

HACETTEPE UNIVERSITY
INSTITUTE OF POPULATION STUDIES

**AN EVALUATION OF MIXED METHODS STUDIES:
A CASE STUDY FOR TURKEY**

Yaser Koyuncu

Department of Social Research Methodology
Master's Thesis

Ankara
May 2019

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Supervisor

Assoc. Prof. Dr. İlknur YÜKSEL-KAPTANOĞLU

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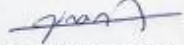
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An Evaluation of Mixed Methods Studies: A Case Study for Turkey
Yaser Koyuncu

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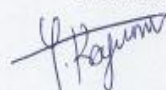
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ABSTRACT

Mixed methods came to light as the third methodological movement besides the quantitative and qualitative methods. It has been significantly popular for researchers, particularly in the last twenty years. However, its philosophy and applicability have been the major site of discussions.

Motivated by these debates, the purpose of this thesis is to evaluate mixed methods studies in Turkey. How mixed methods is perceived and applied to be the guiding research question, 30 master's degree theses of 2017 in the fields of education and sociology from Turkish universities are examined with content analysis. Council of Higher Education Thesis Center Database is the medium for reaching the theses and several keywords are used to screen the mixed methods studies.

This thesis is designed according to the qualitative methodology and it holds the interpretive approach. In addition, content analysis is employed with seven categories for examining the theses. The rationale, definition and naming, model and design, sampling, data collection/generation, data analysis and ethics are the categories for the evaluation.

This study argues that the theses, mostly, can be categorized as extended quantitative inquiries in which the researchers do not have a methodological approach for the qualitative side, rather the qualitative techniques serve for extension of the quantitative research. Furthermore, it is asserted that the theses reflect the messiness of mixed methods with the terminological unclarity, diversity and issues related to the rigor.

Key words: research methods, qualitative methods, quantitative methods, methodology

ÖZET

Karma yöntem, nicel ve nitel yöntemlerin yanında üçüncü yöntem bilim hareketi olarak ortaya çıkmıştır. Araştırmacılar için özellikle son yirmi yılda önemli ölçüde popüler hale gelmiştir. Ancak karma yöntemin felsefesi ve uygulanabilirliği tartışmaların en önemli konuları olarak öne çıkmaktadır.

Bu tartışmalardan hareketle, bu çalışma Türkiye'deki karma yöntem araştırmalarını değerlendirmeyi amaçlamaktadır. Türk üniversitelerinde, 2017 yılında eğitim ve sosyoloji alanında yazılmış 30 yüksek lisans tezi, karma yöntemin nasıl algılandığı ve uygulandığı sorusu temelinde içerik analiziyle incelenmiştir. YÖK Tez Merkezi Veri Tabanı kullanılarak çeşitli anahtar kelimelerle yapılan aramalarla bu tezlere ulaşılmıştır.

Bu tez nitel metodolojiye göre tasarlanmış olup yorumlayıcı yaklaşıma sahiptir. Buna ilaveten, tezleri incelemek için içerik analizi uygulanmış olup yedi kategori oluşturulmuştur. Gerekçe, tanımlama ve isimlendirme, model ve desen, örneklem, veri toplama, veri analizi ve etik değerlendirme kategorileri olarak çalışmada yer almaktadır.

Bu çalışma, çoğu tezin nitel yöntemi metodolojik olarak ele almadığını, nitel tekniklerin nicel araştırmanın uzantısı olarak rol aldığını ve bu sebeple tezlerin çoğunun genişletilmiş nicel araştırma olarak kategorize edilebileceğini savunmaktadır. Ayrıca karma yöntemin bu tezlerde, terminolojik muğlaklık, çeşitlilik ve titizlikle ilgili hususlardan ötürü bir karmaşa içerisinde olduğu ortaya konmaktadır.

Anahtar kelimeler: araştırma yöntemleri, nicel yöntemler, nitel yöntemler, yöntem bilim

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CHAPTER 1. INTRODUCTION

This thesis aims to evaluate mixed methods studies with a view to shed lights on how it is perceived and employed. As the third methodological movement, mixed methods goes through its heyday within the last twenty years. The growing body of literature, as well as its ever-increasing usage, draw considerable attention to this enterprise. Its, inter alia, philosophy, theoretical lenses, design and applications have been the focal points of discussions to delineate mixed methods' identity, and characteristics. At issue, mainly, has been its compatibility to be actualized as a methodology given the fact that it brings the quantitative and qualitative methods into a single study, which is to say, numerous scholars view the quantitative and qualitative methodology as worlds apart on the grounds that their philosophical underpinnings preclude using them together within a research. Mixed methods, however, has been on the way to crystallize as an emergent methodology with burgeoning approaches not to mention that use of mixed methods has been growing significantly. These issues have been the motivation to inquire on mixed methods studies examine and understand how researchers apply it.

Globally speaking, the historical background of social research unfolds two main research types. The quantitative research has been the mainstream and long seen as the synonym of scientific research hand in hand with positivist and post-positivist paradigm that see the reality and knowledge as concepts that are independent of individuals. This, no doubt was not abiding since the qualitative paradigm has challenged this tradition particularly in the 20th century. Subjectivist, interpretivist and critical social sciences adduced several reasonings to alter how should the knowledge, reality and relation between researcher and researched are interpreted. These approaches challenged the assertive reality and knowledge concepts of quantitative research interpreting them in a subjective and constructivist way, which is to say, individuals construct their own meanings and realities as social beings. That is to say, according to this line of thinking, the social environment and meanings bear upon the realities of people. These differences in seeing the world and beyond appears as

reasons for the rift between quantitative and qualitative scholars particularly in the twentieth century's second half which embodied in *paradigm wars* that refers to the two understanding's clash. It also exerts an influence on the idea that quantitative and qualitative paradigms are incompatible and can not stand in the same place.

Besides the quantitative and qualitative research methods, there is the third way of inquiry, which mixes two methods within a study on the basis of several rationales. Various naming has been used to refer this method such as blending methods, integrating methods, multimethod, multiplism triangulation, and finally the acknowledged term within the scientific community is mixed methods. Notwithstanding these terms might appear as synonyms, all of which has nuances in meaning between and they even have different interpretations within. Furthermore, the studies that conduct the quantitative and qualitative studies gain popularity especially after 1990's. It nevertheless carries multifaceted debates on its identity, applicability, feasibility and philosophy. One of which, and above all, has been the question that which epistemology and ontology can underpin using separate paradigms in a study since it the reality, knowledge and relation between researcher and researched are argued to be thoroughly distinctive. These arguments that see the quantitative and qualitative methods are incompatible, faced with alternatives, primarily for those who linked mixed methods with pragmatism which as a philosophical tradition focuses on the relation between actions and consequences.

Taken together, these discussions on mixed methods' identity, applicability and philosophy have been the driving force to inquire on this topic. In addition, the way and which approaches take their place, designs, samplings, data collection and analysis within a mixed methods research are the main aspects that motivated me to research on this topic. Given that it is referred as the third methodological movement, how far one can define it as a methodology is also a critical question that attracted my attention besides the issues that how it is perceived and applied with the rationales to conduct it. Thus, I assumed, a study that interrogates mixed methods will shed light on the perception and application of it, bearing in mind its historical development and

discussions which had many dissenting opinions. It is, therefore, will help to gain insights on this movement not to mention its future.

In order to interrogate mixed methods studies, I focus on graduate degree theses to inquire on how researchers employ the quantitative and qualitative methods together within a study. After examining the data sources, I considered limiting my studies with master's degree theses of 2017 in Turkish universities. The fields, on the other side, are the other parameters to decide upon. Education and sociology master's degree theses are the target of this study concerning that mixed methods is popular amongst educational researchers in Turkey. In addition, fellows of this field contribute mixed methods literature significantly. Choosing sociology, on the other hand, arises from the consideration that it is closely linked to social research. Being a social research methodology master's degree student, I opted for adding sociology theses and remain within the master's degree level in overall, to investigate the same level of studies. Each thesis is regarded as a case within the scope of this study.

Secondly, similar studies at domestic level have been source of inspiration to study on graduate level theses. Baki & Gökçek's (2012) study point out that some studies in Turkey that employ the quantitative and qualitative methods do not refer to mixed methods or they do not detail and explain clearly how mixed methods is employed. What's more, Baki and Gökçek conclude that this issue might stem from the inadequate information of researchers on mixed methods or it may also be derived from the different approaches and interpretation of mixed methods. Furthermore, Gökçek et al.'s (2013) study that examine 97 Turkish articles dated between 2003-2012 from educational disciplines, demonstrate that only 33 papers refer to a rationale for applying mixed methods and the most common justification is to triangulate quantitative and qualitative methods. More significantly, 47 articles do not clearly address the method that is employed. Another study, in which Kocaman-Karaoğlu (2015) examine 112 articles of instructional technology between 2005-2015, concludes that 22 of which apply mixed methods. They also highlight the fact that studies do not clearly refer to the term mixed methods addressing the method of the research as "quantitative plus qualitative" or along similar lines. Its reason might be

rooted in the possibility that the researchers do not have extensive knowledge about mixed methods, as the study argues. In addition, they concluded that 62 percent of the mixed methods articles justified using this methodology with triangulation purpose which is followed by complementarity aims and besides, one paper does not refer to a rationale whereas the most-used design is explanatory sequential. Triangulation is a prominent rationale for applying mixed methods for these researches, if not the foremost.

These studies have been the source of motivation in terms of indicating mixed methods' identity and applicability issues. It emboldened me to research on master's degree studies to have a different target than these studies which focus on journal articles. Investigating theses will enhance the understanding of mixed methods demonstrating usage of mixed methods within a different type of sample. In that vein, researching on Turkish master's degree theses will contribute to determine where mixed methods stands now at domestic level and it will also add a value to the global mixed methods literature indicating the trends on this methodological movement.

This study holds the qualitative methodology with the interpretivist approach, and it applies content analysis. The main reason for conducting a qualitative study is to unearth researchers' world on mixed methods providing insights on how they understand and apply it. This thesis, hence, will focus on the categories and themes that is formed with the content analysis to interpret how mixed methods is employed focusing on the methodology sections of the theses. Content analysis is the technique for examining texts for contextual investigations. Themes and categories that are formed with the content analysis will help to illustrate the meanings and understandings in several contexts.

Examining through the lenses of the qualitative methodology and interpretivist approach, this study attempts to provide insights how mixed methods is perceived and applied within thirty theses. To that end, content analysis is employed, and seven categories are generated which are rationale, definition and naming, model and design, sampling, data collection/generation, data analysis and ethics. Each category pointing

out a vital facet of the mixed methods studies, this formation underpins the evaluation which is reinforced with what mixed methods literature propounds.

Furthermore, the guiding research question is “How mixed methods is perceived and applied in the theses?”, and the sub-question is “What do the categories of rationale, naming and definition, model and design, sampling, data collection/generation, data analysis, ethics present in respect to the mixed methods?”, which rather crystallized during the course of analysis.

Turkish Council of Higher Education Thesis Center (*YÖK Tez Merkezi*) being the data source, a variety of keywords are used to screen mixed methods studies with the year filter of 2017. Ultimately, 28 master’s degree theses in the field of education, and 2 master’s degree theses from the sociology department are specified as the sampling of this study.

I outline and structure my thesis under five chapters which are namely, “Chapter 1. Introduction”, “Chapter 2. Literature Review”, “Chapter 3. Methodology and Data”, “Chapter 4. Analysis” and “Chapter 5. Discussion and Conclusion”.

Firstly, literature review will discuss mixed methods in retrospect and how it is evolved with different approaches. The “methodology and data” chapter details which methodology and approach this study holds with detailing the processes of data collection, analysis, whilst the “analysis” chapter brings up the analysis results based on the seven categories. Eventually, overviewing the prominent points, the “discussion and conclusion” chapter elaborates the two main arguments of this thesis which are conceptualized as “extended quantitative inquiry” and “messiness of mixed methods” with illustrating similar studies at the international level. This part also discusses what the future holds for mixed methods, ultimately ending off with contributions and limitations of this thesis.

CHAPTER 2. LITERATURE REVIEW

This chapter will firstly discuss mixed methods in a historical perspective with the main approaches and philosophical issues. After illustrating examples of evaluative mixed methods studies, what the future can bring for this methodological movement will be elaborated. Last two sections follow will focus on the design, data collection, analysis and ethics in mixed methods which are the main methodological procedures in a research.

2.1. Mixed Methods in Retrospect

As the third methodological movement, mixed methods research is one of the most popular topics within the realm of social research. Notwithstanding the fact that this method experiences its apex in the last decades, its foundations come in view as early as scientific method begins to develop and moreover, its ideational particulars make its presence felt in ancient times onwards. It is thus worthwhile to touch upon the cornerstones of the mixed method in light of the references.

Albeit the scope of this study entails focusing on the mixed methods in social sciences, the natural science's heritage is of an issue to discuss to comprehend the process. Simply put, mixed methods research brings quantitative and qualitative methods under one study. This practice appears in natural sciences in the first place. What combination or incorporation of the mixed method in natural sciences amounts to, is the fact that scientists observed and quantified for what they scrutinize for (Maxwell, 2016). Maxwell (2016) stresses that scientific figures, such as Galileo, studied the sun with his telescope bringing together the observation and quantitative calculation, in which the former refers to the qualitative dimension. The observations lack focus on "meanings" speaking within qualitative terminology, while having the other elements of it, that are verbal/visual description, particularistic approach and inductive reasoning (Maxwell, 2016). Furthermore, Fetters' (2015) analogy of development of horseless carriage into the modern automobile, and combining qualitative and quantitative research to the 21th century "modern mixed methods"

reflects the systematic, organized, rigorously-thought approach vis-a-vis the premodern practice which combines two methods “casually” and unsystematically. In addition, Peltó (2015) puts forward that mixed methods have been around at least for 80 years challenging the arguments date back its nascence to the two decades before as Creswell & Clark (2012) and Teddlie and Tashakkori (2015) suggest. Peltó’s paper (2015) is noteworthy given that it inquiries numerous mixed methods researches which went unnoticed. Various fields as ethnography, economy, education, medicine and healthcare provide the researches mixing the qualitative and quantitative methods. Cora DuBois’ study that the researcher explores a non-Western community where he carried out observations and applied open-ended question mixing with the quantitative data (Peltó, 2015). What’s more, Hesse-Biber (2010) sets examples of mixed methods studies dating back to the 1800s. By way of example, Charles Booth, Frédéric Le Play, and Bohm Rowntree combined demographic-quantitative data conducting participant observations and surveys in 19th century (S. N. Hesse-Biber, 2010). Moreover, Johnson and Onwuegbuzie (2007) draws the attention to the identity development of mixed methods. They underscore the mixed methods’ entity within the 20th century First half of which, scholars applied “mixed research” in anthropology and sociological fieldwork (2007). The touchstone en route to being a “formal” methodology, as they put, is the Campbell and Fiske’s study in 1959 which practiced the triangulation which is called as “multiple operationalism” (Johnson et al., 2007). In addition, Webb et al. (1966) referred to triangulation as a key in measurement process for the sake of “persuasive evidence”. They draw attention to role of independent measurements that will contribute to the certainty of interpretations (Webb et al., 1966). It is, therefore, safe to say that one can trace back the foundations of mixed methods as far as the scientific method burgeoned. However, scholars dissent in where to pinpoint as the commencement of using mixed methods. Considering the mixed methods’ development in an extended timeline is plausible in view of the debates.

Speaking of Campbell and Fiske’s and Webb and his friends’ studies, triangulation necessitates further attention given its close links with mixed methods research. Merriam-Webster dictionary defines triangulation as any trigonometric

operation in order to find a position based on two settled points (“Triangulation,” n.d.). In the field of navigation, additionally, the term refers to using two angles for finding a location (Heale & Forbes, 2013). These lexical definitions somewhat hint at what triangulation refers in social research methods. It basically amounts to applying multiple methods of one methodology or quantitative and qualitative at the same time (Heale & Forbes, 2013). Denzin (1978) establishes four types of triangulation which are namely, data triangulation, investigator triangulation, theory triangulation and methodological triangulation. Methodological triangulation contains *within-method* and *between method* categories. The former one refers to using methods within a paradigm, whereas *between-method* involves multiple paradigms which Denzin (1978) addresses as the “more satisfactory one” given that it not only strengthens the research but also facilitates overcoming the shortcomings in comparison with a single-method study. Undoubtedly, *Between-method* typology carries the same notions with mixed methodology, given that it combines or incorporates the qualitative and quantitative methods. It is essential to note that triangulation does not necessarily presuppose combining the methodologies, say, applying more than one data collection technique within the qualitative research is a variety of triangulation (Carter et al., 2014) as also Fielding (2012) addresses the “constant comparative method” of grounded theory which sets an example of using various data collection methods in qualitative methodology. Furthermore, the objectives of triangulation are yet another debatable matter. Campbell and Fiske (1959), in the aforementioned study, applied “multimethod matrix” and they refer to “independence of methods” which serves the purpose of validation and thereby reaching the convergence . By contrast, several scholars debunk the purpose of validation. For instance, Blaike (1991) argues that aiming at convergence and validation through two methodological standpoints is infeasible in view of the philosophical incongruity. Massey (1999) also has the same line of the logic in his paper contesting the methodological triangulation and the usage of this term as well. The aim of reaching the “completeness” through two methods is futile given the inexistence of a “fixed reality” and globally speaking for social sciences, the term triangulation is misapplied since the methods produce unique sort of data and by no means triangulates the results, as Massey (1999) suggests. Moreover, Mathison (2007) asserts that convergence is not a matter of course in triangulation,

which is to say, the ultimate results are inconsistent and contradictory in many cases. That triangulation strategy per se does not provide an understanding of an issue, but triangulation just delivers signs that one might make sense of a happening, is also a thought-provoking point in the paper (Mathison, 2007). On these grounds, triangulation appears as a term referring to usage of methods or methodologies together and it is contradictive concerning its usage, philosophical basis, and aims.

Turning back to the mixed methods' historical advancement, it is imperative to address *critical multiplism* which emerged as the methodology of post-positivism in accordance with methodological pluralism (Letourneau & Allen, 1999) Thomas Cook describes it as a methodology which seeks different interpretations and values to construe the research phenomenon, seeing the scientific methods imperfect when used solely (as cited in Letourneau & Allen, 1999) and using multiple methods are encouraged insofar as they are grounded (Patry, 2013). Put another way, critical multiplism regards how the methods are chosen bearing the idea that single-method can be incompetent (Houts et al., 1986). By way of illustration, *multiplism* refers to the idea that the scientific methods, individually can't be the finest, a multiplist researcher, hence, puts various ways into the practice, whereas *critical* suggests investigating the biases of the selected method and overall, one should opt for multiple methods to lessen the total bias when the level of which is unclear at the outset (Shadish, 2005). That way, critical multiplism fosters applying multiple methods and overcoming the bias through the instruments of the methods is the goal.

Mixed methods research is entitled in various ways reserving that some are arguable and doubtful. Bryman (2006, 2012) uses the term *multi-strategy research* on the grounds that there are two strategies in integrating research methods rather than combining, such as applying interviews and observations at the same time. However, Bryman (2012) also welcomes "mixed methods research" since it is a shorthand term and mixed methods research industry has developed under this naming. Researchers also use the term *multi-method* to name using the qualitative and quantitative methods together while some scholars distinguish the mixed methods and multi-method researches. Indeed, some researchers use these term synonymously as Stange et al.

