

USE OF MIXED METHOD IN MARKETING RESEARCH: A CONTENT ANALYSIS

Mustafa Polat^{1, *} and Yusuf Öcel²

¹Düzce University, Faculty of Business, Department of Management Information Systems
Düzce, Türkiye

²Düzce University, Faculty of Business, Department of Health Management
Düzce, Türkiye

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ABSTRACT

While the integration of qualitative and quantitative research methods has been relatively rare, it has been applied in numerous studies over the years. However, a standardized framework for combining different data collection methods remains elusive. As a result, there is a growing need for clear guidance on conducting mixed-methods research and evaluating the rigor of data collection and analysis in business research. This study addresses these issues by exploring mixed-methods principles and analyzing their application in top-tier marketing journals. Specifically, the study reviews 3 536 papers published between 2013 and 2022 in the top five marketing journals. A guided selection process consisting exclusion of papers not directly related to marketing area or papers that does not employ a specified mixed method design despite mentioning the method reduced the number significantly. This study revealed that 60% employed sequential data collection, 33% used embedded designs, and 13% applied concurrent designs, with the sequential exploratory design being the most common. Of the final 15 selected papers, seven prioritized quantitative analysis, five focused on qualitative methods, and three adopted a balanced approach. The findings offer valuable insights into how researchers select design types and models for diverse marketing research objectives, contributing practical guidance for future studies. As a result, a detailed framework for choosing appropriate mixed-method designs based on subject matter, industry, or desired outcomes is presented.

KEY WORDS

mixed methods, qualitative methods, quantitative methods, research design, marketing

CLASSIFICATION

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*Corresponding author, *η*: mpolat00@gmail.com; +90 5072307239;
Düzce University Faculty of Business, Department of Management Information Systems,
81620 Düzce, Türkiye

INTRODUCTION

Researches that are designed to use mixed methods which combine both qualitative and quantitative data in one study are scarce despite its relative rise in numbers. Over the last couple of decades, scholars have pointed to advantages of mixed research and suggested varying methods on how to implement it [1]. Scholars have been trying to produce better ways to understand human behavior by making use of different types of data derived in different ways from human activities [2]. One of the key challenges researchers may face is to determine most appropriate method in collecting data and analyzing it. Every research method has its own strengths and weaknesses [3].

Despite its scarcity, the act of mixing of qualitative and quantitative research methods has been tried and implemented for many years in various studies [4]. However, there is no systematic and standardized way of how to mix different types of data collection [1]. As a result, guidance in conducting mixed method research and assessing the rigor of data collection and analysis of both data types in business research are required. This study focuses on such issues as what mixed methods research principles are and how mixed methods design types are used accordingly.

Multiple methods, blended research, multi-method, triangulated studies, and mixed research are all names for combining research methods. ‘Multi-method’ and ‘mixed method’ research are the most commonly used labels in marketing. These two terms are distinguished in the Handbook of Mixed Methods Research [5]. That is, multi-method research entails multiple types of qualitative inquiry (e.g., interviews and observations) or multiple types of quantitative inquiry (e.g., surveys and experiments). On the other hand, mixed methods involve the mixing of the two types of data. Mixed methods research has become the most commonly used term for combining qualitative and quantitative data in a single study [6], and the definition below is based on an examination of definitions used by leaders in the field. Triangulation however is a more general term which can be described as the combination of multiple methods (two or more) in the study of the same phenomenon regardless of the nature of the data used in research [3].

Mixed methods research is the type of research in which a researcher or a team of researchers combine elements of qualitative and quantitative research approaches (i.e., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purpose of breadth and depth of understanding and corroboration [6; p.123]. Based on this definition, we will evaluate marketing researches published in top 5 marketing journals which specifically use two types of data (i.e., qualitative and quantitative).

In the 1980s scholars who tried to combine quantitative and qualitative data were not able to provide defensible reasons for this particular method [7], leading to the development of various reasons for combining data collection methods and research questions specific to different mixed method research designs. The existing literature is still evolving into an understanding of this methodological approach. Hunt [8] points out, qualitative research can supplement the results of quantitative analyses. Gorard and Taylor [9] suggest that the convergence and corroboration of results derived from different methods may increase the reliability and validity of a research. Yauch and Steudel [10] say that the results of one method may aid to elaborate, enhance, illustrate and clarify the results of another method. Singh et al. [11] propose that one method’s strength may help to discover the weakness of another method, which compels the researcher to choose the right approach for future studies.

