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Quality in Geographical Research? Territorial Planning Students' Online Research Methods

Oana-Ramona Ilovan^{a*}, Maria Eliza Dulamă^b, Cristian Nicolae Boțan^c,
Ioana Magdaș^d, Valeriu Mircea Vana^e

* Corresponding author: Oana-Ramona Ilovan, ilovanoana@yahoo.com

^aBabeș-Bolyai University, Faculty of Geography, 5-7 Clinicilor Street, 400006, Cluj-Napoca, Romania, ilovanoana@yahoo.com

^bBabeș-Bolyai University, Faculty of Psychology and Sciences of Education, 7 Sindicatelor Street, 400029, Cluj-Napoca, Romania, dulama@upcmil.ro

^cBabeș-Bolyai University, Faculty of Geography, 5-7 Clinicilor Street, 400006, Cluj-Napoca, Romania, cbotan@geografie.ubbcluj.ro

^dBabeș-Bolyai University, Faculty of Psychology and Sciences of Education, 7 Sindicatelor Street, 400029, Cluj-Napoca, Romania, magdas_ioana@yahoo.com

^eBabeș-Bolyai University, Faculty of Geography, 5-7 Clinicilor Street, 400006, Cluj-Napoca, Romania, valeriu_mircea@yahoo.com

Abstract

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We investigated students' literature search options when conducting research in general and online research in particular, and the sample was represented by university students in their 3rd year at the specialization of Territorial Planning and 2nd year M.Sc. students at Planning and Regional Development, in the Faculty of Geography, Babeș-Bolyai University, in Cluj-Napoca, Romania. These students had to conduct research on territorial planning and find solutions for territorial development in order to write their graduation paper. We identified the strengths and weaknesses of their online research methods, the causes of students' difficulties when conducting online research, and we proposed solutions for either ensuring or increasing the quality of their research results. The most significant conclusions were that, although students searched through diverse and trustful resources (e.g. websites belonging to institutions, organisations, researchers, etc.) and used searching and refining procedures, they still had problems when writing their graduation papers. The problems we identified enabled us to propose introducing a training course for writing scientific papers and graduation papers (training students through writing exercises).

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Keywords: Territorial planning; university education; graduation papers; online literature search; quality research.

1. Introduction

Scientists defined research literature review and underlined its producers (i.e. researchers, scholars, and practitioners) (Fink, 2014, p. 3), while pointing out the importance of searching for bibliography and the benefits of quality literature search from theoretical and practical perspectives (Bell, & Waters, 2005, p. 99; Blaxter, Hughes, & Tight, 2010, p. 100).

Literature search supposes using varied media (printed and online sources). Moreover, a literature search targets both primary (i.e. the data as the product of research) and secondary data (i.e. data from governmental agencies, organizations, companies, etc.) (Martin, & Pavlovskaya, 2010, p. 173; Montello, 2012; Ciascai, 2014, p. 480) and researchers argued that one needed to take into account a strategy of literature search including a series of phases (Notess, 2006, p. 1; Healey, & Healey, 2010, pp. 17-34; Fink, 2014, pp. 4-5). They concluded that it was crucial for the quality of the research to undergo all search phases, alongside the advantages provided by the reviewers' experience and skills, and the quantity and quality of the selected papers.

In addition, researchers argued there was an important relationship between the quality of literature search and the quality of the written paper (characterized by originality and the quality elaboration process) (Healey, & Healey, 2010, p. 16; Oliver, 2012, p. 9).

Recent research on identifying the online literature search skills and practices characteristic of Geography university students (Ilovan, Dulamă, Ciascai, & Maroși, 2015) showed students' difficulties when writing scientific Geography papers required during their studies, as defined by Dulamă (2008, p. 141), and proposed solutions for improving their activity and the quality of their papers. In this context of improving the quality of students' results, Dulamă & Ilovan (2016) argued for the use of feedforward as a powerful tool in geographical university education.

Taking into account the above-mentioned research results, we investigated students' search options when conducting online research on territorial planning and finding solutions for territorial development in order to write their graduation paper. We identified the strengths and weaknesses of their online search methods, the causes of students' difficulties when conducting research in general and online research in particular, and we proposed solutions for either ensuring or increasing the quality of their research results.

2. Problem statement

Before starting our research, we noticed that students had to cope with some difficulties when writing their graduation papers and the respective difficulties had two sources: (1) they were generated by the environment students worked in and (2) they were generated by students themselves.

