New Methodologies of Education and Research in Urban Studies

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ABSTRACT
The complexity of modern urban life indicates the importance of linking various disciplinary paradigms and forms of knowledge to urban studies involving collaborative dimension and focus on transdisciplinary methods. Generally, the practice of studying urban discourse in contemporary higher education system does not show a high level of understanding for collaborative research dimensions, which point to the need for transformation of current practices of education and research processes. Besides, when discussing sustainable development at urban level, education and research methods are among the most important factors and cannot be excluded among the many important aspects of economics, technology, and environment, as well as multilevel governance and complex political features. While highlighting how urban sustainability can be assessed, in this paper, a general review on methods of assessing urban sustainability through education and research on urban topics along with education system and research bodies related to urban studies in Iran for achievement of urban sustainability have been discussed.

Keywords: city; education; research; sustainability.

Introduction

By the last decade of 20th century a new type of urban life was created. The new situation which was the result of radical modifications of interpersonal communications, transformed the human relationships (Moosavi, 2005). This complex urban process containing new interconnection networks, global challenges, new forms of knowledge transfer as well as the development of new technical and technological capabilities requires upgraded complex strategic policies for the implementation of the educational objectives in fields related to urban studies. In this context, the transformation of disciplinary into trans-disciplinary forms of urban studies in contemporary systems of higher education becomes a necessity.

Furthermore, urban expansion policies including intensive urbanization and technical possibilities have all led to new forms of metropolises turning into power centers, which are contesting to adopt a sustainable city character. On the other hand, questions of urban poverty, security and health, urban decay and brownfield sites, urban regeneration etc. are becoming more problematic gaining more attention and demanding a higher level of insight. Global approach to research and urban question-solving has become an important part of sustainable development, where universities shall take central role. Collaborative education and research patterns of urban studies with a high level of interdisciplinary interaction can develop a suitable platform to answer the complex questions of urbanization in 21st century.

In Iran, strategies applied for urban studies in higher education system are diverse, where the model for realization of the study process in disciplinary framework is the dominant approach. Urban studies as a complex discipline and profession include a whole other series of areas including planning, design, landscape, sociology, economy, history, etc. with collaborative relations that can meet contemporary challenges in solving complex issues in urbanization of the 21st century. The core of this collaborative theoretical and practical knowledge includes communicative strategies through different levels of data. Moreover, local areas are now adopting the epithet of “the sustainable city” more than ever which is why global contemplation in a local context is an important turning point in the development of sustainable physical structures of cities. Fragmented knowledge developed in disciplinary methodological frameworks lead to apparent or temporary problem solving. Since physical structures of cities are becoming more complex, urban studies are orienting towards issues of social housing, brownfield investments, as opposed to further decreasing greenfield sites, expansion of low quality urban territories, and there is an increasing need for transformation of current urban structures.

All these challenges seem to be covered in the idea of sustainable city. Sustainable urbanization, as a concept, has raised numerous questions, such as: How can we know a city is sustainable or not? Is urban sustainability always measurable? Do we need a specific education and research model in pursuit of a sustainable city? These are interesting and important questions that need answering in pursuit of all disciplines of urban studies. Cities are composed of people's main habitats in the contemporary world, playing a critical role in
the discourse of sustainable development. Also, when discussing sustainable development at urban level, education and research methodologies are among the most important factors and cannot be excluded among the many important aspects of economics, technology, and environment, as well as multilevel governance and complex political issues (Bulkeley & Betsill, 2005).

While highlighting how urban sustainability can be assessed, in this paper, specific methods of assessing capabilities of education and research methodologies in achievement of urban sustainability are discussed. Although urban studies has been widely discussed and has contributed to the epistemological development of research philosophy (Madil, Jordan, & Shirley, 2000) in developed nations, in countries like Iran, there does not seem to be much research regarding how urban studies have contributed to social development and its major function. Therefore, it is necessary to look at how urban studies can affect social development, specifically focusing on local education and research frameworks and the issue of sustainability.

What is Sustainable?

“Sustainable” in general means able to be maintained at a certain rate or level, but it seems to contain various additional meanings with a surplus of social roles in the field of sustainable development which are “fraught with contradictions” (Redclift, 1987), and therefore, confusing. At times, the word “sustainable” seemed to be intended to make a phrase appear smart or stylish when used with other words creating a great deal of argument and confusion. Sometimes “sustainable development” is confused with “smart growth” or creating “livable communities” (Portney, 2003). By examining a wide range of literature, Frazier (1997) notes “sustainable” being used as “[a] fashionable modifier”. He also indicates that, quite often, the use of the word is even “redundant, hence rendered absurd”, in attempts to emphasize it (Frazier, 1997). On the other hand, the word “sustainable” seems to contain the different values that each concept implies, but expresses these in an abstract and seemingly trendy way. Within this tendency, it is also noted that the word sustainable is considered to describe something objective and scientific (Lélé & Norgaard, 1996).