On the other hand, some critics suggest that qualitative and quantitative methodologies are polarized and based on different epistemological and ontological assumptions that each method follows; therefore, they cannot be mixed [12]. The fundamental difference of the two methods is that while qualitative research focuses on how people interpret phenomena, quantitative

research tries to explain the world using specific hypotheses that can be tested using specific dependent and independent variables by applying objective methods [13]. Although challenging and infrequent, the use of multiple methods leads to more resilient and applicable outcomes compared to those relying on a single method [14].

RESEARCH METHOD

This study aims to perform a semi-systematic literature review coupled with some bibliometric analysis to see the trends, to assess the ways in which mixed method has been used, and practical use of such method in marketing field.

A semi-systematic analysis – or content analysis to be more precise – aims to delve deeper into the techniques used in combining different types of data to be able to identify, analyze and report common patterns. The semi-systematic or narrative review approach is used to review a broad range of articles that are relevant to a topic or a method. The potential contribution of this type of analysis is the ability to map a field of research, synthesize the state of knowledge, and create an agenda for further research, considering the ability to provide a historical overview or timeline of a specific topic [15].

To serve this purpose, in mixed research, the timing (i.e., sequential or concurrent), the priority given to each data type, and the integration (or mixing) of the data will be analyzed. Therefore, the objectives of this research are to find answers to the following questions:

RQ1: *What type of qualitative and quantitative method has been performed?*

RQ2: *Which method has been prioritized?*

RQ3: *Under what circumstances, the two methods have been coupled?*

RQ4: *What are the benefits and advantages of mixing two distinct analyses?*

Numerous studies, such as those by Hanson and Grimmer [16] and Hurmerinta-Peltomäki and Nummela [17], have explored trends in employing mixed methods in research. Harrison and Reilly [18] provided an overview of mixed methods trends in marketing research, later extended by Harrison [19] to the Journal of Business Research. Fakis et al. [20] conducted a literature review on analyzing qualitative information from interviews using quantitative methods. Despite a decade of research by Harrison, there remains a need to monitor the prevalence and assess the diverse uses of mixed methods in marketing. The lack of clarity among marketing scholars regarding types and applications of mixed method designs underscores the importance of addressing these questions to guide researchers in choosing appropriate design options for their strategies.

This study will start with presenting some statistics related to publications of mixed method research in selected journals which will be followed by a content analysis of the mixed method employed in the field of marketing research along with general outlines of the four major mixed method designs. The article concludes with a discussion of the methodological implications and future research recommendations.

DATA AND DATA COLLECTION TOOLS

In order to explore the extent of the use of mixed method, this study analyses research papers that are directly related to marketing topics published in the top five marketing journals. These journals were identified based on impact factor and reference of trusted indexes such as Scopus. The journals are as follows: Journal of Marketing, Journal of Consumer Research, Journal of Marketing Research, Journal of the Academy of Marketing Science, and International Journal of Information Management. The journal; ‘Marketing Science’ has not been included since there is no mixed method research to be found. Even though the name of the journal;

‘International Journal of Information Management’ may suggest otherwise; it is still categorized as a marketing journal by Scopus with a high impact factor [21].

To reach all the prospective articles published in the top five marketing journals, we performed keyword search via Web of Science search engine by searching for phrases such as “ ‘quantitative’ AND ‘qualitative’ ”, ‘multi-method’, ‘mixed method’, or ‘triangulation,’ as they are most commonly used terms in the titles, keywords, or in the abstracts. A total number of 3 536 papers have been published in English between the years of 2013 and 2022 in these journals. The reason behind selecting the relevant articles published in the last ten years was that the articles published in 2013 and before had already been analyzed by other researchers. The aim of the paper is to provide specific bibliometric and content analysis of mixed method research in a systematic way. This analysis will manifest the most recent trend taking the lead from Harrison and Reilly [18], Harrison [19] and Fakis et al. [20].