(2006) do. They indicate that both terms are used interchangeably referring to the multimethod studies as a scheme that integrates number and narratives for a broader discernment (Stange et al., 2006). On the other hand, Johnson et al (2007) analyze scholars' mixed methods' definitions, Pat Bazeley, in this study, puts forward that the key between multimethod studies and mixed methods researches is the sequence of the integration. Bazeley argues that mixed methods researches integrate the methods and techniques in the course of the inquiry whereas multi-methods' integration arises in conclusion (Johnson et al., 2007). In addition, Al Hunter favors *multimethod research* when there is a combination of methods techniques and styles regardless of their qualitative and quantitative characteristics (Johnson et al., 2007). Integration, for these scholars, thus poses a critical role to categorize a study as mixed methods or multimethod. In a recent study, Anguera et al. (2018) attempts to bring a further perspective on the distinction between multimethods and mixed methods investigating the historical development of which. Mixed methods, according to them, has experienced a "identity crisis" given the different naming and definitions, in line with that, for some, multimethods and mixed methods are identical, but not necessarily for those who objects (Anguera et al., 2018). They further call for a clear definition and urge for not blurring the matter with adding new labels, to slot the terms into place given the confusion in mixed methods terminology (Anguera et al., 2018). The multimethod-mixed methods research distinction remains as a controversial topic, the arguments suggest.

The last thirty years-period is the zenith of mixed methods research. Creswell (2012) formulizes *formative period, paradigm debate period, procedural development period, advocacy and expansion period* and the *reflective period* as a scheme for the mixed methods' chronology. The last three refers to 90s and 2000s, the periods that mixed methods' data collection, analysis, design, and purposes were focal subjects which afterwards mixed methods rose to the surface as a distinctive methodology and reflections period that mixed methods have been subject to assessments and criticisms. Furthermore, methodological orientation was undergoing as Tashakkori and Teddlie's mixed methods' definitions in 1998 and 2003 suggest: "combination of the qualitative and the quantitative approaches in the methodology of a study" (as cited in Creswell

& Clark, 2012) , “type of research that data is collected through the quantitative and the qualitative methods for integration and inferences of the results” (as cited in Teddlie & Tashakkori, 2015). Leech’s (2010) interviews with the early developers of mixed methods research (with Morse, Greene, Bryman and Creswell), nevertheless, unravels the disputes inside. For instance, even though all the scholars somewhat agree that the mixed methods field is “messy”, Greene argues that reaching a consensus requires renouncing some aspects of mixed methods research. Nonetheless, Morse argues that scholars should work in cooperation to reach the unanimity, particularly on terminology. The researchers also differ in the philosophical approaches, Bryman holds the pragmatist view whilst Greene has doubts on this standpoint. However, these reputed researchers agree on various points such as how to write a mixed methods research, the need for innovative ideas and training. Having all these in mind, one can’t refer to consensus, nonetheless, the mixed methods research develops towards having an identity with in spite of different vantage points.

Notably, *Journal of Mixed Methods Research (JMMR)*’s appearance in 2007 is one of the mixed methods’ major milestone. Tashakkori and Creswell (2007), in this oft-cited journal’s editorial, point out the distinction between mixed method and mixed methodology, which is to say, using methods for data collection and analyzing the quantitative and the qualitative methods without integrating is more of method-focused research whilst concentration on methodology requires integrating two approaches. Reviewing through the journal’s pieces provides an overview of mixed methods’ key themes and issues. By way of illustration, the fourth editorial discusses four variations of mixed methods perspectives which may not be mutually exclusive. As Creswell and Tashakkori (2007) reveal, method-perspective focuses on the upshot of using two methods whereas methodology-perspective sees the mixed methods in a broader sense that the integration occurs at the level of the procedures, questions, methods, worldviews, approaches, inferences and outcomes. In the third place, researchers holding the paradigm-perspective deal with the philosophical problems debating over encompassing outlooks for mixed methods. And practice-perspective, largely, views the mixed methods as a tool for realizing their designs. Furthermore, JMMR’s another editorial that Tashakkori and Creswell (2008) puts on paper,

discusses the mixed methodology's presence across numerous disciplines noting that its acceptance and utilization varies. It does, however, as they argue, possess the versatility and flexibility for researchers, which is seen as a substantial strength. At around the same years, yet other topics as research questions and integration issues were the focal points. Tashakkori and Creswell (2007), in their JMMR editorial, propose tenets on how to conduct a mixed methods research arguing that a solid mixed methods research should indicate the evident reasons for using mixed methods with interlinked qualitative and quantitative components. They emphasize that a mixed methods research should have distinctive, recognizable qualitative and quantitative data that are analyzed individually, and inferences should be clear integrating more than one strands which will bring a more substantial and purposeful characteristic when compared with a mono-method study. Research question-wise, the study should have minimum one question that points the nature of mixing which is followed by the questions that are linked with the rationale of using mixed methods as they underline. It is also striking that Creswell (2009), in JMMR's another editorial, states that he is tired of the "incompatibility" argument that rejects the mixing of the qualitative and quantitative paradigms. According to him, the worldviews are not firm and rigid, therefore one may have a fluid and dynamic approach that is open to question. In this vein, Bazeley's (2009) JMMR editorial also points out that paradigm wars formed the thoughts, and in a way, stalled the researchers which lagged the progress of methods' integration. This journal's discussions denote the mixed methods' progress and legitimization of the field in time outstripping the paradigm wars and accepting it as a distinctive method and methodology, constituting criteria withal. On more recent editorials, they discuss Mertens et al.'s (2016) "The Future of Mixed Method: A Five Year Projection to 2020" which is kind of a manifestation on mixed method's future putting forward numerous tenets on definition, design, purposes, teaching, professions regarding the mixed methods research. Here they agree on the generic term of "mixed methods" but, according to them, the definition that of can alter. They also decide on two main criteria which are "the integration of results from those different components" and "using more than one method, methodology, paradigm, approach" to distinguish a mixed methods research. This is, therefore, a significant study determining the mixed methods' "identity".

This part so far discussed the mixed methods' main developments within a historical perspective underlining the vital concepts as triangulation, critical multiplism and multi-methods that are closely linked and yet contentious. One can argue that mixed methods crystallized as a methodology in the last decades, and this terming appears to have the endorsement to establish the mixed methods methodology domain, albeit the lack of consensus. Greene (2008) argues that mixed methods has the potential to obtain the methodological features having its philosophical stance, practices and design, also putting forward that the mixed methods will provide deeper understandings and function as a catalyst to comprehend intertwined world issues not just aiming for the convergence but bringing forth an understanding towards different positions. I champion this line of thought that see the mixed methods as a methodology given its emergent pillars and tenets though still developing parallel to what Greene argues, and some conceptualizations can thus be clearly defined in the near future to unclutter the terminology as Angura et al. (2018) suggests.

2.2. Approaches and Philosophy of Mixed Methods Research

Whether the qualitative and quantitative methods are commensurable has hitherto been the epicentral debate on the philosophical discussions in mixed methods research. Being the cardinal reflection of this dispute, the incompatibility thesis refers to the argument that the epistemology, ontology, and axiology, or simply put, the worldviews on reality, existence and values of the qualitative and quantitative research are incongruous. In that respect, the quantitative and qualitative purists contend that the methods should be within the boundaries of the determinant paradigm disavowing mixture of the methods given the incompatibility stemming from the furcation of two approaches (Johnson & Onwuegbuzie, 2004). Positivism and quantification that long seen as the true science which regard mathematics as the "queen of sciences" (Y.S Lincoln & Guba, 1994) and psychics as the science "par excellence" (as cited in Baškarada & Koronios, 2018), hold the idea that there is a "real" reality which is cognizable and the findings of the inquiries are the truths whilst qualitative approaches as constructivism's findings are "created" that sees the reality subjective, local and constructed (Yvonna S. Lincoln & Guba, 2005). It is thus, for those advocates the

incompatibility thesis, blending and mixing these paradigms is conflicting given the perceptual difference. Moreover, placing emphasis on values, qualitative researchers hold “empathetic understanding” contrary to the value-free positivist viewpoint (Howe, 1988). In this vein, “the embedded methods argument” also underlines that researchers must engage an epistemological and ontological position in data generation, however, say, participant observation that requires an interpretivist vantage point will run counter to the positivist stance (Bryman, 2012). Hence this argument also cements the incompatibility thesis.

Speaking of the “incompatibility thesis” and the arguments against mixed methods, it is imperative to address the “paradigm wars” era that hit the 1970s and 1980s. Being the significant term of Kuhnian philosophy, paradigm simply refers to the shared values, beliefs and techniques of a scientific community and most notably, “paradigm shift” as the brainchild of Thomas Kuhn, occurs when “extraordinary sciences” paradigm replace that of the hegemonic “normal science”, in its depression period (Kuhn, 1962/2018). Paradigms that shape the practices and thinking of scientists, became the source of disputes stemming from the incompatibility thesis. Qualitative researchers, particularly, were intransigent on the idea that the qualitative and quantitative paradigms have distinct bases (Creswell & Clark, 2012). In accord, Teddlie and Tashakkori (2015) affix the *mixiphobes* researchers that decline mixed methods research besides the *qualiphobes* and *quantiphobes* that are phobic to the qualitative or quantitative methods devoting themselves merely to one method. Paradigm wars came to a climax in early nineties, and various dissent arguments are raised challenging paradigm wars and the incompatibility thesis. To illustrate, Yu (2003) argues that paradigm in Kuhnian sense misleading to understand the science history putting forward the Laudan’s conceptualization “Research tradition” that stresses the problem-solving ground which involves the “commensurability”, “continuation” and “rationality” components. Yu (2003) also rejects the schematization of the quantitative studies confining it to the logical positivism which he describes as an obsolete philosophy. Further, post-positivism, for the time being, is thought to be more proper to refer to the quantitative research’s approach (Johnson & Onwuegbuzie, 2004). In a similar vein to positivism, post-positivism holds the “real”

reality idea but unlike what positivists assert, that is “imperfect” and can be grasped probabilistically, the findings, in addition, are “possibly” true, based on critical realist line of thinking (Lincoln & Guba, 2005). At the end of the day, these arguments attempted to pull the carpet from beneath the feet of incompatibility thesis advocates.

More to the point, Bryman (2008) suggests that commitment to pragmatism in mixed methods research functioned as a “détente” between paradigms though the war is not at an end given the intraparadigmatic distinctions and contrary viewpoints. Functioning as the way out of paradigm wars, Pragmatism¹ is the philosophical tradition that is originated in the late 19th century with mainly Dewey, Peirce and James’ contributions rejecting the objectivity and subjectivity dualism (and the mind-world scheme), focusing on the “interactions” and “experience” with the linkage between the actions and its consequences in which the inquiry brings the temporal truth or, as Dewey puts, “warranted assertions” that are valid for the very particular issue (Biesta, 2010). Put another way, pragmatism diminishes and disintegrates the dualism of realism and idealism, accentuating the role of experiences which in a way, shape and border our perceptions (Morgan, 2014). It thus brought a fundamentally new understanding to mixed methods research undermining deep-seated philosophical approaches. The researchers that adapted pragmatism broadly belittled the philosophical dimensions of the mixed methods research design following the maxim “What Works” (Hathcoat & Meixner, 2017). As an epitome of this line of thinking, Howe (1988) repudiates the incompatibility thesis arguing that researchers can go ahead with “what works” on the grounds that incompatibility between the qualitative and quantitative research is out of the question, or simply put, they are compatible. Hence, the researchers forge ahead with practical concerns setting aside the philosophical problems and positions with pragmatic tendencies according to the “What Works” understanding. More precisely, the truth is what works and researchers can adopt both methods in order to grasp the research question and beyond that,

¹ Pragmatism is generally translated into Turkish as “*faydacılık*” which is a misconception. “*Faydacılık*” refers (or should) to Mill’s and Bentham’s “Utilitarianism” which is more of an ethical philosophy which argues that we choose the actions with a view to maximize utility of the maximum number of people. On the other hand, pragmatism takes the “actions” as the focal concept, and people seek for the accordance of actions and its practical consequences (Öztürk, 2016).

researchers ought not to ask questions on reality and law of nature (Creswell, 2003). Hathcoat and Meixner (2017) doubt on these arguments indicating the complexity of pragmatism and also they point out that this philosophy is based on asking questions. Furthermore, Sale et al. (2002) present a solution, which is combining both methods for “complementarity” objectives, to overcome the incommensurability problems.

Moreover, feminist researchers via generally adding a quantitative dimension to the qualitative research, can utilize mixed methods given its offerings to inquiry “subjugated knowledge” and “silenced voices” with various methods with a view to unveiling the women concerns and problems (S. N. Hesse-Biber, 2010). Hesse-Biber also discusses what mixed methods can bring to the postmodern approach which rejects the “universal truth” and look for the multitude truths buried under the hegemonic discourse. Also, Postmodernism can welcome possible discrepancies between the qualitative and quantitative results for deconstruction and it will also help to demonstrate the plural understandings (S. N. Hesse-Biber, 2010). In addition, as Hesse-Biber (2010) illustrates, with a qualitative discourse analysis of a political figure and a quantitative inquiry on a large population, the postmodern researcher can interrogate how far a discourse has an impact on masses in order to investigate the insights. Accordingly, mixed methods research can offer further dimensions that researchers from different worldviews and approaches can utilize for their aims and questions.

More recent mixed methods paradigms are also noteworthy. One of which is Mertens’ (2007) transformative paradigm that aims at social change instrumentalizing the quantitative and qualitative methods to uncover the social justice issues particularly targeting the power structures. It, ontologically, sees the reality as socially constructed, and for this paradigm, the researcher and researched are in interaction for greater trust, empathy, and understanding. Furthermore, Schoonenboom (2017) developed the performative paradigm for mixed methods having the constructivist epistemology and ontology within multiple reality realm that emphasizes the “research actions”. The researcher generates new worlds. It requires additional inquiries which bring the “mangles” that interacts and feedbacks for adaptation of the research methods

and methodology. In performative paradigm, the researcher, social and material world are in constant dialogue.

What's more, a recent Journal of Mixed Methods Research editorial calls for alternative worldviews and philosophy to link with mixed methods, particularly from outside of Western world. Intriguingly, Fetters and Azoring (2019) also relate mixed methods to Chinese yin-yang philosophy that sees two conflicting approaches as complementary withholding the bi-reality and single reality.

All in all, mixed methods has a tumultuous development with all disputes and debates on its philosophy and applicability. Many concerns are intelligible as well as the solutions presented. The advent of it is a significant milestone in research methods; paradigm wars, alternative paradigms, and approaches thereto have formed, and to a greater or lesser degree, legitimized this methodology while the discussions are still underway.

2.3. Some Examples of Evaluative Studies

What Morris and Burkett's (2011) study examine has a nexus with what this thesis inquire. Analyzing 53 mixed methods nursing studies, they concluded that the researchers mix the data collection techniques with a view to "enhance" the quantitative dimension and the studies do not really apply mixed methodology let alone the weak rigor for the qualitative side. Claiming that "mixed methodology" is not feasible, they also argued that what happen should be called as "mixed data" or "triangulation" within these studies by pointing out that the studies should be marked as having "enhanced quantitative paradigm". Further to that, Gidding's (2006) paper which suggests mixed methods studies have "post-positivist flavor" that hardly ever represents interpretivist and constructivist viewpoints is in the same direction. Bryman (2006), in addition, analyzes 232 social science articles in the years between 1994-2003, that combine the quantitative and qualitative methods from the fields of media and cultural studies, social psychology, human, social and cultural geography, sociology; management and organizational behavior in which the study detects that

the foremost rationale for employing mixed methods is enhancement by 31.5 percent which is followed by completeness which has the 13 percent proportion and in the third place, triangulation with 12.5 %. Conversely, 26.2 % do not express any rationale for applying mixed methods. Moreover, Alise and Teddlie (2010)'s paper that analyzes psychology, education, sociology and nursing studies in which they demonstrate that 45% of the mixed methods researches examined fall under the “quasi-mixed” category in which there is no to little integration of both methods. Concerning problems on ambiguity, they also suggest that mixed methods researchers should be clearer on explaining and referring to their techniques and paradigms. Another research conducted by Brown et al. (2015) which examines 23 mixed methods articles related to school-based obesity interventions concludes that just ten of the studies indicate using mixed methods approach. In addition, just eight papers refer to a rationale for applying mixed methods. Consequently, the study points out the vague points and poor descriptions of research design in several procedures that cause questioning rigor in mixed methods researches. Another paper that interrogates 175 mixed methods researches from ten nursing journals published between 2014-2018, marks that thirty one percent of the studies do not express a rationale for applying mixed methods, ninety five percent do not refer a research paradigm, and twenty nine percent do not refer to a research design (Younas, Pedersen, & Tayaben, 2019).

2.4. The Future of Mixed Methods

Solid developments aside, the main challenges will be the ongoing ambiguity in underpinnings and practice of mixed methods as some scholars argue. The questions what synthesis means, the way and which methods are used to synthesize the quantitative and qualitative paradigms will continue to lie at the heart of debates (Baškarada & Koronios, 2018). Further to that, notwithstanding it appears as the rapprochement of two research school, some other scholars stress that pragmatism is incapable of grounding mixed methods even though it helps to ask more strict and better questions with its particular viewpoint on knowledge (Biesta, 2010). Moreover, how “qualitizing” the quantitative data will take place in data analysis remains as an unclear aspect as Baškarada & Koronios (2018) argue. As mixed methods gains

popularity, on the other hand, its expertise will be one of the major item of the requirement list. This will introduce a new genre of scholars, in other words, mixed methodologists will be the third expert type going beyond the quantitative and qualitative researcher dichotomy and given the mixed methods research's sophisticated nature that requires a range of skills from both quantitative and qualitative inquiries, how far one can grasp and specialize in both research types and be the "Jack of all trades" is an essential challenge (Andrew & Halcomb, 2009). As Andrew & Halcomb (2009) stress, mixed methodologist, will (or should) compensate shortcomings of expertise on both fields by thrusting management abilities forward administrating the teams that equipped with the skills set needed. They will, however, must have the know-how competency on integration processes which is mixed methods contentious and cross-cutting issue. Training of mixed methodologists, thus, poses a significant role. Intriguingly, Roberts and Allen's (2019) recent paper calls for the inclusion of mixed methods courses in undergraduate psychology curriculum concerning the drawbacks and vagueness of mixed methods' identity, designs and research procedures which are issues that published papers demonstrate. This enterprise, according to them, will help to have rigorous publications of mixed methods researches with improved quality in view of the fact that mixed methods courses are just available in graduate degrees and mixed methods lecturers generally do not have a formal basis for mixed methods, which is to say, they might be oriented only in quantitative or qualitative approaches. Therefore, mixed methods training, before long, can expand through different levels of university education stemming from the need of formal teaching of mixed methods for better quality and rigor which are weighty matters of discussions. It also points to the fact that mixed methods is on track of being one of the core topics of methodology.

