Abstract—This research aims to find an answer to the question of which knowledge and skills do the Turkish urban planners need in their business practice. Understanding change in cities, making an urban decision and putting it into practice, working together with actors from different organizations from various academic disciplines, persuading people to accept something and developing good personal and professional relationships have become very complex and difficult in today’s world. The truth is that urban planners work in many institutions under various positions which are not similar to each other by field of activity and all planners are forced to develop some knowledge and skills for success in their business in Turkey. This study targets to explore what urban planners do in the global information age. The study is the product of a comprehensive nation-wide research. In-depth interviews were conducted with 174 experienced urban planners, who work in different public institutions and private companies under varied positions in the Turkish Planning System, to find out knowledge and skills needed by next-generation urban planners. The main characteristics of next-generation urban planners are defined; skills that planners needed today are explored in this paper. Findings show that the positivist (traditional) planning approach has given place to anti-positivist planning approaches in the Turkish Planning System so next-generation urban planners who seek success and want to carve out a niche for themselves in business life have to equip themselves with innovative skills. The result section also includes useful and instructive findings for planners about what is the meaning of being an urban planner and what is the ideal content and context of planning education at universities in the global age.

Keywords—The global information age, urban planners, innovative job skills, planning education.

I. INTRODUCTION

The roles of urban planners have already crossed the line drawn by the traditional planning field because urban planners work in varied institutions and companies; some of them are directly and some other are indirectly related to city and regional planning [6]. A big gap exists between professional planning education and professional planning practice [1]. Stiftel [11] and Checkoway [2] argue that planning education at universities should cover all knowledge and skills required by the planning practice. According to Osawa and Seltzer [9], planning curricula at undergraduate and graduate levels has to be redesigned to teach students communicative as well as rational/analytic skills. This research aims to explore knowledge and skills needed by the Turkish urban planners in the global information age. This exploration will help scholars to revise the content and context of planning curricula at universities according to the needs of the new age.

II. RESEARCH METHODOLOGY

In the context of this study, 174 experienced urban planners were visited in their natural working environment and were asked about knowledge and skills that they need in their daily business life. Case study and in-depth interview methods were used together to observe urban planners’ real working environment and to understand how they use their knowledge and skills in this environment in a true way. Case study is a common research method in descriptive and exploratory studies [12], [13]. This data collection method is very effective to understand politico-economic, socio-cultural, institutional and administrative environment in which a work is performed; and to observe group behavior that are displayed in a dynamic and interactive way in a place [3]-[5]. Empirics obtained in a detailed case study give researchers an opportunity to test the assumptions and analytical generalizations of orthodox theories [12]. The basic advantage of case study method is to explain complex social phenomenon in depth [10] and to access comprehensive data on a selected research topic [7], [8].

The main element of the case study was a series of semi-structured interviews with urban planners working in varied public institutions and private companies in Turkey. Semi-structured interviews were undertaken with at least five-year experienced urban planners. Five interview questions below were asked to 174 experienced urban planners:

- Could you please tell me the details of your daily business practice?
- What do you do routinely and non-routinely in an ordinary day at work?
- Which knowledge and skills do you use and need in your business?
- What an urban planner do according to you?
- What an urban planner has to know intrinsically?

All answers to the interview questions were transcript and analyzed. Knowledge and skills which an urban planner has to know and use in the business life were grouped under 19 general categories. These categories refer to knowledge and skills that next generation urban planners need at most in the business life. A certain number of key words were defined for each category. The answers of 174 research participants were scanned to find out if they used any of these key words during the interview. When a participant has set up a sentence (once or several times) about a key word, +1 point was added to the
related category. Points gathered under each category were calculated separately and categories were ranked according to their points in descending order. This rank shows the level of importance of a knowledge and skill for the Turkish urban planners.

III. BASIC KNOWLEDGE AND SKILLS NEEDED BY NEXT GENERATION URBAN PLANNERS

Today’s urban planners need four knowledge and fifteen skills for success in their business life. These are:

- Skill to use computer software and technologies
- Life-long learning skill
- Knowledge of legislation and regulation
- Skill to analyze quantitative and qualitative data
- Skill to predict the future correctly
- Skill to report and collect data (make research)
- Team working, mediation and coordination skills
- Skill to understand the real needs and expectation of human and society
- Oratory, presenting and good talking skills
- Good social communication and human affairs skills
- Problem-solving skill
- Mental and cognitive skills
- Moral skills
- Skill to make drawing, design and master plan
- Knowledge of other disciplines related to planning
- Knowledge of the socio-spatial and institutional structure of planning areas
- Skill to make good observation
- Foreign language skill
- In depth knowledge at planning discipline

55.2% of participants stated that “skill to use computer software and technologies” is the most important job skill for urban planners today. According to research findings, an urban planner must able to make 2-D drawings and 3-D modelling on computer; able to think in 3-D; able to create a Geographical Information System (GIS) database; able to manage and process GIS data; in short, planners must benefit best from computer software and technologies in their business.

