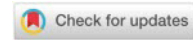


MIX METHODS IN POLITICAL SCIENCES

Vera Arezina^{1*}

¹University of Belgrade, Faculty of Political Sciences, Serbia,
e-mail: vera.arezina@fpn.bg.ac.rs



Abstract: This publication highlights the mix methods in political sciences methodology. Mix methods are defined as `mixing` both qualitative and quantitative methods, or their elements or integration of some elements. Qualitative methods are interpretive and refers to interviews, focus groups, qualitative data analysis and other methods in order to determine the categories, patterns and, mostly important, the participant`s meanings. Quantitative methods are survey and experiment. Survey is used to describe numerically a trend or certain opinion, while in experiment the goal is to identify the outcome, in comparing two groups, one control and other with experimental factor. There are diverse classification of mixed methods designs. During these twenty years, many methodologists have developed more than forty types, so Creswell and Plano Clark have made more concise several classifications of mixed methods designs which can be applied in social sciences.

The object of this article is to point out four mix methods designs which can be applied in political sciences, such as Explanatory design, Exploratory design, Convergent and Embedded design. The author`s objective is to explain each of these designs, the procedures, challenges and their application.

Mixed methods are used in political sciences when only qualitative or quantitative method cannot answer to a research question. The intention of `mixing` or integration of elements or procedures, collecting and analyzing data of both qualitative and quantitative methods, is to achieve more significant conclusions.

Keywords: mix methods, methodology, designs.

Field: Social sciences (political science)

1. INTRODUCTION

In many researches in social and political sciences have been applied exclusively qualitative or quantitative researches since twenty years ago. Qualitative researches have to describe and explain a problem or process, so qualitative methods refers to interviews, focus groups, qualitative data analysis in order to determine the categories, patterns and, mostly important, the participant`s meanings.

Creswell and other methodologist argue that in quantitative researches the most important are "analyzing trends, comparing groups, or relating variables using statistical analysis, and interpreting results by comparing them with prior predictions and past research" (Creswell, 2012, p. 13). Therefore, quantitative methods are survey, experiment and scales. Survey is used to describe numerically a trend or certain opinion, while in experiment the goal is to identify the outcome, in comparing two groups, one control and other with experimental factor. Many methodologist argue that the scales are the instrument in measurement, such as nominal, ordinal, ratio, and interval scales (Creswell, 2012, p. 165–167), as well as Thurston, Likert and Bogardus scale (Arezina, 2021, p. 281–282). For example in Likert scale, score is determined by the sum of all points such as Strongly Agrees = 1, Agrees = 2, Neutral = 3, Disagrees = 4, and Strongly Disagrees = 5. Besides, Likert scale is used to determine trend or frequency such as never, rarely, sometimes, often, and always (Tanujaya at al, 2022, p. 92–93). Instead of the application only qualitative or quantitative researches and methods, in last two decades mixed methods have been used in political sciences.

2. DEFINITION OF MIX METHODS

Mix methods (MM) are also called third wave or paradigm, even distinct approach (Timans, Wouters, & Heilbron, 2019). Mix methods can be defined as a "procedure for collecting, analyzing, and "mixing" both quantitative and qualitative research and methods in a single study to understand a research problem" (Creswell, 2012, p. 535). Also, mixed methods can be defined as "type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration" (Johnson, Onwuegbuzie, & Turner, 2007). Morgan argues that qualitative (QUAL) and quantitative (QUAN) methods can be used at the same

*Corresponding author: vera.arezina@fpn.bg.ac.rs



time, because some qualitative methods can improve data collecting and assessment in quantitative research designs, and vice versa (Morgan, 1998, p. 365–366; Arezina & Spasojevic, 2020). But other methodologists Creswell, Morgan or Tashakkori argue that mix methods combine certain elements from qualitative and quantitative methods such as the research question, data collection or data analysis. So, mix methods can be defined as mixing both qualitative and quantitative methods, or their elements or integration of some elements of research. Those elements of research design include identifying a research problem, reviewing the literature, specifying a purpose for research, collecting and analyzing data, and evaluating research (Arezina, 2021, p. 275–284).

