Enabling ‘Quality Society’ through quality education for sustainable development

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Abstract

The United Nations’ Agenda 2030 for sustainable development is the action plan with the ambitious goals and targets for transforming our world. According to UNESCO, education for everybody is at the heart of the sustainable development, and quality of the education is imperative. Sustainability and sustainable development are ambiguous concepts, and the whole is difficult to discern. Here in this article, we examine them comprehensively and systematically and clarify their elements and relationship in the broader concept of 'quality society'. Quality of the society and education, are dealt with in the professional and standardized way. Great variety of possibilities for formal, non-formal and informal education are available in our societies. Although certain organizations of the society have a strong influence on the prevailing situation and its development, ultimately the education and learning, and also the sustainable development of the society depend on people and their activity. Universities have the special role in the development of civilization towards the advanced human society and the high level of culture, science, industry, and government. Development of the society takes place in the local communities, municipalities, countries, regions and in the whole world. Fast and versatile technical implementations and urbanization set particular requirements on the educational solutions and societal development.
Hence, innovations are necessary also for the educational and societal development processes.

**Introduction**

The United Nations’ Agenda 2030 [1] is the plan of action to ensure human beings’ dignity, equality, healthy environment and prosperous lives, to protect the planet from degradation, to strengthen universal peace in larger freedom, and to revitalize global partnership for Sustainable Development Goals (SDGs). This agenda is based on the positive experiences of the previous UN global development program of the Millennium Development Goals (MDGs) [2].

The particular challenge to the SDGs agenda is the large-scale urbanization and the versatile technological achievements, which already have had an enormous influence on the living environments of the mankind. The world is undergoing the largest wave of urban growth in history [3]. More than half of the world’s population now lives in towns and cities, and by 2030 this figure will move closer to 5 billion. This process brings big social, economic and environmental transformations, especially in the developing countries. Urbanization has the potential to usher in a new era of well-being, resource efficiency and economic growth, but cities are also high concentrations of poverty and inequality.

The SDGs, urbanization and technological implementations set challenging requirements to the education and lifelong learning. According to UNESCO, education is at the heart of this development, and their Vision 2030 for education strives for quality education and opportunities for everybody. This general global vision considers it necessary to ‘ensure inclusive and equitable quality education and promote lifelong learning opportunities for all’ [4].
Sustainability is a subset of the broader concept of the quality of society that links sustainability goals with broad quality thinking and particularly focus on human perception in the context of society. According to the general definition of quality, we understand quality in the societal context as the degree to which a set of inherent characteristics of an object (here the society) fulfils the needs and expectations. Sustainability is a set of inherent characteristics of organizations and societies required by the relevant interested parties. Sustainability is the goal of the sustainable development, which we understand as a part of quality management.

Quality society and quality education and learning cannot happen by chance, but it requires a consistent and systematic approach. In this article, quality of the society and education are dealt in the professional and standardized way.

Education and learning
During their whole lifetime people's learning takes place as individuals and members of different organizations and societies through the formal, non-formal and informal education and learning provided by our society:

- General education from kindergartens and primary schools to universities: Preparing for becoming and growing as a member of society and the citizenship, and contributing to the working life in the society and the world.
- Training and education of young people in vocational schools: Preparing for an occupation and profession for the needs and expectations of the society and its organizations, and person’s career development.
- Training and education in adult education centres: Getting specialized knowledge and skills for citizenship and wellbeing.
• Training and education by third sector organizations, for instance sport clubs, youth centres, associations, etc.: Developing skills and attitudes.

• Organizations’ internal education and learning of leaders and employees: Preparing for the needs and expectations of the businesses and persons’ career.

• Training and education by educational enterprises and consultants: Getting specialized knowledge and skills and networking.

• Self-learning through individual living with family and society members. Lifelong learning among people of all ages is the necessity and also the natural way to the sustainable development and also to adapt to the new ‘smart’ urban circumstances [5]. UNESCO’s GEM Report [6] states that a sustainable future for all is about human dignity, social inclusion and environmental protection. Additionally, the report says that the UN's SDG Agenda requires all of us to reflect upon the ultimate purpose of learning throughout life. According to UNESCO’s global vision [7] for education towards 2030 emphasizes that quality is the essential issue in all forms of education and learning and declares to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Quality of learning is ensured through effective and efficient educational processes [8]. This also includes commitment to improving learning outcomes, consistent evaluations and mechanisms to measure the progress.

Learning consists of three different interrelated entities: (a) learning individuals, (b) learning organizations and (c) learning societies, and includes learning to know, learning to do, learning to live together, and learning to be. Ultimately education and learning and also sustainable development relate to people and their activity,
although different organizations have the major influence on the development.