46% of participants stated that an urban planner needs a “life-long learning skill” very much in the business life today. According to research findings, an urban planner must be farsighted and stimulating; have strong intuitions; in short, a planner must predict the future correctly based on realistic imaginations.

35.6% of participants stated that an urban planner needs a “skill to predict the future correctly” very much in the business life today. According to research findings, an urban planner must think very quick and practical; understand urban issues easily and carry out healthy evaluations on planning matters.

34.5% of participants stated that an urban planner needs a “skill to report and collect data” very much in the business life today. According to research findings, an urban planner must collect required data from true sources, able to discuss on the validity of the collected data and able to write an expert report.

33.3% of participants stated that an urban planner needs “team working, mediation and coordination skills” very much in the business life today. According to research findings, an urban planner must have a team spirit; able to bring different actors and institutions together for a certain aim; be open to sharing and cooperation; able to manage group pressure; use the time well; in short, a planner must able to lead crowds when necessary as a good negotiator and assembler.

32.2% of participants stated that an urban planner needs a “skill to understand the real needs and expectation of human and society” very much in the business life today. According to research findings, an urban planner must think very quick and practical; understand urban issues easily and carry out healthy evaluations on planning matters.

29.9% of participants stated that an urban planner needs “oratory, presenting and good talking skills” in the business life today. According to research findings, an urban planner must be able to present; be open to innovation; keep up to date; in short, a planner must move with the times and play on the new age.

28.7% of participants stated that an urban planner needs “problem-solving skill” in the business life today. According to research findings, an urban planner must be self-confident and decisive; be sensitive on details; be solution-oriented to finalize troubles; in short, a planner must find effective solutions to complex problems.

28.7% of participants stated that an urban planner needs a “good mental and cognitive skill” in the business life today. According to research findings, an urban planner must read and understand fast; able to think practical and life-wide; in short, a planner must make fast but true decisions developing theories into practice.

27.6% of participants stated that an urban planner needs some “moral skills” in the business life today. According to
research findings, an urban planner must have a patient, calm, tolerant, durable, fair and defender character; in short, a planner must be righteous, just and prudent.

24.1% of participants stated that an urban planner needs a “skill to make drawing, design and master plan” in the business life today. According to research findings, an urban planner must be able to design physical environment; able to produce analysis and synthesis maps and able to make a master plan for a settlement.

21.8% of participants stated that an urban planner needs “knowledge of other disciplines related to planning” in the business life today. According to research findings, an urban planner must know that planning is multidisciplinary; be aware of the type of contributions of other disciplines to the planning field and have general, technical and practical knowledge about other fields.

21.8% of participants stated that an urban planner needs “knowledge of the socio-spatial and institutional structure of cities” in the business life today. According to research findings, an urban planner must have comprehensive and specific information about planning areas; in short, a planner must able to understand and develop society-space relationships.

13.8% of participants stated that an urban planner needs a “skill to make good observation” in the business life today. According to research findings, an urban planner must able to determine the current situation in a place; able to read change making a process analysis and able to define social, environmental, spatial and economic facts.

13.8% of participants stated that an urban planner needs a “foreign language skill” in the business life today. According to research findings, an urban planner must be able to communicate verbally and in black and white with international actors; able to collect data from foreign resources; in short, a planner must able to move globally and make business abroad.

10.4% of participants stated that an urban planner needs “in depth knowledge at planning discipline” in the business life today. According to research findings, an urban planner must know planning ideas, approaches and practices very well and must be expert on a special sub-planning field.

IV. DISCUSSION

Fig. 1 shows the knowledge and skills of next generation urban planners. They are ranked according to their importance for the planning job.

The study revealed that the most important skill for the Turkish urban planners today is “the using of computer software and technologies”. The global information age, as affected other occupational groups, forces urban planners to manage data efficiently, to analyze data in a healthy way and to present data by using innovative technological tools and software. An urban planner has an authority to reshape places so they can study on space very well. Computer software processes quantitative and qualitative data in relation to space and helps planners to see clearly what kind of a physical environment will be created at the end of a planning process. Land is the most important resource in urban areas today so urban planners have to develop ideas, plans and projects connected to the spatial realities of cities with the help of computer software and technologies.

