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The Culture of Teaching and Learning in Japan and its Relevance as an Economic Driver

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Abstract National borders have lost importance and competition is becoming more global every day. Products and services are sold and available concurrently in large geographical regions. Problems and issues are crossing borders, affecting the global economy rather than only the national. The need to address global problems on a global level by the international community is apparent. For a company to survive in such an environment it has become a pre-requisite to attract and retain the best human capital. It has to adopt and apply knowledge-based intercultural and interdisciplinary work processes and go beyond their national markets. Education is having a growing importance for supplying qualified graduates to industry. My observations and experiences from teaching in Japan, seen through the filter of Hofstede's cultural dimensions, illustrate how a threefold cultural layer constrains the adaptation demanded by the pressure from a competitive global market. The change process happening all over the world is hindered and halted by a mindset that has not yet seen the need for change to communicate and cooperate across borders.

Keywords : *Education, Culture, Economic Driver, Skills & Competencies, Innovation*

Introduction

Every day we are confronted with huge amounts of information. An increasing number of people are connected to the Internet and people can produce as well as consume data available on an increasing number of websites. In school, at work, at home, on the telephone, on your computer or handheld, information is being channeled to you. It has become a situation that throughout all areas of life we are supposed to handle a still growing amount of information. Information that actually needs to be processed, it needs to be evaluated and interpreted to become the input as a basis for decisions.

The goal is to use this information to take decisions that improve life, make it more comfortable and

enjoyable. In order to do that one has to validate information, filter out unnecessary information, identify important parts and understand this information in its relevance to ones own personal life. Everyone has different strategies to deal with this information overload. And this ability of processing and using the information for your benefit will distinguish you from others.

On a larger scale companies and organizations have to face the same reality embedded in a constantly changing environment and its requirements. Technology changes rapidly, new work processes and methods are developed, product and market systems are becoming more complex, outsourcing to cheaper locations has become a daily reality and financial markets influence your global undertakings. Innovation and product development are key success factors for every company to prevail in the market and global competition [1].

Innovation and creativity as economic drivers

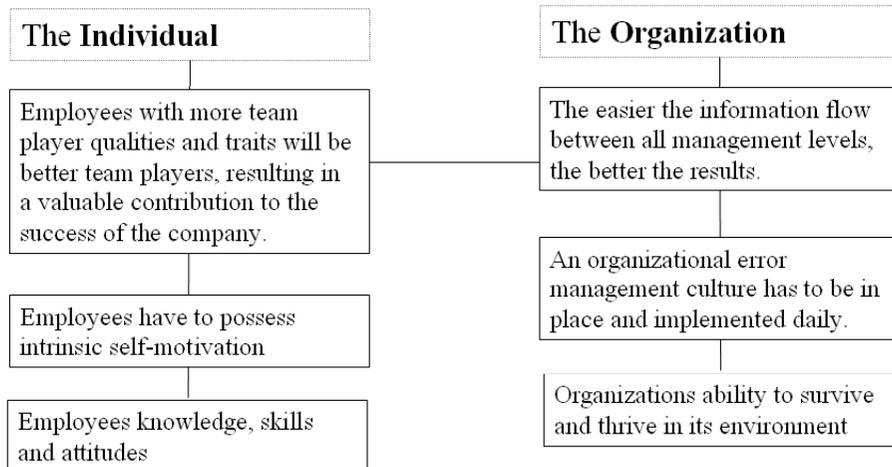
Innovation and creativity are essential for sustainable growth and economic development; they have become important economic drivers in our societies developing from information societies to knowledge societies. The competencies, a combination of complementary skills and its knowledge base are embedded in interdisciplinary groups or teams that together make it possible to develop and market products and services with a competitive advantage.

The growing complexity of problems [1] and tasks of a society today and the rapidly changing environments demand that individuals are not only able to handle the information overflow paired with the technological change; they also need problem-solving competences on an emotional and social level. The integration of social and human values has become the challenge and the opportunity of today.

