

Comparative Study of Evaluation Indicators for Learning Cities and the Implications

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Abstract: With the development of society, more and more cities are participating in the initiative to build learning cities. Constructing an evaluation indicator system for learning cities to monitor the progress and promote their growth has become increasingly important. This paper analyzes the preliminary framework of the UNESCO Global Learning City Index and R3L+ Quality Framework. The comparison is made from the aspects of design philosophy, criteria of indicator, and the cycle of evaluation process. The findings suggest that the construction of an evaluation indicator system should be focused more on the diversity of learning city development, the construction of an evaluation process cycle, and the significance of building cooperative networks.

Keywords: Learning city; United Nations; Evaluation indicator system; Quality assurance framework

Online publication: October 22, 2024

1. Introduction

In 1968, Hutchins introduced the concept of a “learning society” in his book *The Learning Society*, in which he argued that education was constrained by politics, economics, technology, and social order and that poverty hindered the distribution of educational resources. As productivity developed and labor was liberated, individuals would have more leisure time to learn. Therefore, Hutchins proposed that education would return to its true essence in the 21st century^[1]. With the proposal of the learning society, the publication of *Learning to Be* in 1972 further promoted this concept globally^[2]. In recent years, learning cities have demonstrated their merits in aiding the economic transformation of developed countries, solving social problems in developing countries, and promoting urban sustainable development^[3].

To promote the construction of learning cities more effectively, UNESCO introduced A Preliminary Framework of the UNESCO Global Learning City Index at the end of 2012, which consists of three primary indicators: the benefits of constructing learning cities, the main pillars of learning city development, and the essential conditions for building learning cities. These three primary indicators set the foundation for three evaluation series, with each series containing three levels of indicators^[4].

The European Union (EU), in its efforts to support the development of learning cities, has also funded several projects to build evaluation indicator systems for learning cities. This framework includes four quality dimensions, a set of core quality standards, and a quality cycle.

2. Evaluation indicator system for learning cities

2.1. Preliminary Framework of the UNESCO Global Learning City Evaluation Indicator System

The UNESCO framework is primarily based on three core questions: What is it? Why is it needed? How is it done? With this approach, the preliminary framework includes three primary indicators with specific references. These indicators are the benefits of building a learning city, the main pillars of learning city construction, and the essential conditions for building a learning city.

The first primary indicator, the benefits of building a learning city, refers to the impacts and roles of constructing a learning city. The second primary indicator, the main pillars of learning city construction, describes the key aspects of constructing a learning city. The third primary indicator, the essential conditions for building a learning city, focuses on the necessary guarantees for building learning cities ^[5].

2.2. R3L+ Quality Framework

the R3L+ project focused on two critical questions: First, what are the most important quality dimensions that promoters need to consider? Second, in which aspects can quality be demonstrated? Therefore, the R3L+ project developed four core quality dimensions, a set of core quality standards, and a quality cycle.

2.2.1. Quality dimensions

The R3L+ quality framework identified four core quality dimensions: partnership, participation, process, and learning culture. Among these, partnership, participation, and process are the three main pillars for the construction of a learning city, while learning culture ensures that adult and lifelong learning are integrated into local development plans. Hence, they are referred to as the “three plus one” quality dimensions, as shown in **Figure 1**.

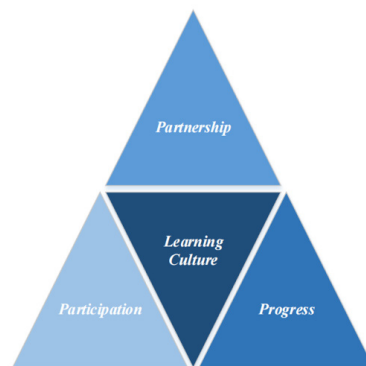


Figure 1. Quality dimensions in the R3L+ Project

Partnership is concerned with building connections between various actors and stakeholders in the city or region, involving cross-organizational and departmental cooperation, as well as the integration of networks. Participation involves bringing a broader community into the learning process and actively

promoting their contribution to community transformation. Process refers to the output-oriented approach in building a learning city, where progress is measured based on specific goals and compared to other learning city projects. Learning culture refers to embedding learning and knowledge sharing at the core of development in learning cities, whether in public institutions, private enterprises, educational and research institutions, civic organizations, or key individuals.

2.2.2. Quality criteria

Once the quality dimensions are identified, they are specified into quantified observable points, then forming standards, which serve as the basis for quality assurance.

