







still under study (Bryman 2007, Fielding and Schreier, 2001; Kelle, 2001; Mason, 2006). Mixing methods therefore offers enormous potential for exploring new dimensions of experience in social behaviors, and different intersections between these. It can encourage researchers to see differently or to think outside the box, if they are willing to approach research problems with an innovative and creative palette of methods of data generation. As Gillies and Edwards point out Qualitative, empirical research tends to expose the contradictory, tangled complexity of real life experience, which often stands in stark contrast to neatly packaged theoretical accounts of social change. (Gillies and Edwards, 2005).

## 6. Selecting A Mixed Method Design

The design and conduct of any two mixed methods studies will never be exactly alike. There are several key principles that researchers consider in selecting the mixed method design. Creswell and Plano Clark (2011) provide several principles for designing a mixed methods study. First is recognizing whether mixed methods designs can be fixed and/or emergent. Fixed mixed methods designs are mixed methods studies where the use of quantitative and qualitative methods is predetermined and planned at the start of the research process, and the procedures are implemented as planned. Emergent mixed methods designs are found in mixed methods studies where the use of mixed methods arises due to issues that develop during the process of conducting the research. Second is identifying an approach to design. There are several approaches to design, and researchers can benefit from considering their personal approach to conducting mixed methods studies. These design approaches fall into two categories: typology-based and dynamic. Third is matching the design to the research problem, purpose and questions. The importance of the research problem and questions is a key principle of mixed methods research design. This perspective stems from the pragmatic foundations for conducting mixed methods research where the notion of "what works" applies well to select the methods that work best to address a study's problem and questions. Fourth is being explicit about the reasons for mixing methods. Another key principle of mixed methods design is to identify the reason(s) for mixing quantitative and qualitative methods within the study. Combining methods is challenging and should only be undertaken when there is a specific reason to do so.

In addition, Creswell and Plano Clark (2011) also pointed out several key decisions in choosing a mixed methods design:

- 1) Determine the level of interaction between the quantitative and qualitative strands.
- 2) Determine the priority of the quantitative and qualitative strands.
- 3) Determine the timing of the quantitative and qualitative strands.
- 4) Determine where and how to mix the quantitative and qualitative strands.

## 7. Mixed Methods Design Strategies

Creswell in his book "Research design: Qualitative and Quantitative Approach" describes six research design strategies that can be used in mixed method researches. They are .1. Sequential Explanatory Design, which collects and analyses of quantitative data followed by a collection and analysis of qualitative data for the purpose of using qualitative results to assist in explaining and interpreting the findings of a quantitative study. 2. Sequential Exploratory Design which is an initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis with the purpose to explore a phenomenon. This strategy may also be useful when developing and testing a new instrument. 3. Sequential Transformative design which is a collection and analysis of either quantitative or qualitative data first. Then the results are integrated in the interpretation phase to employ the methods that best serve a theoretical perspective. 4. Concurrent Triangulation Design which uses two or more methods to confirm, cross-validate, or corroborate findings within a study. Data collection is concurrent. This is generally used to overcome a weakness in using one method with the strengths of another. 5. Concurrent Nested Design which includes nested approach that gives priority to one of the methods and guides the project, while another is embedded or "nested." The purpose of the nested method is to address a different question than the dominant or to seek information from different levels. 6. Concurrent Transformative Design is the design that uses of a theoretical perspective reflected in the purpose or research questions of the study to guide all methodological choices to evaluate a theoretical perspective at different levels of analysis.

## 8. Conclusion

Mixed research method as third methodological or research paradigm, which was defined by Creswell and Plano Clark (2003) as a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination to provides a better understanding of research problems than either approach alone. Mixed methods research is important today because of the complexity of problems that need to be addressed and the practical need to gather multiple forms of data for diverse audiences. It has many advantages to a researcher. The objective of this present paper was to review the existing literature relating to mixed research method as the third research paradigm and add some knowledge about mixed research method for research directions, development and advancement as a methodology for future researchers. It provides knowledge of how mixed research method can be used to enhance the relevance of the research findings. The article includes Greene et al.'s (1989) five purposes of mixed research method as triangulation, complementarity, development, initiation and expansion. In particular, it contended that six types of mixed method research designs as sequential explanatory, sequential exploratory, sequential

transformative, concurrent triangulation, concurrent nested and concurrent transformative designs.

