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Knowledge Economy, Competition and Career Development

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In 1984, two decades ago, the University of Sri Jayewardenepura celebrated its Silver Jubilee. His Excellency the President J.R. Jayewardene was invited to deliver the convocation address that year, and the then Vice-Chancellor asked me to draft the address for the His Excellency. To my great disappointment, he read some other speech. However, I preserved my draft because I thought, the speech titled *Innovative Society and the University*, contained some valuable ideas for the university community. Two decades later, I put the same ideas into my way of communicating and I was about to publish them in a single volume along with my other writings. Today, I am grateful to the Vice-Chancellor, the Senate and the Council for giving me this opportunity to share those ideas with you all.

The University of Sri Jayewardenepura is forty-five years old. In fact, Universities never age, because the more they experience and learn, the more they realize that the boundaries of discovery are still broader and blurred. Universities must generate energy and strength at a rate higher than the other organizations in society. They must be in the forefront of others in society so that they can lead social organizations by providing power, the power of knowledge.

The economy of the future is derived from the science of today. It happened this way in the information economy, and in the industrial economy before that, and it will happen again in the molecular economy. A new economic life cycle begins as science learns something new about the way the world works. Next, technology shows us how to turn new science into new productive capabilities. As a life cycle reaches maturity, business will employ the new technology to improve its performance. Ultimately, as an economy ages and once the new technology becomes a standard commodity, we encode the deeper lessons from science and technology and apply them to the way work gets done and the way society is organized.

Let us look at the evolution of industrial economy through these four stages. In the gestation period, the industrial revolution began with scientific breakthroughs in Mathematics, Physics and Biology. The growth phase translated these scientific discoveries directly into the technologies that powered the industrial economy, electrical networks, steel mills, and oil companies. As the maturity stage arrived, entrepreneurs of the industrial economy reorganized their capabilities around new management concepts such as assembly lines and interchangeable parts, and around new structures of organizations, multinational companies extending their power beyond national boundaries. These concepts and structures reached the level of decreasing efficiency by the 1960s and economic progress needed the support of a new basis of power.

In the mid-twentieth century, a new economic life cycle started. Technology based on information theory and semiconductors enabled the manipulation of large quantities of data at high speed, building an infrastructure for providing cheap computer hardware, software, then communication networks, and currently, an explosion of wireless devices. Today, we are in the middle of the third phase, the growth phase, when every kind of business and government organizations attempt to incorporate the new technologies to improve their value, cost, and quality performance (e.g., through mass customization, online order confirmation, and mobile connectivity).

The information economy is just now beginning to glimpse its organizational phase, which will come into focus much more in the decade ahead. We see it as practices like Internet-based virtual teams, telecommuting, and networked organizations start to take hold. A new organizational model built around a key technology - networks - has already begun to challenge the structures of the previous economy. Higher education outside the traditional class rooms is already made possible by e-learning and interactive distance-mode delivery systems. A growing employment force is already working on part-time arrangements, and the shift of economic power toward individuals is shaping the styles of management every where. Connectivity has created a marked increase in economic volatility that will define the key challenges of the next decade.

Analysis of history of technology by futurists such as Ray Kurzweil shows that technological change is exponential contrary to the common sense, so we will not experience 100 years of progress in the twenty-first century — it will be more like 20,000 years of progress (at today's rate). Place an order online, and your confirmation appears in your inbox before you are offline. Try to have your computer repaired, and you find that it's been replaced by a newer model. And the expectations of today's customers is that any feature they've seen anywhere should be available everywhere instantly. Referring to change during the industrial era, we were told that everything, except change, is subject to change. Today, in the information age, we have realized that change itself is changing, it's rate of change is exponential.

My goal today is to get us all thinking together about the future, the future use of our knowledge. The knowledge economy has come. It is featured by connectivity. In the connected economy, innovations must take place in all human activity, technological, organizational, and social. For this, we may have to innovate a new man, and in this sense, innovation is psychological, philosophical, and behavioural. People must learn to look at the whole rather than the part. People must learn to work together rather than in specialized compartments challenging and competing each other. People must share goals rather than pursue conflictive goals. Technological progress alone cannot promise this nor is it the way.

To succeed in the knowledge economy, you must understand how knowledge works. Unfortunately, knowledge is among the least understood in our universities. Let me ask what is knowledge? Knowledge is science, and Westerners tend to emphasize one aspect of knowledge, i.e. the explicit one or coded knowledge. This knowledge, as a body of organized information, can be understood at three levels. The first is the shallow level that presents data organized in order to provide information in response to the question 'what' is out there: what it looks like, what is happening, what it contains,

etc. The 'what' question looks for description of matter, relations and events. A university graduate would go beyond this shallow level of description and raise the question 'why' which looks for explanation of phenomena. It is in this context that analysis of information comes in by way of such means as reasoning, cause effect analysis, hypothesis testing, etc. Moving further and deeper, one examines questions of methodology or 'how' such analysis was made and pays attention to reliability, validity and tenability of explanations by replicating the analyses previously undertaken. When you enter the competitive employment markets you will be armed with this 'coded' knowledge, attested by the degree certificate you receive today.