Partnership networks are at the core of the framework, with a shared mission, vision, goals, and focus areas; communication principles, channels, and formal structures; and the roles and trust among stakeholders in the partnership network. The participation dimension includes stakeholder participation and network communication. Performance is measured through the willingness and ability to understand and accept the evaluation results. The learning culture dimension consists of eight quality criteria.

2.2.3. Quality cycle

To support the realization of these standards, R3L+ developed the quality cycle. It comprises two aspects: one is the steps related to the quality assurance process (intervention system); the other one is the steps related to supporting the implementation of quality actions (support system). The intervention system consists of four stages: initiation, data analysis, decision-making, and reflection (**Figure 2**).

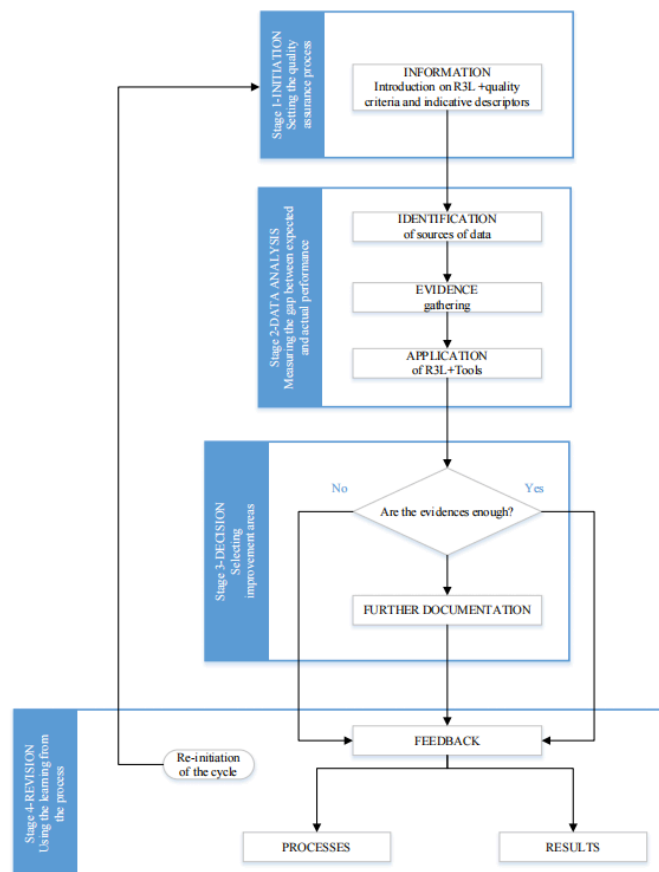


Figure 2. Intervention system

The intervention system consists of initiation, data analysis, decision-making, and reflection. In the initiation stage, learning city quality criteria are introduced, which involves clarifying the methods to be applied, the main participants, and expected outcomes. In the data analysis stage, the actual performance is compared with the expected performance, identifying the achievements in specific dimensions and areas requiring improvement. In the decision-making stage, areas for improvement should be determined, based on the previous stage's results with sufficient evidence. In the reflection stage, intervention actions should be reflected to be modified. Once specific areas for improvement are identified, the mechanisms and resources need to be summarized and reflected upon to improve existing interventions ^[6].

Europe establishes the support system in its quality framework. The R3L+ Quality Framework is based on a fundamental assumption: low levels of motivation and experience may limit the quality of learning city construction. Specific assistance and guidance are needed, which can take various forms, from specific resources to training. The outcomes of the R3L+ project serve as the foundation for training and support programs rather than being independently used by participants in learning regions ^[7].

3. Comparative analysis and summary

3.1. Design philosophy

The Preliminary Framework of the UNESCO Global Learning City Evaluation Index is to help countries better understand the concept of a learning city and to guide the development of learning cities worldwide. The framework is designed from three perspectives: “why,” “what,” and “how.” The first key indicator explains “why,” namely the reasons for constructing learning cities, which aim to better promote the development of every citizen, empower individuals, foster social, cultural, and economic prosperity, and facilitate sustainable development. The second key indicator illustrates “what” a learning city is. This includes six secondary indicators, representing the six aspects of building a learning city. The third key indicator addresses “how” to do it, outlining the guarantees needed for the construction of a learning city.

The R3L+ project, on the other hand, focuses on ensuring learning quality. R3L+ Quality Framework is based on the concept of learning and quality ^[8]. In learning psychology, constructivism advocates that learning is an activity undertaken by individuals themselves. In sociological and psychological theories on socialization, the personal development model is recognized, emphasizing that individuals are embedded in a series of interacting environmental systems. In the theory of learning organizations, it is proposed that organizations can learn through individual learning. Modern theories of change in social systems argue that social systems change in interactions with other systems. The system change is always a combination of top-down and bottom-up strategies, with networks playing a critical role in the process of change. Based on these theoretical foundations, a comprehensive understanding and definition of concepts such as learning, learning quality, and learning city construction have been achieved, which further enhances the scientific nature of the R3L+ Quality Framework during its implementation.