Many times it is not the issue any more to find the technological solution to a problem, but to be able to master instrumental and competing relationships, evaluate values and norms, set goals and standards, and take decisions that can be carried out throughout society. Leadership qualities and the ability to work in interdisciplinary teams are the competencies companies are looking for.

Companies and organizations are required to adapt in such a way that they are able to process more information faster, identify the information relevant to their environment and use it for making sound decisions that help the company not only to survive but to succeed in the market on a long-term basis.

Ultimately companies and organizations consist of the individuals managing and working in the company or organization: the employees and the management. Human capital is the term used to encompass the importance and economic value of competences, knowledge and personality attributes embodied in the ability to perform work to produce a product or service competitive on the market.



Graph 1: The Individual and the Organization

Each individual with his or her tasks and responsibilities has to contribute to the value creation of the company. To master the complex requirements and at the same time continue to grow and sustain a competitive advantage, companies and organizations have to attract and retain the best human capital with the required skills to do so.

Skills and competencies

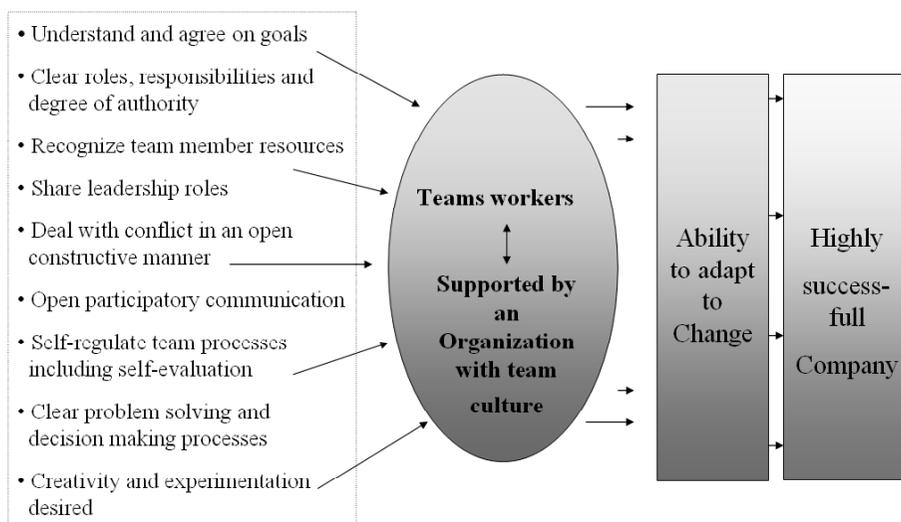
The required skills are defined by companies and can be found on their websites. They range from essential knowledge specific to the respective job to related soft skills and attitudes.

Those lists of required skills include

- Communications Skills
- Analytical & Research Skills
- Computer Literacy
- Flexibility & Adaptability
- Interpersonal Abilities & Teamwork.

- Leadership Quality & Management Skills
- Multicultural Sensitivity & Awareness
- Problem-Solving Capacity & Creativity

The following graph aims to map out the skills required to fulfil the needs of companies and organizations.



Graph 2 Skills and Competence Map

Looking at those skills required by companies it becomes clear that they are crucial for adapting to continuously changing situations and environments. For an individual those skills are crucial for finding employment and being able to keep it. Being able to continuously learn and improve is the ability companies look for. The term lifelong learning visualizes the need to keep improving your skills.

The key competences for lifelong learning [2] were defined by the European Union as

- **Communication in the mother tongue** which is the ability to express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing);
- **Communication in foreign languages** which involves mediation and intercultural understanding.
- **Mathematical competence and basic competences in science and technology.**
- **Digital competence** involves the confident and critical use of information and communication technology (ICT);

- **Learning to learn** is related to learning, the ability to pursue and organize one's own learning
- **Social and civic competences.** Social competence refers to personal, interpersonal and intercultural competence.
- **Sense of initiative and entrepreneurship** is the ability to turn ideas into action.
- **Cultural awareness and expression** which involves appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media..

It is also stated that these key competences are interdependent and the emphasis is put on critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings.

An OECD publication [3] identifies three categories of key competencies that are essential for the personal and social development of people in modern, complex societies:

- ✘ interacting in socially heterogeneous groups;
- ✘ acting autonomously and
- ✘ using tools interactively.