Universities have the special role of civilization because of their three intertwined responsibilities of the highest education, science based multi-disciplinary research and social collaboration.

Organizations and societies learn through their individual members’ learning and collaborating. Learning of the organization is aimed at the purposes of the organization and organized by the management and the business system. Learning of the society takes place through the influence and activity of many different individuals and organizations in the society. Learning individual, learning organization, and learning society are very different learning domains.

**Sustainability and quality of society**

Sustainability and sustainability development are not unambiguous concepts [9], and in different contexts they have different meanings. For instance, ISO standards [10] present different definitions for sustainability in more than 20 different standards. Hence it is difficult to understand these concepts comprehensively in general and with regard to their elements of content and relationships with other concepts. Here we consider them comprehensively and systematically for the theoretical and practical reasons, and clarify their composite elements and relationships within the broader concept of quality society.

Our expression quality society [11] means a society with high quality, or a well functioning and well-developing society, which is good for all of its interested parties and fulfils their particular needs and expectations. Quality of society consists of many various interrelated characteristic dimensions. Sustainability and its inherent characteristics are used to characterize a certain degree of performance of the organizations, ecosystems or globally interacting
actors. In the context of society, sustainability is a subset within the quality of society.

Sustainability development includes significant themes of quality management. These are realized by the diffusion of quality and innovation achievements of the individual and organizational society members. This diffusion takes place through learning of individual people, organizations and the whole society.

Large scale discussion on sustainability development started with the well-known Brundtland Report [12], where the sustainable development was defined as social and economic advance to assure human beings a healthy and productive life, but one that did not compromise the ability of future generations to meet their own needs. In this context, the concept of sustainability [13] is the requirement of our generation to manage the resource base such that the average quality of life that we ensure ourselves can potentially be shared by all future generations. Development is sustainable, if it involves a non-decreasing average quality of life.

The early definitions of sustainability emphasized human aspects. Later the focus has shifted more to the organizational questions, business advantages and challenges [14], and collaboration [15]. In general, this trend is strongly highlighted in the widely referenced and used three pillars [16] of the sustainable development and the related organizational evaluation and reporting [17]: (1) Economic development, (2) Social development and (3) Environmental protection. In this context, organizational responsibility and economic growth are emphasized as the prerequisites for achieving society-wide sustainable development.

United Nations’ SDG [18] consists of 17 goals:

1. End poverty in all its forms everywhere
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Ensure healthy lives and promote well-being for all at all ages
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Achieve gender equality and empower all women and girls
6. Ensure availability and sustainable management of water and sanitation for all
7. Ensure access to affordable, reliable, sustainable and modern energy for all
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10. Reduce inequality within and among countries
11. Make cities and human settlements inclusive, safe, resilient and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change and its impacts
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Recently also many other areas, viewpoints and methodological tools [19] are linked together with sustainability including corporate social responsibility [20], risks [21] and resilience [22]. Also, the Millennium development goals, MDG and Sustainability Development Goals, SDG of the UN still further expand the scope of
sustainability development to the level of countries and societies. In these contexts, also some quality aspects are incorporated. Sustainable development has become a comprehensive and multidisciplinary issue for the whole of the Planet Earth and Humanity [23]. We reason and conceptualize the quality of society, comprehensively as an antireductionist concept that implies a society with high quality, or a well-functioning and well-developing society, which is good for all of its interested parties. However, many widespread practices consider quality of society in a very fragmented way, for instance in various society evaluations and comparisons with many specialized aspects including municipality operations, environment, nature, culture, family issues, feminist issues, migration, employment, education, industry, agriculture, tourism, innovation, welfare, wellbeing, aging, healthcare, sport, communication, food supply, security, religion, etc.

Societal quality consists of many characteristic dimensions according to the following general systematic categories:

- Community services and their effectiveness and integrity
- Serviceability (i.e. service accessibility and service retainability), including capability and availability
- Security with regard to property, belongings, societal stability, and local, regional and national defence
- Human identity and intimacy, privacy, self-esteem, self-actualization, and respect
- Human rights and equality
- Morality and ethical performance
- Social performance (*), including education, creativity, connectivity, interactivity and sharing, and incorruptibility
- Nutrition, cleanliness and health
- Aesthetics
- Ecology (*)
- Economy (*) and efficiency and cost of poor quality
Sustainable development pillars (*) are here included in the concept of quality as the subset.