Table 1. Mix methods – mixing and/or integration of elements of research design

| Elements of research design | Qualitative research | Quantitative research |
|---|---|---|
| Identifying a research problem | Description of main phenomenon, idea or process | Description of trends |
| Reviewing the literature or identifying subject of research | Minor role to justify research problem, important are views of participants | Major role for to justify research problem and direct hypotheses |
| Hypotheses or purpose statement | General hypotheses | Specific and narrow hypotheses to study only a few variables and obtain measures or assessments |
| Collecting data | Conduct interviews, focus groups, qualitative data analysis with open-ended approaches. Small samples. Important is to determine words from a small number of individuals to obtain participants' views | Conduct survey, experiment or scales with closed-ended approaches in which the researcher identifies set response categories. Large samples. Important is to determine numeric data from a large number of people |
| Analyzing data | Text analysis for defining and interpreting the larger meaning | Mathematical procedures, statistical analysis to compare groups or relating variables and using computer-aided programmes (SPSS, R, STATA,...). Interpreting results to determine trends |
| Evaluating research | Flexible structures and evaluative criteria, and the researcher's subjective approach. | Fixed structures and evaluation criteria, and the researcher's objective approach. |
| Interpretation of results | Wide | Concise |

Mixed methods are used in political sciences when only qualitative or quantitative method cannot answer to a research question. The intention of 'mixing' or integration elements or procedures, collecting and analyzing data of both qualitative and quantitative methods, is to achieve more significant conclusions. Regarding collecting data, in mix methods researches it is possible to conduct surveys and later focus groups to obtain more information. After above mentioned elements of research design, in mix methods are important validation and interpretation of data as well as writing a research report.

3. MIX METHODS DESIGNS

The research design is a framework or "procedures for collecting, analyzing, interpreting, and reporting data" (Creswell, 2007, p. 58). Baran argues that a mixed methods research design is "a procedure for mixing both methodologies in a single study to obtain evidence needed to provide a deep understanding of the research problem" (Baran, 2019, p. 27).

Methodologists have developed more than forty types of classification mixed methods designs, so Creswell and Plano Clark have made several concise classifications of mixed methods designs which can be applied in social sciences (Creswell, 2015, p. 62), especially in political sciences and researches.

Beside them, Tashakkori and Teddlie and others proposed several basic mix methods designs, such as Explanatory, Exploratory, Convergent and Embedded design.

3.1. Explanatory (Sequential) Design

This type of mix methods design has two sequential phases. First phase is collecting and analyzing quantitative, then in second phase qualitative data. Upon the quantitative results, researcher determines questions, sampling, and qualitative data collection. Disadvantages refer to availability of participants and necessary time for conducting two phases of research (Teddlie & Tashakkori, 2009, p. 155).

This mixed design has been applied when quantitative results have to be refined by qualitative data, and when research problem is more quantitative, so it has been applied widely in social and political sciences. In explanatory (sequential) design, Driscoll et al. (2007) have collected quantitative data using a survey, and in second phase they have used a semi-structured interview as qualitative data.

3.2. Exploratory (Sequential) Design

It also has two sequential phases, but the procedure consist of the first phase which is "gathering qualitative data to explore a phenomenon, and then collecting quantitative data to explain relationships found in the qualitative data" (Creswell, 2012, p. 543). The first phase is qualitative because theories, hypotheses and variables are not known, and then based on qualitative results, researcher in second phase determines questions, sampling, and quantitative data collection. Gioia and Thomas have applied this exploratory design to collected qualitative data by interviewing all three members of the top management of a large public university several times and analyzed 11 out of a total of 25 in-depth interviews In second phase they have identified categories and developed a survey which they sent out to a much larger sample to collect quantitative data (Gioia and Thomas, 1996).

Main disadvantages is necessary time to conduct two phases. Exploratory Design is applied when research problem is more qualitative and it is important to explore a phenomenon or process before deciding which variables have to measure quantitatively.

3.3. Convergent (Parallel) Design

In Convergent (Parallel) Design the researcher simultaneously collects the qualitative (QUAL) and quantitative (QUAN) data, but analyzing them separately and compares the results into conclusions. This mixed method design is applied when researcher have to collect both QUAL and QUAN data in one visit, because the limitation of time.

Also, this is huge advantage, but disadvantages refer to high research skills of the researcher in order to compare and unify QUAL and QUAN data sets, especially when the results differ significantly.

3.4. Embedded Design

In this type of Mixed Methods Design qualitative (QUAL) and quantitative (QUAN) data are collected simultaneously or sequentially, but the data sets are analyzed separately and they address different research questions (Creswell, 2012, p. 544–545).

One type of data is secondary to the other, and secondary data collection and analysis is conducted before, during or after the primary methods which can be advantage. Embedded Design can apply if researcher has limited time and resources, and if it is necessary to collect secondary data.

5. CONCLUSIONS

During past two decades, mixed methods have been applied in political sciences when only qualitative or quantitative method cannot answer to a research question. After defining mix methods, we have pointed out how can we mix and/or integrate elements of research design such as identifying a research problem, literature review, defining hypotheses, collecting and analyzing data as well as evaluating research and interpretation of results from both qualitative and quantitative researches in order to achieve more significant conclusions.

Among wide variety of mix methods classifications, we have pointed out to several main mix methods designs, such as Explanatory, Exploratory, Convergent and Embedded design. We have explained each of these designs, especially the procedures, advantages or disadvantages and their applications.

The purpose of this article is to help researchers to understand how to design a mixed methods research study in social and political sciences.

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