

ORGANIZING URBAN PLANNING DOCTORAL EDUCATION IN A GLOBAL CONTEXT

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Abstract. Starting in 2005, Romanian education started its true reform in a globalizing context. Universities were assessed based on their performance; as a result, the doctoral education, meant to provide for the future trainers at Bachelor’s and Master’s levels, had to re-focus on research. The process was slower in the case of urban planning, due to the fact that publications and citations are not characteristic research outputs of the field. The paper discusses the process of creating the first Romanian doctoral school of urban planning starting from the hypothesis that its new focus required a positivist systemic understanding of urban planning research. The results show that the new approach was productive and well received by the doctoral students, and has a beneficial influence on urban planning in general, increasing its international visibility.

Key words: doctoral education, globalization, positivist approach, reform of education, systemic analysis, research.

1. Introduction

Although the laws tend to distinguish between basic research (focused on the scientific advancement) and applied or industrial research / technological or experimental development (focused on developing or improving products and services in order to valorize them on specific markets), most people consider that research answers three basic needs,

for scientific progress, economic development and societal challenges (Petrișor, 2016)a. Although the dictionaries do not make a clear difference, research and studies are different. In more details, studies use existing methods to check an existing theory in a new area or using a new sample. Their scientific impact is limited, funding less likely to obtain, and results hard to publish. The research

embeds an innovation element (Meheus, 1999), methodological or theoretical, has a higher impact, can obtain funding and results are easier to publish (Petrișor, 2014). Studies can be part of a research aimed to check a theory when the research process is organized on more directions, each of which is a study. The common perception of research is described by words including: data, figures, statistics, publications, evaluation, objectiveness, science and logic (Ryan, 2006). In a broader context, a 2011 article states that *“in developing countries, research is often concerned with investigating or addressing local or national issues and problems”* (Al-Suqri and Lillard, 2011).

The positivist approach, which can be characterized as framing the research process in the sequence observations – hypothesis – experiment – data analysis – validation of hypotheses seems to have extended its influence from sciences to social sciences and humanities (Ryan, 2006). Positivism appeared in the illuminist period of the Renaissance (Farr, 2012; Ryan, 2006); the scientific progress during this period is often explained by the positivist approach of causal analysis (Farr, 2012). This is attributed to Comte, the founder of sociology, who starts to apply the methods of experimental biology to human populations (Farr, 2012; Ryan, 2006) in order to obtain scientific information in an objective manner (Farr, 2012). The causal analysis makes a difference between the teleological question – ‘Why?’ and the mechanist one – ‘How?’ (Louca *et al.*, 2004). ‘Why?’ is answered by a condition hypotheses phrased as “A involves B” (Caldwell, 1980), tested using a hypothetical-deductive model where new scientific statements are validated by deriving verifiable knowledge and comparing it with the observations

(Meheus, 1999). As a consequence, positivists consider that the complete understanding of phenomena must rely only on observations and experiments (Ryan, 2006). The privileged status of some fields, mentioned above, started vivid criticisms, especially after 1950, when the positivist approach started its domination of natural and social sciences (Caldwell, 1980), and, consequently, the acceptance (and publication) of results was conditioned by using the hypothesis – experiment – (quantitative) analyses. The first were related to the very genesis of the positivist method. Social scientists argued that the uniqueness of individuals questions the results obtained from a sample to the entire population because it assumes that the sample is uniform (Farr, 2012). Moreover, the method can be hardly applied to non-scientific areas; for example, science and theology are two fundamental elements of the knowledge effort, yet different in terms of language and methods (Boldur-Lătescu, 2012).

The focus on disseminating results – ‘publish or perish’ – seems to be a direct consequence of positivism (Antunes, 2004); in addition to it, the value of research and researchers tends to be measured more and more by citations (Ha *et al.*, 2006; Lawrence, 2007; Selvarajoo and Robert, 2013; Björk, 2015; Kangas and Hujala, 2015; Pontille and Tomy, 2015; Petrișor 2016b), and, recently, by their societal value (Liu *et al.*, 2013). In addition to the positivist influence, globalization (Nerad, 2006) and the wide spread of inter- and trans-disciplinary research approaches had set a significant fingerprint on all disciplines, including the social sciences and humanities (Petrișor, 2013), especially in times characterized by sudden changes, political fragmentation, fast circulation of information and conflicting values (Booher and Innes, 2002; Petrișor and Mitrea, 2016).

