/Representative Director of the Japan-India Association; Prime Minister 2000-2001; Minister of Education 1983-1984) happened to establish JAIST from 1974 up to 1990 [49,50]. Mr. Matsusaki's philosophy was strong human love and respect. Mr. Matsusaki quoted the following words in 1987, 'Adult men die, but their villages still remain'. [51]. 'Judges are mortal for what to know yourself'. Finally, Mr. Tominaga Keii was selected to be the first President of JAIST. Mr. Keii was not only well known chemist, but also a leader in educational administration [52-54].

Conclusion

This paper predicts by reviewing the future visions of JAIST from the author's point of view after 15 years from 2018. 1) It is important to make statement that JAIST is established as a graduate Institute for making Peace and harmony for all human beings. This institute must have philosophy for collaborative learning approach from youth to aged including k-12 as lifelong span developmental curriculum. 2) Future responsibility has to be kept within the institute towards 15 years in advance likely. It might not have survived as a national university in the past 40 years. The ministry of Education and Science has plan to a combine National and Private Universities. Therefore, it is necessary to educate business oriented entrepreneurs

and various field leaders. 3) Developing Globally and Locally. Curriculum may be necessary for involving people in the community for turning out various masters of wining, playing, understanding and practicing arts. In other words, JAIST must have a role to contribute in and historical fostering human resources. Moreover, JAIST must be a role model to be followed, contributing in the Graduate school style towards other communities and countries, as well. 4) It is important to have a broader perspective of Global Community Center (GCC). GCC may have a role for developing at grass roots by promoting international, interdisciplinary and inter-industrial exchange of culture, science and research though fostering human recourses and human bonding as an international collaborative community Center. This must be fundamental philosophy of JAIST. In other words, it is important to recognize roles and philosophy of Japan, advanced, educational Institute and Technology. Japan has mission to build up peace in the world setting. Advance means not only developing future advanced science and technology, but also digging up ancient wit and wisdom for restoring culture and history. Institute itself has mission to train science and technology to be a leader in the fields, but also it is important to educate MAN with understanding bioethics [55-57]. That means MAN is not only a biological existence, but also a mental, intellectual, spiritual and culturally eternally progressive and growing for leading the world. This is one of the missions and character of JAIST as an original Advanced Institute for various Master of wining (Meijin名人), Master of Playing (Tastujin達人) and Master of Understanding (Tetsujin鉄人) and Master of Eternal ARTs (Sennin 仙人) as stated youth is a gift and Age is an Art [58-60].

JAIST has concluded a Memorandum of Agreement on Double Master's Degree Program with Indian Institute of Technology Gandhinagar since August 28th in 2017. IIT Gandhinagar is known as one of the twenty-three institutes of Indian Institutes of Technology, which is recognized for its high standard of research all over the world. IIT Gandhinagar was founded in 2008 and is located in Palaj, Gandhinagar, which is one of the oldest living cities in India. Relationship of India and Japan was established in 1903 by former Prime Minister Shigenobu Ōkuma, Viscount Moriyoshi Nagaoka, Viscount Eiichi Shibusawa and others to encourage India-Japan friendship. Then, the Japan-India Association was authorized as a foundation by Ministry of Foreign Affairs in 1939. Rabindranath Tagore, the first Nobel Prize Winner in Asia was one of the most influential person from India to Japan [61]. With the above concept the author organized the conference at Andhra University in India by inviting Dr. A.P.J. Abdul Kalam, Former President of India [62-65].

In the vision of IIT Gandhinagar quotes from Gitanjali by Tagore as follows: "Where the mind is without fear and the head is held high, where knowledge is free. Where the world has not been broken up into fragments by narrow domestic walls. Where words come out from the depth of truth, where tireless striving stretches its arms toward perfection. Where the clear stream of reason has not lost its way into the dreary desert sand of dead habit. Where the mind is led forward by thee into ever widening thought and action. In to that heaven of freedom, my father, Let My Country Awake!" [66]. It is concluded as follows by Tagore from His Book titled Man.

So does the Upanishads says, "You have to live a hundred years, you must act," Fulfill your hundred years of life by work, such work as can truly be claimed through belief and result to express the truth of "I am He." Not by turning up one's eye-balls and sitting

with closed breath and staying far away from man do we gain this Truth.

This work, this toil is not for earning livelihood. Developing original philosophy of Gerontology with Science and Technology will be the most effective action to bring people to educate and contribute for the future advanced society to society and to the world at large. Using existing resource is the key to success from the ancient to the future from the youth to the old.

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