The first type of problems was related to: the existence of just a few printed Romanian territorial planning scientific journals at the faculty library and some had been already borrowed when they wanted to access them; the existence of no printed foreign territorial planning scientific journals at the faculty library so that they could not browse them and become acquainted to their contents during their years of study; the fact that they received no suggestions from their supervisors related to possible

references; the fact that students had no idea how to write a graduation paper. Therefore, the existence of online sources could be a solution to such problems and we wanted to see to what extent students knew how to use the virtual environment in order to realize a literature search.

The second type of problems was generated by the students: they did not know how to search for relevant bibliography; they ignored foreign literature in the field; they often read general information sites and just a few specialty sites, usually replacing printed or online scientific works, and they lacked creativity because they copied entirely models and structures of previous graduation papers. Such models reduced their inventiveness. And, equally significant was that they started reading and writing for their graduation papers very late, and this generally led to low quality papers.

3. Research questions

We wanted to find answers to the following questions: What type of materials did our students search online for when writing their graduation paper? Where did they search for them? How did they search for them?

4. Purpose of the study

Starting from the answers to the above-mentioned research questions, our aim was to identify the strengths and weaknesses of our students' online research options when writing their graduation paper, the causes of students' difficulties when conducting online research, and to propose solutions for either ensuring or increasing the quality of their research results.

5. Research methods

5.1. Participants

The research we realized during the 2015-2016 academic year focused on analyzing 44 students' answers (the sample was represented by university students in their 3rd year at the specialization of Territorial Planning and 2nd year M.Sc. students at Planning and Regional Development, in the Faculty of Geography, Babeş-Bolyai University, in Cluj-Napoca, Romania). 70.58% of the Bachelor's level students completed the questionnaire, and 58.82% of the Master's level ones, meaning that 64.7% (44 students) of the group of students from the two levels represented our respondents. This sample size was not correlated to the total student population in the Faculty of Geography and limiting our research to one faculty influenced our results, while data generalization was not possible.

5.2. Procedure, data collection and research material

We collected the necessary data through a questionnaire survey. We realized the questionnaire using the Google Forms application in Google Drive and then we sent it through e-mail to 68 students, representing all students who enrolled for the Bachelor's specialization in Territorial Planning (34

students) and for the M.Sc. specialization in Planning and Regional Development (34 students). They filled in the questionnaire on a voluntary basis. The questionnaire included 22 items on what type of online materials our students searched for when writing their graduation paper, on where and how they searched for those materials.

We also researched the curricula of the two educational programs (Bachelor's and M.Sc.'s) for courses training students in writing scientific papers and graduation papers.

6. Findings

6.1. Analysis of the respondents' answers

We noticed that the type of online materials students searched for was according to their specialization and to the type of research they conducted (i.e. intensive research based on case studies). They searched for academic sources first and then they used intensively materials from public authorities, when documenting their case studies. For instance, for writing a regular research paper in the field of territorial planning, students searched (Table 1) for identic or similar websites as in the case when they tried to establish the title of and structure their graduation paper (Table 2).

We noticed that the sources available online from public authorities (that could offer them information especially for their case studies) were on the second place after the academic sources (Table 1).

Table 1. The places/persons where students searched for papers and other materials (selection of the top ranked answers) when writing a research paper in the field of territorial planning.

Places/persons	%
The library of the Faculty of Geography	88.6
Local, county, and national public authorities	70.5
The professors at the Faculty of Geography	63.6
The Central University Library	54.5
Urbanism offices	50
Books and other specialty studies	47.7

Nevertheless, the sources from public authorities had a smaller role at the beginning of students search for information, because first students preferred conducting literature search in the library or asking their professors (Table 2).

Table 2. The places/persons where students searched for papers and other materials (selection of the top ranked answers) when structuring my graduation paper.

Bibliographical sources	%
The professors at the Faculty of Geography	72.7
Specialty websites	63.6
The library of the Faculty of Geography	59.1
The Central University Library	27.3
Books and other specialty studies	27.3
Local, county, and national public authorities	27.3
Urbanism offices	15.9

Before searching for bibliographical sources on the web, for a topic about territorial planning, students realised a series of actions and those showed which their usual approach was to researching the literature in the field (Table 3). Unfortunately, students rarely used printed Geography dictionaries (the online good ones were not available in Romanian) and preferred the online general ones and this was a weakness for their research strategy.