It has become clear now that the discussion of key competencies is a vivid one and that the recommendations of actors on different levels of society coincide in their answers to the question with slight differences regarding the depth of the classification.

Today many companies work internationally, linked to networks and collaborative workgroups that are operating on a virtual basis with shared knowledge management methods. So industry requirements go even beyond the categorization of competencies and state that learning and working are not divided anymore [7]. This validates the need for lifelong learning competencies. This also shows the demand for education using real life or close to real life projects. The principle of learning-by-doing, based on the concept that successful learning only takes place when acquired knowledge can also be applied and experienced becomes essential for the success of learning [1].

Communication and culture

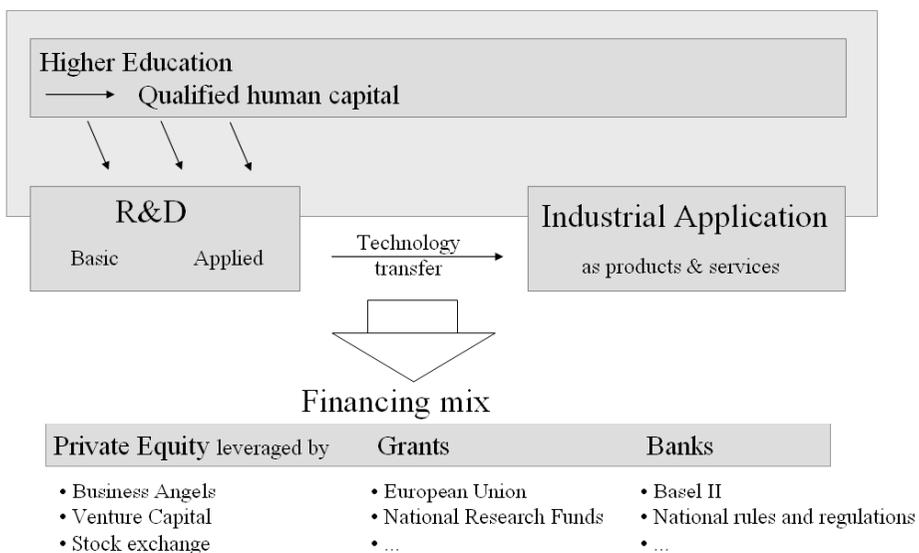
Those skills and competences are tools the new generations have to get familiar with. More so they have to experience them and practice their use. Those skills are very closely related to the nature of each individual

and the demands of the environment we grew up in and therefore the respective cultural background.

Communication is essential. All skills and competencies are based on communication skills [8]. Companies and organizations are active in a global environment, so communication means communication in the mother tongue and communication in foreign languages. Here again we can find the culture embedded in the respective language spoken. Culture and cultural aspects are appearing on multiple levels and as a pre-condition, as a means of knowledge transfer in communication and as a result and skill as in cultural sensitivity. This is why it is so complex to understand the relevance and influence of culture. Culture emerges on several different levels and from different angels.

The role of universities

At the basis of knowledge creation in society the role of universities in this process is essential. Companies and organizations recognize the essential contributions that universities make in providing their companies and their regional economies with a competitive advantage through highly skilled workers, advanced technology, unparalleled knowledge and practical know-how. In many countries companies and organizations closely cooperate with universities. They are involved in curricula development and competence definition for specific fields of study as well as in joint research and development projects.



Graph 3: The role of universities in innovation systems and regional economies

Universities start to recognize themselves as unique places from where ideas emerge. People from various disciplines with different approaches and perceptions of risk make universities an environment where ideas are inclined to be born. Many well-known universities all across the globe now offer courses in entrepreneurship and created spin-off centers to support future entrepreneurs in an active way.

The experience in international exchange of information and cooperation between universities is another advantage for companies and organizations to gain access to graduates and highly skilled labour with this experience. This is one of the most powerful mechanisms for knowledge transfer from university to industry.