FINDINGS

Out of 3 454 articles published in selected journals over the last decade, only 54 met our initial criteria based on search terms. These articles were then scrutinized to confirm their adherence to the defined mixed methods approach. Prospective articles were required to feature qualitative research with primary data collection in non-numerical forms (words, images, symbols) and quantitative research with data collection in numerical forms. To identify mixed methods studies, we employed a coding scheme aligned with the standards set by the founding editor of the Journal of Mixed Methods Research, who rigorously assesses whether submitted articles meet the journal’s criteria.

These articles were then thoroughly examined to find out whether both qualitative and quantitative data were actually analyzed, or just merely mentioned them. As a result of this meticulous search, 23 articles were excluded despite the fact that they had already used the keywords we specifically looked for without employing the mixed method. Therefore, 31 articles appeared to have employed the mixed method research just the same as it was defined. These 31 articles were subjected to our statistical analysis. There is an increasing trend in the number of articles that have implemented mixed method designs over the years presented in Figure 1, total number of mixed method articles over the years.

Among top five journals, most of the contribution is made by the International Journal of Information Management, 23 of all 31 articles were published (74%). However, the other journals have provided much less contribution.

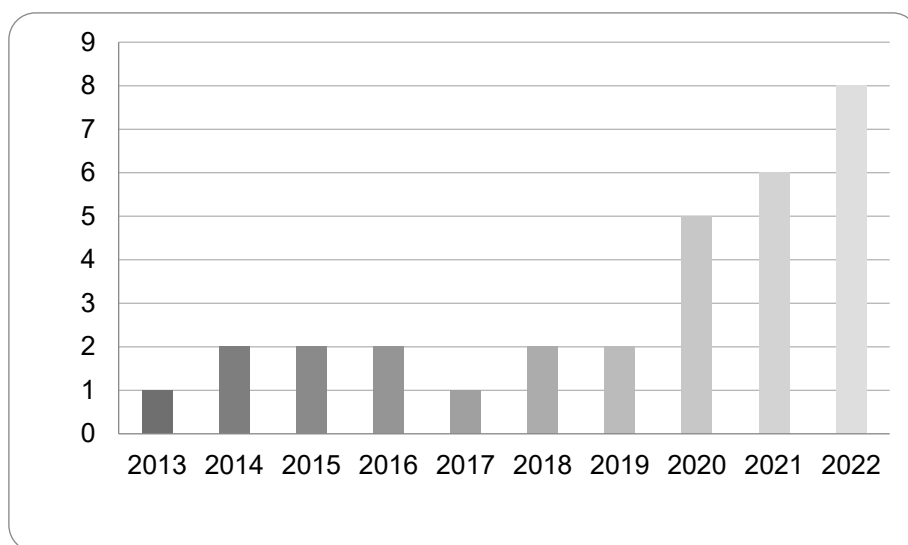


Figure 1. Total number of mixed method articles over the years.

The positive trend in the number of mixed method articles is heavily influenced by the International Journal of Information Management, while other journals have minimal or no impact in this area. Despite initial appearances as a result of initial analysis, articles found in the Journal of Marketing Research were ultimately excluded as they did not align with the specific criteria for mixed method research as is shown in the Table 1, distribution of articles over journals.

Table 1. Distribution of articles over journals.

Journals	Number of articles	Percentage
Journal of Marketing	2	6,45
Journal of Consumer Research	2	6,45
Journal of the Academy of Marketing Science	4	12,9
Journal of Marketing Research	0	0
International Journal of Information Management	23	74,2

In the next phase we examined the articles whether they were directly related to marketing research based on their title, abstract and keywords. Some articles were related to other areas of social sciences even though they were published in marketing journals.

18 of these articles were then excluded as they were not directly related to the field of marketing. Remaining 15 articles were thoroughly read and analyzed to identify their particular approach to employing different mixed method design types, Table 2. All results have been entered on a spread sheet.