Table 3. Students' actions before searching for bibliographical sources on the web, for a topic about territorial planning (selection of the top ranked answers).

Students' actions	%
They established a list of concepts related to the subject	68.2
They identified the key words in the title	54.5
They searched for definitions of the key words from the title in an online dictionary of the Romanian language	25
They had another approach (not mentioned)	18.2
They searched for definitions of the key words from the title in printed Geography dictionaries	13.6
They searched for definitions of the key words from the title in encyclopedic dictionaries	13.6

In order to find the most relevant, up to date and trustful bibliographical web sources for their graduation paper in the field of territorial planning, students used very much and much the sites of public and private institutions specialised in their field of interest, well known books in the field, and governmental websites. Having the same purpose, when searching the Internet, they first looked for materials in Romanian (88.6%). Only a few students (9.1%) declared that they searched for English language sources first. An explanation could be that the majority of their case studies were from Romania. Nevertheless, the fact that some do not master the specialty language in English could be another explanation. This was supported by the finding that a third of our respondents said that they used always or frequently Google translate to be able to understand text in English, and thus also running the risk of using wrong translations, invented terms and concepts, etc.

When searching the Internet, they also looked for the most relevant terms from their specific research topic (29.5%), for key words in the field of territorial planning (25%), for key words from the title of their specific research topic (22.7%), and for the title of their specific research topic (20.5%). These were their top-ranked answers and one could see that there were not significant differences between students' preferences and actions when searching for key words.

After the listing of the web sources with contents in the field of territorial planning, the majority of students (75%) opened and browsed them in a selective manner. They used the following criteria: the language of the material (72.1%), the document type (.doc, .pdf, .ppt) (51.2%), and the contents of the abstract (30.2%).

Only 10 students out of the 44 respondents used very much (2 respondents) and much (8 respondents) scientific journals and that could explain some students' low quality elaboration of their graduation papers, because they were little exposed to quality, peer-reviewed materials, and to quality empirical research. This situation requires professors' intervention for improving students' access to scientific journals, especially the online ones.

In addition, 18% of the students declared that they used only between 6 and 10 bibliographical references for their graduation paper which was seriously decreasing the quality of their writing. Still, they were aware of and used diverse strategies when the search engine found just a few bibliographical

sources, for a topic about territorial planning (Table 4). In this context, students' actions also showed that they collaborated very little with their colleagues (only 9.1%).

Table 4. Students' actions when the search engine found just a few bibliographical sources, for a topic about territorial planning.

Students' actions	%
They established new key words for their search	54.5
They asked their coordinator professor	54.5
They enlarged their research topic	27.3
They enlarged the geographical area for their topic	20.5
They asked other specialty professors	9.1
They asked their colleagues	9.1
They asked other specialists	4.5

6.2. Analysis of the curricula

Taking into account the results of the questionnaire, we also researched the present curricula of the two education programs for courses who trained students in conducting research (either in general, or for their graduation paper) and we noticed that, for the Bachelor's level, during the three years of study, respondents had two courses training them for research: *Quantitative methods in planning* (in the first year), and *Social investigation techniques* (in the second year). In the second semester of both these years, they had two periods for field work (5 and 10 days), where professors supervised their field activity. In their third year of study, students also had a course dedicated to the data collection for their graduation paper (this was in the form of on demand meetings for advice with the coordinator of the respective paper).

For the Master's level, students had a course on the *Technology of spatial planning measures projects* that could give them information on how to research and write their own projects for the graduation paper (although not all graduation papers focus on such projects, students approaching also some other topics) and a period for *Research practice for elaborating the graduation paper* (students working under the supervision of their coordinators).

Taking into account the problems students had to cope with while writing their graduation papers, we concluded that the present courses in the curricula were not enough for training them to write quality graduation papers.

7. Conclusions

The most significant conclusions were that, although students searched through diverse and trustful resources (e.g. websites belonging to institutions, organisations, researchers, etc.) and used searching and refining procedures, they still had problems when writing their graduation papers. The problems we identified enabled us to propose introducing a training course for writing scientific papers and graduation papers (training students through writing exercises). In addition, this course should also focus on the online search of the extant specialty literature especially because this research concerning students' Internet searching options showed that students' preferred such sources to the printed ones or to professors' advice. We also advice professors to learn more about their students' research knowledge

and skills in the virtual environment in order to be able to improve these knowledge and skills when working with their students.

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