## References

- [1] Anchin, J.C. (2008). Contextualizing discourse on a philosophy of science for psychotherapy integration. *Journal of Psychotherapy Integration*, 18, 1-24.
- [2] Bartholomew, T. T., & Brown, J. R. (2012). Mixed methods, culture, and psychology: A review of mixed methods in culture-specific psychological research. *International Perspectives in Psychology: Research, Practice, Consultation*, 1, 177-190.
- [3] Brewer J, Hunter A. 1989. *Multimethod Research: A Synthesis of Styles*. Newbury Park, CA: Sage.
- [4] Bryman, A. (1988). *Quantity and quality in social science research*. London: Routledge.
- [5] Bryman, A. (2007). Barriers to integrating quantitative and qualitative research. *Journal of Mixed Methods Research*, 1, 8-22.
- [6] Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.
- [7] Caracelli, V. J., & Greene, J. C. (1993). Data analysis strategies for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 15(2), 195-207.
- [8] Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches*.
- [9] Creswell, J. W., & Miller, G. A. (1997). Research methodologies and the doctoral process. In L. Goodchild, K. E. Green, E. L. Katz, & R. C. Kluever (Eds.), *Rethinking the dissertation process: Tackling personal and institutional obstacles* New Directions for Higher Education, No. 99, pp. 33-46). San Francisco: Jossey-Bass.
- [10] Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. (2nd ed.). Thousand Oaks, CA: Sage.
- [11] Creswell, J. W., Goodchild, L., & Turner, P. (1996). Integrated qualitative and quantitative research: Epistemology, history, and designs. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 11, pp. 90-136). New York: Agathon Press.
- [12] Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 209-240). Thousand Oaks, CA: Sage.
- [13] Currall, S.C., Towler, A.J.: Research methods in management and organizational research: toward integration of qualitative and quantitative techniques. In: Tashakkori, A., Teddlie, C. (eds.) *Handbook of Mixed Methods in Social and Behavioral Research*, pp. 513-526. Sage, Thousand Oaks, CA (2003)
- [14] Datta, L. (1994). Paradigm wars: A basis for peaceful coexistence and beyond. In C. S. Reichardt & S. F. Rallis (Eds.), *The qualitative-quantitative debate: New perspectives* New Directions for Program Evaluation, No. 61, pp. 53-70). San Francisco: Jossey-Bass.
- [15] Denzin, N.K., Lincoln, Y.S. Introduction: the discipline and practice of qualitative research. In: Denzin, N.K., Lincoln, Y.S. (eds.) *Handbook of Qualitative Research*, 2nd edn., pp. 1-28. Sage, Thousand Oaks, CA (2000)
- [16] Engel M. (2007), Mixing methods: reliability and validity across quantitative and qualitative measures of relationship Quality: In Small M.L. (2011), *How to Conduct a Mixed Methods Study: Recent Trends in a Rapidly Growing Literature*, *Annual Review of Sociology*, 37:57-86.
- [17] Fielding, N. and Schreier, M. (2001) 'Introduction: On the Compatibility between Qualitative and Quantitative Research Methods', *Forum Qualitative Social Research* (On-Line Journal) 2(1), <http://www.qualitative-research.net/fqs-texte/1-01/1-01hrsg-e.htm>
- [18] Fielding, N. G., & Fielding, J. L. (1986). *Linking data*. Newbury Park, CA: Sage.
- [19] Forthofer, M.S.: Status of mixed methods in the health sciences. In: Tashakkori, A., Teddlie, C. (eds.) *Handbook of Mixed Methods in Social and Behavioral Research*, pp. 527-540. Sage, Thousand Oaks, CA (2003)
- [20] Fry, G., Chantavanich, S., & Chantavanich, A. (1981). Merging quantitative and qualitative research techniques toward a new research paradigm. *Anthropology and Education Quarterly*, 12, 145-158.
- [21] Gelo, O., Braakmann, D., & Benetka, G. (2008). Quantitative and qualitative research: Beyond the debate. *Integrative Psychological & Behavioral Science*, 42, 266-290.
- [22] Gillies, V. and Edwards, R. (2005) 'Secondary Analysis in Exploring Family and Social Change: Addressing the Issue of Context', *Forum Qualitative Social Research* 6(1), <http://www.qualitative-research.net/fqs-texte/1-05/05-1-44-e.htm>
- [23] Glik, D. C., Parker, K., Muligande, G., & Hategikamana, D. (1987). Integrating qualitative and quantitative survey techniques. *International Quarterly of Community Health Education*, 7(3), 181-200.
- [24] Greene J, Caracelli V and Graham W (1989) Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis* 11: 255-274.
- [25] Greene JC. (2007), *Mixed Methods in Social Inquiry*. San Francisco: Jossey-Bass
- [26] Greene J, Caracelli V and Graham W (1989) Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11, 255-274.
- [27] Hanson, W. E., Creswell, J. W., Clark, V. L. P., Petska, K. S., & Creswell, J. D. (2005). Mixed methods research designs in counseling psychology. *Journal of Counseling Psychology*, 52, 224-235.
- [28] Hugentobler, M. K., Israel, B. A., & Schurman, S. J. (1992). An action research approach to workplace health: Integrating methods. *Health Education Quarterly*, 19(1), 55-76.
- [29] Hunter, A., Brewer, J. :Multimethod research in sociology. In: Tashakkori, A., Teddlie, C. (eds.) *Handbook of Mixed Methods in Social and Behavioral Research*, pp. 577-594. Sage, Thousand Oaks, CA (2003)