The type of mixed method depends on the timing or sequence in the use of two different type of data. Timing procedures vary by design type. Concurrent designs employ data-collection both for qualitative and quantitative in concurrent way as the name suggests. On the other hand, explanatory and exploratory designs employ sequential data collection. However, embedded designs may employ either sequential or concurrent data-collection procedures. The analysis made to differentiate and categorize the type of mixed method research was conducted separately by both authors and combined later. The differences in the categorization were discussed and finalized to produce more objective results.

In order to establish a unified methodology in assessing mixed method design, the same type of representation that is employed by previous similar research such as those that Harrison [19] did, will be used. Therefore, to present the design type and the priority of particular method a notation and symbol system has been employed which was developed by Morse [5]. In this system, plus (+) symbol is used to represent concurrent study which means both qualitative and quantitative methods were used simultaneously. An arrow (\rightarrow) is used to indicate that the two methods are used sequentially. Capital letters represents the higher priority for a particular method, while lowercase indicates lower priority. For example, QUAL \rightarrow quan indicates a sequential study where qualitative data was collected prior to the quantitative data, and that qualitative data takes precedence. QUAL + QUAN indicates that both data strands were collected simultaneously and were given equal priority. This notation system is used in Table 2, used research design.

In this study, 9 mixed method studies implemented data-collection procedures sequentially (60%), whereas five employed embedded designs (33%). And rest of the two studies were concurrent designs (13%). On the whole, the sequential exploratory design was the most commonly used approach. However, it could be said that quantitative studies are prioritized more than qualitative ones. While 8 of the articles prioritized qualitative research design, 5 of the articles preferred qualitative studies. 3 studies displayed a more balanced approach. This is quite an expected result, as it has been evaluated and recognized by prior studies that most articles employing mixed methods in marketing literature usually have a more positivist orientation [22].

Table 2. Used research design.

Study	Design	Priority
[23]	Sequential exploratory	QUAL→quan
[24]	Sequential exploratory	QUAL→QUAN
[25]	Sequential exploratory	qual→QUAN
[26]	Sequential explanatory	QUAN→qual
[27]	Embedded (Sequential)	QUAN(qual)
[28]	Embedded	QUAN(qual)
[29]	Concurrent	QUAL+QUANT
[30]	Concurrent	QUAL+QUAN
[31]	Sequential exploratory	QUAL→quan
[32]	Embedded	QUAN(qual)
[33]	Embedded	QUAN(qual)
[34]	Sequential exploratory	QUAL→quan
[35]	Sequential exploratory	QUAL→quan
[36]	Sequential exploratory	QUAL→quan
[37]	Embedded	QUAN(qual)

Exploratory designs are employed when it is necessary to explore relationships between variables that are not well understood. In this particular type of research, qualitative data is collected and analyzed prior to quantitative data. The qualitative phase is employed in exploring and identifying measuring items or scales. Based on these built instruments, quantitative phase is used as a way to test what has been explored before. This type of design may be used in instrument design or building theories, typologies or classifications [38].

Seven studies have employed sequential exploratory design type (47%). All of these studies start their qualitative phase with an interview. As it is represented in Table 2, in five of those studies qualitative phase plays a primary role, for it is used to develop a theory or an instrument while the quantitative phase is used to test what has been developed earlier.

Jin et al. [23] used qualitative methods to identify variables and subsequently developed their research model and hypotheses, which were tested with quantitative methods. In the first phase, a Delphi study was conducted to identify which image features were significant for users' behavioral willingness to know more about a product and read its content. This approach enabled them to identify important image features for users. In the second phase, the researchers used the stimulus-organism-response (S-O-R) framework as an overarching tool to examine how the visual features of a cover image triggered users' subjective evaluations of the corresponding content and product, leading to their behavioral willingness to know more about the product and to read its content. To test their research model, they designed a confirmatory scenario experiment as they believed it was well-suited for their study.

Nunes et al. [24] took a more balanced approach with a two-stage study. First stage consisted of an interview and a survey (one conducted on a nationally representative sample) to identify authenticity's six constituent components, namely accuracy, connectedness, integrity, legitimacy, originality, and proficiency of consumers. The second stage was designed to empirically estimate the six components developed in the previous stage and to support the composite formative nature of the construct. They also assessed the prior studies related to their research. They then integrated themes from consumer data into their study and reconciled them with existing definitions in the literature. Subsequently, they conducted quantitative analyses. In the development of measures for the quantitative phase, they benefitted from the qualitative analysis. They used a coding procedure by drawing from the themes and six components that were identified in their first study.