<table>
<thead>
<tr>
<th>No</th>
<th>Knowledge/ skill</th>
<th>Number of Participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Skill to use computer software and technologies</td>
<td>96</td>
<td>55.2%</td>
</tr>
<tr>
<td>2.</td>
<td>Life-long learning skill</td>
<td>80</td>
<td>46%</td>
</tr>
<tr>
<td>3.</td>
<td>Knowledge of legislation and regulation</td>
<td>64</td>
<td>36.8%</td>
</tr>
<tr>
<td>4.</td>
<td>Skill to analyse quantitative and qualitative data</td>
<td>64</td>
<td>36.8%</td>
</tr>
<tr>
<td>5.</td>
<td>Skill to predict the future correctly</td>
<td>62</td>
<td>35.6%</td>
</tr>
<tr>
<td>6.</td>
<td>Skill to report and collect data (make research)</td>
<td>60</td>
<td>34.5%</td>
</tr>
<tr>
<td>7.</td>
<td>Team working, mediation and coordination skills</td>
<td>58</td>
<td>33.3%</td>
</tr>
<tr>
<td>8.</td>
<td>Skill to understand the real needs and expectation of human and society</td>
<td>56</td>
<td>32.2%</td>
</tr>
<tr>
<td>9.</td>
<td>Skill to oratory, presenting and good talking</td>
<td>52</td>
<td>29.9%</td>
</tr>
<tr>
<td>10.</td>
<td>Good social communication and human affairs skills</td>
<td>50</td>
<td>28.7%</td>
</tr>
<tr>
<td>11.</td>
<td>Problem-solving skill</td>
<td>50</td>
<td>28.7%</td>
</tr>
<tr>
<td>12.</td>
<td>Mental and cognitive skills</td>
<td>50</td>
<td>28.7%</td>
</tr>
<tr>
<td>13.</td>
<td>Moral skills</td>
<td>48</td>
<td>27.6%</td>
</tr>
<tr>
<td>14.</td>
<td>Skill to make drawing, design and master plan</td>
<td>42</td>
<td>24.1%</td>
</tr>
<tr>
<td>15.</td>
<td>Knowledge of other disciplines related to planning</td>
<td>38</td>
<td>21.8%</td>
</tr>
<tr>
<td>16.</td>
<td>Knowledge of the socio-spatial and institutional structure of planning areas</td>
<td>38</td>
<td>21.8%</td>
</tr>
<tr>
<td>17.</td>
<td>Skill to make good observation</td>
<td>24</td>
<td>13.8%</td>
</tr>
<tr>
<td>18.</td>
<td>Foreign language skill</td>
<td>24</td>
<td>13.8%</td>
</tr>
<tr>
<td>19.</td>
<td>In depth knowledge at planning discipline</td>
<td>18</td>
<td>10.4%</td>
</tr>
</tbody>
</table>

Total Number of Research Participants: 174

Access to data became very easy thanks to internet world today. However, the actuality of data became a big problem in this age because of the fast-obsolescence character of information. An urban planner can only make true decisions with enough and actual data. Planners always try to reach new data. They always have to be open and ready to learn. Therefore, the second most important skill for next generation urban planners is “life-long learning” according to this research.
Just as happened in other fields, urban planners make decisions and display activity under a legal and institutional framework. This is an obstacle for them to be a law unto themselves. Planners have to be aware of legal factors which limit them in their business. They cannot apply illegal decisions and actions. Similarly, they have to obey the rules and procedures of institutions and companies in where they work. Otherwise, they cannot put their decision or action into practice. Therefore, the most real, true, valid and official knowledge for urban planners is “the knowledge of legislation and regulation”. This knowledge protects planners to go wrong, make mistakes and to take a legal punishment. Again, this knowledge helps them to defend their ideas strongly against decision and policy makers.

Having a skill to collect quantitative and qualitative data or having knowledge of legislation and regulation is not enough for urban planners. A planner has to understand, comprehend, analyze and interpret all obtained data at first in order to use it properly in planning policy and practice. The interpretation of data for planning practice is not independent from the knowledge of legislation and regulation in nature. Again, the interpretation of out of date and invalid data leads planners to wrong ways and evaluations. Computer software and technologies help planners to manage and organize data linking with space. Thus, the understanding and comprehension of urban planners about a planning matter increases significantly. Healthy data analysis and interpretation leads better planning decisions.