Universities have to understand and recognise the needs of industry and at the same time their own strengths. Universities, taking advantage of their strengths in today's environments, now move from simple knowledge „transfer“ towards knowledge sharing organizations and foster interaction with industry [4].

The continuously changing environment and a more important role of communication requires new way of learning and teaching. The transformation process started and is taking place in universities all around the world.

Observations from teaching in Japan

My experience of working and teaching in several universities in Nagoya has startled me because none of the above described realities of today seem to be relevant in Japan. Universities have not identified nor understood the changing requirements. At the same time students and even industry do not push for change. It feels like a downright developmental halt for teaching and learning practices.

Change is a process that is closely related to culture, to national and regional cultures. Looking at Geert Hofstede's Cultural Dimensions [5] in more detail gives illustrates possible preventing factor for the deadlock in the Japanese education system.

His analysis for Japan is different from other Asian Countries and presents a unique country profile. The following table shows the 5 indexes of Japan and exemplary other Asian countries to underline this unique position. However, the commentary for each index following below is only referring to Japan and does not compare to the countries listed here.

Country	PDI	IDV	MAS	UAI	LTO
Japan	54	46	95	92	80
India	77	48	56	40	61
Singapore	74	20	48	8	48
Taiwan	58	17	45	69	87
China*	80	20	66	30	118
South Korea	60	18	39	85	75

PDI Power Distance Index
IDV Individualism
MAS Masculinity
UAI Uncertainty Avoidance Index
LTO Long-Term Orientation

* Estimated values

Graph 4: Geert Hofstede's Cultural Dimensions

The following paragraphs explain the five cultural dimensions of Hofstede and their relevance in regard to education. After each index a commentary from personal observations and experiences from teaching in universities across Nagoya, Japan, follows.

The **Power Distance Index** [5] shows the extent to which the less powerful members of an organization or institution accept and expect that power is distributed unequally. This index takes form in the teacher student relationships, the respect towards the teacher and the education process itself. A higher number in this dimension indicates that the class is teacher centered. The teacher should take all initiative and therefore quality of learning heavily depends on the teacher. Whenever problems occur a higher authority as the parents is being involved. This dimension is strongly related to the dimension of masculinity.

The experience of teaching classes in universities across Nagoya for about two years now shows that the above described forms for a higher value in this dimension are reality, not matching the value of the index. Teachers are supposed to be the only source of information and students are only familiar with following strict instructions. Interactive classes with participation being part of the requirement to be delivered by students are not common and create uncertainty among the students. Students are not accustomed to speak up, ask and answer questions, express their opinion and be asked to articulate needs and requirements they might have. Even more so they have not ever been asked about what they need for their learning process. Consequently they are not aware of their own ways of learning and their own role in it. Roles and responsibilities are strictly defined, whereas success of learning is mainly contributed to the teacher only. At the same time motivation to learn and self direction in the process are almost completely missing. A successful learning process is the product of a relationship between a teacher and a student, each side providing their contribution and understanding their responsibilities on the way. The pure consumption of learning material and information from the teacher without the student's motivation and interest to understand is a rather difficult situation, doomed to fail.

The dimension of **Individualism** [5] on the one side versus collectivism on the opposite side is the degree to which individuals are integrated into groups or acting as independent individuals. In an individualist society individuals have loose ties between each other. In a collectivist country people are integrated from birth onwards into strong groups. This dimension is related to classroom behavior with the most common appearance in students not speaking up, not even when asked. In a collectivist country the purpose of learning is to fit into the group, aiming at preparing the students for a place in society. Learning is seen as a one-time process and not as life-long learning process. This dimension, as the only one out of all five dimensions, is changing towards a more individualistic society with an increase in national wealth [5].

The rather low IDV value does not explain the rather passive behavior of students in class. Participation and interest in the subject are not common and students sleeping during class are nothing exceptional. The explanation may rather lay in the fact that Japanese employers do not voice the requirements in respect to what field of study or what grades are expected from graduates. This is my experience in respect to social sciences studies. Universities have certain reputations and a diploma from the right university is required for employment in a certain company. It is a question of passing the rigorous entry exams for the right university and, if successful, having the necessary financial power to get through the university years. Extra curricula activities as club activity are regarded as essential important. Often friendships formed in the club and with former club members last for a life time and are powerful in regard to finding employment. These facts at least explain the lacking motivation and sometimes even disinterest in class work which is of course especially frustrating for teachers and educators.