On the other hand, the significant development of mixed methods is another facet of the topic. The manifestations, growing emphasis on integration and delineating the mixed methods identity will have a strong influence on mixed methods future. Speaking in Kuhnian terms, qualitative research challenged the dominant-positivist paradigm culminating in paradigm wars that are followed by the detente of two approaches with alternative paradigms that clear the way for mixed methods. Scholars

increasingly vocalized the rationales of better and in-depth understanding of complex phenomena with emphasizing the incompetency of single-method studies. In addition, mixed methods as Molina-Azorin and Fetters (2019) argue, has the potential to be decisive in social change and societal matters. In their paper titled “Building a Better World Through Mixed Method Research”, they accentuate the transforming features that mixed methods can have, simply stemming from multilateral involvement in research design for the qualitative and quantitative procedures and thereby the stakeholders will contribute to the actions to be taken for societal issues by means of the variations that will yield different and strong solutions to challenges researchers might encounter. Apart, they stress that mixed methodologist can also change the society by “using complete methodological tool kit”, “integrating expertise across other methodologists”, “producing resonating evidence”, and revealing the impact of the research. For future use of mixed methods, these are its offerings for the researchers that hold transformative paradigm.

Moreover, as the world goes through the social media era, how and to what extent researchers can utilise mixed methods are essential matters to envisage its future, given the massive flow of the data and information which will undoubtedly affect the social research and methodologies. Researchers apply mixed methods in social media analyses as the number of studies demonstrate. By way of example, Chou et al. (2014) analyze obesity in social media with a mixed methods study in which they employ descriptive keyword and post analysis which is followed by discourse analysis with a view to form themes to investigate meanings. As another illustration, Rohm et al. (2013) interrogate “brand-consumer interactions driven by social media” with a mixed methods approach bringing together the themes were formed based on social media diaries and LCA (Latent Class Analysis). In addition, a more recent study examines “vaping culture in online social” media applying mixed methods. Colditz et al. (2019) employ a convergent parallel approach with incorporating prevalence estimates and phenomenological contextualization. Here they also emphasize what mixed methods can provide to research on social media given the quantitative “big data” and qualitative mass data for contextual, linguistic in-depth analysis. Taken together as examples from different fields, these studies indicate and mark how mixed methods

can partake in social media inquiries and its applicability within this mass data flow which will shape the future and mixed methodologists will have the chance for multifarious research designs within the enormous data pool.

Speaking of the social media and what mixed methods offer, it is imperative to address big data and mixed methods' nexus which will arguably have the potential to be the hot topic of social research in the near term. In an earlier paper, Hesse-Biber and Johnson (2013) underscore that the way mixed methodologists will cope with the big data is of concern for the future. That is to say, they argue that the big data and social media might compel researchers for novel paradigms and procedures besides pushing scholars for groundbreaking innovations on fundamentals as ethics, confidentiality, data collection, and analysis. Put differently, most of the data will no longer be private as the distinction between public and personal will be cloudy which will bring the concepts as confidentiality into question that might force to redefine the terms. Hesse-Biber and Johnson also point to the fact that dealing with big data will break the mold on perceptions such as that of time and space as the boundaries between virtual, augmented reality and reality will be dimmed. In exchange, they stress, mixed methods might help to understand complex big data structures with the tools it provides. More to the point, Mertens et al. (2016) also address another point that will challenge mixed methodologist. Big data, as they point out, might amount to the data of population in the future, in contrast to that of the sample, which is to say, generalization and representation that researchers seek will be debatable when we have the data of entire population at hand. The question here is that how mixed methodologist will adjust to these alterations to examine their theories. On the other hand, Mertens et al. (2016) also emphasize the opportunities mixed methods provide as they see mixed methods researchers having "kaleidoscope" with them. For instance, mixed methods will help to go beyond limitations of the words and statistical data with what digital age brings, say, attracting and intriguing data visualizations and graphical presentations. Some recent publications demonstrate mixed methods' usage in big data as O'Halloran et al.'s (2018) study in which they investigate how digital tools provide possibilities to convert qualitative data into quantitative one where the ultimate aim is to employ data mining and visualizations within a mixed methods inquiry. In a similar

vein, O'Halloran and his friends (2019) apply discourse analysis using data mining and visualizations in another mixed methods study that inquires on "violent extremist discourse". Having said that, researchers have begun to employ mixed methods within big data sets which will gain more momentum in the near future given that the digital age will be shaped by big data and massive flow of information, and hence social researchers will have to adapt. No doubt that this will dramatically change our perceptions and terminology for research not to mention the questions need to be answered on how mixed methods researchers will conduct and apply main procedures when the concept of data will fundamentally transform.

Lastly, one cannot afford to overlook the role of softwares as is improved tremendously within the last twenty years. Researchers can utilize the advanced software as NVivo, Maxqda, Atlas.Ti which are originally designed for qualitative inquiries have recently adapted features that make it possible to employ mixed methods which will undoubtedly facilitate the analysis procedures. That is to say, these developments will increasingly ease to conduct sophisticated mixed methods procedures in the future.

2.5. Design of Mixed Methods Research

Numerous designs have been illustrated to form the procedures of conducting mixed methods research. The designs can facilitate deciding measures and actions to be taken in the inquiry's each step depending on the researcher's approach and philosophy. This section will discuss and attempt to explain the conceptualizations from illustrious scholars in this field given the plethora of design typologies and the need for focusing on prominent ones and those simplify to grasp the transformation. It will also provide insights on mixed methods' and the concepts. For this section, the Table 2.1 encapsulates references in what follows.

Let us begin with Greene, Caracalli and Graham (1989)'s five typologies. In sum, *initiation* studies look for finding new perspectives and contexts, *expansion* aims for enhancing the breadth of the studies with different methods, *development* uses the

methods' results to instruct and improve one another, *complementarity* seeks to complement and support the methods with a view to enhance and elucidate the results, and finally *triangulation*, as discussed previously, attempts for corroboration and convergence using different methods (Greene et al., 1989). In addition, Greene and Caracelli (1997) formulated a design on the basis of two categories: *component designs*

Table 2.3.1. Mixed Methods Designs That Are Referred

SCHOLARS AND DESIGNS	DESIGN COMPONENTS
Greene, Caracelli and (1989) Methods Graham's Five Typologies of Mixed	Initiation Expansion Development Complementary Triangulation
Greene and Caracelli's Designs (1997)	Component Designs Integrated Designs
Morgan (1998) Priority-Sequence Model	Qualitative Preliminary Quantitative Preliminary Qualitative Follow-up Quantitative Follow-up
Tashakkori and Teddlie's (1998) Designs	Mixed Methods Designs -Equivalent Status -Dominant-Less Dominant -Multilevel Use Mixed Model Designs -Confirmatory -Exploratory -Parallel -Sequential
Tashakkori and Teddlie's (2006) Designs	Parallel Mixed Designs Sequential Mixed Designs Conversion Mixed Designs Multilevel Mixed Designs Fully Integrated Mixed Designs
Creswell's (2003) Strategies	Sequential Explanatory Strategy Sequential Exploratory Strategy Sequential Transformative Strategy Concurrent Nested Strategy Concurrent Transformative Strategy
Creswell and Piano Clark (2012)	Convergent Parallel Design Explanatory Sequential Design Exploratory Sequential Design Embedded Design Transformative Design Multiphase Design

and *integrated designs*. *Component designs* are the studies that pursue the inquiry with different methods in a distinct fashion and the combination takes place in the

interpretation section. Conversely, *integrated designs* dictate major integration throughout the research process incorporating the different paradigms which yields an enhanced understanding of the matter, as they put. Furthermore, Morgan (1998) sets forth *The Priority-Sequence Model* which presents four design types. *Qualitative Preliminary* is primarily a quantitative design which a minor qualitative inquiry assists the data collection. *Quantitative Preliminary*, in contrast to the first one, is a qualitative-focused design and the quantitative inquiry plays the guide role for the data collection. In addition, *Qualitative Follow-up* and *Quantitative Follow-up* are the designs that qualitative and quantitative inquiries functions as the second step for evaluation and interpretation, respectively (Morgan, 1998) (See the Table 2.3.1.).

Furthermore, Tashakkori and Teddlie in their work dated 1998 (as cited in Creswell & Clark, 2012; Maxwell & Loomis, 2003), separate the *mixed methods design* and *mixed model designs*. The former one stands for the combination of methods alone whereas *mixed model designs* oblige combining beyond one stage. *Mixed method designs* have the varieties of *equivalent status (sequential or parallel)*, *dominant- less dominant (sequential or parallel)*, and *multilevel use*. The categories are shaped on the weight of the method and the sequence. In addition, *Mixed model designs*, as they formulate, have *confirmatory*, *exploratory*, *parallel* and *sequential mixed model* components. More to the point, mixed model design's indispensable feature is the multiple occurrences of mixing, which means the first strand's results (application of a method or a type of study) serves the purpose of shaping new aims and matters for the subsequent strand which is a dissimilar study type. They also see the fully integrated mixed model studies as sort of mixed model design's paragon which instructs inferences from both strands for the sake of meta-inferences (as cited in Greene, 2007).

In their later works, Tashakkori and Teddlie altered this scheme dropping the separation between mixed model and mixed method arguing that all the mixed methods studies have integration through the phases, as all recent studies concur (Teddlie & Tashakkori, 2006). This distinction is thus of no avail. Tashakkori and

Teddlie, later set up the typology that includes *parallel mixed designs*, *sequential mixed designs*, *conversion mixed designs*, *multilevel mixed designs*, and *fully integrated mixed designs* (as cited in Creswell & Clark, 2012). (See Table 2.3.1.)

Moreover, Creswell (2003) introduces six types of what he calls as strategies (see the Table). Qualitative inquiry holds the primary role in exploratory designs whereas explanatory designs attach the principal position to the quantitative side. Triangulation strategy seeks for the corroboration and convergence and this integration springs in the interpretation phase, which generally, each method has the equal weight. Nested strategy, on the other hand, has a leading method that directs the research and the other method is embedded with its low-priority and ultimately, the mixing occurs the analysis. In addition, transformative strategy sets sight on changing and transforming the underlying reasons for the research problem. Thus, according to Creswell, a method's weight depends on the researcher's aims and the integration also can occur in any phase, though mostly, that is the analysis phase. Following that, Creswell and Piano Clark (2012) established a modified version. This time the word "strategy" drops, and design comes in. *The convergent parallel design* has the concurrent timing of implementation giving equal weight to each method. Additionally, *the explanatory sequential design* and *the exploratory sequential design* differs in the priority of the methods and the sequence. The first one takes the quantitative inquiry as the leading method and based on the quantitative findings, the researcher plans the qualitative part with a view to explain the first results. On the other hand, the exploratory sequential begins with the qualitative inquiry and the researcher, in the sequel, continues with the quantitative phase that aims at generalizing the results. Furthermore, the researcher adds an additional qualitative or quantitative inquiry, labelled as the "embedded", during the conventional qualitative or quantitative setting, so as to upgrade the scheme in *the embedded design*. As regards to *the transformative design*, the researcher follows a theoretical framework and he or she can stretch the priority, the sequence, and the other elements according to the necessities. Finally, *the multiphase design* combines the sequential and concurrent designs, generally for a funded overall project that has various questions and aims. (See the Table 2.1) Besides these, some writers applied non-typological approaches as Creswell and Clark (2012)

(calling it as “dynamic approaches”) and Maxwell and Loomis (2003) refer. Researchers contemplate research’s each stage and compose a pattern irrespective of a typology, or in other words, the design takes its shape not adhering to a pre-planned scheme, which is to say, the researcher rather focuses on the research questions.

Being an arduous process, applying a typology or structuring a design has a major place in the methodology. The weight, priority, sequence and integration come to the front as the components. Considering these design conceptualizations and definitions, which is chosen to explain the main elements, one can argue that the researcher’s method priority and the aim of using mixed methods play the role in shaping the design. It also may well be argued that the greater integration gradually becomes a pillar to distinguish a mixed methods research as Tashakkori and Teddlie underscore. Mixed methods research requires heightened integration along with the study’s phases in the last instance, though complexity and diversity of the phenomenon remain. Concepts as “model” and “strategy” has undergone a change or kept in the background as time progresses. It is also noteworthy to point out that these scholars are fellows of Education and Health fields. The contribution to mixed methods, as it stands, mainly emanates from these disciplines.

2.6. Data Collection, Data Analysis and Ethics in Mixed Methods Research

Data collection starts with the sampling procedures that determine the data providers. Teddlie and Yu (2007) discuss a typology which is refined from previous sampling studies, that has five components. First to elaborate is *Basic Mixed Methods Sampling Strategies* which is germane to Patton’s maxim “samples within samples”. In this technique, otherwise known as stratified purposive sampling, researchers form strata in order to choose several cases to scrutinize in detail on the basis of purposive random sampling. Secondly, *Sequential Mixed Methods Sampling* refers to the designs that the first sequence’s sampling (quantitative or qualitative) shapes the following one. As they note, mostly, the qualitative inquiry uses the subsample of the quantitative sample frame. Moreover, Teddlie and Yu found that there is hardly a concurrent mixed method study that clearly discusses both dimension of purposive and probability

sampling techniques which falls within *Concurrent Mixed Methods Sampling* type. They also outline two sorts of concurrent mixed methods sampling. In the first one probability sampling and purposive sampling are run for the quantitative and qualitative inquiry separately while the second formation operates purposive and probability samplings in tandem to generate the data for both methods. For instance, a mixed method inquiry that includes both open-ended and closed-ended questions can be in this category. Fourthly, *Multilevel Mixed Methods Sampling* is the strategy that centers the units of analysis which are “nested within one another”. Researchers, form units and employ different sampling types in line with the requirements. That is to say, this type is founded on units of analysis rather than strands. Lastly, *Combination of Mixed Methods Sampling Strategies* is the complex sampling type that includes multiple sampling strategies within levels and strands in the same study. In addition, Onwuegbuzie and Collins (2007) set a typology that has *sequential* and *simultaneous* components. They also define the sub-categories, namely, identical, parallel, nested and multilevel for both components which refers to the link between two methods. (See Table 2.4.1.)

Table 2.4.1. Sampling Typologies That Are Referred

SCHOLARS	SAMPLING TYPOLOGY
Teddlie and Yu (2007)	Basic Mixed Methods Sampling Strategies Sequential Mixed Methods Sampling Concurrent Mixed Methods Sampling Multilevel Mixed Methods Sampling Combination of Mixed Methods Sampling Strategies
Onwuegbuzie and Collins (2007)	Sequential <i>Identical</i> <i>Parallel</i> <i>Nested</i> <i>Multilevel</i> Simultaneous <i>Identical</i> <i>Parallel</i> <i>Nested</i> <i>Multilevel</i>

Data collection in mixed methods, on the other hand, largely depends on the design and sampling. Researchers can form their data collection techniques and

methods according to the study's purpose. Creswell and Clark (2012) suggest that existent literature is short of focusing data collection in particular. And they also assert that the data collection techniques are closely linked with the design and sampling choice. In what follows, they discuss the data collection guidelines for each design that are pointed out earlier.

Data analysis procedures in mixed methods is rather sophisticated process in comparison to single-method studies. Regarding the analysis, Tashakkori and Teddlie structures timing-based approach. They propose three different strategies which are *concurrent mixed analysis*, *sequential qualitative-quantitative analysis* and *sequential quantitative-qualitative analysis* (as cited in Venkatesh et al.,2018). Moreover, techniques of *qualitizing* and *quantitizing* are demonstrated in respect to the data analysis process (Sandelowski, 2000). Quantitizing is the way of transforming the qualitative data to numerical with the quantitative techniques whilst researchers that employ qualitizing, morphs quantitative data into qualitative data for the qualitative inquiry which is comparatively a rare practice.

Moreover, ethics in mixed methods research is of fundamental importance. It might require further attention given the study's bi-dimension. Global principles for social research as informed consent which requires informing participants and voluntariness, confidentiality that dictates researchers to keep information of the participants and use them merely for research purposes and the principle of avoiding harm and doing good that to minimize the risk of participants, especially for some conditions that are thought to maximize the society's benefits (Israel & Hay, 2006). It is therefore vital to follow these principles within a mixed methods research design.

CHAPTER 3. METHODOLOGY AND DATA

3.1. Methodology and Approach

This study applies the qualitative methodology with taking the perspective of interpretivist approach. Qualitative research, as Bryman (2012) suggests, is inclined to focus on words in place of numbers. However, this would be a cursory glance at this methodology. Bryman (1988) also notes that the qualitative research deals with how should the social world be understood. From the qualitative outlook, the social world is constructed with individual objects that shape contexts with their beings and those objects, can't be degraded into a single variable altogether (Flick, 2009). The word "quality" addressing to the essence and ambiance of the things, qualitative research inquiries the "meanings, concepts, definition, characteristics, metaphors, symbols and descriptions" as Berg (2011) states. In addition, the qualitative inquiry seeks for the meanings lie beneath the experiences attributing a value-laden perspective unlike the value-free approach of quantitative research (Denzin & Lincoln, 2005). Investigating the phenomena from the eyes of those involved being the canon, qualitative research advocates *verstehen*, which is an essential terminology of Max Weber's sociological inquiry that generates information through systematic observation wherein the insiders' perspectives set the grounds (Lapan et al., 2012). Also, qualitative research is linked with *hermeneutics* which is the interpretation methodology that, by and large, studies texts, focusing on meaningful human actions and problems occurring therefrom ("Hermeneutics," n.d.). The hermeneutics and phenomenology reflect the qualitative research's epistemology (Alastalo, 2008) that accepts the linkage between researcher and researched, by extension, what the inquiry brings is the outcome of this process while positivism has the objectivist stance that assumes a reality beyond the individuals, and accordingly, the inquiry is to ascertain the way things work and the reality (Lincoln & Guba, 1994) With that in mind, this study has the qualitative research approach, which is to say, evaluating mixed methods researches considering authors' understanding and to construe the concepts on the basis of mixed methods literature underpin this study's core. I attempt to unearth the meanings, concepts and

“social world”, with regards to mixed methods research’s conceptualizations in the researchers’ realm. The mixed methods literature, beyond this, helps to engender a blueprint for the evaluation. More to the point, I sustain the interpretivist approach, that is strongly relatable to the concepts of *hermeneutics* and *verstehen*, upholding the constructivism and relativism’s line of thought, which, epistemologically and ontologically speaking, disaffirms the mono-reality and advocates that the reality is constructed. By extension, the reality is interactional with the individual’s culture and context (Willis, 2007). This approach also might aim at calling forth for personal transformation (Given, 2008). Hence, I pursue this inquiry bearing this epistemological and ontological thread of thoughts. Evaluating the mixed methods researches focusing on prominent concepts and meanings with keeping in sight the authors’ “reality” is the main purposes of this study.

3.2. Data Generation

In accordance with this study’s aims, reaching a fair number of mixed methods theses in Turkish academia was the primary goal. To that end, certain limitations and criteria are required to progress the sampling. As is argued that all the qualitative research samplings are somewhat purposeful (Coyne, 1997), this study, applies the criterion sampling which examines the cases according to criteria that are established beforehand (Patton, 2002). Each thesis might be regarded as a case within the scope of this study.