Above all, a shared feeling that a sustainable thing is “a good thing” appears to exist, and there are few who would be against non-sustainable things (Jamieson, 1996). The definition of “sustainable” is obviously a huge concern now and it is something that will continue to produce debate, and be of interest to everyone involved.

Urban Sustainability

Modern development in urban domains have been facing problems regarding sustainability, and alternative plans have been sought. The contested concept of sustainable development can be seen as being in the same line to seek an alternative. Today, more attention is paid to quality in urban life, which was discounted by an emphasis on quantitative and objective approaches to urban situations; for example, a focus on urban residents’ quality of life or a greater social mix in neighborhoods striving to combat exclusion were set through Agenda 21 launched in Rio and the Third International Urban Forum in Vancouver in 2006.

When considering the field of contemporary urban studies, the word “sustainable” seems to imply a respect for quality in its meaning. This point can be further supported by the notion of urban sustainability considered as “a problem described by the complex dynamics of human-nature interactions”, which requires the perspectives of both scientific and philosophical understandings of the world; in other words, an integrated view of the perspectives of quantitative and qualitative approaches to assess urban sustainability. This is important, especially when bearing in mind the fact that urban sustainability indicators are claimed to be more quantifiable and scientifically valid than to be accepted by a qualitative form (Bell & Morse, 2003). In attempts to assess how sustainable a city is, and the characteristics of urban sustainability, many different criteria and indicators must not be ignored (Shen, Ochao, Shah, & Zhang, 2011). Urban sustainability indicators can be defined as bellwether tests of sustainability and reflect something basic and fundamental to the long-term economic, social or environmental health of a community over generations. Many have attempted to accomplish an “objectively verifiable scientific measurement of sustainability”. Most criteria or indicators attempt to integrate the different perspectives of stakeholders, and they are based on the fundamental scientific principles of simplicity and quantification.

It is important to note that most indicator systems are to some extent simplification and reflection of complex phenomena, even though some indicators have very complicated multilateral categories. For example, the United Nations (2007) published revised edition of the Commission on Sustainable Development (CSD) indicators developed in response to decisions by the CSD and the World Summit on Sustainable Development in 2002. The CSD indicators are composed of 14 themes with 44 sub-thematic categories. In the past, the Oregon Progress Board identified 272 indicators (Oregon Progress Board, 1991). The Alberta Round Table on Environment and Economy finalized a total of 59 indicators from the initial 850 suggestions.

While these urban sustainability criteria or indicator systems are broadly applied as important tools (Shen et al., 2011), there is a more fundamental question: Is urban sustainability always measurable? Two main streams about the question can be found: a moderate perspective, and a radical perspective. A moderate perspective does
not oppose the idea that urban sustainability can be measured, but emphasizes that an epistemological shift of the philosophies underpinning urban sustainability is needed for example from the neo-classical economic approach to donor-side approach. It is important to acknowledge this type of shift when it is applied, because if unnoticed, this may result in inconsistencies in results due to the different scales of time and space as well as the aims of their use (Federici, Ulgiati, Verdesca, & Basori, 2003). An attempt to make an indicator system reflect qualitative data by converting to quantitative numeric data can be included in this moderate view as well (Bell & Morse, 2003). Some may see this as quite desirable, as an effort to embrace quality in the indicator system; this may raise a more radical issue of “measurability”.

Despite numerous attempts to measure urban sustainability, scholars with a radical perspective like Bell and Morse (2003) challenge the principle of “measurability” regarding sustainability indicators. They argue that these attempts to quantify sustainability are “the impossible task...” to measure what was never potentially measurable: the immeasurable sustainability. The inherent tension between “the physical and social/psychological, the objective and the subjective” seems to make it difficult to measure sustainability in certain areas such as the quality of people’s urban life. These types of quantitative approaches are still arguable.

Discussion

At the time being, perspectives of sustainable urban discourse include development of universal knowledge and study that are based on four pillars, defined by the International Commission on Education for the Twenty-first Century. These are learning to know, learning to do, learning to live with, and learning to be (Delors, 1998). As the sustainability agenda has emerged into international discourse and policy, in Iran too, higher education has become a significant point of focus for implementing change, and societies seek direction from the sector (Moosavi, 2013).

Methodological transformation, reorganization of study orientations, and adjusting with new study methods which are oriented towards higher levels of integration is the primary mechanism for developing sustainable urban studies discourse. Therefore, empowerment of the idea about collaborative engagement is one of the key directions of sustainable trans-disciplinary study development. That is why the policy of higher education is expected to intensify the promotion of trans-disciplinary education and research models and development of adequate mechanism for collaborative research development.