Societies are scale-free networks [24]; they are unplanned and emergent entities, and their growth is sporadic and self-organizing. Each actor of the society can impact in the network and its development according to the actor’s ability and capacity. Development of the society takes place in the local communities, municipalities, countries, regions and in the whole world. Societal development and the quality of the society are diffusion processes through learning from the activities and achievements of many different independent private companies, public service organizations and institutions and influential individuals. Strong development in technical achievements and urbanization influence on the educational possibilities and societal development in a crucial way. Hence, innovations are also necessary in and for education and the development processes.

**The professional quality approaches**

The most central general concepts, quality and quality management, form the basis of the professional quality approach. They are suitable also when considering the quality of society and quality of education and learning.

Quality experts have during circa 100 years presented different definitions for the concept of quality, which also has led to methodological fragmentation in practical quality implementations. For instance, the recognized report of UNESCO [25] considers quality in the education sector from many different and significant viewpoints, but the definition of the concept itself has left unclear. The report says: ‘Notwithstanding the consensus about the need to provide access to education of good quality, there is much less agreement about what the term actually means in practice.’ The report also refers to a very old article of Adams [26], which identifies about fifty different definitions for educational quality.
Hence the core message, ‘The quality imperative’, of the report remains vague as well as the measures that are needed. Perhaps a still more difficult situation is when the quality of society is being discussed, because the object of quality, society, the aggregation of different human and organizational entities with many different views and opinions, and hence quality should be considered as a multidisciplinary issue.

It is most useful and most preferred to apply the internationally standardized definition when considering the concept of quality professionally. This definition is used around the world and in millions of organizations and it has been developed collaboratively during more than 30 years by the international experts. According to this definition, the quality of an object means the degree to which the object fulfils the needs and expectations of all those parties being interested in the object [27]. In another article we have justified that this definition is valid and advisable also from the scientific point of view [28]. This definition of the concept of quality is very suitable even in the context of society, education and learning.

Quality management is defined as management of the organization with regard to quality [29]. Quality management is the professional way to get quality related measures implemented in practice in organizations. It is not any separate function but seamlessly integrated with the general management of the organizations. Quality management is also the framework to realize sustainable development and its result sustainability.

Quality improvement is an important part of quality management, and it is defined as increasing abilities to meet the needs and expectations of the interested parties [30]. In the organizations, quality improvement particularly consists of the performance improvement of the business processes and products. According to the conceptual definition, quality improvement is closely related to
human and organizational learning and innovation, and this same can also be inferred from the practical experiences [31].

In the case of education and learning, the object of quality consists of all outcomes of the education providing organization. Education providers have many different interested parties, but the teacher and student are the most important ones. Quality of the education implies satisfaction of both the learner and the teacher. Quality of learning is to fulfil the learner’s needs and expectations for his/her satisfaction, although all the needs and expectations cannot be explicitly articulated. Quality is a person’s subjective combination of rational, non-rational (emotional), and irrational (spiritual) perceptions.

**Conclusion**

The United Nations has set very ambitious multi-dimensional goals globally for the sustainable development of the societies. However, conceptually sustainable development is too vague for the overall governance of the subject. Hence, this article brings up the broader concept of the 'quality society', which takes into account the society as a whole and in particular highlights the degree to which the needs and expectations of society's members and other stakeholders are being fulfilled. Society is a network that is not managed, but all of the network members, particularly different organizations, have their inherent potential to influence on the society's positive development. It is a matter of culture and civilization, how willingly and efficiently organizations are committed to social responsibility and take account of sustainable development and the quality of society in their own activities. The governing bodies and authorities of the society can promote this with appropriate incentives and restrictions. Societies develop in terms of quality and sustainability through the learning of the society-members and through the diffusion effect. However, ultimately the awareness, attitude, know-how and action of people of all ages is crucial. Increasing awareness is achieved through many-sided formal, non-formal and informal education and lifelong learning, whereby the quality of education is imperative.
References

[1] United Nations (2015). Transforming our world: the 2030 Agenda for Sustainable Development, https://sustainabledevelopment.un.org/post2015/transformingourworld

[2] United Nations (2015). The Millennium Development Goals Report, United Nations, http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf

[3] UNFPA, the United Nations Population Fund (2016). Urbanization, http://www.unfpa.org/urbanization.

[4] UNESCO (2015). Incheon Declaration, Education 2030: Towards inclusive and equitable quality education and lifelong learning for all, https://en.unesco.org/world-education-forum-2015/incheondeclaration.

[5] Mohanty, S., Choppali, U. and Kougianos, E. (2016). Everything you wanted to know about smart cities, IEEE Consumer Electronics Magazine Vol. 5, Issue 3, http://ieeexplore.ieee.org/document/7539244/.