The target is master’s degree theses of the Department of Education and Department of Sociology published in 2017 within Turkish universities. With my reconnaissance beforehand, I found out that the contribution to the mixed methods mostly come from scholars of educational sciences and also employing mixed methods is widespread amongst educational researchers. In addition, being a social research methodology student, I was interested to inquire on sociology theses given its close links with social research. However, I screened low numbers of sociology studies in the database. Be that as it may, I also included two sociology theses to investigate how mixed methods is perceived in that field. Furthermore, it should be noted that the

popularity of mixed methods researches begets a great number of studies which requires certain limitations. Generating data from the source, which is *Thesis Center Database of Council of Higher Education* (In Turkish: *YÖK Tez Merkezi*)², necessitated a boundary for the sake of in-depth analysis with an enhanced breadth. For instance, searching “karma yöntem” (in English: mixed methods) on theses’ abstracts under “detailed search” section for the years between 2010 and 2017 displays 350 social sciences master’s degree thesis while adding PhD dissertations increases the number to 738. The database screens 14, 26, 38, 76, 92, 131, 156, 205 theses respectively for each year between 2010-2017 which provide an indication on the mixed methods’ ever-increasing rise over the recent years (See Table 3.2.1.). I, therefore, limit my inquiry with two departments’ master’s degree theses, also applying the year-filter as 2017 which is chosen for focusing on the recent works and due to the reason that I commenced writing my thesis in 2018. That is to say, 2017 is taken as the reference since it was the finished year. In addition, being a master’s degree student motivated me to inquire the studies of same level, hence I focused on master’s degree theses.

Table 3.2.1. Number of Theses Screened with “Karma Yöntem” Search

Year	Education Master’s Degree Theses	All Departments Master’s and PhD Theses and Dissertations
2010	0	14
2011	2	26
2012	5	38
2013	5	76
2014	12	92
2015	10	131
2016	19	156
2017	12	205
TOTAL	65	738

² The Council of Higher Education (YÖK) is the autonomous governmental body that coordinates the Turkish universities and oversees the quality assessments. The thesis database is accessible on <https://tez.yok.gov.tr/UlusalTezMerkezi/>

Thesis Center Database of Council of Higher Education (In Turkish: *YÖK Tez Merkezi*) is the official online open-access source that gathers all Turkish universities' thesis and dissertations under one roof. Finding the mixed methods researches in this database was the next step, and thus various keyword combinations are required to display the mixed methods theses in the search tab which runs the queries within the theses' abstracts.

Table 3.2.2. Keywords and Theses Screened on YÖK Thesis Center Database

Keywords	Education	Sociology
<i>karma yöntem</i>	11	0
<i>karma araştırma</i>	6	0
<i>çoklu metot / metod</i>	0	0
<i>karma desen</i>	0	1
<i>karma metot/metod</i>	0	0
<i>çoklu yöntem</i>	0	0
<i>mixed method(s)</i>	0	0
<i>mixed research</i>	0	0
<i>mix method(s)</i>	0	0
<i>multi method/multi-method/multimethod</i>	0	0
<i>mix research</i>	0	0
<i>triangulation</i>	0	0
<i>multi research / multi-research</i>	0	0
<i>üçgenleme</i>	0	0
<i>nicel ve nitel</i>	2	0
<i>nitel ve nicel</i>	2	0
<i>qualitative and quantitative</i>	6	1
<i>quantitative and qualitative</i>	1	0
<i>niceliksel ve niteliksel</i>	0	0
<i>niteliksel ve niceliksel</i>	0	0
TOTAL	28	2

Concordantly, the table above (Table 3.2.2) demonstrates the related keywords “mixed methods”, “multimethod”, “mix research”, “mix method”, “multi research”, “triangulation”, “qualitative and quantitative”, “quantitative and qualitative” and corresponding Turkish words with the number of thesis. Some theses appear repetitively with different keywords, and these duplications are fixed. It is important to note that this search is limited within the scope of the thesis abstracts. Department of Education and Department of Sociology are the departmental filters, whereas the year filter is 2017 and the educational level filter is the master's degree. In addition, the search is confined with the authorized theses since some writers do not allow to share their work. In sum, 28 Education and 2 Sociology master's degree theses published in 2017 across the Turkish universities form this study's sample. This

sample contains theses from 21 different universities, and three major cities, namely İstanbul, Ankara and İzmir have 8 theses contributing from 5 different universities. Topics of the theses are of a wide variety, roughly speaking, including the educational curriculum, psychology of administrators and teachers, tutoring teachers, educational inspectors, educational techniques, students' perceptions, family and romantic relations.

3.3. Data Analysis

The principal focus of this study is the method sections of the thirty theses to examine how the mixed methods takes its place, and to form the concepts and meanings thereof. In this vein, qualitative content analysis is applied. Content analysis is a technique for studying texts or any similar purposeful material to make inferences for contextual usage (Krippendorff, 2004). Krippendorf (2004) also objects those who see the content analysis as a quantitative inquiry, arguing that reading per se is a quintessentially qualitative procedure. Qualitative content analysis is also defined as the research method that has systematic coding and theme constructing procedures for subjective understanding (Hsieh & Shannon, 2005). This study puts the content analysis procedures into practice. That is to say, coding the methods section of thirty thesis and constituting themes combined under categories constitute the basis of analysis. My study, by extension, falls rather within conventional or inductive content analysis during which researcher starts the inquiry, so to say, with an "empty mind" and the categories comes to light afterwards, unlike the deductive content analysis which has pre-prepared categories and theoretical framework (Hsieh & Shannon, 2005; Kondracki, et al., 2002). In addition, categorization through open coding is the process of inductive content analysis (Elo & Kyng äs, 2008). In fact, I did have a number of preliminary evaluation criteria that I conceived in consideration of mixed methods literature. These criteria were reason and philosophy for using mixed methods, sampling, integration, and design issues regarding mixed methods researches. Nevertheless, performing an open-coding might provide broader insight. Thus, I practiced open coding and generated themes focusing on the method section which comprised of 14 categories. After studying thoroughly on the categories, I downsized

the categories to seven, which are “Rationale”, “Definition and Naming”, “Model and Design”, “Sampling”, “Data Collection”, “Data Analysis” and “Ethics”. Tables and quotations assist the analysis and interpretations; besides that, themes and concepts reflect the insights. That being said, discussing and interpreting the concepts based upon the mixed methods literature is another facet of this study. As it stands, this study bears mainly inductive (or conventional) content analysis’ notions and therewith, it has the aforethought framework at the outset though open coding caused changes. Kondracki et al. (2002) suggest that inductive and deductive content analysis are not mutually exclusive and applying both might be convenient. Hence this study blends both approaches partially. It is also needful to note that the analysis is done by using NVivo 12 software.

3.4. Ethical Concerns

As a text-based study; informed consent, confidentiality and anonymity take the leading role as regards to the ethical concerns. The thesis database is open-source and the authors consent to present their works that are open to research or else they can block the access if they are willing. Confidentiality which requires that data and results shouldn’t point and associate any particular individual (Mertens, 2012) is provided by not giving the identities of the authors in any part of this study. Furthermore, codes as *T1*, *T2*, *T3* are thought to ensure the anonymity. Quotations are referred with code names and departments. Essential to note is the approval of the Hacettepe University Ethics Committee beforehand which is attached to the appendix. Lastly, the quotations are translated into English given that the large majority of the theses are in Turkish.

3.5. Reflections and the Process

Though starting fully to study on my thesis was overdue, once I accomplished that the topic engrossed me. Realizing how entangled the topic is, I exerted more effort on the readings and the understanding the concepts related to mixed methods research. Initially, I had several evaluation criteria and stronger impetus to apply them. Yet, in a stepwise manner, the structure is altered with the open-coding and a thorough study

on the material. The process helped me to be better acquainted with the subject and how mixed methods, as an emergent enterprise, is a multifaceted topic and has multifarious point of views. Manifold ways of approaching the subject have impelled this study to adapt the interpretivist approach besides within an evaluation framework. I doubted on mixed methods given the philosophical bases and paradigm discussions at the outset. If anything, from now on, I do believe that mixed methods research will increasingly gain momentum with novel paradigms that will overcome the philosophical conundrums. I thus am more broad-minded towards the mixed methods from that of the beginning. In that vein, researchers, I suggest, need to propel the mixed methods to shape it as an “institutionalized” and legitimized methodology which has been the very tendency in the last decades.

CHAPTER 4. ANALYSIS

This chapter will analyze the thirty theses based on seven categories, which are “rationale”, “definition and naming of the mixed methods”, “model and design”, “sampling”, “data collection/generation”, “data analysis” and “ethics”. Having fourteen categories at the outset after the open-coding employed in the method and methodology chapters, the number is reduced to seven with a view to focus deeper on these categories that is thought to unfold mixed methods studies’ many aspects which will work as a catalyst to understand how authors conduct mixed methods researches. As the literature and ensuing chapters attempts to explain mixed methods’ formation process and the debates surrounds its methodological substantiality, it is imperative to analyze how the authors rationalize employing mixed methods and define it, also with the model and design, sampling, data collection, data analysis processes and techniques that will elaborate these mixed methods studies underpinnings. Apart from this, how ethical concerns have its coverage within the theses’ chapters will hazard an opinion the way the authors handle ethics stemming from adding an inquiry or dimension to their studies which is, for this study, an issue of concern. As per the framework above, this chapter will discuss the considerable themes and concepts constituting these mixed method researches that are significant to progress on this emergent methodology. Conversely, the absence of concepts and themes are also of note to form an opinion, for instance, on methodological rigor and clarity within these mixed methods researches.

4.1. Rationale of Mixed Methods in the Theses

The rationalization of using mixed methods reveals why the authors apply mixed methods that might make conspicuous the purpose and groundwork for the understanding of this methodology. In line with that, philosophical foundations and social science approaches are the other pillars for providing the basis to employ mixed methods. Additionally, the debates on the mixed methods paradigms and philosophical discussions urge to analyze the authors’ stance on this matter, which is to say, the authors’ vantage points will betoken what the mixed methods’ understanding is within

these thirty theses. To that end, the table indicates, if any, the rationale of using mixed methods together with philosophy and approaches that the theses hold. The columns “Rationale of Using Mixed Method” and “Paradigm –Philosophy–Approach” array the reasons for using mixed methods and the philosophical stances regarding the mixed methods. Though it is conceivable that every scientific study, by its very nature, has a philosophical position and reasons for applying its method whether it is vocal or not, specifying it can bolster the methodological clarity and rigor. Particularly, in view of this study’s purpose, the mixed methods’ philosophical and rationalistic basis might indicate the status for the evaluation considering mixed methods’ retrospect and where it stands currently. Some thesis introduces the direct rationale for applying mixed methods which undoubtedly concretize the methodological purpose whilst some others deliver the reason and rationale indirectly. On the other hand, paradigm, philosophy and the approach references and statements are significant in terms of understanding the mixed methods’ foundations.

Table 4.1.1. Rationale, Paradigm, Philosophy and Approach in The Theses

THESIS	RATIONALE OF USING MIXED METHODS	PARADIGM - PHILOSOPHY-APPROACH
T1	“Complementing the weakness of quantitative findings with qualitative findings”	Somewhat referring to paradigms of quantitative and qualitative researches but no direct philosophical position No reference to any social science approach
T2	“Improving the Reliability”	“Positivist and Anti-Positivist approaches used to improve the quality”
T28	“To obtain a better and holistic understanding” and “To utilize strengths of both quantitative and qualitative research”	No reference to any paradigm, philosophy or approach
T29	“Complementarity”	No reference to any paradigm, philosophy or approach
T30	“Qualitative inquiry aimed at gathering second-type of data”	No reference to any paradigm, philosophy or approach
T18	(Indirectly) “Mixed method studies provide better understanding of the research question.” “Quantitative findings are supported by qualitative findings”	Addressing to mixed method as the “synthesis of qualitative and quantitative paradigm” No reference to any philosophy or approach

**Table 4.1.1. Rationale, Paradigm, Philosophy and Approach In The Theses
(Continued)**

T3	(Indirectly) “Mixed methods provide better understanding”	No reference to any paradigm, philosophy or approach
T4	(Indirectly) “Qualitative data supported Quantitative data obtained.”	No reference to any paradigm, philosophy or approach
T5	(Indirectly) “Mixed Methods offers informative, complete, balanced and useful research”	Referring to mixed method as third methodological paradigm No reference to any social science approach
T6	(Indirectly) “Mixed Method provides presentation, analysis, gathering of issues by various methods”	No reference to any paradigm, philosophy or approach
T7	(Indirectly) “Mixed Method is used for depth and breadth of understanding and validation”	No reference to any paradigm, philosophy or approach
T8	(Indirectly) “Mixed Method provides better understanding”	No reference to any paradigm, philosophy or approach
T10	(Indirectly) “Mixed method researches provide better reliability” (Indirectly) “Mixed method researches strengthens the weaknesses of single-method studies”	No reference to any paradigm, philosophy or approach
T11	(Indirectly) “Mixed method design provides better understanding of quantitative findings (Indirectly) “Mixed method compensates the limitation of both methods by strong aspects” (Indirectly) “Mixed method can be used when there is a need for deeper explanation”	No reference to any paradigm, philosophy or approach
T12	(Indirectly) “Mixed method strengthens the advantages of both methods” (Indirectly) “Mixed method provides more options of methods and approaches”	No reference to any paradigm, philosophy or approach
T13	(Indirectly) “Mixed method is the study that is used for examining the research problem comprehensively and multi-dimensionally”	(Indirectly) Referring to “pragmatist philosophy of mixed methods”

Table 4.1.1. Rationale, Paradigm, Philosophy and Approach in the Theses (Continued)

T16	“Applying qualitative method to bring deeper and detailed information to the superficial data of the quantitative method” and “To balance the sampling limitation of the qualitative research with the quantitative inquiry”	No reference to any paradigm, philosophy or approach
T17	(Indirectly) “Quantitative findings are enriched with the qualitative findings in this design.” and (Indirectly) “Qualitative findings provide extra information to the quantitative research results.”	No reference to any paradigm, philosophy or approach
T18	(Indirectly) “Mixed method studies provide better understanding of the research question.” “Quantitative findings are supported by qualitative findings”	Addressing to mixed method as the “synthesis of qualitative and quantitative paradigm” No reference to any philosophy or approach
T19	(Indirectly) “Mixed Method strengthens the advantages of both techniques”	No reference to any philosophy or approach
T20	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T22	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T23	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T24	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T25	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T26	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T27	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T14	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T15	No reference to rationale of using mixed method	No reference to any paradigm, philosophy or approach
T9	No reference for rationale of using mixed method	No reference to any paradigm, philosophy or approach

The most salient points are that just six of thirty theses have a direct rationale for applying mixed methods and eleven theses by no means have a reference while thirteen theses address the rationales of applying mixed method indirectly. The overall

picture does not elucidate the reasons why the authors employ mixed methods. For direct references, the rationales of better understanding, complementarity, strengthening, supporting come to the fore whereas many theses address the reason indirectly, which is to say, the rationales are expressed referring to an author on general rationales of the mixed method without specifying the thesis' purpose. Paradigm, philosophy and approach-wise, as it stands, just one author refers to the mixture of positivist and post-positivist approaches in the study. This hinders to explicate the philosophical grounds the theses offer for mixed methods. In this respect, one can argue that most of the thesis do not evidently address or discuss the rationale, philosophical essentials and the approaches to mixed methods. A systematic discussion and expounding the rationales would provide enhanced methodological foundations and a further comprehension thereof (See Table 4.1.1.).

Furthermore, the content analysis with open-coding on the method sections of the theses revealed themes that are immediately pertinent to the “why” questions in regard to the reasons applying mixed methods. “Better Understanding”, “In-depth Information”, “Enriching the Content”, “Strengthening and Complementing”, “Support”, “Reliability and Validity”, “Insufficiency and Weakness” are the themes that reflect the rationales for using mixed methods. In relation to that, the rationales, for the most part, are linked with the purpose of adding the qualitative inquiry. The themes are based on directly or indirectly presented reasons and rationales for applying mixed method. Illustrating the themes corroborated with quotations will help to understand mixed methods' role and its relationship with the theses' contents along with how it functions within these studies.

“Better Understanding” is the theme originating from the studies refer to the rationale of applying mixed methods, which is broadly, the development of understanding by the help of using both qualitative and quantitative methods which also expands and enhances the comprehension of the inquiries. The theme constitutes the notions that see the mixed methods as an assistant to enhance understanding and comprehension by providing insights for uncovering connections. Mixed methods, for

several authors, is thought to provide extra instruments to grasp the aims and results of research in a sophisticated way as the quotations also demonstrate.

“According to Creswell and Piano Clark, mixed methods involves the philosophical assumptions that guide managing the data collection and analysis procedures by the combination of the quantitative and qualitative approaches in many stages of the research process. They emphasize that the main premise of the mixed methods is using the quantitative and qualitative data. It also provides understanding the research problem much better than a single-method. On the other hand, they defined the explanatory design as the design that researchers seek for specific results as an extra inquiry within a quantitative research.” (T3 from Department of Education)

The author refers to Creswell and Clark to suggest that mixed methods provide a better understanding than a single-method study. Put another way, the research is expected to elicit further explanations using the methods in tandem. In this study, which “level of burnout” of administrators and teachers from primary schools is in question, the author has a distinct question for qualitative inquiry that aims at finding out how subjects experience “level of burnout” and what they propose as solutions regarding the problem. Having an “explanatory design”, as is referred to in the method section, the qualitative part is an additional inquiry with little to no inferences and comparison between two methods. Explanatory design, typically, forms two phases in which qualitative inquiry follows the quantitative one with a view to explain the findings of quantitative method. It is nonetheless unsharp if the author acts from that point, which is to say, the qualitative part is more of an extra inquiry follows the sequence yet bereft of a clear-cut connection and transition. Additionally, the author doesn’t provide substantial information on how this design and qualitative inquiry yielded a better explanation. It is thus safe to say that qualitative part has a secondary role formatted as an extra inquiry based on a sub-question, not addressing to the cogent grounds and arguments for the rationale of adding the qualitative phase.

“Mixed methods strengthens the advantages of both techniques via using the quantitative and qualitative techniques within a framework. More importantly, researchers that apply mixed methods have more chance to choose methods and approaches relevant to their research questions. Mixed methods researches, rather than restricting the options of the researchers, apply multiple approaches seeking for answers to the research questions. Mixed methods, in many cases, does not aim to validate an opinion or support it.

Rather it aims at enhancing the understanding (Onwuegbuzie and Leech, 2004, cited in Baki and Gökçek 2012).” (T12 from Department of Education)

T12 questions principals’ competence of evaluating teacher performances with a triangulation design as is pointed out in the method. The author, referring to Onwuegbuzie and Leech, indirectly indicates the rationale of using mixed methods. Sub-questions have quantitative and qualitative dimensions with additional discussion part that demonstrates quantitative finding followed by quotations from interviews. That is to say, the qualitative part varies the data in a way that one can compare with quantitative findings. The assumption that mixed methods enhance understanding form its basis by the triangulation design which brings both methods’ data to the forefront albeit the author does not directly manifest the reason for applying mixed methods. Notwithstanding the study has detailed results for quantitative and qualitative inquiries with quotations and references, the author does not discuss the overall comparison and inferences how the rationale for using mixed methods worked. Quantitative inquiry takes the first place in the sections on data generation and results, however, T12 does not prioritize a method over the other, which is rather the common practice given the triangulation design of the study that runs two methods culminated in combination.