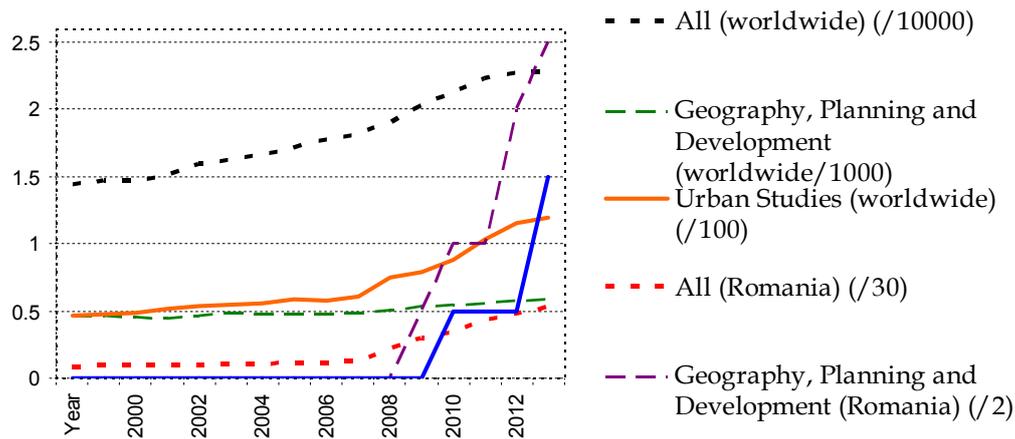


Fig. 1. Growth of the scientific output for particular fields worldwide and in Romania, based on SCImago data.

A particular example is provided by Romania. Prior to joining the European Union, the research and education authorities carried out in-depth analyses aimed at estimating the position of Romanian science in the global context (Repanovici, 2011). The results showed that Romanian scientists working in Romania had little visibility in the mainstream literature compared to foreign scientists working in the same field and even to their peers working abroad. As a result, the research strategies and policies were aimed at increasing the visibility of Romanian science, resulting into an overall increase of the scientific production more than six times during 2008-2013 (Pajić 2015; Petrișor and Mitrea, 2016). However, the growth was uneven, and the increase was even more spectacular in humanities, where articles are not necessarily the main output (Huang & Chang, 2008) and they often cite non-journal sources (Archambault *et al.*, 2006). Fig. 1 shows the comparative situation of several planning-related disciplines based on SCImago data; the graph shows that the growth of Romanian scientific output was more spectacular than the international one, especially for planning-related disciplines.

The re-integration of Romanian education and science in the global context is an irreversible process. Hypothesizing that the inherent changes in doctoral education can be accommodated only by building everything upon the positivist principles and using an approach based on a systemic understanding of research, and applying the 'publish or perish' principle, the study aimed to apply the systemic analysis in order to look at the case study of creating the first Romanian doctoral school of urban planning, provided the new educational challenges of globalization.

2. Data and methods

The doctoral school of urban planning was created separating the only Romanian doctoral school of architecture and urban planning, *Space - Image - Text - Territory*, functioning at "Ion Mincu" University of Architecture and Urban Planning, in two doctoral schools, one dedicated to architecture and another to urban planning. The systemic analysis, consisting of looking at the relationship between the interrelated elements of a system in tight relationship to its functions (Hardré, 2007), was used to compare the two schools. Among others, the systemic analysis requires (a)

representing the system, (b) defining stakeholders, (c) identify their roles, (d) design the procedures, & (e) identify the relationships with the sub-systems and integrating systems (Keating *et al.*, 2001). In addition to it, all doctoral students (with a special call addressed to those with a longer experience, able to compare the two schools, were asked to fill in an online questionnaire asking whether the new school fits better their needs and soliciting respondents to rank the influence (positive or negative) and importance of the changes made during the creation of the new school: (a) the rules for passing from one year of studies to the next one, (b) the system of credits assigned to different activities (e.g., attending conferences, delivering presentation, writing articles, attending courses etc.), (c) the credit system associated to courses (grouped in required and optional modules, in two categories - "formation in urban planning" and "research"), (d) the guidelines for writing the doctoral thesis, (e) the option for a monographic or research thesis, (f) the criteria used to evaluate the doctoral theses, (g) the curricular offer, (h) the presence of courses taught by people from outside the university, (i) the focus on research and dissemination, (j) the organization of a conference of the Doctoral School, & (k) launching a journal of the Doctoral School.

Data were processed by computing scores for each element, multiplying its influence by its importance. In this process, the scale was modified; the original questionnaire used a Likert scale (Likert, 1932). For measuring the influence, the new scale used negative values (-2 and -1) for a perceived negative influence indicated by total disagreement, respectively disagreement

with the item, 0 for neutrality or no answer, and positive values (1 and 2) for a perceived positive influence indicated by agreement, respectively total agreement. For measuring the importance, the Likert scale values ranging from 1 - not at all important to 5 - very important were used as multiplying coefficients in computing the total scores of each item.