Thus, the Preliminary Framework of the UNESCO Global Learning City Evaluation Indicator System was developed to enable countries to better understand the concept of learning cities and to guide their construction. Meanwhile, the R3L+ Quality Framework was developed to ensure learning quality in a learning city, grounded in theoretical research that defines the concepts of learning and quality.

3.2. Evaluation criteria

Both the Preliminary Framework of the UNESCO Global Learning City Evaluation Indicator System and the

R3L+ Quality Framework are designed to monitor the development of learning cities. While both emphasize the political and economic concepts of learning and share a common understanding of what constitutes a learning city, their design philosophies differ, leading to variations in content and emphasis.

3.2.1. Highlighting the “people-first” principle

The first key indicator in UNESCO’s framework, “The benefits of building a learning city,” includes a secondary indicator, “individual empowerment and social cohesion,” containing nine tertiary indicators, whose content is focused on the individual, reflecting the status of lifelong learning and the development of learning cities in different regions through the surveys and evaluations of individual circumstances. In the R3L+ Quality Framework, the quality standard of stakeholder participation under the participation dimension reflects the R3L+ framework’s inclusiveness toward individuals, striving to ensure that everyone can learn. Both frameworks highlight the “people-first” principle of learning cities^[9].

3.2.2. Promoting social sustainability

The third secondary indicator in UNESCO’s framework under the “benefits of building a learning city” measures sustainability, including seven tertiary indicators. This focuses on the sustainability of learning cities from an ecological perspective. In contrast, the R3L+ Quality Framework does not specifically set quality standards for sustainability. The content and objectives of European learning cities are set according to the specific circumstances of each city, and the EU measures their actions, strategies, and outcomes. While the EU acknowledges the political and economic concepts of learning, emphasizing learning’s role in promoting regional development, civic participation, sustainable urban growth, and reducing social inequality, it does not measure ecological aspects as systematically as UNESCO’s framework.

3.2.3. Building a learning culture

A learning culture, specifically a lifelong learning culture, holds a significant position in both UNESCO’s and the EU’s frameworks. In UNESCO’s system, the sixth pillar under “the main pillars of building a learning city” is a vibrant lifelong learning culture. The EU Framework places even more emphasis on learning culture, making it the fourth quality dimension, which is the key to integrating adult and lifelong learning into local development plans. Lifelong learning possesses intrinsic energy and motivation, making it more dynamic than external learning cultures. It helps foster shared values and supports the development of social capital within learning cities^[10]. Learning cities aim to establish a lifelong learning culture where every individual has educational opportunities, providing equal learning opportunities for marginalized and disadvantaged groups. As society is composed of individuals, providing learning opportunities promotes both individual and societal development. Therefore, building a lifelong learning culture is a vital aspect of learning cities and holds a prominent place in the evaluation system.

3.2.4. Building partner networks

The development of learning cities requires the participation of various stakeholders, who can be categorized into key, primary, and secondary stakeholders. Building partner networks and establishing operational mechanisms to organize all stakeholders to collaboratively construct a learning city is a crucial topic. The secondary indicator under the “basic conditions for building a learning city” is the measurement of stakeholders. The R3L+ Quality Framework, however, places partner networks as the first quality dimension

and the central concept of the framework. Partner networks can consist of top-down formal networks organized by the government or bottom-up informal networks organized by civil society. Both types of networks can foster collaboration, better develop and utilize resources and potential, share resources and experiences, and contribute to the construction of learning cities.

3.2.5. Promoting stakeholder participation and management

The construction of learning cities relies heavily on stakeholder participation. Without the involvement of stakeholders, building a learning city becomes difficult. Both UNESCO's and the EU's evaluation systems monitor the willingness of stakeholders to participate, their level of involvement, and the strategies and outcomes of their actions. In UNESCO's preliminary framework, the second secondary indicator under "the basic conditions for building a learning city" is "the effective management and participation of stakeholders," and the EU's quality dimension of participation includes the quality standard of stakeholder involvement, both of which measure stakeholder actions and their participation in the development of learning cities. Furthermore, UNESCO's secondary indicator of strategic vision, political intent, and policy commitment, and the EU's criteria of shared missions, visions, goals, and priorities, also measure stakeholder willingness to participate in the construction of learning cities, ensuring smooth implementation across different sectors of the city.