“There was also an element of descriptive case study in my research, with my goal to uncover some connections and patterns within and between quantitative and qualitative data.” (T5 from Department of Education)

“Rather it is a mixed method study that focuses on a single case and combines the conclusions drawn from inferential and descriptive statistics and the qualitative interviews to offer insight and explore the meanings of perceptions communicated from both types of data.” (T5 from Department of Education)

T5 examines social skills in drama class with a “exploratory single case study”. It involves surveys and interviews with students of middle school drama class. The quotation above reflects rationale for applying mixed methods, which is to explore meanings and uncover connections between qualitative and quantitative inquiry. These concepts, particularly exploring the meanings, are closely related with qualitative research methodology, and the author stresses that the study gives equal weight to qualitative and quantitative inquiry as the quotation below reveals:

“My study is considered the “pure” form due to the relatively equal weight I give to both quantitative and qualitative data. R. Burke Johnson et al. argue in the Journal of Mixed Methods Research that mixed method research is considered the “third methodological or research paradigm” after qualitative and quantitative designs, and one that can offer “the most informative, complete, balanced, and useful research results” (Johnson et al., 2007, p.124).” (T5 from Department of Education)

The author considers the study as the “pure” form of mixed methods attaching equal priority to both methods, referring to the Johnson and et al.’s typologies of “qualitative mixed” that the qualitative dimension is dominant”, quantitative-dominant “quantitative mixed” and “pure” form which has equal weights on both methods. It triangulates the data with a view to compare and corroborate the results, as the author points out in the method section. The study presents quantitative and qualitative findings and brings forth a summary of data results introducing connections between quantitative and qualitative data. It is hence safe to say that the study demonstrates a rationale that serves the purpose of the design. And above this, the rationales of conducting mixed method research are foremost concepts of qualitative methodology’s purposes such as exploring the meanings.

“In-depth information” is another theme comes to the surface with the codes that address mixed methods’ role to deepen researchers’ knowledge and its apparatuses to analyze the question with more context-based, subjective information. It goes without saying that what brings the personal and contextual data is the qualitative inquiry.

“It is considered that interviews will provide the chance to obtain in-dept information with determining the malfunctions and deficiencies that are experienced and thought by the teachers who are in charge of the program.” (T11 from Department of Educations)

T1 addresses the qualitative facet with the interviews, and mixing the methods, assumedly, yields a deeper look for the research topic. This study aims to analyze learning outcomes for the second-semester units in which the author conducts interviews for an in-depth inquiry and the analysis part illustrates a separate part for qualitative results and it constitutes themes and quotations. In addition, the thesis does

not propose an argument if prioritization of a method is of concern. Nor does it state any concept of mixed method design. However, qualitative inquiry serves the purpose of completing the quantitative sides as the author delivers. On the other side, the research is designed in survey model terms, as the method section addresses. For the quantitative dimension, the author conducts three follow-up tests. The results part demonstrates qualitative and quantitative findings in a separate way without an overall discussion. Attaining in-depth knowledge is one of the rationales of adding interviews in which qualitative method “completes” the quantitative inquiry.

“Enriching the content” is yet another theme which is in connection with the rationales that aims at endowing the content with mixed methods apparatuses. Several theses underscore that blending the methods (or adding the qualitative inquiry) embellishes the research with added findings. It will, supposedly, extend the understanding through the instrumentality of enriched content and results.

“The inquiry is proceeded with the qualitative phase in order to obtain richer content based on the findings of the quantitative dimension. In this stage, content analysis is employed to the data that are collected with semi-structured interviews.” (T11 from Department of Education)

T11 inquires the educational inspectors’ effect on professional development of primary school administrators and it applies explanatory sequential design as the author reveals in the method section. Accordingly, qualitative part follows the quantitative data collection and its analysis. Besides enriching the content, the author also suggests the results of the quantitative phase necessitated a qualitative inquiry to have a further understanding of the issue as the quotation below addresses.

“The expectation from the quantitative analysis is nevertheless the requirement that the inspection always contributes to the professional development of the administrators. Therefore, a second step in the research is needed for further understanding of the quantitative analysis results.” (T11 from Department of Education)

The analysis section reveals questions and sub-question for quantitative and qualitative inquiry and the author discusses the results of both dimensions. The author thusly provides an enriched content and further understanding by adding the

qualitative inquiry with sub-question that includes the views of the sample individuals. T11, nevertheless, does not contain a section discussing how the interviews are conducted. Additionally, there is no emphasis on which methods to prioritize, however, one might as well argue that the author attaches a priority to quantitative dimension since the qualitative phase functions as a second move to enrich and understand the results of quantitative phase which is the base of the study.

“The quantitative findings are enriched with the qualitative findings in the interpretation sections of the research (Fraenkel, Wallen ve Hyun, 2012).”
(T17 from Department of Education)

Furthermore, T17, which suggests qualitative inquiry enriches the content, studies on the behaviors of university students experienced trauma that needs psychological help. In the method section, the author defines the research model as explanatory sequential design. The author also puts forward that researchers prefer this design to provide extra data to quantitative research results. Semi-structured interviews that are culminated in forming themes with descriptive analysis are the qualitative inquiry dimension. In addition, the analysis part reveals quantitative and qualitative results respectively, and it discusses the results in the following section. Though the author disregards a direct rationale for using mixed methods, the qualitative part plays the secondary role for “extra findings” in terms of “enrichment of the content” purpose.

“Strengthening and Complementing” is the theme that stands for the rationales that emphasize advantages of both methods which translate into more strength for research goals, as T1 and T12 suggest. In addition, “Completion” amounts to the idea that MM functions as a tool to complete a research in the sense that a single-method study can be inadequate. The justification for reasons to conduct a mixed method study, that one may consider after examining the theses, is to have a more complete research findings and results. That is also indispensable to say that qualitative inquiry is the aspect that completes the quantitative part as the researchers deliver.

“Mixed method researches, attempt to apply multiple approaches seeking answers to the research questions rather than limiting the options of the researcher. This research also applies mixed methods in order to complement

the drawbacks of the quantitative findings by means of the qualitative findings.”
(T1 from Department of Education)

“Mixed method researches through using the quantitative and qualitative techniques in the same framework, strengthens the advantages of the both techniques. More significantly, the researchers that use mixed methods, have more option to choose methods and approaches relevant to the questions they determined (T1 and T12 from Department of Education).

T1 and T12 go with the same lines referring to Onwuegbuzie and Leech’s work suggesting that mixed methods strengthen the advantages of both methods. T1, as discussed previously, studies on the achievement of learning outcomes for the second-semester units and applies mixed methods so as to cover up quantitative deficiencies and on the other hand T12 investigates the school principals’ competence on evaluating teacher performances having no straightforward rationale for applying mixed methods. T1, nonetheless, falls short of discussing the foundation as to why the quantitative inquiry is deficient in view of the research purposes. Having said that, the studies conduct interviews and surveys for the sake of mixing the methods.

“Support”, as the next theme, is also one of the foremost concepts that, mostly, is the role of the qualitative dimension. That is to say, researchers take the qualitative side of the studies to support the quantitative inquiry when it comes to mixing the methods. Qualitative part, largely, acts as a backer and supporter alongside the quantitative inquiry.

“Thus, in connection with the tenth sub-question of the study and the research question, it can be concluded that students perceive the PPP (Presentation Practice Production) as an effective teaching technique that enables learning English in a faster, sufficient and comprehensive way together with providing positive attitude towards English classes. These results that obtained with the qualitative data analysis, can be conceived as such as to support the quantitative analysis results shown above.” (T14 from Department of Education)

These passages place the emphasis on the results of the qualitative inquiry which supposedly backs up the conclusion of the quantitative analysis. Accordingly, the qualitative inquiry constitutes the support notion for using MM, in other words; this functionality is one of the bases for the justification as to why researchers integrate

two methods. No doubt that qualitative research stands for the “verbal” side of a MM study and it supports the “numerical” data. The quotation also draws attention to the support of “verbal data” by the virtue of qualitative inquiry. The author, thusly, functionalizes mixing the methods with an eye to bolster the numerical or quantitative side of an inquiry via exploring “verbal” data within the scope of the research. Additionally, T14, which examines the effect of PPP (Presentation – Practice – Production) technique on learning of primary school fourth class students, is devoid of any statement on rationale for mixing methods. It just asserts the sequence of data collection in which the qualitative inquiry follows the quantitative one. Speaking of qualitative inquiry, the author states that the method for qualitative research is phenomenology although it is a far-fetched assertion given that the author, absent from the environment, applies a written open-ended questionnaire to have answers from the students. Qualitative inquiry reserves one sub-question and the author forms themes and codes based on the content. It functions in the form of supporting the quantitative data derived from scales and statistical tests.

“The numeric data is supported with the verbal data in this research which the views of the experts and teachers on math curriculum that are adopted as of 2013-2014 academic year, are determined with the curriculum evaluation form and interview form that are prepared by the researcher. Thus, it is a descriptive study.” (T24 from Department of Education)

T24, on the other hand, investigates the applicability of the curriculum of the secondary school mathematics course by not addressing the term “mixed methods” throughout the pages. Being a descriptive study, it applies the survey method in which, the author notes that, “interview technique is a common procedure”. The qualitative data supports the quantitative data, and the analysis part refers to the quotations from interviews. Though the author does not address, the study, as it stands, is a quantitative-dominant study with a secondary, supportive view for qualitative inquiry let alone the perplexing descriptions for the model of the research.

The authors also justify using mixed methods with concerns on reliability and validity. The theme “Reliability and Validity” addresses the theses that point out mixed methods’ contribution to building-up trustworthiness for the results of a study, and the

authors, rationalize employing mixed methods to improve the reliability and validity in that vein.

“In addition, accordingly, combining the qualitative and quantitative research approaches, methods and techniques for solving a problem in mixed methods researches, is more effective in solving the problems in comparison to applying these methods individually. In this research, mixed methods is applied to improve the reliability. Thusly, the reasons for the data that is obtained by the quantitative method are attempted to be determined by the qualitative data. (T2 from Department of Education)”. (T2 from Department of Education)

“In this study, by means of using the quantitative and qualitative methods; different data sources, data collection tools, and analysis methods are attained. In this way, it is aimed to improve the reliability of the research and have more accurate results.” (T2 from Department of Education)

T2 inquiries the effect of station technique on academic success and the attitudes in teaching Turkish language. The author, as is discussed in the method section, compiles objectivity of positivist approach and subjectivity of anti-positivist approach “to improve the quality”. Action research is the design of the qualitative dimension whereas the thesis employs survey design for the quantitative side. In addition, the author, accordingly, interviews both students and teachers besides and applies “observation technique” by noting what is monitored to the special forms in a class environment. T2 presents the quantitative and qualitative results individually, the latter one involves frequency tables based on the themes and codes followed by a discussion part. In that part, the author suggests that qualitative analysis supports the quantitative results in a coherent way. Therefore, it may well be put forward that the qualitative inquiry supports the quantitative results in a view to improve the reliability for this research.

“It is aimed to confirm the results of the data that is collected with different methods in mixed methods researches and it is also sought to strengthen further the reliability of the results. (T10 from Department of Education)

T10, on the other hand, investigates applicability of the project task activities in mathematics curriculum and has a sub-question reserved for the qualitative inquiry in which the author runs interview to collect data albeit the ambiguity of the process. It runs the inquiries simultaneously, as the author states, yet the model and the design

are indistinct. One might as well suggest that the qualitative inquiry is somewhat vague in the sense that it lacks discussions on how the qualitative dimension reflected the rationale of using the mixed methods.

“The reason for choosing both quantitative and qualitative data collection methods is to advance the reliability and validity.” (T24 from Department of Education)

Moreover, T24, as discussed before, applies the qualitative inquiry in order to support the quantitative data. The qualitative inquiry plays a supportive role which paves the way for a reliable and valid study, as it suggests.

All things considered, improving reliability and validity is one of the rationales for applying mixed methods, the qualitative inquiry has the supportive or somewhat secondary role which the authors, presumably, suggest that adding this dimension brings reliable and valid results. Mixed methods, as the authors assert, functions as a leverage for persuasiveness and trustworthiness of a study, let alone the justification of using mixed methods on the grounds of improving the reliability and reliability.

Being the next theme, “Insufficiency and Weakness” is connected to the single-method study’s inadequacy which is another reason hold forth for applying mixed methods amongst the theses. Mixing methods, presumptively, will contribute to the tools that a researcher has, thereby fulfilling the requirements for a more elaborate inquiry.

“Besides, problems regarding EFL(English as a Foreign Language) writing classes addressed by this study are complex ones as in most social and human sciences. Using only quantitative or qualitative method would not be sufficient to address this complexity (Creswell, 2009, p. 203).” (T28 from Department of Education)

Referring to Creswell, T28 notes that using both methods will help to overcome the complexity. T28, unlike the other studies discussed, straightforwardly, states that the study prioritizes the qualitative inquiry. The author also asserts that mixed methods will provide a holistic understanding and quantitative dimension functions to validate the qualitative result. English as a Foreign Language skills development on college

student is the matter of the inquiry which is modeled as an action research design. In addition, the author discusses the research process and results elaborately, applying surveys, focus groups, reflecting journals and observations. Therefore, it overcomes this complexity with various methods and techniques taking into account that it is an action research.

“Via applying this method, some unexpected results that are obtained from the qualitative and quantitative results can be explained by the help of the data that is generated with the other method, and that way, the deficiency of a method is filled with the other’s contribution.” (T10 from Department of Education)

. Referring to Şimşek and Yıldırım, T10 puts forth the argument that methods can minimize the weaknesses of one another when used together which will heighten the understanding. Ergo, mixed methods function as a tool to make up the deficiency given the possible weaknesses of a single-method study, as the author suggests. This rationale and its connection with the results part of the study, however, is rather vague in T10, given that it does not contain a relative discussion part as is discussed earlier.

All in all, the key issues are methodologically vague and ambiguous points regarding the rationale of the study, and the authors, for the most part, have quantitative-dominant approach to examine the topics sidelining the qualitative inquiry by attaching a secondary role.

4.2. Definition and Naming of Mixed Methods in the Theses

Even though “mixed methods” is the generic and as well as the embraced term recently, a variety of denotations and definitions exist within the thirty theses. Seeing these differences is crucial to understand where mixed methods terminology stands and how the terminology differs. The literature and the historical development demonstrate the different naming and terminology of the mixed methods yet the last two decades showed the solidification of the third methodology with the title “mixed methods”. Denotations within thirty theses vary for mixed methods, which are, mixed method research, mixed research, mixed approach, mixed model, mixed design. This signifies the variety and the fact that there is no consensus on how to refer mixed

methods despite recent endeavors to gather it under a single term which is the “mixed methods”. By extension, this might as well be the sign of still-continuing “messiness” of this methodology given the authors do not have a single nomenclature. Moreover, seven theses do not put any denomination for using both methods whereas a few authors define mixed methods in their own words which mainly refer to the terms of combining, incorporating, using both methods together. Furthermore, twelve theses do not refer to any scholar for the definition and naming of mixed methods. The others refer to prominent scholars as Johnson, Onwuegbuzie, Clark, Creswell, Turner, Tashakkori and Teddlie besides Turkish academics Baki, Gökçek, Yıldırım, Şimşek, and Balcı (See Table 4.2.1). Having said that, a considerable number of the authors do not refer to the naming or the denotation of this methodology, nor do they use any references to define their methodological foundation. Denotation and naming are signs of to what extent mixed methods is approved as a methodology and how far it gained its “identity”. References to scholars, or lack thereof, is also of significant importance to opine as to whether the researchers follow the literature on mixed methods or not. Studies having own definitions also provide an overview of how the mixed methods is perceived and interiorized amongst the researchers. In this respect, the overview indicates the unclarity and ongoing terminological variety given the studies without references terminology, which also might spur questions for the methodological rigor and mixed methods identity.

Moreover, three themes come to the fore regarding the mixed methods definition, which are “Using the Methods Together” and “Combination” and “Incorporation” that are linked to how the authors define mixed methods which also signifies the point of view on this methodology.

“This study, which aims at revealing the self regulatory learning skills of Bachelor’s Degree students and determining the role of the higher education programs on the self regulatory learning skills of the Bachelor’s Degree students, adopts the mixed methods to answer the research questions. Johnson, Onwuegbuzie and Turner (2007, p 123) define the mixed research methods as the research type that different elements of the qualitative and quantitative research approaches are applied for enhanced and deep understanding as well as confirmation purpose. Yıldırım and Şimşek (2013 p. 351), on the other hand, describe the mixed research method as the research that applies, in accordance

with the pragmatist philosophy, the quantitative and qualitative methods to examine the research problem in a comprehensive and multi-dimensional way.” (T3 from Department of Education)

“In this research the qualitative and quantitative methods are applied together. Thusly, survey, in-depth interview and observation methods are used.” (T30 from Department of Sociology)

“This research is a mixed study applying the quantitative and qualitative methods together.” (T29 from Department of Education)

Table 4.2.1. Naming, Definition and References

THESIS	NAMING	OWN DEFINITION	REFERENCES
T1	Mixed Methods, Mixed Research	Using two paradigms together	Johnson and Onwuegbuzie, Baki and Gökçek, Balcı
T2	Mixed Methods	No own definition	Sönmez ve Alacapınar, Johnson and Onwuegbuzie, Creswell, Shope, Clark, Greene,
T4	Mixed Methods	No own definition	Sieber, Creswell
T6	Mixed Methods	“Combining two methods”	Baki and Gökçek, Creswell Piano Clark
T7	Mixed Methods	“Incorporating the components of qual and quan approaches”	No reference related to definition and naming
T10	Mixed Methods	No own definition	Creswell, Piano Clark, Balcı
T12	Mixed Methods	“Method comprises of qual and quan methods”	Creswell and Piano Clark, Tashakkori and Teddlie, Johnson and Onwuegbuzie
T16	Mixed Methods	No own definition	Tashakkori and Creswell
T23	Mixed Methods	No own definition	No reference related to definition and naming
T22	Mixed Methods, Mixed Methods Research	“Using qual and quan methods together”	Creswell, Tashakkori and Teddlie, Johnson and Onwuegbuzie
T28	Mixed Methods	No own definition	No reference
T8	Mixed Methods Research	No own definition	Creswell and Piano Clark, Tashakkori and Teddlie, Yıldırım and Şimşek
T19	Mixed Methods Research	“Using quan and qual methods respectively”	No reference related to definition and naming
T20	Mixed Methods Research	No own definition	Tashakkori and Creswell
T5	Mixed Methods Research Design	“Incorporating both quan and qual data”	Johnson, Creswell
T17	Mixed Research Methods	No own definition	Tashakkori and Teddlie
T13	Mixed Research Methods	No own definition	Onwuegbuzie and Turner, Yıldırım and Şimşek
T11	Mixed Methods Design	“Using qual and quan designs together”	Christiensen, Johnson and Turner
T15	Mixed Research Design	No own definition	No reference related to definition and naming
T14	Mixed Research Model	No own definition	Creswell

Table 4.2.1. Naming, Definition and References in The Theses (Continued)

T18	Mixed Model, Mixed Design	“Using both qual and quan approaches”	Brannen
T3	Mixed Approach	No own definition	Creswell, Piano Clark
T29	Mixed Study, Mixed Methods Research, Mixed Research	No own definition	Creswell, T ashakkori and Teddlie, Johnson and Onwuegbuzid
T9	No Naming	No own definition	No reference related to definition and naming
T21	No Naming	No own definition	No reference related to definition and naming
T24	No Naming	No own definition	No reference related to definition and naming
T25	No Naming	No own definition	No reference related to definition and naming
T26	No Naming	No own definition	No reference related to definition and naming
T27	No Naming	No own definition	No reference related to definition and naming
T30	No Naming	No own definition	No reference related to definition and naming

T13 names mixed methods as “mixed research design” by defining it as the design that enables researchers to deepen their understanding with confirming and validating their results. In addition, it refers to Yıldırım and Şimşek by pointing out the philosophical ground of mixed methods which, accordingly, is pragmatism. The author defines the mixed methods as “using qualitative and quantitative methods together”. T30 and T29 are also in that regard using the similar words for the definition.