3. Results and discussion

The questionnaire designated to assess the perception of changes by the doctoral students was answered by 6 of the 28 students, but actually answers were not expected from the beginners (6), students in terminal years (10), those who interrupted their studies or do not attend them regularly (2), therefore the response rate is satisfactory.

The results indicated that all students who answered the questionnaire consider that the new school better fitted to their needs.

When looking at the perception of changes, their influence was perceived as positive; a single responder considered the curricular offer inferior, but this particular opinion was against the general trend (as indicated by the other respondents). Apart from this exception, all other respondents considered that changes were very good or good or had a neutral attitude (Fig. 2).

When respondents were asked to rank the importance, all changes were seen as very important or important, or the attitude was neutral (Fig. 3).

The final step was ranking the elements using the weighted scores (rescaled influence times the importance of each element).

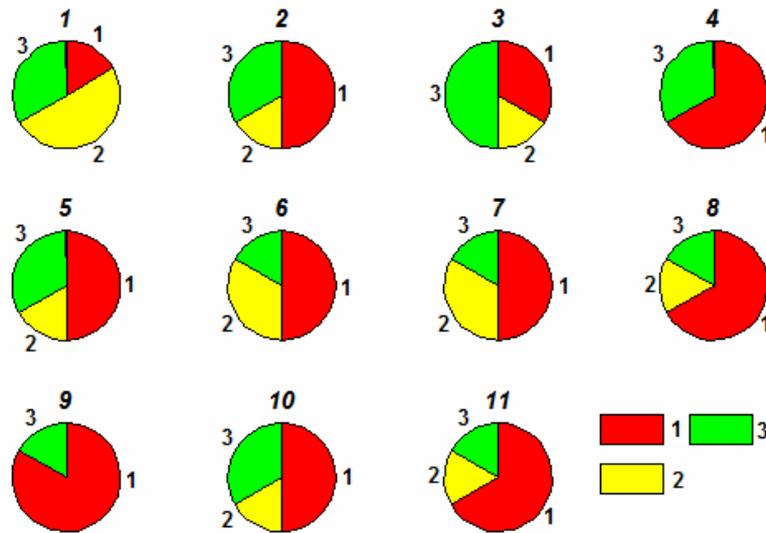


Fig. 2. Perception of the influence of the main differences between the two schools based on the answers to the questionnaire addressed to doctoral students. The number above each chart indicate the element: (1) the rules for passing from one year of studies to the next one, (2) the system of credits for different activities, (3) the credit system for courses, (4) the guidelines for writing the doctoral thesis, (5) the option for a monographic or research thesis, (6) the criteria used to evaluate the doctoral theses, (7) the curricular offer, (8) the courses taught by outside people, (9) the focus on research and dissemination, (10) the Doctoral School conference, & (11) the Doctoral School journal. Answers use a Likert scale with levels 5 and 4 indicating a negative perception, 3 corresponding to a neutral or lacking answer, and first two levels indicating a positive perception.

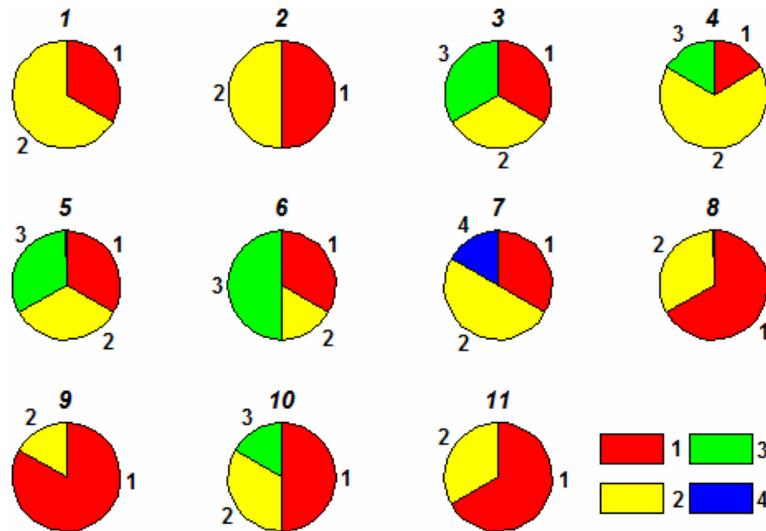


Fig. 3. Perception of the importance of the main differences between the two schools based on the answers to the questionnaire addressed to doctoral students. The number above each chart indicate the element: (1) the rules for passing from one year of studies to the next one, (2) the system of credits for different activities, (3) the credit system for courses, (4) the guidelines for writing the doctoral thesis, (5) the option for a monographic or research thesis, (6) the criteria used to evaluate the doctoral theses, (7) the curricular offer, (8) the courses taught by outside people, (9) the focus on research and dissemination, (10) the Doctoral School conference, & (11) the Doctoral School journal. Answers use a Likert scale ranging from 5 – very low important to 1 – very important, with level 3 corresponding to a neutral or lacking answer.