- [30] Johnson R.B, Onwuegbuzie A.J., Lisa A. Turner *Toward a Definition of Mixed Methods Research* Journal of Mixed Methods Research 2007; 1; 112
- [31] Johnson, B., & Turner, L. A. (2003). Data collection strategies in mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 297-319). Thousand Oaks, CA: Sage.
- [32] Johnson, R. B. (Ed.). (2006). New directions in mixed methods research [Special issue]. *Research in the Schools*, 13(1). Available online at [http://www.msera.org/rits\\_131.htm](http://www.msera.org/rits_131.htm)
- [33] Johnson, R. B., & Christensen, L. B. (2004). *Educational research: Quantitative, qualitative, and mixed approaches*. Boston, MA: Allyn & Bacon.
- [34] Johnson, R.B., Onwuegbuzie, A.J.: *Mixed methods research: a research paradigm whose time has come*. Educational Researcher. 33(7), 14–26 (2004)
- [35] Kadushin C, Hecht S, Sasson T, Saxe L. 2008. Triangulation and mixed methods designs: practicing what we preach in the evaluation of an Israel experience program. *Field Methods* 20(1):46–65.
- [36] Karasz, A., & Singelis, T. M. (2009). Introduction to the special issue: Qualitative and mixed methods research in cross-cultural psychology. *Journal of Cross-Cultural Psychology*, 40, 909-916.
- [37] Kelle, U. (2001) Sociological explanations between micro and macro and the integration of qualitative and quantitative methods, *Forum: Qualitative Research*, 2, 1: e-paper. <http://www.qualitative-research.net/fqs-eng.htm>
- [38] Leech N.L., Anthony J. Onwuegbuzie A.J. *A typology of mixed methods research designs* Springer Science Business Media B.V Qual Quant 43:265–275,(2007) DOI 10.1007/s11135-007-9105-3
- [39] Lonner, W. J. (2009). Introduction to the special issue: Qualitative and mixed methods research in cross-cultural psychology. *Journal of Cross-Cultural Psychology*, 40, 907-908.
- [40] Mason J. (2006) *Mixing methods in a qualitatively driven way*, *Qualitative Research* SAGE Publications (London, Thousand Oaks, CA and New Delhi) vol. 6(1) 9–25.
- [41] Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA.
- [42] Miller SI, Gatta JL. (2006). The use of mixed methods models and designs in the human sciences: problems and prospects. *Qualitative and Quantitative Research* 40:595–610
- [43] Morgan, D.L.: *Practical strategies for combining qualitative and quantitative methods: applications to health research*, *Qualitative Health Research*. 3, 362–376 (1998)
- [44] Morse, J.M.: Approaches to qualitative-quantitative methodological triangulation. *Research in Nursing Health* 40, 120–123 (1991) multicultural counseling. *Journal of Counseling Psychology*, 52, 240-247.
- [45] Newman I, Ridenour CS, Newman C, DeMarco GMP. 2003. A typology of research purposes and its relationship to mixed methods: In Small M.L. (2011), *How to Conduct a Mixed Methods Study: Recent Trends in a Rapidly Growing Literature*, *Annual Review of Sociology*, 37:57–86.
- [46] Obstfeld D. 2005. Social networks, the Tertius Iungens orientation, and involvement in innovation. *Administrative Science Quarterly*. 50(1):100–30
