Analysis of the Online Survey Methodology: A Systematic Literature Review

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The Objective

The SLR method was performed to figure out all existing studies in Online Survey Method, their limitations and open issues for future studies. This study looked for answers to four research questions:

- *RQ1. How to develop an online survey system with a high rate of assertiveness and quality of the collected data?*
- *RQ2. How to obtain a representative sample of the population in an online survey?*
- *RQ3. How to motivate respondents to take an online survey?*
- *RQ4. How to associate the available secondary data to reduce the participation of respondents?*

The Protocol

- Automatic Search and Selection - Due to time constraints we selected six data sources for this study, namely, The IEEE Xplore, the ACM Digital Library, Science Direct, Springer Link, arxiv by Cornell University and Semantic Scholar.
- Identification of Inclusion and Exclusion Criteria - We used a date cut of criteria of studies published between 2010 and 2020, among other criteria that served as a filter for the results from the search step;
- Critical Evaluation - The results were analyzed sequentially in increasing depth analysis at each step. We used the candidate studies that reached the final step to extract data for synthesis and statistical analysis

General Results

The proposed research process resulted in 36 primary studies (23 were journal, 11 conferences and 2 workshops). Most of them was from the United States, corresponding to 13 articles (36.1%). Followed by China, with 5 articles (13.9%) and in the third place, Germany with 4 articles (11.1%). UK and Switzerland present 2 articles and the other sites, only 1 study each.

Source	***Search Results***	***Potentially Relevant***	***Relevant Studies***	***Search Efficacy***
ACM	11	5	1	9,09%
IEE	464	16	6	1,29%
SCIENCE DIRECT	23	16	8	34,78%
SPRINGER	178	8	2	1,12%
ARXIV	61	20	11	18,03%
SEMANTIC SCHOLAR	19	19	8	42,11%
TOTAL	756	84	36	

Conclusion

As a conclusion to systematic review of the literature, we can emphasize that although the online research methodology has become popular, there are still several gaps and inconclusive responses. What demonstrates that there is still a long journey to validate theses collected data differently from what already exists in application protocols/techniques and validation on face-to-face survey, it is necessary that these standards be developed and discussed in the academic environment for the virtual environment. In other words, it is necessary to promote a digital transformation in traditional survey’s institutes.