The final results, presented in Fig. 4, indicate that the most appreciated elements were the courses taught by outsiders, the focus on research, the

new journal and the credit system. Overall, these findings confirm that the new school built upon the principles of positivism and oriented towards

research and dissemination of results, was not a utopian construct, but actually answered the need of its students and their aspirations for the future career.

The position of urban planning varies across different countries. The European-Union based SCImago classification based on Scopus data lists “planning” and “urban studies” under the “social sciences” and “architecture” under “engineering”, United-States based Thomson-Reuters classification lists “planning” and “urban studies” under the “social sciences” and “architecture” under “arts and humanities”, and the Romanian classification lists all of them under “humanities”. The same differences exist with respect to the methods of urban planning, most often imported from other disciplines (Lacaze, 1990). From a systemic viewpoint, the uncertain position of the field results directly into the lack of clear criteria or improper criteria for measuring the scientific production and its impact.

These problems became evident in 2011, when the Romanian government decided to rank (and fund accordingly) the Romanian universities based on their research outputs measured by the number of articles in the mainstream literature and their citations. The assessment exercise carried out within “Ion Mincu” University of Architecture and Urban Planning revealed the fact that the Faculty of Urban Planning was better positioned than the Faculty of Architecture in terms of the research outputs (articles and citations). As a consequence and in accordance with the overall trends, revealed by the national minimal required standards used for

the promotion in faculty and research ranking, for accessing the national research grant competitions and for accessing national funding designated for education institutions, the Faculty of Urban Planning recognized the fact that urban planning research is ready to take the challenges of globalization and able to compete in the European research ecosystem (Florescu and Mitrea, 2015). Moreover, the Faculty decided to become more competitive in research by creating first the Center of Excellence in Planning in 2013, serving as a pivot of applied research, aimed at promoting urban excellence, developing international cooperation, and providing advanced education, and later its own Doctoral School, in 2015.

From a systemic viewpoint, the Doctoral School of Urban Planning was conceived as an open system, related to the Faculty of Urban Planning and University, but also to other institutions, including foreign ones. Its staff consists of the following types of people: (a) doctoral advisors, (b) members of the advisory committee, (c) faculty members involved in teaching, (d) doctoral students, and (e) researchers. In addition to them, for the purpose of serving the two purposes (learning and research) a dissemination ecosystem, consisting of three publications and a conference, was designed based on the following principles: (a) interface with the outer environment, for the promotion of research results, (b) incremented ranking of publications, to ensure a gradual learning of publishing basics, & (c) systemic relationship with the University, Faculty, and whole research and education ecosystem. The schematics of the doctoral school are presented in Fig. 5.

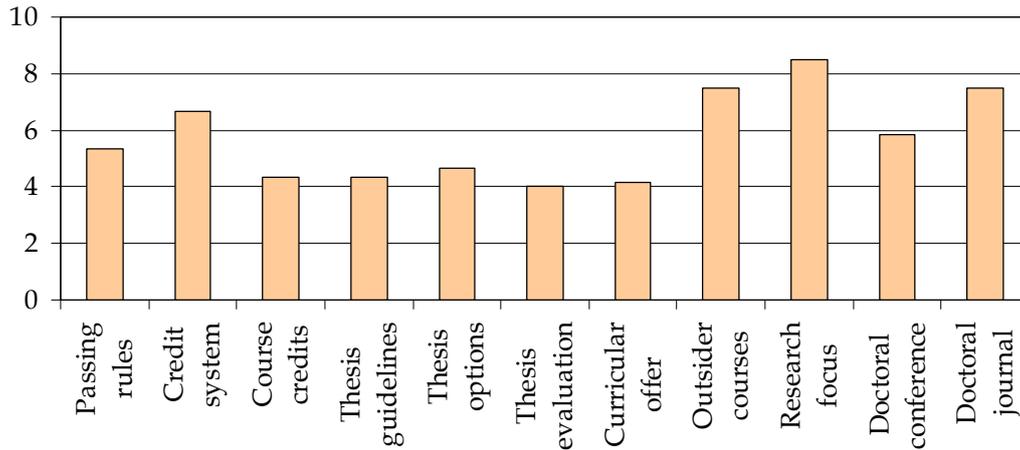


Fig. 4. Perception of the differences between the two schools based on the answers to the questionnaire addressed to doctoral students, ranking the influence and importance of changes.