It has to be noted though that Hofstede classifies Japan as an individualist country. Only Western countries perceive Japan as a collectivist country (Hofstede 2001) [5].

The **Masculinity** [5] versus Femininity dimension refers to the distribution of roles between the genders. The assertive pole has been called 'masculine' and the modest, caring pole 'feminine'. Generally students from masculine countries take studying very seriously and parents expect them to be the best. More feminine cultures consider the average student as the norm and grades are not that important. This difference can be noticed in classroom behavior in a way that students will try to make themselves visible in class in a masculine culture. In a more feminine country young people show more intrinsic interest in the subjects. This dimension is related to aggression in relation to behavior in groups and between different levels of authority.

With a score of 95 Japan ranks as number one among all countries on the masculinity scale. But to the contrary of Hofstede's classification, Japanese students do not fit the description. Classroom behavior is very passive throughout both genders and it takes quite some time to get students acquainted to a more participative and interactive teaching and learning style as described above.

The **Uncertainty Avoidance Index** [5] is an index showing a society's tolerance for uncertainty and ambiguity. It indicates to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Cultures trying to avoid uncertainty want to minimize the possibility of such situations by strict laws and rules. An uncertainty accepting culture is more tolerant of different opinions; they try to have as few rules as possible and society relies on people's good attitudes and believes. Those less-rule oriented societies more readily accept change.

Translated to the classroom this dimension is about how much structure is put into classroom activities. In addition to that it is about precise objectives, assignments described in detail and strict timetables. On the other side you can find open-ended learning situations broad assignments and goals and no timetables. Students from cultures with a high UAI index expect the teacher to be the experts and have all the answers. Teachers and experts using difficult to understand and cryptic academic language gain full respect. Students from countries with a low UAI number accept a teacher who says "I don't know". When taking Information and Communication Technology ICT and the changes in the teacher role it brings along – from the sole expert with all answers to a moderator - into account, this aspect should be analyzed again in more detail.

The specification of the high UAI value matches my class observations. Skills like creativity, critical thinking, initiative, problem solving, risk assessment and decision taking can not be easily taught in a cultural environment asking for fully structured and rigid task design. Additionally initiative and critical thinking do require the intrinsic motivation of the learner which is mostly lacking. So the teacher is confronted with the task to first spark motivation and interest in the subject in students. Doing so requires a lot of time and then a semester is almost over when a level of motivation and interest is reached that would allow the training of the mentioned skills. The reason why this takes so much time is that a relationship of trust has to be created between the teacher and the student to allow him or her to open up and show more of his or her identity to the teacher and the class. It seems that this is not the usual case and that teacher student relationships generally are very respectful, but stay distant and impersonal.

An aspect that contradicts the specification of the UAI is that many times curricula are lacking [5]. This situation is specifically striking since one would expect a concrete rule. Noticeable is also that cooperation between teachers is almost not existing, leading to uncoordinated approaches and inconsistent and incomparable course contents.

I experienced Japan as a very rule-oriented society with a large number of written laws and regulations as well as unspoken rules. In practical life many of those are not obeyed though when nobody is watching. Rules that do not make any sense or are outdated legally stay in effect even though they are practically not executed. On the other hand new rules that are very necessary for safety are practically not executed even though legally enforceable. In companies and organizations this behavior is a strong obstacle against any change if it is for its good or bad.

The **Long-Term Orientation** [5] versus short-term orientation is the fifth dimension. Values associated with Long Term Orientation are thrift and perseverance. Values associated with Short Term Orientation are respect for tradition, fulfilling social obligations, and protecting one's 'face'. In a classroom setting this translates to Asian students attributing success to effort and failure to the lack of it resulting in their willingness to put in more effort. But an international comparative test of mathematics and science performance [5] sponsored by the Organization for Economic Co-operation and Development proved that the argument that Asian students simply put in more work is insufficient. This dimension is the place where the discussion between rote learning and understanding learning takes place but did not yet lead to a complete understanding of the different approaches.