3.2.6. Summary

The six pillars in UNESCO's Framework represent structural indicators ^[11], the benefits of building learning cities are the ultimate result indicators, and the basic conditions are the conditional indicators of city development. The evaluation system covers all aspects of building a learning city in a comprehensive and systematic manner. However, this breadth may also limit the focus and goals of each city's development. Different cities have different social backgrounds and cultures, and thus the priorities and direction of learning city development vary. To avoid homogenizing the development of learning cities, the R3L+ Quality Framework allows each city to define its specific development goals and priorities based on its unique circumstances. However, the EU framework tends to focus on monitoring stakeholder intentions, actions, and strategies and lacks specific monitoring of whether individuals benefit from the construction of learning cities.

3.3. Constructing a cyclical evaluation process

The EU has integrated quality criteria into the construction, forming what is known as a "quality cycle." The quality cycle consists of two main systems: the intervention system and the support system.

The intervention system is divided into four phases: initiation, analysis, decision, and revision. In the initiation phase, the R3L+ quality standards are introduced, which are used to collect data on construction. Once the authenticity of the data is confirmed, the next phase is the analysis, where the merits and demerits of learning city construction are identified, and the necessary improvements and goals for the next phase are determined. Additionally, there is a need for revision on the previous phase, selecting valuable insights and discarding ineffective elements. This revision helps provide lessons and best practices for future phases, ensuring a more informed approach to resource allocation, actions, and strategies needed for achieving the next goals. This process repeats cyclically, forming a quality cycle, which helps learning cities continuously identify both strengths and weaknesses during their development process. Hence, the quality process not only

monitors the development of learning cities but also serves as a tool for self-correction, enabling cities to better leverage their strengths and mitigate their weaknesses.

The support system is designed to safeguard the quality of learning city construction by providing various forms of support. This support system ensures that the development of learning cities remains aligned with initial objectives, also helping individuals better understand how support for specific goals and fields can add additional value to the development process.

4. Implications

4.1. Emphasizing the diversity in learning city construction

Every city has a unique historical and cultural background. Cities are at different stages of social, economic, cultural, and technological development, and each city faces distinct social issues and contradictions. The motivations vary, as do the leading entities. For example, in Beijing, learning city construction is government-led, adopting a top-down approach, while in Cork, Ireland, learning city construction was initiated by a charity from the bottom up. Therefore, there will inevitably be differences in the construction of learning cities, and no fixed or universally applicable model can exist^[12].

When constructing an evaluation framework, it is crucial to recognize and respect the diversity and specificity of learning city development. A one-size-fits-all approach is inappropriate. Although quantitative indicators facilitate data collection, it is important that the evaluation criteria are set in consideration of the unique characteristics of each city and its learning city development^[13]. Just as R3L+ Quality Framework allows stakeholders to define a shared vision and mission through cooperative networks and then, set clear, quantifiable goals, strategic directions, and priorities.

4.2. Constructing an evaluation cycle

As the number of learning cities increasingly grows, it is essential not only to focus on the quantity of cities but also on the quality of their development. Therefore, quality assessment should be integrated into the construction process of learning cities, with real-time monitoring and recording of the development process. This will help to better identify each city's strengths and weaknesses in the process. Not only can this assist in timely corrections during construction, but cities can also determine the strategies and goals for the next stage of construction, optimizing the use of resources and potential^[14].

Establishing a cycle involves integrating the evaluation into the construction from the beginning by introducing criteria, monitoring and recording the process, verifying the data collected, and analyzing and reflecting on the results. It allows for continuous monitoring of the learning cities and plays a guiding role in fostering self-development, ultimately helping cities achieve sustainable development goals.

4.3. Emphasizing the importance of building cooperative networks

Both the Preliminary Framework of the UNESCO Global Learning City Index and the R3L+ Quality Framework emphasize the importance of building cooperative networks. As an old Chinese proverb says, "Many hands make light work." It has become increasingly important to establish cooperative networks and determine the mechanisms through which stakeholders can collaborate effectively toward a common vision and mission^[15]. In 2022, Shanghai initiated an attempt to use a partnership approach in building a learning city, proposing a cooperative framework and promotion mechanism involving municipal departments, district-level agencies, community organizations, enterprises, and social organizations, encouraging active

participation in the construction of learning organizations. However, a systematic method for building cooperative networks and mechanisms has not been developed in China. Through the networks, cities can integrate the resources and potential for learning city construction, achieve inclusive lifelong learning, build learning cities, and realize sustainable social development.

Disclosure statement

The author declares no conflict of interest.

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