“Combining” is the other theme regarding the definition of mixed methods. T29 defines mixed methods as the combination of both methods.

“Mixed methods researches can be defined as the researches that the researcher combines the quantitative and qualitative methods in the inquiries. (T29 from Department of Education)

Referring to it as mixed design, T18 defines the mixed method as combining or incorporation of qualitative and quantitative researches.

“The research, in the process of data collection process, is designed in a mixed design format which is the combination of the qualitative and quantitative researches. For the quantitative dimension, correlational survey model is applied whereas in-depth interviews are conducted for the qualitative dimension.” (T18 from Department of Sociology)

“Examining the impact of the interpersonal competence level of the university students in romantic relations on self-handicapping inclination, this research is designed according to the mixed model. Researches based on mixed methods are the studies that blend or combine the qualitative and quantitative approaches Brannen, 2005).” (T18 from Department of Sociology)

“Mixed methods design, which the quantitative and qualitative research designs are used together, is applied for this study that investigates the contribution of the education inspectors on elementary school principals’ professional development. Christiensen, Johnson and Turner (2015) define the mixed methods research as the study that combines the quantitative and qualitative research techniques. “(T11 from Department of Education)

T11 defines the mixed methods as using both designs together, followed by the definition of Christiensen, Johnson and Turner that see mixed methods researches as “combination” of qualitative and quantitative techniques as well as referring to it as a design.

“Mixed method design incorporates both quantitative and qualitative data in the research inquiry, with the weight given towards each category’s data collection and analysis critical in defining the type of mixed method design. (T5 from Department of Education)

T5, describing mixed method as a design, defines it as incorporation of quantitative and qualitative data.

The naming and definitions vary across the studies, the three themes “incorporation”, “combination”, “using both methods together” reflect the definitions the authors opt-for. On the other hand, integration becomes increasingly emphasized component of mixed methods research as the mixed methods writings also indicate, and it is somewhat difficult to differentiate Turkish words if they mean integration, combination or incorporation since they are generally translated into Turkish with the same word. It would be aptly to translate integration as “*bütünleştirme*” or “*entegre etmek*” which means to make a whole or entire, whereas “*birleştirme*” rather gives the sense of combining or incorporating that refers to include as a part or mix into one. The distinction is nevertheless not simple given that they can be used interchangeably, It is noteworthy to bear in mind the language barrier.

4.3. Model and Design of the Theses

As the open coding on method sections of the theses brings into view, research models and designs are amongst prominent concepts that the researchers refer and base their mixed methods studies accordingly. However, the terminology is yet again confusing. That is to say, several authors refer mixed methods as a research model that provoke thoughts on the distinction between model, methods, and methodology. Mixed methods, in hindsight, develops as the third methodological movement largely eluding the incompatibility perceptions on track of strengthening its identity. Nonetheless, the authors refer mixed methods as a model or put differently, the model and methodology are used interchangeably. Furthermore, the leading scholars introduce numerous design typologies that determine the strategy, sequence, priority, and aims of a mixed methods research. It is thus of paramount importance to see the reflection of these typologies within the scope of thirty theses. Commonly thought as the intrinsic components of designs, sequence and weight are also the elements that might demonstrate the viewpoint of the researchers. Sequencing can signify the priority, the strategy and the aim of a study whilst the weight might indicate the dominant paradigm and the vantage of the researchers. Hence investigating model, design, sequence, and weight will bring an overview of how mixed methods researches are shaped within the thirty theses.

A significant number of the theses do not refer to any models. Many studies have a section titled as a research model in the absence of direct usage and reference to the any “model”. This said, ten theses directly address to a model. Moreover, fourteen theses do not involve a reference to any design. The sequence is yet another component that refers to the timing of data collection for qualitative and quantitative inquiries. The pattern that quantitative inquiry follows the qualitative one is dominant, not to speak of the nonignorable number of “concurrent” sequences in which the quantitative and qualitative data collection run at the same time. Moreover, two authors define their study as “equal-weight” research and two studies are “qualitative dominant” and “quantitative dominant”. Undoubtedly studies that do not have reference to weight or

prioritization of methods, apply the qualitative inquiry in a secondary, complementary or supportive fashion, as is discussed before (See Table 4.3.1.).

Table 4.3.1. Models, Designs, Sequence and Weight

THESIS	MODEL	DESIGN	SEQUENCE	WEIGHT
T1	Survey	No Reference	Quan then Qual	No Reference
T2	No Direct Reference	No Reference	Quan then Qual	No Reference
T3	No Direct Reference	Explanatory Design	Quan then Qual	No Reference
T4	No Direct Reference	Explanatory Design	Quan then Qual	No Reference
T5	No Direct Reference	Mixed Method Research Design	Quan then Qual	Equal Weight
T6	Mixed Method	Convergent Parallel Design	Concurrent	No Reference
T7	Mixed Method	Concurrent Dominant Status	Concurrent	Quan Dominant
T8	Mixed Method	Explanatory Design	Quan then Qual	No Reference
T9	Descriptive Survey Model	Convergent Parallel Design	Concurrent	Equal Weight
T10	Mixed Method	No Reference	Concurrent	No Reference
T11	Mixed Method Design	Explanatory Sequential Design	Quan then Qual	No Reference
T12	Mixed Method	Triangulation	No Reference	No Reference
T13	No Reference	Convergent Parallel Design	Concurrent	No Reference
T14	Mixed Research Model	No Reference	Quan then Qual	No Reference
T15	Single Survey Model	“Designed according to Survey Model”	No Reference	No Reference
T16	Survey Model	Convergent Design	Concurrent	No Reference
T17	No Direct Reference	Explanatory Sequential Design	Quan then Qual	No Reference
T18	Mixed Model	No Reference	Quan then Qual	No Reference
T19	No Direct Reference	No Reference	Quan then Qual	No Reference
T20	No Direct Reference	No Reference	Quan then Qual	No Reference
T21	No Reference	No Direct Reference	No Reference	No Reference
T22	General Survey Model	No Reference	Quan then Qual	No Reference
T23	No Direct Reference	No Reference	Not Clear	No Reference
T24	Survey Model	No Reference	Not Clear	No Reference
T25	General Survey Model	No Reference	Concurrent	No Reference
T26	Survey Model	No Reference	Not Clear	No Reference
T27	No Direct Reference	Experimental Design	Concurrent	No Reference
T28	No Reference	Action Study	Concurrent	No Reference
T29	No Direct Reference	No Reference	Quan then Qual	Qual Dominant
T30	No Reference	No Reference	No Reference	No Reference

Moreover, this category has the sub-category of “Model” including “Mixed Methods Research”, “Mixed Approach”, “Mixed Methods Design”, “Descriptive Study”, “Survey” and “Mixed Research Model” and “Mixed Model” themes that coding process unveiled.

Most of the studies have the heading of “Research Model” however with indirect reference to mixed methods or no clear definition of the model (Demonstrated by “No Direct Reference” on Table 4.3.1)

“This study, which aims to evaluate the candidate teacher mentorship process that are in force in National Education Ministry’s educational institutions, is a mixed methods research.” (T19 from Department of Education)

“This study is a mixed methods research. The qualitative and quantitative data are used together in this research. Mixed methods is the research type that researchers combine the components of the qualitative and quantitative research approaches for the breadth of understanding and confirmation. The design of this research is “Concurrent Dominant Status”. (T7 from Department of Education)

T7 follows T19 in terms of referring “Mixed Methods Research” under the “research model” topic without stressing clearly what “model” is applied in the study. Nor does it use the word “model” under the topic. The authors classify their studies as mixed methods research under the section of “research model”. As it stands, the authors determine mixed methods research as the model of their research in spite of the unclarity.

“This research adopts the mixed approach. It draws on explanatory design applying the quantitative method in the first phase and the qualitative method in the second phase.” (T3 from Department of Education)

T3 states that the study embarks on mixed approach which is of a different kind terminology under the topic of “research model”. It might as well be a sign that the author does not see mixed methods as a distinct methodology. Rather he does categorize it as a data collection process within an approach.

“This research is a descriptive study that aims at reveal views and perceptions of teachers about the active listening skills of the school principals. Descriptive study is the research type that0 seeks for revealing the current situation (Balci, 2010, p.20). Mixed methods, which includes both quantitative and qualitative dimension as the data collection techniques, is applied for this research.” (T4 from Department of Education)

Being the next theme, “Descriptive” model , as T4 portrays, is the research model including the mixed methods with the qualitative and quantitative data

collection techniques. Balcı's descriptions and method of the thesis suggests that mixed methods is seen as the data collection technique rather than a methodology.

“Mixed methods design, which the quantitative and qualitative research designs are used together, is applied for this study that investigates the contribution of the education inspectors on elementary school principals' professional development. Christiensen, Johnson and Turner (2015) define the mixed methods research as the study that combines the quantitative and qualitative research techniques. “(T11 from Department of Education)

T11 defines its model under the topic by “mixed methods design” that combines the quantitative and qualitative designs. It is yet another way of referring to mixed methods which is a sign of variety and confusion for the terminology.

“Survey” as the next theme that is in connection with the research models of the theses. Considerable number of the researchers design their study according to the survey model. It is imperative to note that survey, is commonly referred as the quantitative inquiry's apparatus that aims at collecting numerical data with questionnaires. It is thus a symptom of quantitative viewpoints' domination within these studies. In addition, it also may well be argued that the qualitative inquiry and its approach have the secondary role within these researches.

“Descriptive survey model is applied in this study in order to evaluate the candidate teacher training program based on the views of the teachers and advisors. The program is implemented for the first time in 2015-2016 academic year. The model is also applied to offer a variety of suggestions in light of the data obtained.” (T9 from Department of Education)

“This study is designed according to the single screening model which is a type of general survey model. Survey models are the research approaches that aim at describing an existing or past case as is or was. The incident, individual or object that is the matter of the topic is attempted to describe in its conditions and as is.” (T15 from Department of Education)

“This study is a survey model research. Survey model is the research approach that aims to describe an existing or past case as is or was (Karasar, 2005, p.77) Mixed methods is applied for the data collection.” (T16 from Department of Education)

“This research is in accordance with the general survey model which is a type of survey model. General survey models are the survey designs on the whole

universe or a group, an example or a sampling based on the universe in order to have a general argument for the universe that consists numerous elements (Karasar, 2009).” (T22 from Department of Education)

“In this research, the sampling, which represents the information technology teachers and elementary school students in Ankara, is the teachers of the information technology, fifth and sixth grade students of 11 elementary school in Altındağ, Çankaya, Etimesgut, Keçiören, Mamak and Yenimahalle which are central districts of Ankara. Therefore, the research model is determined as general survey model.” (T25 from Department of Education)

Furthermore, the theses define their model with survey model’s variants as descriptive survey model and general survey model. These models demonstrate the “quantitative-centric” vantage point that views the mixed methods or qualitative inquiry as sort of an extension and expansion pack rather than a fully-fledged methodology.

Two studies are the source of the themes “Mixed Research Model” and “Mixed Model” that bring varieties to the mixed methods terminology not to mention its contribution to the confusion in terminology.

“Mixed research model is applied in this research. Both quantitative and qualitative data is collected within the scope of the research by means of using the quantitative and qualitative research methods concurrently or sequentially in mixed research models (Creswell, 2013, p.14-16)”. (T14 from Department of Education)

“Examining the impact of the interpersonal competence level of the university students in romantic relations on self-handicapping inclinations, this research is designed according to the mixed model. Researches that are based on mixed methods blend or combine the qualitative and quantitative approaches Brannen, 2005).” (T18 from Department of Sociology)

“Design” as the sub-category, has the themes of “Explanatory”, “Convergent”, “Mixed Method Research Design”, “Survey Model Design” and “Experimental”. Fourteen studies do not have any design reference while the other studies, mostly, refer to John Creswell’s explanatory and convergent designs.

“Exploratory design in mixed methods researches is defined as the mixed methods design that the researcher seeks for specific results in an extra inquiry within a quantitative research.” (T3 from Department of Education)

“Explanatory mixed methods is employed in this research. In explanatory mixed methods, firstly, the quantitative inquiry is conducted, the data is collected and analyzed. Afterwards, these analyses are explained in detail anew with the qualitative inquiry (Creswell, 2013, p.15). This research is also supported with the qualitative data after the quantitative data collection.” (T4 from Department of Education)

“This research applies the “explanatory sequential design” that includes the quantitative data collection at first, then the qualitative data collection and finally the analysis. According to Creswell and Piano-Clark (2015) explanatory sequential design is the mixed methods design that the researcher begins with managing the quantitative stage and then he or she seeks for results with a second phase.” (T8 from Department of Education)

The theme of “Explanatory” mainly refers to the Creswell’s design that typically prioritizes the quantitative inquiry. The qualitative inquiry plays the supportive role on the basis of the quantitative dimensions’ findings.

“This study applies “convergent parallel design” which is a type of mixed methods research. The qualitative and quantitative data is collected concurrently, and the analysis, on the other hand, is done separately. Finally, the results are combined during the interpretation phase (Creswell and Piano Clark, 2011).” (T6 from Department of Education)

“Convergent design is preferred for this study. The reason is to balance the advantages of a data collection method with the other data collection method’s disadvantages for better understanding of the research problem. In other words, it is applied to balance the qualitative method’s sampling limitations with a scale of the quantitative method, as well as to overcome the limitation of the quantitative method’s superficial data with the detailed and in-depth information that the qualitative method provides (Creswell, 2012).” (T16 from Department of Education)

Furthermore T6, and T16 represent the theme of “Convergent” which refers to the design in which, generally speaking, the qualitative and quantitative inquiry have equal prioritization. However, the models of T9 and T16 are “Descriptive Survey Model” and “Survey Model”, Therefore, one can argue that the requirements of the design are not fairly in line with the models’ viewpoint.

Moreover, T5 defines its design as “Mixed Methods Research Design”, T15 as “Survey Model Design” and T27 as “Experimental Design” which also illustrate the relevant themes.

“A mixed method research design was utilized for my case study. Mixed method design incorporates both quantitative and qualitative data in the research inquiry, with the weight given towards each category’s data collection and analysis critical in defining the type of mixed method design.” (T5 from Department of Education)

This study is designed according to the single screening model which is a type of general survey model. Survey models are the research approaches that aim at describing an existing or past case as is or was. The incident, individual or object that is the matter of the topic is attempted to describe in its conditions and as is.” (T15 from Department of Education)

“This study applies the experimental design with the pre-test post-test control group. Also known as the real experiment model, this model is seen as scientifically most valuable experiment model.” (T27 from Department of Education)

T5 defines its design as “mixed method research design”, and” pure form” of the mixed method where qualitative and quantitative methods are of equal weight as is also discussed in the previous section. The author refers to the term “triangulation” in a scheme which explains the research process in the following pages. Therefore, the design can be also seen as “triangulation” though the author indirectly refers. Defining its design as a single survey model, T15 acts from the quantitative standpoint. In addition, T27 portrays its study design as the paragon of the experiment models which is also known as the “real experimental design”. It has the control and experiment group settings that undoubtedly falls within the quantitative methodology.

4.4. Sampling of the Theses

One of the pillars of a research design is the sampling procedure. As the third methodological movement encompassing the quantitative and qualitative elements, mixed methods sampling procedures require further complex processes and designs. Scholars, in the literature, introduced several mixed methods sampling typologies, and thus, how these designs resonate within these researches is a significant question to

comprehend the mixed methods' understanding and the way it functions with all its procedures. Many studies target the "universe", or the "population" and they, therefore, do not point out any sampling methods. On the other hand, many studies do not include any sampling method references for the qualitative inquiry, which is to say, the study group is identical for both dimensions. Be that as it may, not addressing and discussing the qualitative dimensions' sampling nevertheless upsets the methodological clarity. In addition, a considerable number of studies shape their samplings from a quantitative vantage point as it echoes the matters discussed in the previous chapters. Studies, particularly, that opt for "study group" rather than "sampling", do not have a distinct sample design for the qualitative inquiry. What's more, random sampling, stratified sampling, and purposive sampling come to the forefront for qualitative sampling whereas convenience sampling, criterion sampling, maximum variation sampling are the prominent techniques when it comes to the qualitative dimension (See Table 4.4.1).

"Study Group" and "Mono Sampling" are the themes that coding process of the method section that are striking to demonstrate the main practices of the researchers within this scope. The former theme reflects the authors that do not have a sampling but study group whilst the latter one indicates the studies that do not procedure sampling separately for both methods.

"65 English teachers in Muratpaşa district of Antalya compose the study group of the research." (T22 from Department of Education)

Not referring to any specific sampling method, T22 interrogates the social media effect on teaching English based on a "study group" applying two scales for data gathering. One of which, -the author phrases as "view form scale", probes for the qualitative data.

"Study group for the qualitative data comprises 52 teachers that answers one open-ended question on the application of elective courses evaluation scale form. No additional study group is formed for the qualitative inquiry." (T6 from Department of Education)

Moreover, T6 which interrogates the elective courses within the context of democratization of education, does not conduct a sampling for qualitative inquiry apart.

Further to that, the author finalizes the scale for data collection with an open-ended question for the qualitative dimension.