Shi et al. [25] put more emphasis on the quantitative data in contrast with general tendency. They firstly conceptualized omnichannel customer experience and developed a survey

instrument. In the qualitative phase, they conducted in-depth interviews and a focus group to explore the content of omnichannel experience. Then, in the second stage, they developed scales to measure customer experience. They collected two data sets then analyzed the data with partial least squares (PLS) items for the five dimensions of omnichannel experience.

Explanatory research designs involve a two-step approach where researchers gather and evaluate quantitative data initially, and then expand on those results in a subsequent qualitative investigation to enhance comprehension of the quantitative outcomes. The extension phase may involve utilizing the quantitative data to identify cases or questions that warrant further examination during the qualitative phase [39]. In explanatory designs, quantitative data takes precedence and, as the label implies, the explanatory design is useful in explaining relationships or study findings. Typically, in both exploratory and explanatory research designs, the data sets, or strands, are usually combined or integrated during the interpretation stage and in the discussion section.

Only one article has employed explanatory design. Mäntymäki and Riemer [26] conducted research on teenagers' use of social virtual worlds (SVW). Based on developmental psychology and gratifications approach, they examined teenagers' continuous SVW use. They implemented quantitative hypotheses-testing inquiry as its main method. To gain a deeper understanding of the users' perspective, they complemented the quantitative inquiry with a structured content analysis of users' free text comments.

In embedded designs, researchers gather data through either a sequential or concurrent approach, with one type of data potentially providing support for the other, or both forms of data complementing each other in a more comprehensive design. In sequential designs, qualitative data may serve as a supplement to an experiment or correlational study, while in concurrent designs; both qualitative and quantitative data may provide support for a case study, ethnography, narrative, or other qualitative research method [38]. A key question that helps distinguish an embedded design from other types would read 'Is the secondary data type playing a supporting role? Would the findings from this secondary data hold significance in the absence of the primary study?' [40].

Embedded designs are typically used when a study involves multiple research questions that require different types of data. An example of a research question that might use an embedded design could be, 'In what ways do the qualitative results contribute to the interpretation of experimental or correlational findings?' [39].

Among our research corpus, five studies have employed embedded designs in their mixed studies (33%). In all of these studies qualitative data have played a supplementary role. One of these studies, conducted by Kassemeier et al. [27], consisted of two quantitative studies and one preliminary qualitative study focused on value creation and claiming by customer-oriented salespeople in price negotiations. In the first stage of their research, they investigated how salespeople's customer orientation impacted their ability to create and claim value, using data from surveys of salespeople and customers, as well as observations by research assistants. This study enabled them to assess salesperson's value creation by asking customers about the extent to which the salesperson correctly identified and fulfilled their needs. In this way, they were able to assess salesperson's value creation for customers by customers' perceived salesperson customer orientation. They used these data, as well as previous research on the topic, to develop scales and to measure these factors. To further validate their findings, they conducted an online survey of salespeople to create a scale to measure sales managers' confidence in promoting high prices. By continually referring to earlier studies, they developed and tested their scales multiple times throughout their comprehensive study.

In their research on how corporate social responsibility (CSR) activities on customers' perceived price fairness, Habel et al. [28] conducted one qualitative and four quantitative studies. Their initial qualitative study was part of a larger longitudinal study involving over 4 000 customers, and focused on how a company's engagement in CSR affects perceived price fairness, moderated by customers' intrinsic CSR attribution. The preliminary qualitative study was designed to provide insight into the effect of CSR engagement on perceived price fairness. In subsequent studies, the authors sought to explore the extent to which customers' perceptions of the benefits and price markup resulting from CSR engagement can explain this effect. Using more complex models, the authors compared and built on their earlier studies to further elucidate the relationship between CSR engagement and perceived price fairness.

Concurrent or convergent designs involve gathering both qualitative and quantitative data simultaneously, analyzing them separately, and then merging the databases in a later stage. The purpose of concurrent designs is to combine the advantages of both quantitative and qualitative research methods by comparing or verifying quantitative results with qualitative findings. An example of a research question using this design would be, 'to what extent do the qualitative results confirm the quantitative results?' [39]. In our study, three articles appear to have employed concurrent design (20%).