This dimension was added by Hofstede at a later stage than the first four indexes and the meaning of the two orientations seems to be switched to the contrary. Therefore in the discussion of my experiences, the meaning of the long-term and short-term orientation are used in the way the terms are used in economy and particularly in the topic of sustainability because I do think that this parameter is very valuable and should be included in this reflection.

There are a lot of incidences where I encountered this in my classrooms. Students think on a very short-term basis, meaning that they only study just-in-time before an exam. Students will forget what they learnt from one Monday to the next. They will only study for the final exam. The concept of continuous learning in smaller steps is not known and therefore very unfamiliar for them. The only way to introduce this way of learning to students is to hold exams and small test in short intervals, for example bi-weekly. I can also

confirm this by examples from everyday life in Japan where short-term thinking is the rule.

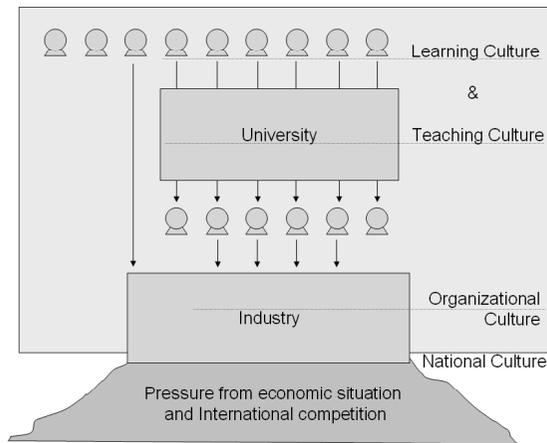
As a summary I can say that my experiences in Japan show that teaching and learning are seen in a completely different way than in the rest of the world. Universities teach programmes as they did decades ago. Courses are mainly or exclusively focused on teaching of theory and mechanical learning forms prevail. There is a lack of curricula and a deficit in knowledge about pedagogical methods and course design. Knowledge application and skills like creativity, social and economic responsibility as well as critical thinking skills stay out of the scope of study programmes. Communication skills being the basic skill for employment in industry all around the world are undervalued. All in all the comprehension of education is different.

What is most appalling to me is that the industry in Japan, as the future employers of university graduates, does not voice their demand for highly qualified graduates. Instead Japanese companies are putting new recruits through a long and expensive training, lasting up to 1 1/2 to 2 years in cases I heard about. If there are students, who really excel in their language studies and get to know a language – that is a very small number - because of high personal motivation and an exchange semester in the respective countries where the languages are spoken, are rarely identified as a useful asset for a company. The English language is in a slightly better position than other languages because it is recognized as a necessity, even though the level of spoken English is still low.

There is only a marginal change happening with participative and interactive teaching methods brought in from outside Japan by native foreign language teachers. But it stays selective and real effort for changing educational structures is not existent.

Conclusion

The ability to use information correctly and efficiently has become a key competence for individuals, be it in professional life or in personal life. In the present economic situation, companies have to face new requirements week for week. Innovation and quality of education start to play an increasingly important role in education around the world.



Graph 5: Threefold Cultural Layer

The above graph and my observation from teaching in Japan seen through Hofstede's cultural dimensions illustrate the threefold cultural layer hindering change in Japan.

I believe that the skills described in this article are the most important factor for a country to economically succeed and sustain their economic growth. It is the ability to recognize those needs and adapt teaching and learning throughout the educational system in a way that these skills can be taught and trained:

- Ability to communicate
- Ability to cope with change and learn
- Ability to handle technology
- Ability to understand complex coherences
- Ability to build trust and relationship

Companies and organizations need employees (university graduates) who are able to solve unstructured problems, work in a self dependent way, act with at least a minimum of economic and social responsibility and show motivation and capability for self-directed development. The future of any country strongly depends on the ability of how well to respond to those needs.

This reflection is based on my observations and experiences and might not apply to other universities or cities or regions in Japan.

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