Table 4.4.1. Sampling of the Theses

THESIS	QUAN SAMPLING	QUAL SAMPLING	Extra Notes
T1	Simple Random Sampling	Convenience Sampling	
T28	Convenience Sampling	Convenience Sampling	"Action Study"
T29	Unbiased Sampling	Criterion Sampling	
T10	Purposive Sampling	Purposive Sampling	
T11	Simple Random Sampling	Maximum Variation Sampling	
T12	Simple Random Sampling	Maximum Variation Sampling	
T13	Stratified Sampling	Purposive Sampling	
T17	Non-Random Sampling	Non-Random Purposive Sampling	
T19	Stratified Sampling	Criterion Sampling	
T23	Cluster Sampling	Purposive Sampling	
T2	Purposive Sampling	No Reference to Any Method	Same Group with Quan
T3	Random Sampling	No Reference to Any Method	
T6	Stratified Sampling	No Reference to Any Method	Same Group with Quan
T7	Random Sampling	No Reference to Any Method	Same Group with Quan
T8	Purposive Sampling	No Reference to Any Method	Qual Sample "randomly" selected
T9	Criterion Sampling	No Reference to Any Method	Same Group with Quan
T14	Random Sampling	No Reference to Any Method	Same Group with Quan
T16	Disproportionate Sampling Method	No Reference to Any Method	Same Group with Quan
T20	Simple Random Sampling	No Reference to Any Method	Same Group with Quan
T25	Purposive Sampling	No Reference to Any Method	"Purposive Sampling" referring to the whole research
T4	No Reference to Any Method	Maximum Variation Sampling	
T26	No Reference to Any Method	Convenience Sampling	"Census" for Quan
T30	No Reference to Any Method	Purposive Sampling	"All the households" for Quan
T5	No Reference to Any Method	No Reference to Any Method	Applied to the "Population"
T27	No Reference to Any Method	No Reference to Any Method	
T15	No Reference to Any Method	No Reference to Any Method	Same Group with Quan
T18	No Reference to Any Method	No Reference to Any Method	
T21	No Reference to Any Method	No Reference to Any Method	"Exploratory Study"
T22	No Reference to Any Method	No Reference to Any Method	Same Group with Quan
T24	No Reference to Any Method	No Reference to Any Method	

“Study group for the qualitative data comprises 487 candidate teachers and 122 advisor teachers who are volunteer for answering the open-ended questions in the survey form that is applied. No additional qualitative sampling group is constituted. (T9 from Department of Education)

T9 employs a single study group that is for both qualitative and quantitative inquiry. A survey with open-ended questions, once more, is the medium for qualitative data generation.

“The study group of the research comprises 36 female (54,5 %), 30 male (45,5 %) and in total 66 students who studies at Yeşilyurt Primary School for the 2016-2017 academic year.” (T26 from Department of Education)

Without a reference to any sampling method. T27, who investigates language learning with puppet model, applies the qualitative inquiry with open-ended questions to the same group.

“The study group comprises 28 students in total. Each class has 14 students that are determined as experiment (N=14) and control (N=14) groups by means of the random method.” (T14 Department of Education)

T14 that investigates language learning with “presentation-application-production“ technique also has a single study group that also receives open-ended questions for the qualitative inquiry.

“Mono Sampling” theme remark the studies that do not design their qualitative designs individually.

“69 aylık üzerinde okula başlayan öğrencilerden oluşan (74 öğrenci) grup ise tesadüfi örnekleme yöntemine göre; toplam 27 okulda ilkokula başlayan 409 öğrenci arasından her şubeden eşit sayıda ve her okuldan üç öğrenci belirlenmiştir.” (T7 from Department of Education)

T7, which works on the comparison of students’ academic success that start to the primary school in different ages, has the sampling that also answers “interview forms.

“The universe of this research comprises the teachers on-duty and the students in primary schools of Anatolian Side of İstanbul Province in the 2014-2015 academic year. The sampling, in addition, comprises 200 primary school

teachers and the students of the primary schools of Ümraniye district in İstanbul.” (T15 from Department of Education)

T15, on the other hand, does not have a reference to any sampling method. The qualitative “open-ended questions” are attached to the quantitative survey which is directed to the same group.

4.5. Data Collection/Generation in the Theses

The ways that the researchers collect or generate data for the theses are the focus of this section detailing how the authors conduct the quantitative and qualitative sides of that. Data collection and generation are significant steps in mixed methods research process. By virtue of open coding, several concepts of the qualitative and quantitative inquiry became evident and the data collection / generation category is thought to address to provide insights on this process within thirty theses. On the quantitative side, the prominent concepts are surveys, scales, and tests whereas the authors apply interviews, view forms, open-ended questions prevalently for the qualitative part. The debatable issue here is that a good deal of the theses organizes the tools for qualitative data generation in an attached format to the quantitative survey with open-ended questions which, for a serious number of the studies, are expected to be answered by writing. Additionally, many theses do not enlarge on the process of qualitative data inquiry which leads to methodological vagueness (See Table 4.5.1). What’s more, denoting written open-ended question forms as “interview” (*görüşme* in Turkish) is of concern, which is to say, it would be aptly to call them with another term or just as “open-ended questions”. These points bring forth the quantitative-driven viewpoint of the authors, somewhat downplaying the qualitative aspect.

“Extension” and “Misconceptions” are the two themes that this category will address. First one refers to the qualitative inquiries that are largely in a written format that seems as an extension of the quantitative inquiry whereas the next theme develops out of the misuse of the terms.

“Personal Info Form and Foreign Language Achievement Test, which is prepared by the researcher, are applied for data collection in the research. The

process of preparing these forms is concluded after receiving the opinions of specialists in their field.” (T27 from Department of Education)

Table 4.5.1. Data Collection Methods and Techniques

THESIS	QUAN DATA COLLECTION	QUAL DATA COLLECTION	Extra Notes
T1	Monitoring Tests	Interview Forms, Semi-Structured Interview Technique	
T2	Achievement Test, Attitude Scale	Interview, Observation Technique	
T3	Maslach Burnout, Inventory Scale	Interview	
T4	Listening Application Survey	Interview	Interview process is not clear
T5	Survey	Interview	
T6	Evaluation Scale	Open-Ended Question at the end of Survey Scale	
T7	Aptitude Test	Interview in a written format	
T8	Two Likert Scale Surveys	Semi-structured interviews	
T9	Survey Forms	Open-Ended Question at the end of Survey Scale	Qual data probably taken in written form
T10	Likert Scale Survey	Semi-structured interview form	No info on how interviews are conducted
T11	“The Contribution of Auditing to the Professional Development Scale”	Interview	No detailed info on interview process
T12	Two surveys	Semi-structured Interviews	
T13	“Self-regulative learning scale”	Semi-structured interviews	
T14	“Achievement Test” “Attitude Scale”	Interview Form with single open-ended question	Students took interview form in a written way when the researcher was away.
T15	Likert Scale Survey “Academic Achievement Test”	Open-ended questions attached to the survey	No reference to the qual side under data collection section. Most probably answers are taken in a written form
T16	“Learning Climate Scale”, “Perception of Problem-Solving Scale”, “Critical Thinking Disposition Scale”	“Autonomy Support Teacher View Form”, “Autonomy Support Student View Form”, “Perception of Problem-Solving Student View Form”, “Critical Thinking Disposition Student View Form”	Qual View forms are answered in a written way

Table 4.5.1. Data Collection Methods and Techniques in The Theses (Continued)

T17	“Social Support Perceived Multi-Dimensionally Scale”, “Attitude on Psychologic Assistance Scale”, “Attitude of Handling Evaluation Scale”	Semi-Structured Interview Form	
T18	“Interpersonal Competence Scale” “Self-Handicapping Scale”	In-Depth Interview	
T19	“Analysis of Mentorship Process Scale”	Focus Group with Semi-structured Interview	No detailed info on how focus groups are conducted
T20	“Academic Achievement Test”	Focus Group with Interview and Observation form	
T21	Surveys	Open-ended questions	
T22	Likert Scale Survey	Interview form “Scale”	
T23	“Achievement Test”	Semi-Structured Interview	
T24	“Curriculum Evaluation Form Scale”	Semi-Structured Teacher Interview Form, Semi-Structured Expert Interview Form	Qual inquiry is done through phone calls and face to face interviews
T25	Surveys	Open-ended questions attached to the surveys	Most likely, open-ended questions are answered in a written way
T26	“Organizational Loyalty Scale”	“Organizational Loyalty of Teachers and Administrators Semi-Structured Interview Form”	No detailed info on interview process
T27	“Foreign Language Test”	Open-ended questions attached to the survey	No solid reference to qual data generation process. Open-ended questions are answered in a written way.
T28	Student Survey Writing Quiz	Focus Group, Reflection, Observation	
T29	“Achievement Test” “Attitude Scale”	Semi-structured interview technique	
T30	Question Form	In-depth interview, Observation	

T27 which examines “puppet model” in teaching English, bases its data collection/generation on an “achievement test” without addressing the qualitative side of it. On the other hand, the abstract of the thesis indicates that the students take a written evaluation form for the qualitative dimension. The method section neglects to elaborate the qualitative data generation process or its foundations. Although it is cloudy given that the author does not explain qualitative data collection/generation

throughout the lines of method section, the design is based on open ended questions attached to the quantitative tests that the students take. In fairness, it is necessary to say that the target of the study, which is the third class students, might entail such design for convenience. However, bringing such vagueness regarding the qualitative inquiry might stands for disregarding the qualitative methodology and using it as an extension of the surveys.

“The answers to open-ended questions posed to the teachers are transferred to the computer as are. Content analysis is employed to the answers which are then separated into several themes. These themes are detailed under the qualitative findings section.” (T15 from Department of Education)

T15 also represents the same line of data collection/generation pattern. The data collected/generated with open-ended questions attached to the survey is the qualitative source of data which examine the fourth-grade curriculum of science courses. In practice, the teachers sit the quantitative survey and continue with the open-ended questions for the qualitative data. Moreover, the quotation above is from the analysis section, which is to say, the “data gathering” part under the method section is nonetheless does not have any reference to the qualitative data generation process. Additionally, the reader, at the utmost, can assume that the teachers answered the questions in a written way given there is no elaboration on this. These points harm the methodological clarity and signal the inattentive look on qualitative methodology.

“The qualitative data of the study is obtained with 4 open-ended questions added to the candidate teacher and advisor teacher surveys.” (T9 from Department of Education)”

“The quantitative and qualitative approaches are applied together to collect the data for the research. The quantitative data with “Evaluation of the Elective Course Implementation Scale” and the qualitative data is obtained by the open-ended question at the end of the scale.” (T6 from Department of Education)

T9 and T6 also hold the same line of practice on design with the open-ended question attached to the surveys organizing the qualitative data collection/ generation as an extension to the quantitative inquiry. T9 that examines the education of candidate teachers have four questions for qualitative data collection/generation bound to the

survey. The reader can just surmise that the answers for qualitative questions are written since there is no elaboration. Furthermore, the author follows the same pattern in T6, adding the qualitative questions at the end of the survey that are answered by teachers. It is thus fair to say that qualitative data collection/generation is not founded in detail, and adding the qualitative inquiry is somewhat perfunctory.

“The researcher applied the interview form that would take approximately 15 minutes. During the application, the research waited outside when the students were responding to the questions and the students left the forms to a box outside of the class without putting any name on the papers that would lead to be recognized.” (T14 from Department of Education)

By way of example to theme of “Misconception”, T14, which investigates the effect of “presentation-practice-production” technique on fourth-grade students, apply the “interview” term for its qualitative data collection / generation form that the students fill in the class when the researcher is elsewhere. It goes without saying that using the term “interview” is sound when an actual conversation takes place.

“The first section of the survey is to address the demographic characteristics whereas the second section has 10 items of 5-level Likert type (Appendix 1). The second scale, on the other hand, is the interview form that comprises of open-ended questions to receive the opinions of the English Language Teachers on using social media for teaching English (Appendix 2).” (T22 from Department of Education)

Additionally, T22 refers to its qualitative data collection tool as “scale” which is largely used for the quantitative inquiries. It reflects the quantitative-centric lenses on the methodology that might prompt to question the rigor for the qualitative methodology.

4.6. Data Analysis in the Theses

Data analysis is the next category for this chapter concerning the quantitative and qualitative elements of these mixed methods studies. Statistical procedures as ANOVA, MANOVA, Kolmogorov – Smirnov Test, Mann- Whitney – U Test are predominating the quantitative inquiries whereas content analysis is the foremost technique that the theses conduct for the qualitative inquiry (See Table 4.6.1). The

point for this category is that the quantitative viewpoint on the methodology makes its presence felt in data analysis. Measuring frequencies, quantifying and displaying statistical indicators for qualitative analysis, are applications amongst these theses. Make no mistake, the numbers and frequencies do not amount to the quantitative perspective of researching, but the way of pursuing the analysis and the terminology show that quantifying prevails on the qualitative inquiry. In what follows, this section will provide quotations that endorse this disposition, together with explanations.

Table 4.6.1. Data Analysis Methods and Techniques

THESIS	QUALITATIVE DATA ANALYSIS	QUANTITATIVE DATA ANALYSIS
T1	Content Analysis	Kolmogorov- Smirnov Test, ANOVA
T2	Content Analysis	Shapiro-Wilk Test
T6	Content Analysis	T-test, ANOVA
T9	Content Analysis	Chi-Square Test, T-test, ANOVA
T7	Content Analysis	Scale Grading
T11	Content Analysis	T-test, ANOVA
T12	Content Analysis	Kolmogorov – Smirnov Test, Mann Whitney-U Test Kruskall Walls Test
T13	Content Analysis	T-test, ANOVA
T14	Content Analysis	Wilcoxon Signed-Rank Test, Mann-Whitney-U Test
T15	Content Analysis	Descriptive Statistics
T20	Content Analysis	Kolmogorov-Smirnov Test, Mann – Whitney U Test
T23	Content Analysis	T-Test, Brown – Forsythe Test, Dunnett’s C Test
T24	Content Analysis	Kolmogorov Smirnov Test, Shapiro – Wilk Test
T25	Content Analysis	Kolmogorov Smirnov Test, T-test, ANOVA
T26	Content Analysis	T-test, ANOVA, LSD Test
T8	Descriptive Analysis	T-test, ANOVA
T10	Descriptive Analysis	Chi-Square Test, T-test

Table 4.6.1. Data Analysis Methods and Techniques in The Theses (Continued)

T17	Descriptive Analysis	Kolmogorov – Smirnov, T-test, Chi-Square Test, Shapiro-Wilk Test, Logistic Regression Analysis, ANOVA, MANOVA
T18	Descriptive Analysis	MANOVA, Regression Analysis
T22	Descriptive Analysis	T-Test, Variance Analysis, Correlation Analysis,,Mann – Whitney U Test, Kruskal – Wallis H Test, Pearson Correlation Analysis
T3	Descriptive Analysis, Content Analysis	T-test, ANOVA
T19	Descriptive Analysis, Content Analysis	Shapiro -Wilk, Kolmogorov – Smirnov Test, Mann – Whitney U Test, Kruskal – Wallis – H Test
T29	Descriptive Analysis, Content Analysis	Kolmogorov-Smirnov Test, T-test
T4	Descriptive Analysis, Content Analysis, Constant Comparative Technique	T-test, ANOVA, Chi-Square Test
T5	Inductive Qualitative Content Analysis	Inferential Statistics
T16	Deductive Qualitative Analysis	Kolmogorov - Smirnov Test, Mann – Whitney U Test, Spearman Corelation Analysis, Linear Regression Analysis
T21	Qualitative Analysis	ANOVA, Descriptive Analysis, T-test
T27	No Reference	Wilcoxon signed Rank Test
T28	Open Coding Data Reduction	T-test
T30	Thematic Coding Method	Quantitative Analysis Method

“Quantifying” is the sole theme under this category arises of the coding on relevant sections of the theses. Simply put, it refers to the dominant practice of quantifying and using frequencies within the scope of thirty theses.

“The qualitative data of the study is obtained with an open-ending question that is added to the scale form and the data is analyzed with content analysis method. The data is grouped under categories which are separated into themes.” (T6 from Department of Education)

T6 that examines impact of democratization on elective courses, puts content analysis into practice with a quantitative approach. It uses the term “qualitative

findings” and arrays the frequencies of themes in order to interpret them according to the numerical superiority.

“In sub-theme of informing, the most delivered opinion is the problem that the administrators, advisors and principals are not knowledgeable enough (8%). Expressing opinion under the theme of evaluation, 2.9% of the candidate teachers stated that the evaluations are unjust. 6.9% of the candidate teachers that expressed their opinion on the topic, indicated that the training process is not unnecessary whereas %6.3 of the candidate teachers stated that there are plenty of uncertainties in the process. These findings indicate that the candidate teachers are not well-informed about the process and they experience uncertainties within this period.” (T9 from Department of Education)

Studying the “Candidate Teacher Education” program, T9 conducts content analysis and under “qualitative findings” sub-section with the frequencies and percentages on which the interpretations are based. Also, owing to the fact that the open-ended questions are attached to the survey, it, in a sense, attributes a quasi-extension role to the qualitative inquiry that follows the quantitative one.

“As for the analysis of the qualitative data, content analysis is employed. “The data is summarized and interpreted based on pre-determined themes in content analysis” (Yıldırım ve Şimşek, 2011). Pre-prepared interview questions are addressed one by one to 26 form teachers that participated to the study and notes are taken by the researcher. Collected data are reviewed beforehand and then it is analyzed. The data are gathered into relevant categories and the answers are sorted based on the frequencies (Ek-10). Correlated data are interpreted afterwards. “(T7 from Department of Education)

“Curriculum Evaluation Form is about the sixth-grade math curriculum. Table 37 indicates the mean of the responses of the 17 math teachers to the Curriculum Evaluation Form(ÖPDF)-K dimension.” (T24 from Department of Education)

Examining students that start to school in different ages, T7 applies content analysis with quotations based on frequencies in the “findings” section. And the discussion part, additionally, does not have a discussion on the qualitative “findings” which would elaborate what the data signifies. Furthermore, the second quotation above represents the quantification of qualitative data to the extent that the author presents statistical indicators. Scrutinizing T7’s findings section makes clear how the

author, who inspects elementary school mathematics curriculum, “quantifies” the qualitative data by incorporating frequencies and statistics obtained from qualitative inquiry into the quantitative findings. That is to say, the quantifying practice reigns over the qualitative dimension.

“The seventh sub-question of the research is “What are the views of the students in control group on the activities during the classes?” Views in written format are requested from the students in the experiment group at the end of the inquiry in order to support the quantitative findings of the research.” (T27 from Department of Education)

“Frequency numbers, word maps and word trees that are acquired with word search related to the answers of the open-ended questions are demonstrated in this section of the study.” (T22 from Department of Education)

T27, which examines the effect of “puppet model” on English language learning, addresses the qualitative analysis bypassing qualitative analysis process under the “analysis” section. Under the “findings”, the author puts the quotations in order without explanation. In what follows, the author addresses the qualitative question with a minor part in the “discussion” section. The question is about the views of students as is demonstrated in the first quotation above. T22, on the other hand, applies content analysis in which the result turn into frequencies, statistics and word clouds that have the quantitative notion for explaining the ideas. The two quotations above are to underpin the argument that quantitative-centric view pervades the methodology.

4.7. Ethics in the Theses

No doubt that ethics is a significant element of a scientific research. In mixed methods studies, this aspect is intriguing given the additional dimension of the research design. What it brings to the ethical concerns and how the mixed methods researchers grip that are the focal points of this category. In this vein, looking through the ethical considerations will portray how ethics takes its place within the theses. First and foremost, just eleven theses refer to ethical consideration within the body parts of the theses (See Table 4.7.1). One might argue that a researcher should take utmost care of ethical procedures concerning the interviews, focus groups or the other data generation

methods and explanation of this process within the thesis chapters will bring a solid ethical perspective to the studies. However, most thesis does not have palpable elaboration for these procedures.