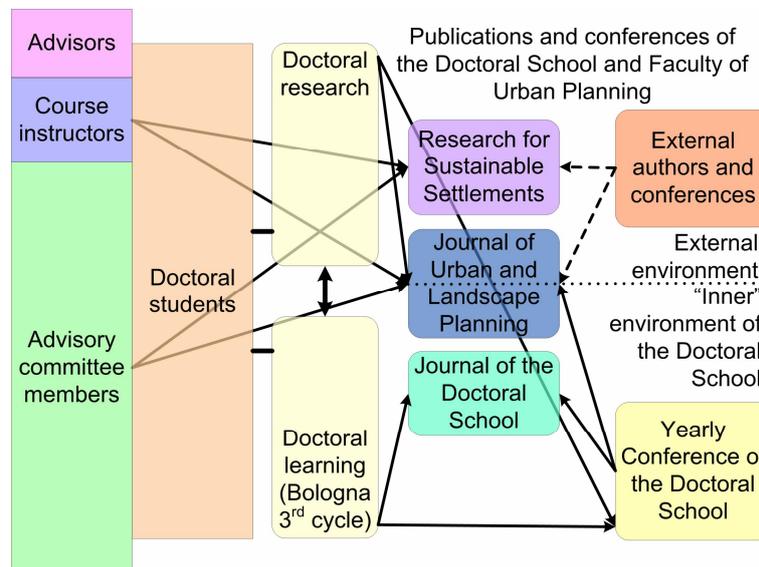


Fig. 5. Schematics of the research ecosystem of the Doctoral School of Urban Planning at “Ion Mincu” University of Architecture and Urban Planning in Bucharest, Romania.

The structure of the Doctoral School results from its goal of becoming a school of excellence through advanced research, resulting into three aims: (a) sustainability in terms of funding, achieved by creating a team able to absorb research funds and use them for its own research; (b) integrate urban planning in the publishing and conference landscape, & (c) increase the visibility of research by attracting recognized specialists and presence of the research developed within the school in the mainstream literature and

conferences. As a part of this strategy, the Doctoral School aims to increase the number of foreign doctoral advisors and members of advisory committees in 2016.

The very first outputs of this organizational model were clearer rules and procedures and a better focus on research. For example, the outputs of candidates in the Doctoral School of Architecture are typically monographic theses, and a very limited scientific production (conference presentations

and articles are merely recommended than required). The Doctoral School of Urban Planning requires students to deliver presentations in its internal conference and publish in its journal in the beginning of their research, and then incrementally move to other national and international conferences and publish in other journals, with higher rankings. A credit system rewards those disseminating the results proportional to the international visibility of the dissemination means (e.g., more credits are given for presenting papers in international conferences or for publishing articles in the mainstream publications etc.); this requirement is expected to determine an increase of the scientific output, especially with respect to journal articles and conference proceedings. Consequently, the students of the Doctoral School of Urban Planning are allowed and even encouraged to develop research theses, consisting of a collection of articles linked together by a similar theoretical or methodological background, in addition to the traditional monographs. This new provision created a better connection with dissemination, as the students were able to be credited more times for the same output: a study can be developed in a progress report (and credited accordingly), presented in a conference (with its corresponding credits), get published in a journal (with afferent credits) and finally become part of the thesis.

In addition to promoting the school through the students' requirement to attend conferences and publish in journals that are not organized or edited by the Doctoral School or University, the presence of foreign and outer specialists increases the visibility and

exposure of the Doctoral School of Urban Planning compared to its Architecture peer. This is achieved through the fact that its staff includes foreign professors and people from other Romanian universities or research institutes who teach courses, co-advise doctoral students, or serve as members of the advisory committees in a permanent or long-term setting.

4. Conclusion

From a practical standpoint, this study might serve as a 'learning tool' for the process of creating a doctoral school in a globalizing context. The main lesson learnt is that in order to be efficient and answer the actual needs of students the school must look systemically at the 'bigger picture' and see research in its positivist understanding, regardless of the national trends. The approach presented in this study has a national impact, increasing the overall scientific output and the visibility of lesser advantaged domains.

Creating a Doctoral School requires a positivist and systemic understanding of the entire research process, in correlation with its learning role in the teaching ecosystem. In order to be visible, the School must embed a 'learning' set of conferences and publication, and connection with the outer world. In addition to these, a scientometric approach, aimed at measuring and monitoring the scientific output, is a necessary requirement for achieving the goal.

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