In the knowledge economy, coded knowledge alone would not guarantee your success. You need to master another aspect of knowledge, i.e. tacit knowledge, also known as implicit knowledge. Tacit knowledge you acquire by experience, experimentation, and application. The knowledge economy demands you, the knowledge worker, to develop expertise around tacit knowledge in order to succeed in competition. The knowledge worker is an employee who is simultaneously an investor and owner of the enterprise he/she is working for. You as the knowledge worker are the major creator of wealth. The knowledge-based human resource has overtaken the importance of land and buildings, raw materials, finance capital and other material inputs to organizations. The knowledge worker is different from the employee whose progress depended on orderly supply of labour in exchange of a salary. Your job is different from even the information worker whose job is about data and information processing. In a knowledge-based organization, it is the knowledge worker's creativity that would make the entire system successful. As Peter Drucker said, in a traditional workforce, the worker serves the organization; in a knowledge workforce, the organization must serve the worker.

You must become outstanding performers in our future economy. For you to become truly outstanding, you must go beyond your book knowledge and learn how to combine coded knowledge with tacit knowledge. Let us take the case of a development assistant in a Divisional Secretariat who begins a career of functional specialization. Your authority as development assistant would be limited to skilled preparation of assigned tasks in a given area of responsibility. Your next step of career development would be cross-functional. In the new job, as Development Officer, you take up the challenge of designing and creating new projects for the clients of the division. While each officer's style of learning may be unique, it is important, however, that you learn beyond 'cooking recipes' and do something of your own. Creativity is more likely to be a function of cross-functional learning than of functional specialization. You have to learn needs and wants of clients and customers and develop the skill of sensing their expectations as they enter the Divisional Secretariat office. You want to be a truly professional.

At each level of your work, if you prepare yourself one-step ahead of your career path, you in no time become an outstanding professional at the organizational level - the highest level. There, you will provide leadership, develop and share a set of excellence-enhancing values, norms, and behaviour in the entire organization.

By now you would have realized how important it would be for you to develop core competencies in your early career. Unless you are able to deliver value, based on a core activity that your employer assigns priority, your life in any organization will be miserable. You will feel misery because you are not wanted, the team does not welcome you, and you do not have a sense of achievement at the end of the day. As core competencies in you, many employers value one's ability to design a product, convince a customer, apply quality standards, operate IT system, record type and report accurately, record performance and follow-up, or analyze information and make recommendations. If you do not possess one or more of the like, then you must acquire them immediately.

Having core competencies alone is not sufficient to perform a job satisfactorily. Core competencies are applied in a system of physical, technological, and socio/psychological environment of an organization. You are only one element of the larger system and hence you must know how to connect with other components of the system. The range of skills you need for this connectivity are known as generic skills.

They are about communication - how to listen, respond, assert, write, and present convincingly. They are about interpersonal relations - understanding other's needs and mental states, perceiving accurately, coping, helping, and synergizing in group situations. Furthermore, the networked organization today expect you to communicate and work with others in an IT environment. Without a mastery of IT, you will be out of place, reactive, and refused.

Chancellor:

In a knowledge economy these are some of the challenges our graduates would face. What advice could we give them at this juncture of their commencement of professional life? Here are a few for you to be ahead of others:

Take the initiative: Though employers like employees to perform what they are assigned to do, they expect you to look around, see improvements, and take the initiative of value creation. In the knowledge economy and organization, each employee has to define and re-define their tasks and develop a dynamic organization. If your behaviour is passive, reactive, and resembles an obedient pupil, you are getting closer to the exit door.

Be with people: The most vital resource in the knowledge organization is the people, the bosses, co-workers, team members, customers etc. With your multiple interpersonal skills you make each and every one of them want you. They depend more on you than you depend on them, that is the equation. If you are introvert, acquire some values of extrovert. If you are an extrovert already, learn how to manage your qualities for greater personal power.

Continue to learn: Tragedy awaits out-dated knowledge. In the knowledge economy, the rate of change is exponential and what you have learnt in your university will soon become obsolete, if not already. In

a competitive market system, knowledge of the past has only a marginal value, and you must compete for the acquisition of futuristic knowledge.

Chancellor:

The university of Sri Jayewardenepura has a historic origin which is worth of reminding at an occasion like this. As a centre for higher learning, this university was pioneered first as the Vidyodaya Pirivena in 1873 by Ven. Hikkaduwc Sri Sumangala Nayaka Thera. The re-establishment of this leading academic institution in the form of a University took place in 1959 under the illustrious leadership of Ven. Weliwitiye Sri Soratha Nayake Thera. In the light of the academic and research traditions which have evolved during this long period of our history, the University of Sri Jayewardenepura has undoubtedly played a pivotal role in our society. Our University is challenged by the IT revolution, and it will be challenged very soon by the new economy of molecular technologies that is in the making elsewhere. We must learn to transform with courage the medieval University structure and bring the University to the forefront of knowledge creating institutions.

I wish you all a successful future. Thank you.

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