[6] UNESCO GEM (2016). Global Education Monitoring Report, Education for people and planet: Creating sustainable futures for all, http://unesdoc.unesco.org/images/0024/002457/245752e.pdf.

[7] UNESO (2015). Incheon Declaration, Education 2030: Towards inclusive and equitable quality education and lifelong learning for all. https://en.unesco.org/world-education-forum-2015/incheondeclaration.

[8] Anttila, J. (2014). Ensuring the quality of learning through effective and efficient educational processes, The 12th International Conference, Lifelong learning: Continuous education for sustainable development, Saint-Petersburg, Russia.

[9] Lozano, R. (2008). Envisioning sustainability three-dimensionally. Journ. of Cleaner Production 16.

[10] ISO Online Browsing Platform (OBP), https://www.iso.org/obp/ui/.

[11] Anttila, J. and Jussila, K. (2015). Striving for the ‘Quality society’ through high quality education and lifelong learning, 59th EOQ Congress, Athens Greece.

[12] Brundtland, G. (1987). Report of the World Commission on Environment and Development: Our Common Future, http://www.un-documents.net/our-common-future.pdf.

[13] Brundtland, G. (1994). Sustainability. Ethical Foundations and Economic Properties. Policy research working paper 1302, The World Bank.
[15] Ford, S. and Despeisse, M. (2016). Additive manufacturing and sustainability: an exploratory study of the advantages and challenges. Journal of Cleaner Production 137.

[16] Mathur, V. N., Price, A. D. F. and Simon Austin, S. (2008). Conceptualizing stakeholder engagement in the context of sustainability and its assessment, Construction Management and Economics, 26:6.

[17] United Nations, General Assembly (2005). A/RES/60/1, http://www.un.org/womenwatch/ods/ARES-60-1-E.pdf.

[18] GRI (2016). GRI Standards, https://www.globalreporting.org/standards.

[19] United Nations, General Assembly (2015). Resolution adopted by the General Assembly on 25 September 2015, Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1, http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&E.pdf.

[20] Lozano, R. (2012). Towards better embedding sustainability into companies' systems: an analysis of voluntary corporate initiatives, Journal of Cleaner Production 25.

[21] ISO (2010). ISO 26000:2010, Guidance on social responsibility. ISO Geneva, Switzerland, https://www.iso.org/obp/ui/#iso:std:iso:26000:ed-1:v1:en.

[22] Faris, C., Gilbert, B. and LeBlanc, B. (2013). Integrating the triple bottom line into an enterprise risk management program.

[23] http://www.coso.org/documents/COSO-

[24] ERM%20Demystifying%20Sustainability%20Risk_Full%20WEB.pdf.

[25] Derissen, S., Quaas, M. and Baumgärtner, S. (2009). The relationship between resilience and sustainable development of ecological-economic systems. University of Lüneburg, Working Paper Series in Economics No. 146, http://www.leuphana.de/fileadmin/user_upload/Forschungseinrichtungen/ifvw/L/WorkingPapers/wp_146_Upload.pdf.

[26] Berkes, F. and Folke, C. (2000). Linking social and ecological systems. Management practices and social mechanisms for building resilience, Cambridge University Press, Cambridge UK.

[27] Dunlop, D., Kanninen, T. and Aaltonen, M. (2015). Manifesto for a sustainable planet. Transforming global emergency to opportunity and action, Helsinki; Lazarte, M. (2016). ISO standards help meet SDGs says World Bank Group expert. ISO News. International Organization for Standardization, http://www.iso.org/iso/home/news_index/news_archive/news.htm?refid=Ref2118.
[28] Barabási, A. (2003). Linked: How everything is connected to everything else and what it means for business, science, and everyday life. Plume Books. New York USA.

[29] UNESCO (2005). Education for all, The quality imperative, http://unesdoc.unesco.org/images/0013/001373/137333e.pdf.

[30] Adams, D. 1993. Defining Educational Quality. Arlington, VA, Institute for International Research. (IEQ Publication No. 1. Biennial Report).

[31] ISO (2015). ISO 9000:2015, Quality management systems - Fundamentals and vocabulary, ISO Geneva, Switzerland.

[32] Anttila, J. and Jussila, K. (2017). Understanding quality – Conceptualization of the fundamental concepts of quality, International Journal of Quality and Service Sciences, https://doi.org/10.1108/IJQSS-03-2017-0020.

[33] ISO (2015). ISO 9000:2015, Quality management systems - Fundamentals and vocabulary, ISO Geneva, Switzerland.

[34] Ibid.

[35] Kim, D-Y., Kumar, V. and Kumar, U. (2012). Relationship between quality management practices and innovation. Journal of Operations Management 30.