Lee and de Fortuny [29] explore the idea that consumer influencers can shape reference group meanings in social media. Through a survey in which over 5 000 participants provided open-ended reference group associations for 25 major brands. They started with Natural Language Processing to analyse consumer reference groups on social media. Via this particular method, they explored the words and phrases that were freely provided by consumers to describe brands. Then they conducted a survey to identify brands with the strongest reference group associations involving 146 participants. The survey had both open-ended questions and questionnaires. The data were collected simultaneously the qualitative and quantitative data were analyzed separately. Then they were combined and discussed later to see how these analyses may support each other.

Goor et al. [30] investigated how consumers deal with their feelings when they think that their social status is threatened. They explored the reasons and methods behind consumers' decision to shift their focus and exhibit success and accomplishments in different areas. To achieve this, they employed various techniques including field and lab experiments, incentive-compatible designs, nethnographic analysis, observational study, and qualitative interviews. They conducted a nethnographic analysis as their initial qualitative study by collecting data from an online discussion platform, which was followed by a quantitative study. The results from these studies were compared and integrated in the discussion section of Study 1. They then observed car bumper stickers in a marathon and interviewed undergraduate students as a follow-up to their previous observation, which was the second part of Study 2. They conducted an online experiment in the third part of Study 2 to evaluate how status threat affected consumers. In their subsequent studies, they continued to employ multi-method data analysis and consolidated all their studies under the 'General Discussion' section by comparing and combining the results.

By definition, the concurrent design involves collecting data simultaneously and giving equal importance to both data strands, which makes it well-suited for meticulous data collection and analysis in both strands. In some cases, concurrent design studies addressed different research questions using each data strand. In some other cases, multiple data strands have employed to explain the same phenomenon. Sometimes, different data strands had not given equal importance.

Most of sequential exploratory designs have been published on the International Journal of Information Management which mainly publishes articles related to IS research. However, all the concurrent designs have been published in the Journal of Consumer Research. 3 out of 6 embedded designs have been published in the Journal of the Academy of Marketing Science.

DISCUSSIONS

The identification of primary patterns in mixed method designs offers a structure for examining these design types, enhancing the reliability of marketing research by employing research designs that are distinct from single-strand studies. This structure also fosters a unified language among researchers who use mixed methods and provides direction for marketing researchers in creating mixed methods studies.

There had been articles mentioning the mixing of different data types as their method but they had not met the definition of mixing both qualitative and quantitative data. So, there seems to be either confusion or lack of standards in the understanding of what really makes a method mixed. Prior studies such as those which Harrison and Reilly [18] and Harrison [19] have analyzed the mixed method designs and provided some general guidelines in the field of marketing research. Ten years after their research there still seems to be a necessity to systematically examine and offer some further guidelines to provide some standards for employing this method.

By examining selected marketing articles, it is evident that while some researchers briefly mention of the rationale behind selecting a specific mixed research method, some do not mention at all. The researchers may not be keenly following recent mixed method literature that suggests certain guidelines and formalities on how to pursue certain type of mixed method study such as Creswell and Plano Clark [38]. Nevertheless, it appears that there is a prevailing preference for exploratory designs, as almost half of the articles analyzed have utilized this approach.

Arunachalam, et al. [31] discusses the reasoning as to why they resorted to the use of mixed-method approach saying that it provides them ‘a powerful tool to address dynamic and complex contexts.’ While it is difficult to execute and hence rare, they express; it produces more robust and relevant results than single method studies. Ray et al. explain their reasoning, ‘As the nature of this study is both purposive as well as probabilistic...’ Nunes et al. [24] legitimize their preference by saying ‘successful concept reconstruction is predicated on taking a grounded theory approach’ and that they believe it is possible through mixing two methods. Mäntymäki and Riemer [26] suggest that the role of the qualitative analysis is to aid the interpretation of their quantitative findings of users’ free text comments. Borah, et al. [32], in their comprehensive embedded research, they say they were able to ‘combine the best of both worlds (real-world data and behavioral experiments) to generate our insights’.