As Iran is and will be on the stage of rapid urbanization, the economy is and will be the most influential item related to sustainable urbanization. Thus, measures such as urban infrastructure provision, technology advance, and industrial structure update, as well as simplified administrative process, are among key factors to motivate prosperous market economy system. Moreover, increasing the welfare of urban community and create a harmonious social environment is the concept that matters to sustainable social development. Therefore, trans-disciplinary collaborative strategies in urban studies is of significant importance. Without the integrity of knowledge and lifelong learning, it is hardly possible to provide answers to big issues of urbanism in a global time, in theory and in practice, in science and profession. In Iran, development of new sciences is preceded by long-term and integral analysis of the scientific system which demands collaborative engagement on the highest level. Therefore, universities and higher education institutions should transform into places for development of trans-culture, transnational cooperation. New branch of science, trans-urbanism, has emerged recently and it points out the need for a comprehensive and more complex approach to solving urban problems. Also, globalization implies both globalization and universality of the matters of education, implementation into practice, interaction of art and science through a universal approach and trans-disciplinary notion as the essential feature of urbanistic education. Besides that, development of the art of relationships building through all levels has an important role in the development of the new study method.

Moreover, the educational environments created in higher education systems should enable students to better understand their physical and social environment; to develop a more positive and constructive attitude towards cultural and environmental diversity, as well as fundamental ecological processes; and to use their scientific knowledge and attitude in a way that is responsible, from an urban point of view, with respect to the well-being of all users of urban space in their own society, other societies and even all over the planet as a whole (Moosavi, 2013).

Also, vocational knowledge is compulsory, but not sufficient, development of other study forms, which are necessary in a joint action in solving urban issues, is also important. It is necessary to implement new ways of engagement, which are in essence interdisciplinary, into study programs. For example: different forms of courses, external participants in the study process, organizing seminars and debates, forums, publications, performances, exhibitions, and also tracking of the results and experiences as new innovating parameters of the trans-disciplinary study approach. Transnational collaboration systems, new education methods and ateliers, research centers, institutions promoting trans-disciplinarity, innovative experiences and approaches to solving urban interventions, cross-referencing results of the analyses in disciplinary and trans-disciplinary frameworks, visions of possible alternatives and all
potential activities that direct to a higher level of cooperation, are important factors in the development of the trans-disciplinary urban educational discourses in higher education systems and research institutions.

In a previous study, Moosavi and Shoaian Sattari (2013) have pointed to major obstacles of education of sustainable architecture in Iran. Most part of these obstacles are also arguable regarding the education and research of sustainability in urban studies. These obstacles may be summarized as follows:

• more scientific research on theoretical nature of the specific subject of urban sustainability and its adoption to local society of Iran is necessary;
• it is necessary to provide diverse options and degrees for education of sustainable urbanization in higher education for the mass, in order to distribute meaningful and applicable science among millions who wish to learn and upgrade their professional capabilities and opportunities;
• lifelong education must be provided to professional body of urban planners, designers, managers as well as architects that seek not only formal degrees, but to keep up and readapt to a rapidly evolving technical changes and evolutions;
• universities and higher education institutes must be able to act as contributors of sustainability, providing their societies with fundamental opportunities for sustainable development and maintenance of sustainable knowledge, independent thinking, social identity and values; and finally
• more conscious planning for adoption of new technologies in education of urban studies is vital to redefine and reconfigure socio-cultural and economic character of sustainability (Moosavi & Shoaian Sattari, 2013).

Conclusion

The sustainably growing economy provides supports of capital and technology for urbanization. The goal of sustainable urbanization is to realize the common development of man and society and ecology. The city absorbing more labor, and then residents' higher living standards, environmental governance, infrastructure construction, scientific and technological updating require sustained economic growth and strong capital support (Lu & Ke, 2018). Therefore, collaborative methodologies of education and research and a true trans-disciplinary orientation is almost becoming an imperative for urban studies. A complex system, such as the urban one, demands innovations and new forms of insight, and also interaction through all levels in solving urban issues that, in the light of social, socio-economical, political, ecological, climate and other changes, get intensively more complex. Fragmented knowledge implemented through urban interventions is reflected negatively on the city and residents, on ecological and social dimensions. Non-sustainability of such a system is inevitable. Also, urban health, an especially sensitive issue of the 21st century, is getting more difficult to investigate in disciplinary frameworks.

The mission of contemporary institutions of education and research in the 21st century implies orientation towards a development strategy for integrated knowledge, which as such, can meet challenges of global processes: urbanization, cultural and social transformations. Sustainable development of the physical structure of the city is a primary issue for meeting the demands of the global time. In Iran, integrated urban professional knowledge is a vast area involving as many autonomous disciplines in the system of collaborative action, and also other forms of knowledge that can act in joint framework to give solutions to issues of the global world in a local context. Trans-disciplinary methodology of urban discourse in education and research systems can become a paradigm of sustainable urban development of the 21st century cities.

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