Table 4.7.1. Ethics References

Thesis	References for Ethical Considerations
T1	Addressing to “voluntary basis”
T2	Addressing to “voluntary basis” and “anonymity”
T3	Addressing to “voluntary basis”
T4	Addressing to “voluntary basis”
T5	Detailed explanation under “Ethical Considerations” topic
T8	Addressing to “convenience” of the interviewees’ time and location
T12	Addressing to the chance of interviewees on “stopping and deleting the records”
T13	Addressing to “voluntary basis” “voluntary participation form” and chance of “stopping the interviews”
T22	Stressing that researcher showed regard “not to intervene to the private life”
T24	Addressing to the “voluntary basis”
T28	Addressing to the “confidentiality”, “anonymity”, “consent”, “voluntary basis”

Furthermore, “Voluntary Basis”, “Confidentiality”, “Private Life” “Convenience” and “Consent” are the themes under this category that refers to the elements of ethical issues which are formed with the coding.

“In this study, individual interviews with 26 elementary school third class teachers lasted 30-45 minutes. Interviews were conducted in a comfortable, and sincere manner on voluntary basis, since positive communication was established before and during the interviews with the teachers.” (T1 from Department of Education)

“At each stage of the study, volunteerism is taken as basis and during the collection of both quantitative data and qualitative data, the Voluntary Participation Form in Annex 6 has been signed. In addition to the written permission of the participants, the principles of voluntary participation were also stated orally and they were able to leave without any sanction at any stage of the research.” (T13 from Department of Education)

Both studies above stress the “voluntary basis”, also referring to the comfort of

the participators and T13 elaborates it with voluntary participation form and right to leave without any sanction.

“The interviews were conducted with the students on a voluntary basis. It is stated that the participants’ comfort and and that feeling secure have a significant impact on the quality of the interviews (Kaptan, 1973: 248). Therefore it is stated that the identity of the participants would be kept confidential.” (T2 from Department of Education)

T2 refers to the “confidentiality” with also touching open the voluntary basis and the comfort of the participators.

“During the interviews, care was taken to obtain useful information for the study, not to interfere with private life and to be neutral.” (T22 from Department of Education)

Moreover, T22 addresses the “private life” in the sense that the researcher pay attention not to intervene the private and to be impartial.

“It is important to make an appointment for the day and time of the meeting considering the mishaps that may arise. In the selection of the place to be interviewed, the places where the interviewer can express himself or herself, and feel safe, should be preferred (Güler, Halicioğlu and Taşgan, 2015). 2015As stated in the literature, it was taken care to make the appointments by making an appointment in advance, and in the places where the interviews would feel comfortable and in the time and places arranged according to their preferences.. The participants were given preliminary information about the recording of the interviews, but many participants did not want the audio recording to be made on the grounds of subjectivity of the matter.” (T8 from Department of Education)

T8 refers to the “convenience” and place for interviews and the recording problems which can be classified as ethical considerations.

“Not only in the consent forms but during the whole study participants were also reminded that participation was voluntary, and they could withdraw from the study whenever they wanted to. They were not provided with any sort of incentives for attending the study. They were also told the anonymity of their identity and confidentiality of the data they provided for analysis would be ensured both during and after the study. For example, student surveys were submitted in closed envelopes and there were not any names on. Also, before the focus group interviews, all participants were given nicknames and addressed each other with their nicknames when the interview was being tape-recorded. Lastly, all research records were stored securely

and only the researcher had access to the records.” (T28 from Department of Education)

Being an exemplar of having detailed ethical concerns part T28 refers to the “consent”. It details the research process and the ethical measures are taken.

All in all, the theses, mostly, do not have a separate ethical consideration part. “Voluntary Basis”, “Confidentiality”, “Private Life” “Convenience” and “Consent” are the themes that rise to the surface about ethical issues. Ideally, the studies should have a part devoted to the ethical considerations explaining the ethical aspects. However, it is not a common practice within these theses, as this category suggests.

4.8. Overview of Main Issues

Thus far, each pointing a significant aspect, seven categories are illustrated. This brought up numerous concepts, along with the subject matters that are open to discussion. This section will summarize and overview the key issues that the analysis chapter yields.

The rationale category that focuses on the justification for employing mixed methods besides the philosophical foundations, puts forward that the authors refer to various mixed methods functions and what it brings as better understanding of the research question, enriching the content; strengthening, complementing, and supporting the qualitative data; improving the reliability and validity. In addition, the idea that mono-method studies might be insufficient and weak to address the research inquiry is yet another rationale for applying mixed methods as few authors consider. At issue is the fact that only six authors directly introduce a rationale for using mixed methods. Aiming for better and holistic understanding, complementing and supporting the quantitative dimension, utilizing the both methods’ strengths are the justifications and rationales for those directly state it. Per contra, eleven theses do not have any discussion on the rationale of the mixed methods. Nor do they remark a direct rationale for employing it. This, dramatically, obstructs to discuss the mixed methods rationales within this scope. However, one might as well argue that the researchers do not deem it necessary to ground the rationale of mixed methods. Further, it may as well be

asserted that mixed methods as a methodology, does not appear crystallized substantially within the theses, for the most part.

The definition and naming category, on the other hand, suggests that the authors diverge in naming mixed methods. Twelve researchers name it with “mixed methods” (*karma yöntem* in Turkish) which is the broadly accepted term whilst mixed approach, mixed research model, mixed method design, mixed study, and mixed model are the other naming to which the theses make references. Further focal point of the section is whether the authors use any own definition or not, that brings forth the “incorporation of both methods”, “combination of both methods” and “using two methods together” themes. In addition, the authors refer to the leading scholars of the field as Creswell, Clark, Tashakkori, Teddlie, Johnson, Onwuegbuzie, besides with the Turkish academics as Baki, Gökçek, Balcı. That aspect is examined in an attempt to pin down how far the authors follow the mixed methods literature and the field’s leading figures. More significantly, seven theses by no means address “mixed methods” nor they define and refer to any scholars of the field. It is thus safe to say multi-definitions and naming are still of an issue, together with the fact that a significant number of studies do not have a benchmark defining and naming mixed methods which incites questioning mixed methods identity as the third methodological movement.

The “model and design” category reveals that several researchers refer to John Creswell’s typologies as explanatory and convergent designs whereas almost half of the theses do not refer to any designs. In addition, twelve researches follow, “quantitative then qualitative” line of sequence. Eight studies have the concurrent sequential inquiry whilst several studies are ambiguous about the order. On the other hand, just few studies state the priority whereas the large percentage do not have any reference on weight and prioritization of any methods. Furthermore, seven studies apply survey research model and number of authors describe their research model as mixed methods, and besides, a singular study define its research model as “mixed model”. The bottom line is that considerable number of studies do not refer any design or typology, and varieties are evident to refer to the research models.

Moreover, mono-sampling for the quantitative and qualitative dimensions is the common practice within thirty theses. Besides that, several authors refer to study groups rather than sampling, and by extension, a considerable number of theses do not have a qualitative sampling individually. Further, the data collection / generation category illustrates that a substantial amount of thesis has the qualitative inquiry as an extension of the survey and scales, and in certain cases, the participators responds the questions written and some contested terminology arises referring to open-ended written questions inquiry as interviews with applying “scales” in the qualitative dimension. Also, several studies do not reflect the interview process clearly. The data analysis category, on the other hand, focuses on the quantitative approach on the qualitative data, which is the common way of treating the “verbal” data. As regards ethics, nineteen theses do not have a section or a piece within the body parts of the thesis which makes challenging to discuss concepts come to the fore. In spite of that, voluntary basis, confidentiality, convenience, private life, and consent themes are on the table to highlight for this category.

CHAPTER 5. DISCUSSION AND CONCLUSION

This study attempted to investigate how mixed methods studies are conducted within thirty theses. Examining through the qualitative methodology and interpretive approach's lenses, seven categories of focus revealed various themes that address characteristics of the mixed methods studies. Prominent themes aside, I argue that the dominant practice within these studies leave the qualitative inquiry in a secondary position, without its methodological notion. The studies, for serious number, apply the quantitative and qualitative data collection techniques together with a view to enhance and extend the quantitative inquiry. These two arguments discussed herein are the crux of this thesis. It is asserted that most of the theses should be defined as extended quantitative inquiries and mixed methods' messiness is apparent with the terminological unclarity and diversity along with issues related to rigor.

The first argument for these studies is that mixed methods, in most instances, is not perceived and applied as a methodology, which is to say, the dominant way of investigation can be addressed as *extended quantitative inquiry*. The researchers, for the most part, have the quantitative vantage point and the qualitative inquiry is "fit-in" the studies. Many studies have the survey model that the qualitative aspect appears to be a patch within the design of the thesis. Mostly being descriptive studies, qualitative dimension completes the quantitative survey with open-ended questions, sometimes in a written way, not having elaboration on the qualitative inquiry that ends up quantifying the findings which enhances the quantitative dimension. In addition, the secondary and sidelined role of the qualitative dimension is discernible in sampling procedures, data collection and analysis procedures which makes elusive to define these studies within the qualitative methodology terms. More to the point, Karasar (2016) to whom several theses refer for the research model, rejects the distinction between the quantitative and qualitative research arguing that researches can have both methods which have commonalities and yet they are not mutually exclusive. Further to that, Karasar claims that almost all studies have quantitative and qualitative dimensions by their very nature. Therefore, according to this line of thinking, researches coalesce the qualitative and quantitative dimensions and thus discussions

on the methodologies are of no avail. Furthermore, Karasar (2016) classifies two model types which are survey and experiments. Eight theses refer to these models which reflects the quantitative point of origin and the qualitative essentials do not partake in these models. The qualitative side rather is addressed in data collection techniques. Hence it is fair to say that this perspective acts within considerable number of theses which, do not apply the qualitative methodology but rather employs the qualitative techniques. Neither do they take mixed methods as a methodology. To bolster up the argument, the distinction between methodology and method is crucial to underscore. Methods are tools and techniques that the researchers apply for data gathering whereas research methodology is a broader and sophisticated term encompass the paradigm guides, philosophy, postulations, methods, and techniques (Given, 2008). In other words, methods are the way and which tools, procedures are employed for the data collection and analysis whilst methodology is an overarching point of sight that involves the research approach, theoretical framework and paradigm (Mackenzie & Knipe, 2006). Put differently, method answers the “how” question and methodology is more likely to in relation with “why” question (Jackson et al., 2007) Hence, methodology is more complex, theory-laden concept that is hand in hand with values and philosophies which direct the research whereas methods are the techniques for data collection and analysis. For a considerable number of the theses, the qualitative research’s techniques as open-ended questions and interviews are employed in a widespread manner, yet the samplings, data collection, and analysis are based on the quantitative design. The qualitative method’s worldview, philosophy and approach are not well-discussed, elaborated and in several cases are unclear. Taken all together, the researches, for the most part, can be defined as extended quantitative inquiries which use a combination of the quantitative and qualitative methods for enhancing and extending the quantitative viewpoint.

Moreover, the question how mixed methods research, which is defined as the third methodological paradigm based on the pragmatic philosophy that has the quantitative and qualitative methods, techniques and stance point together in a study (Johnson et al., 2007), takes place, was another point of focus within these studies. In a similar vein what has been argued, it is challenging to say that mixed methods is

perceived and applied as a methodology within these studies. For the most part, the rationale and philosophical foundation are not stated clearly, the vantage point is the quantitative methodology and the qualitative dimension is somewhat the notion that extends that. If anything, the philosophy of the theses is somewhat in relation with the Howe's maxim "What Works" (1988) albeit the unclarity of discussions on the underpinnings. That is to say, the practicality and convenience are the focal spots for the serious number of the authors designing the studies.

The second argument of this thesis is that mixed methods studies are in a mess with their terminological unclarity and diversity. In addition, rigor is another component of this messiness. Put another way, these are the issues that imply the identity problem of mixed methods. As was pointed out in the literature, Leech's (2010) interviews with the leading scholars bring forth the "messiness" of the mixed methods field. I echo this point on the basis of what the analysis yields for this thesis. To a considerable extent, diversity and sometimes unclarity in terminology which appear as a hodgepodge are of concerns for the studies, which is to say, number of authors use mixed methods as is for defining their method whereas mixed study, mixed design, mixed model, mixed approach are the other titles that the researchers use. In addition, several studies do not refer to any definition or naming. This brings the lax terminology for the studies that apply the quantitative and qualitative methods. What's more, the mixed methods appears not to have gained its identity concerning these theses.

The other source of for messiness is the issues related to rigor in the studies. In connection with that, Creswell and Clark's (2012) outline can guide the methodological rigor. They suggest and urge, inter alia, to clearly address and define the philosophical foundation or theoretical lens, the research questions for the qualitative and quantitative dimensions, the typology and design, potential ethical issues and the procedures of mixed methods design (See Appendix A). In this respect, it is difficult to establish the argument that most theses stick to rigor and this outline's elements. For the major number of the theses, there is no stated philosophy or worldview for conducting the mixed methods research. The reason why mixed

methods is applied, for the serious number, is indirect and unclear. In addition, procedures for the qualitative inquiry is vague and not elaborated for several studies including the sampling and data collection. Furthermore, the majority of researches do not have ethical concerns sections and references within the body parts of the thesis which upsets the methodological rigor.

On the other hand, as is discussed in the literature review, intellectual endeavor and debates are underway to delineate the mixed methods' identity within research methods. The progressive development of it, in the meantime, indicates the growing emphasis on the integration of both methods. Yet the theses examined, for the most part, do not have solid integration processes and neither do they reflect a broad consensus on the mixed methods' identity. One can argue that the researchers, at large, are not well-informed and trained on mixed methods. By extension, the practicality of techniques and methods are the primary focus. From what these studies portray, it may well be argued that there is still a lot to do for progressing on mixed methods' individuality. The place of the qualitative inquiry within a mixed methods study remains as a weighty matter given the positivist/post-positivist dominance within these studies.

Despite the fact that this thesis pointed out the growing and ever-increasing sphere of influence of mixed methods in the global arena, the applicability and feasibility of it will be the sources of surrounding debates. On one side, it has the momentum to gain its identity, however, as the analysis of thirty theses from Turkey demonstrates, the practice of mixed methods seems to be in a tumult. In addition, most of the studies conduct the qualitative side as an extension with ambiguous points which raises the question if the post-positivism is disguised under the mixed methods clothe. The future, in addition, will bring number of challenges and opportunities for mixed methods as big data and the digital age will cause radical changes on social research.

What's more, as various domestic and international publications, which have parallel findings compared to what this thesis suggests based on researches in Turkey conclude, there is a need for mixed methods training given that it is still in infancy

period, and also the data integration should be stressed increasingly for the quality and issues related to rigor.

The concluding remark on mixed methods prospect is that, in spite of the objections, it is on the way of becoming the mainstream bearing in mind that it can be regarded as still an infant. Discussions and debates will help to crystallize the mixed methods' identity in the social research realm. Alternative paradigms that overcome dichotomies for complex phenomena and mixed methods relation with big data and social media, I envisage, will be the center of discussions regarding mixed methods.

This thesis, I surmise, will add a value to the mixed methods literature by way of overviewing where it stands now, and also it will provoke thoughts on this emergent methodology which is a contentious and multifaceted topic. I also espouse the view that mixed methods will gain a stronger identity and continue to be the hot topic of the research methods. This study draws the attention to the identity of mixed methods with the argument that it has a messy character within thirty theses. In addition, the argument that the positivist / post-positivist viewpoints predominate the researches will help to question the role of qualitative research within a mixed methods study. It is thus will be a source to interrogate how far mixed methods is applicable or where these studies stand compared with the academic debates and developments on mixed methods in domestic or international level. This also might heighten awareness for conducting mixed methods research procedures given the critical points this thesis stressed.

Broader studies might reveal different findings since this thesis analyzes master's degree theses of education and sociology departments of Turkish universities dated as 2017. Additionally, studies from different levels and fields within different years can have varied findings. It should also be noted that the studies that are found in the database are limited with the keyword searches in abstracts of theses. Finally, most of the studies are in Turkish which brought forth difficulties to differentiate some terms as integration and combination.

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APPENDIX A. CRESWELL AND CLARK'S OUTLINE OF A PROPOSAL FOR A MIXED METHODS DISSERTATION OR THESIS

<p>Title</p> <ul style="list-style-type: none">• Foreshadows mixed methods study and type of design <p>Introduction</p> <ul style="list-style-type: none">• The research problem• Past research problem• Deficiencies in past research and one deficiency related to a need to collect both quantitative and qualitative data• The audiences that will profit from the study <p>Purpose</p> <ul style="list-style-type: none">• The purpose of the project (use the scripts in Chapter 5) and reasons for design type• The research questions and hypotheses (ordered to match the design)<ul style="list-style-type: none">-Quantitative research questions or hypotheses-Qualitative research questions-Mixed methods research question (s) <p>Philosophical and Theoretical Foundations</p> <ul style="list-style-type: none">• Worldview• Theoretical Lens (social science or advocacy) <p>Literature Review</p> <p>Methods</p> <ul style="list-style-type: none">• A definition of mixed methods research• The type of design used and its definition• Challenges in using the design and how they will be addressed• Reference to and inclusion of a procedural diagram in an appendix• Quantitative data collection and analysis• Qualitative data collection and analysis and qualitative data transformation, if used (in exploratory design, place qualitative before quantitative)• Mixed methods data analysis procedures• Validity approaches in quantitative, and mixed methods research <p>Potential Ethical Issues</p> <p>Researcher's Resources and Skills</p> <p>Timeline for Completing the Study</p> <p>References</p> <p>Appendixes With Instruments and Protocols and Procedural Diagram</p>

Source: Creswell, J. W., & Clark, V. L. P. (2012). *Designing and Conducting Mixed Method Research* (2nd Edition). SAGE.

APPENDIX B. HACETTEPE UNIVERSITY ETHICS COMMITTEE APPROVAL



T.C.
HACETTEPE ÜNİVERSİTESİ
Rektörlük

Tarih: 31.07.2018 11:22
Sayı: 35853172-010.99-E.00000173361

E.00000173361

Sayı : 35853172-010.99
Konu : Yaser KOYUNCU Hk.

NÜFUS ETÜTLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE

İlgi : 07.05.2018 tarihli ve 85844849-010.99/00000034246 sayılı yazı.

Enstitünüz Sosyal Araştırma Yöntemleri Anabilim Dalı yüksek lisans programı öğrencilerinden **Yaser KOYUNCU**'nun **Doç. Dr. İlknur YÜKSEL - KAPTANOĞLU** danışmanlığında yürüttüğü "**An Evaluation of Mixed Methods Studies: A Case Study for Turkey**" başlıklı tez çalışması, Üniversitemiz Senatosu Etik Komisyonunun **17 Temmuz 2018** tarihinde yapmış olduğu toplantıda incelenmiş olup, etik açıdan uygun bulunmuştur.

Bilgilerinizi ve gereğini saygılarımla rica ederim.

e-imzalıdır
Prof. Dr. Rahime Meral NOHUTCU
Rektör Yardımcısı