Lee and de Fortuny [29] say that the use of mixed method was an answer of a call: ‘In his seminal work, McCracken [41] called for additional methodologically oriented research that was both qualitative and quantitative in nature to understand cultural meaning transfer’. Li and Mao [33], after completing their quantitative research, they moved onto the qualitative phase since, ‘Follow-up interviews are frequently used by IS researchers to clarify quantitative analysis results through talking to the participants to uncover the reasons behind an unexpected pattern in the data gathered from the previous stage of the work’.

As it is seen in the examples given, mixing two different types of data may have many benefits, which encourages researches to use. In the light of researchers’ conclusions pertaining to the effective use of the mixed method research, it is secure to say that a mixed study will become a necessity when;

- studying a complex context which will not be dealt enough with single study,
- to gain a deeper understanding and broader perspective,
- to increase the ability to interpret the results of one study in line with those of the previous ones,

- the subject matter of research is not well known and there is a need for an exploratory study providing researcher also wants to test that study to make a stronger case. (sequential exploratory),
- in case of a need for a concept reconstruction or grounded theory approach supported with some statistical findings (preferably embedded),
- to support an experimental study with real world data in order to have a more holistic approach (embedded)
- to clarify quantitative analysis results and to uncover the reasons behind an unexpected pattern reached through the data gathered from the previous stage of the work (sequential explanatory or embedded).

Mixing multiple studies should be pursued systematically. Otherwise, including both data types without integrating them will be merely a collection of methods. Therefore, strong mixed methods studies should address the decision as to how to integrate the data taking timing and priority into account [40].

To use a multi-layered analytical approach that starts with answering ‘what’ and ‘how’ questions, researchers should begin with a qualitative study. This will give them a better understanding of the phenomenon they are studying, which will then enable them to develop more specific and focused questions to be answered in the quantitative follow-up phase. Exploratory designs are best suited for situations where the research questions are more focused on qualitative aspects, such as discovering patterns and themes. They are also useful when researchers are not sure what constructs are important to study, and when relevant quantitative instruments are not available. Finally, exploratory designs can be helpful when researchers identify new emergent research questions based on qualitative results that cannot be answered using qualitative data alone [38].

Creswell and Plano Clark [38] recommend using embedded designs when researchers are not knowledgeable in a supplementary method or when resource limitations prevent them from devoting equal attention to both types of data. Based on the embedded designs discussed in this review, it can be concluded that researchers turn to embedded designs to achieve various goals such as reconstructing a concept or developing grounded theory, supplementing an experimental study with real-world data to obtain a more comprehensive approach, explaining unexpected patterns in the quantitative analysis results, and uncovering reasons behind such patterns found in the data collected in the previous stage of the study.

It has been observed that researchers prefer convergent designs when they want to pursue complex, multi-faceted research which necessitates different types of data in a short period of time and have limited time to collect data. They may believe that the consumer perception may change over time for the service or product in a longitudinal study which may invalidate or weaken the results of the research. Another factor may be that they may need to gather both types of data during a single visit to the field. Additionally, they may use this mixed method approach when they believe that collecting and analyzing both quantitative and qualitative data are equally important in comprehending the issue at hand. For this purpose, researchers should possess expertise in both quantitative and qualitative research methodologies and be capable of managing extensive data collection and analysis activities [23].

Area of study or subject of the analysis may also affect what type of mixed method to choose. For example, in the area of IS research, sequential exploratory analysis seems to be most common and well-suited approach, though this is not definitive. When the issue at hand is complex that needs various types of data to make a case, embedded or concurrent designs would be more helpful. This conclusion can be drawn both by examining article titles and keywords as well as the distribution of mixed methods over journals, Table 3.

Table 3. Distribution of mixed method designs over journals.