- [47] Pager D, Quillian L. 2005. Walking the talk? What employers say versus what they do. *American Sociology Review*. 70(3):355–80
- [48] Plano Clark, V. L., & Wang, S. C. (2010). Adapting mixed methods research to weddings, and the impact on gay activism. *American Sociological Review*. 74:865–90.
- [49] Ponterotto J.G., Mathew J.T., Raughley B. (2013) The Value of Mixed Methods Designs to Social Justice Research in Counseling and Psychology, *Journal for Social Action in Counseling and Psychology*, Volume 5, Number 2.
- [50] Rallis, S.F., Rossman, G.B. : Mixed methods in evaluation context: a pragmatic framework. In: Tashakkori, A., Teddlie, C. (eds.) *Handbook of Mixed Methods in Social and Behavioral Research*, pp. 491–512. Sage, Thousand Oaks, CA (2003)
- [51] Rocco, T.S., Bliss, L.A., Gallagher, S., Perez-Prado, A., Alacaci, C., Dwyer, E.S., Fine, J.C., Pappamihel, N.E. : The pragmatic and dialectical lenses: two views of mixed methods use in education. In: Tashakkori, A., Teddlie, C. (eds.) *Handbook of Mixed Methods in Social and Behavioral Research*, pp. 595–615. Sage, Thousand Oaks, CA (2003)
- [52] Rossman, G. B., & Wilson, B. L. (1985). Numbers and words: Combining quantitative and qualitative methods in a single large-scale evaluation study. *Evaluation Review*, 9, 627-643.
- [53] Sandelowski, M. (2003). Tables or tableaux? The challenges of writing and reading mixed methods studies. In Tashakkori A & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 321-350). Thousand Oaks, CA: Sage.
- [54] Sandelowski, M.: *Real qualitative researchers don't count: the use of numbers in qualitative research*. *Research in Nursing Health* 24, 230–240 (2001)
- [55] Small M.L. (2011) *How to Conduct a Mixed Methods Study: Recent Trends in a Rapidly Growing Literature*, *Annual Review of Sociology*, 37:57–86
- [56] Smith, M. L. (2007) Multiple methodology in education. In J. Green, G. Camilli, & P. Elmore (Eds.), *Complementary methods for research in education*. Washington, DC: American Educational Research Association.
- [57] Steckler, A., McLeroy, K. R., Goodman, R. M., Bird, S. T., & McCormick, L. (1992). Toward integrating qualitative and quantitative methods: An introduction. *Health Education Quarterly*, 19(1), 1–8.
- [58] Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches* Applied Social Research Methods, No. 46
- [59] Teddlie, C. & A. Tashakkori. (2003). *Major issues and controversies in the use of mixed methods in the social and behavioral sciences*. *Research in the Schools*, 13(1), 12-28.
- [60] Thomas, R. M. (2003). Blending qualitative and quantitative research methods in theses and dissertations. *Journal of Mixed Method Research* 2-54. Thousand Oaks, CA: Sage.

- [61] Twinn, S.: Status of mixed methods research in nursing. In: Tashakkori, A., Teddlie, C. (eds.) Handbook of Mixed Methods in Social and Behavioral Research, pp. 541–556. Sage, Thousand Oaks, CA (2003)
- [62] Waszak, C., Sines, M.C.: Mixed methods in psychological research. In: Tashakkori, A., Teddlie, C. (eds.) Handbook of Mixed Methods in Social and Behavioral Research, pp. 557–576. Sage, Thousand Oaks, CA (2003)

