"WISE CITIES" IN THE MEDITERRANEAN? CHALLENGES FOR EDUCATION AND INTEGRATION

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he Mediterranean was always an area of exchange of people, goods and ideas. Its cities were important centres in the history of mankind and for European civilisation. The Library of Alexandria was a centre of science, Athens the cradle of new democratic ways of political decision-making and Rome the capital of the Roman Empire. City-states like Venice commanded global economic networks and enjoyed an incredible cultural richness. The Mediterranean has also been a centre of religious learning: Rome and Constantinople/ Istanbul were home to the Roman Catholic Church and the Eastern Orthodox Church respectively. Cairo, Kairouan, Damascus and Baghdad were centres of Islamic learning. Advancements in philosophy and medicine in Arab Al-Andalus gave critical impetus to the later European enlightenment. Like Istanbul and Sicily, the Iberian Peninsula was a true cultural and intellectual bridge between Orient and Occident.

The history of the Mediterranean was at the same time a history of conflicts between religious and political powers that had to be balanced through the centuries. The northern European countries started their own cultural and economic transition during the enlightenment, when people like Immanuel Kant and René Descartes opened the door to rationalism and individual freedom. Freedom of thinking and movement was key for the development of Western societies and the rise of their cities. The autonomy and freedom in the cities created a climate in which innovation in arts, culture, science, technologies, business and industry could develop. The power of educated citizens formed new democratic structures, local governance systems with the strong participation of citizens and new forms of networks of cooperation between different stakeholders in cities. As a result, cities were able to become communities that integrated different social classes and people from different ethnical, religious and national backgrounds. This integrative process and the way of creating cities will be challenged by the global megatrends that all cities are facing in the 21st century.

1. Challenges for the cities of the 21st century

Cities are hot spots of change, opportunities and problems in a globalised world. They all face similar global megatrends: globalisation, digitalisation, climate change, demographic change, social change and urbanisation.

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Globalisation

"The world is flat" as Thomas L. Friedman argued in his famous book (Friedman, 2005): the high transparency and comparability of markets, services and living conditions combined with open markets for goods and services and the free flow of information intensify global economic competition. At the same time borders for people are partly open; the populations of our cities are becoming more and more international. The global exchange of ideas in business and science opens up new forms of competition for the best brains. Education systems face the challenge of attracting and developing talents and offer them opportunities to stay.

Digitalisation

Digitalisation is an important driving force for innovation and change in our societies, economies, labour markets and education systems. At the same time, it is an instrument for new ways of global economic competition. Cities are facing important changes in the labour market: new working conditions, new methods of work and new jobs are emerging, while existing employment is often at risk. New added value chains will change our tax revenues. At the same time, big data has become the new gold. Combined with data analytics and artificial intelligence it will create new economic value.

The new competitive environment is one where "The winner takes it all", as the same software can be used and replicated on a global scale with no marginal cost. New ways of personal, social and political communication will change the local process of political decision-making and of citizens' participation. This can contribute to much higher transparency in public administrations and local politics.

With the omnipresence of information on every smartphone, the traditional settings and methods of learning are globally challenged. The availability of global knowledge and the continuing growth of new knowledge have driven the growing significance of lifelong learning for personal and professional development.

Climate change

Millions of citizens dream of copying the lifestyle of Western societies. But this lifestyle is linked to an economic growth system that produces high emissions and consumes natural resources in an abusive way. Our Western lifestyle is not sustainable. It causes climate change and is threatened by it at the same time. Unstable weather conditions are causing flooding, dry periods and heavy storms. Cities play a crucial

role in climate change mitigation and renewable energy transitions, but they also have to adapt to climate change. Cities have to be prepared to become resilient and they have to adapt public infrastructures, buildings and houses to ensure better protection for citizens. The exchange of expertise between cities and joint lobbying for technical and financial support from federal and regional governments and international organisations are necessary.

Demographic change

In the northern part of the Mediterranean Sea the population is getting older and becoming more heterogeneous through low birth rates and migration. In the southern part of the Mediterranean Sea the population is much younger, with higher birth rates and fast-growing cities. This growth might slow over time as North African countries are now well ahead in a demographic transition, with birth rates close to the replacement level of 2.1 children per woman or even below it, for example in Tunisia. However, this is not the case in Sub-Saharan Africa. Today, the population of Africa is over 1.2 billion and will reach over 2.4 billion in 30 years. Seeing the economic, political and administrative situation today, it will be a serious challenge for the cities in the southern part of the Mediterranean Sea to cope with this fast-growing population and integrate it into their cities. Therefore it will be very important to support African cities in a sustainable way to limit and regulate the future flow of migrants inside Africa and towards Europe.