	JM	JCR	JAMS	IJIM
Sequential exploratory	1	0	1	5
Sequential explanatory	0	0	0	1
Embedded	1	0	3	2
Concurrent	0	2	0	0

Complex design settings may involve the utilization of multiple sequential phases which were apparent in the works of some authors such as Habel et al. [28] and Goor et al. [30]. This type of research had been traditionally limited to bigger projects, which typically had enough time and financial resources for research. However, the introduction of new information communication technologies (ICTs) has led to a rapid transformation in both qualitative and quantitative research. We are now confronted with the significant challenge of conducting mixed method research online. According to Hine [42], few researchers in social sciences and humanities cannot find some aspect of their research interest reflected on the internet. ICTs can be used as a data collection tool or as the most suitable research platform to address issues related to Internet-based communication and computer-mediated interactions. Lobe and Vehovar [43] anticipated that similar advancements would arise in the realm of mixed method research, and they tried to demonstrate how its implementation could enable mixed method research and eliminate the obstacles of time and financial resources, thereby enabling more flexible mixing. They turned out to be right as IS research area related to marketing field shows a significant rise in the use of mixed method design.

In designing a mixed method research, another question is what type of data is more important and therefore prioritized. To make a comparison and distinction between qualitative and quantitative data, Chatterjee [44], in his analysis of customer service evaluations, proposes that when assessing customer service, managers should differentiate between quantitative and qualitative evaluations. He says that quantitative evaluations are more concrete and specific, while qualitative evaluations are more abstract and comprehensive. Therefore, qualitative evaluations are more effective in explaining abstract contexts, whereas quantitative evaluations are more suited to concrete service contexts. This has implications for the method of collecting feedback and generating information for post-purchase customer evaluations. Abstract service contexts like amusement parks, hotels, restaurants, and hospitals should prioritize textual reviews over quantitative ratings for information generation. Conversely, concrete service contexts like low-cost airlines and fast-food counters should focus more on collecting quantitative ratings-based feedback.

Deducing from what Chatterjee suggests, it could be said that on customer related researches, when the subject service or brand is more accessible, standardized and aimed at mass market, quantitative analysis may suit well. On the other hand, when the subject of service or brand is tailored towards high-end user, designed to offer desirable or specialty product or aimed at luxury segment which would be less in numbers but more in details, in that case a qualitative analysis may suit better.

In addition, quantitative research is better suited for addressing questions related to specific variables, and questions that require information on who, where, how many, and how much. On the other hand, qualitative research is better equipped to answer questions related to why and how. Qualitative research focuses on understanding behaviors, feelings, the experiences of individuals and groups and the meanings attached to those experiences. Mixed method research can overcome the limitations of both qualitative and quantitative research by combining their strengths. This article shows that a typology of mixed method research can be used to classify the different types of mixed method research used by marketing scholars. The results indicate that sequential designs were predominantly used in marketing studies, unlike other disciplines that use concurrent or evenly distributed designs.

Moreover, concerning the interpretation of a phenomena researchers must be careful since the use of multiple methods will help collect more significant data, which may become highly demanding and challenging for the researcher to manage, select and analyses in line with the objectives of the study [11].

This study acknowledges that the article selection process is subjective, which is a limitation. However, it provides an up-to-date overview of the current use of mixed methods designs in marketing research. This study also recognizes that due to space limitations, some qualitative or quantitative content may have been excluded during the review process. Furthermore, the classifications made about mixed method design may not be a clear-cut distinction. Since the authors do not always mention what type of mixed method they prefer or the timing they implement in their data collection procedure, our classifications may be argued by other scholars.

CONCLUSIONS

The use of mixed method design, we believe, should be encouraged as a multiple type of data and analysis will bring about a more balanced approach and give more insights to measure desired subject. This study provides guidance for marketing researchers in identifying what type of mixed method design to be utilized. This study could be recognized as an attempt to extend the seminal works conducted by Harrison and Reilly [18] and Harrison [19].

In the future it will be helpful for researchers to be aware of different types of use of mixed method to have a more standardized and systematic understanding of the research. In that case, they can specify their type of use in their study which will help both the authors during their research and the readers after its publication to have a better understanding of conducted method.

Marketing managers can gain a more comprehensive perspective on marketing issues with the implementation of a proper mixed method since combining quantitative research with qualitative research can enhance the generalizability of findings to a larger population while preserving the insights already gained [45]. As a result, mixed methods research is considered more reliable than any one research paradigm, as the methods can complement each other and compensate for each other's weaknesses [46].

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