Planning is the art of shaping the future in a sense. One must know the history very well to predict the future correctly. The history works like an early warning system. It means one who knows the cause and effect of past events can foresee what may happen in the future and how future events may be resulted. An urban planner has to read history intensively to strengthen his/her intuitions. Imagination is important as much as knowing the past. An imaginative and farsighted urban planner can change the fortune of a settlement drawing a realistic new future vision to that settlement. Computer software and technologies are useful tools to make imaginations real on the paper or on the screen. Urban planners can persuade decision makers easily showing them impressive 2-D drawings or 3-D modelling. Planners have to read very much; have to follow innovations and have to be open to change. Knowledge of legislation can be an obstacle in front of dreams and imaginations. Therefore, an urban planner must have an idea about what kind of legal framework
may help him/her to make dreams come true. Current laws and regulations may change due to changing conditions of a society. Next generation urban planners have to take steps in the direction of revising good-for-nothing legislation and regulation regarding urbanization and property development to promote positive development.

Planners need too much data to shape the future of a place in a positive way and to solve complex urban problems, today. Misinformation and data manipulation is very common in the world of internet. Accessing data can sometimes be very time consuming and costly. However, imperfect and inadequate data may lead planners to wrong planning decisions. In short, the nature of information has changed significantly today. In such an environment, an urban planner has to be equipped with knowledge and fifteen basic skills in the global information age. The most important ones with the highest score are “skill to use computer software and technologies”, “life-long learning skill”, “knowledge of legislation and regulation”, “skill to analyze quantitative and qualitative data”, “skill to predict the future correctly” and “reporting and collecting data skill”. In fact, all knowledge and skill which are defined in this research are associated with each other significantly so all of them should be seen very important by next generation urban planners.

The study revealed that skills related to social sciences (for example team working, mediation, coordination, oratory, presenting, observation, communication and so on) are very important for the success of next generation urban planners. The finding shows that planning is a multidisciplinary activity and it is hugely associated with social sciences.

Moral skills are important as much as mental and cognitive skills for today’s urban planners according to the finding of the research. Planning is the art of affecting real life. Urban planners make decisions about people’s life style and properties so their sense of justice and equity has to be developed significantly. Mind help urban planners to understand which planning decision affect different community groups in which ways in a city. However, morality helps urban planners to take action to defend and maintain the rights of poor and vulnerable communities in a city.

V. CONCLUSIONS

This study aims to explore knowledge and skills which are very necessary for urban planners who want to be successful in their business life in the global information age. The curricula of city and regional planning departments, the content and context of planning courses and teaching methods may be revised according to the findings of this research. The study shows that the traditional (positivist) planning approach has already started to give place to innovative (anti-positivist) planning approaches in the Turkish Planning System. Therefore, next-generation urban planners who seek success and want to carve out a niche for them in business life have to equip themselves with innovative skills.

Findings show that urban planners should own four basic knowledge and fifteen basic skills in the global information age. The most important ones with the highest score are “skill to use computer software and technologies”, “life-long learning skill”, “knowledge of legislation and regulation”, “skill to analyze quantitative and qualitative data”, “skill to predict the future correctly” and “reporting and collecting data skill”. In fact, all knowledge and skill which are defined in this research are associated with each other significantly so all of them are very important for next generation urban planners.

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References

Fatih Eren was born in Eskişehir, Turkey on 18 August 1981. He graduated from Selcuk University, Department of City and Regional Planning (Hons) in 2003. Right after the graduation, he started to work as a “research assistant” in the same department. During the assistantship work, he took charge as a “researcher” in several research and application projects which were funded by Turkey’s important public institutions. Meanwhile, he got his MSc degree with a thesis on public and private partnerships in urban regenerations. He won a governmental scholarship from Turkish Council of Higher Education (YÖK) in 2007 and his PhD education then started in the Department of Town and Regional Planning at the University of Sheffield, UK. After the completion of the PhD, which is about the internationalization process of Istanbul’s property market, he turned back to Selcuk University, Department of City and Regional Planning as a “lecturer” at the beginning of 2013. His profession and research interest is on urban and regional planning, property markets, property development and investment so he is now teaching and conducting research on these areas at this university. In addition to academic activities, he regularly provide expert reports to the Republic of Turkey Ministry of Justice. Since 2010, he is one of the directors of “Centre for Strategic Research and Analysis (CESRAN International)”, which is a UK-based international think-tank.