Social change

Attractive cities attract people from all over the world. The more international they become, the more they gain in allure for future migrants. Attractive cities will become more and more global villages with increasing heterogeneity and cultural diversity, with many nationalities, languages and ethnical and religious backgrounds. As a result, international exchanges of business people, scientists and experts will grow as well as the brain drain towards attractive cities.

In all cities we are facing increasing inequalities between rich and poor, which is quite often linked to the educational and digital divide. The key to overcoming this divide and being able to integrate migrants, refugees and asylum seekers is an active education and integration policy from cities.

Urbanisation

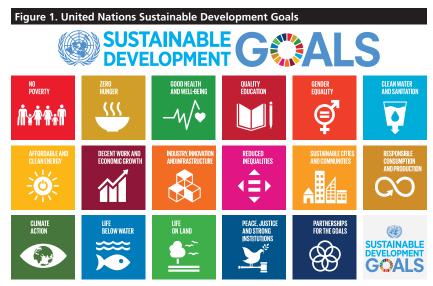
Today over 50% of the world's population is living in an urban environment. In 30 years over 70% will live in cities. Every year 100 million people more will inhabit our cities, which corresponds to eight times the Région Parisienne every year. The fast growth of cities in Africa and the southern Mediterranean countries has two drivers: the growing population and migration from rural areas. The cities are facing problems of affordable housing, new settlements, adequate public infrastructure in terms of mobility, health, water and energy supply, jobs for young people and education provision.

Facing all the transformation processes caused by the global megatrends, cities have to conceive strategies on which direction they want to develop in and what the goals for their long-term sustainable development could be.

All the 17 SDGs with 169 sub-goals are related more or less to the economic, social and ecological development of cities.

2. "Wise Cities" as sustainable cities

For the realisation of the sustainable goals of the UN Agenda 2030 (SDGs), cities can be and should be a driving force in the spirit of "think global, act local" (see Figure 1). All the 17 SDGs with 169 subgoals are related more or less to the economic, social and ecological development of cities. Goal 11 explicitly states the intention to "Make cities and human settlements inclusive, safe, resilient and sustainable". Every city has to undertake steps for sustainable city development as a responsibility for the next generations in their social, ecological and economical aspects.



Source: UNDP (2018).

At the same time, cities are affected by climate change with varying intensity. Therefore the Paris agreement on climate action is not only an ecological obligation but also a complex challenge to achieve the climate goals and to become resilient against climate change.

What are the long-term goals for living together in our city, in our country, in our global village? What are the long-term tasks for linking global and local strategies to achieve sustainable city development? A top-down as well as a bottom-up approach is needed: the legal frameworks on the international and national levels combined with the necessary financial and administrative support are at the basis of concrete implementation. The bottom-up approach needs the local support of citizens, the private sector, science and education.

Living and governing a city in a sustainable way has many interconnectivities and interdependences as Figure 2 shows.



In the centre of the joint efforts is an integrative urban society. It is here that the various policy fields are conceived, planned, discussed and executed.

Source: Schuster (2013).

In the centre of the joint efforts is an integrative urban society. It is here that the various policy fields are conceived, planned, discussed and executed, ranging from energy issues and mobility to natural protection, housing and cultural activities. These integration processes will be successful if they are linked to an open society which gives everybody fair chances with the help of an education system that promotes the personal and professional talents of all. Education is and will be the key for a knowledge-based society and therefore the base for economic success and general welfare in the 21st century.

3. "Wise Cities" for a knowledge-based society

How can we develop ways to achieve a sustainable education system for a knowledge-based society? How can we achieve the three goals that are crucial to guaranteeing education for everybody?

- Everybody should get a fair chance to develop his or her talents, to acquire and use skills for professional development and to live in a selfresponsible way;
- Everybody should get an education in order to learn how to learn and to be able to adapt to new situations;
- Everybody should be able and willing to take responsibility in our community, for our society and our environment.

What kind of knowledge, abilities and skills do we need in the 21st century? How can we offer the necessary qualifications to provide better opportunities, especially for young people who strive to create their personal and professional futures? Five skill sets are important in this regard (see Figure 3):

Figure 3. Necessary educational skill sets for the 21st century

Regarding these continuous transformation processes, cities need educational opportunities for lifelong learning for all

in our heterogeneous

societies.

Professional knowledge as basic and orientative expertise combined with understanding of the connections between different subjects.

Cognitive abilities, especially analytical and problem-solving skills, combined with the ability to familiarise themselves with new fields of professional activity.

Social behaviour, above all communication skills, ability to work individually and in a team.

Intercultural competences, above all openness to other cultures, knowledge of foreign languages, competences related to foreign countries and familiarity with their everyday culture.

Personal abilities: willingness to perform, motivation, resilience, flexibility.

Source: By author

To achieve the necessary competences for a successful personal and professional life, the educational offers in our cities have to change. Teaching and learning processes should become "dual" through linking systematically:

•	Basic Knowledge	with	problem-solving skills
•	Expertise	with	understanding of the system
•	Theory	with	practice
•	Analogue	with	digital forms of learning
•	Individual	with	cooperative learning
•	Independent	with	team-based work
•	Personal cultural identity	with	intercultural understanding
•	Self-reflection	with	social interaction

In consequence, education should be linked to real life and applied solutions. To this end the educational system needs to integrate the following aspects:

- Didactic methods for individual and cooperative learning like deep learning and design thinking;
- Active roles for pupils/students to solve problems individually or in a team in a co-constructive way;
- Explaining and exploring the connectivity of different subjects from known to unknown;
- Combining theory with practice learning by doing;
- New ways of learning, for example: E-learning by interactive individual and group learning activities, having no constraints in terms of space and time, a growing variety of formal and informal learning spaces;
- The continuous necessity to integrate new insights and findings pedagogically and transform them for personal and professional qualifications.

Regarding these continuous transformation processes, cities need educational opportunities for lifelong learning for all in our

heterogeneous societies. Early childhood education in the kindergarten and differentiated school forms are of particular importance, but so are multiple vocational training opportunities at schools and at university level with the strong and binding commitment of companies. Informal learning opportunities such as libraries, community colleges and youth centres complete these cornerstones of education.

The integration of digital media into education is more and more needed for lifelong learning in diverse ways. The monopoly of classical educational institutes has been eroded as information and learning apps are available online and formal training certificates have become less important because of the ever-decreasing half-life of knowledge.

The analyses of the European Commission from their "Education and Training Monitor 2017" show that all countries with dual professional education systems that link theory and practice on all levels have significantly fewer unemployed young people, less brain drain, better economic development and higher competitiveness of companies (European Commission, 2017).

As a result, cities have to play an active role in the transformation of the education system so citizens can become a part of the globalised knowledge-based society. This transformation requires learning skills and knowledge for the 21st century that combine theory with practice. This combination has to be based on a new culture of responsible cooperation and long-term commitment of companies in learning partnerships. Finally, a political decision of the government and the parliament is needed to place a share of the responsibility for practically oriented education in the hands of companies and their organisations, particularly the Chambers of Commerce, Craft and Industry. Cities as laboratories of the future should be the conveners and driving forces of this reform process.

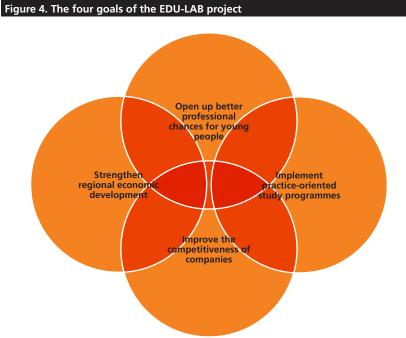
4. "Wise Cities" strategies for the 21st century

In a globalised world, cities cannot be isolated islands. They need strategies of cooperation inside the city with all stakeholders, with other cities and further partner organisations like national city unions and international organisations like UN-Habitat. An example of such a strategy is the EDU-LAB project. It is part of the EU Strategy for the Danube Region, which encompasses nine EU countries and five non-EU countries along the Danube River, stretching from Ukraine, via Serbia and Hungary to Austria and Germany (INTERREG-Danube Transnational Programme, 2018 a and b).

The EDU-LAB project breaks new grounds in professional education, regional development and policies for the improvement of competitiveness (see Figure 3). It entails a great degree of cooperation between cities of the region, whose economic structures and development differ considerably. Although it is difficult to generalise, the experience of the EDU-LAB project and its network approach might entail some useful lessons that could be emulated by cities in the Mediterranean, particularly those in the southern Mediterranean that face challenging labour markets.

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In a joint effort with the Danubian Charter for Young Talents the EDU-LAB project will create a new culture of cooperation between educational institutions, the business sector, public authorities, civil society and the participating cities. To have an instrument for this binding cooperation the partners will create national academies for professional education with five activities that will be combined in a synergetic way: (1) Universities will be supported in implementing dual study programmes, (2) Qualification programmes will be developed for mentors in companies who are responsible for the apprenticeships and practical parts of dual studies, (3) Teachers in professional schools will be provided with qualification programmes, (4) Know-how transfers between universities and companies will be organised via study programmes and in science and research, and (5) Further training programmes will be offered, such as training for start-up companies, entrepreneurship and design thinking.



Source: By author

The Danubian Council of Academies for Professional Education will support the activities via the exchange of experiences and practices, by developing study programmes and blended learning systems and via strong partnership with national governments and the European institutions. Such a network structure could be useful for the Mediterranean region too, and could provide an impetus for vocational training. The European Foundation for Education tries to convince companies and wealthy people to get involved in the dual education system and donate financial resources to it (European Foundation for Education, 2018). In Egypt for example, the Sawiris Foundation for Social Development is willing to build new schools and teachers' academies based on new pedagogical concepts that have been briefly described in this chapter (Sawiris Foundation for Social Development, 2018).

In consideration of the demanding challenges cities are facing, civil society should play a more prominent role in the future in the administration of municipal affairs. The principle of subsidiarity, which is part of the legal framework of the European Union, provides some important guidelines in this regard. It has a double function: On the one hand all public tasks which could be fulfilled on the local or regional level should be done on the level which is the closest to the citizens. On the other hand cities can commission non-profit organisations to fulfil municipal tasks in the areas where they are in charge.

In Stuttgart, for example, where I used to be mayor, 50% of the kindergartens, 50% of the hospitals and 10% of the schools are managed by NGOs and financially supported by the city. Through this system – which can also be found in other German cities – we have a strong civil society and a strong commitment of volunteers who help to fulfil public tasks. In Stuttgart 20% of the citizens are engaged in volunteer work. As 60% of the children in the city have a migration background (i.e. at least one of their parents was born abroad), our education system plays a key role in integrating the children from 170 different nations in our urban society, starting with early childhood and kindergarten education. The Stuttgart Partnership for Education is a network of many stakeholders, such as NGOs for pre-school education, sport and culture associations, while companies get linked with schools to enrich the curricula. It has the goal of ensuring that no child gets lost. The Stuttgart Pact for Integration is a comprehensive approach to using many instruments to integrate socially all generations of migrants while respecting their cultural backgrounds in an international urban society.

Cities should be more than streets, buildings, public infrastructure and public services. Cities should become "communities" in which the citizens have to play an active role.

5. Suggestions for "Wise Cities" in the Mediterranean

- 1. Fast-growing cities, particularly those in the southern part of the Mediterranean Sea, are hot spots for social tensions, economic growth and future perspectives. To enable cities to fulfil their task, a strong local self-governance system is helpful. The European Charter of Local Self-Government of the Council of Europe outlines basic principles in this regard (Council of Europe, 2018). Countries with a strong tradition of local self-governance, such as Germany, Austria, Switzerland, Sweden and Denmark tend to have better social and economic development than more centralised countries.
- 2. Cities should be more than streets, buildings, public infrastructure and public services. Cities should become "communities" in which the citizens have to play an active role via local initiatives and the involvement of companies for the sustainable development of cities.
- 3. Our citizens should become active partners in a global knowledge-based society. Therefore the cities should become the promoters, conveners and providers of educational offers. These educational offers should be "dual", combining theoretical education with vocational training in companies to get the right qualifications that help in finding a job and improving the competitiveness of companies.
- 4. The "Union of the Mediterranean" could be strengthened by cities, universities and civil society focusing on new ways of sustainable education to help realise the UN Agenda 2030.

5. A joint effort for a lifelong learning system for everybody could become a common goal for a knowledge-based society. It could be supported by the European Commission and the World Bank and could encompass the creation of networks of educational institutions, the utilisation of digital media for educational goals, cooperation with the private sector in dual education and the promotion of projects for sustainable economic growth.

In sum, "Wise Cities" in the Mediterranean should attempt to fulfil the sustainable development goals by a long-term strategy that links their important history with sustainable goals in the future.

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