

Running head: DIVING INTO PARTICIPATORY ACTION RESEARCH:

Diving into Participatory Action Research:

A Reflective Journey

Judith Hadden

University of Calgary

The schoolhouse, among all community institutions, is a venue where understanding, and ultimately learning, is held as sacred as the sacrament in the Christian church, the Old Testament in the Synagogue or the Koran in the Mosque. The teacher's first day on the job begins a journey of research and exploration that is often not reflected upon. This is where the passionate educator discovers the essence of student learning as well as personal learning, all in the pursuit of excellence.

Early research practice, simplistic in nature, occurs out of survival, akin to the bottom rungs of Maslow's Hierarchy (1999). When confronted with a student who is unsuccessful in the classroom, for example, teachers have a need to seek out the understanding of the context. Much of the teacher's work is trial and error and lacks scientific process. As the teacher becomes learned in pedagogy, and builds a greater capacity for understanding the many aspects that affect learning, the teacher begins to sort through knowledge, and draw from the data they have discovered about the student, ultimately matching knowledge with practice. In the end, the ontological philosophy emerges, "what knowledge is" (Bloomberg & Volpe, 2012, p. 41) and one begins to think of oneself as a researcher.

Upon reflection, I draw an analogy of my epistemological "how we know what we know" (Bloomberg & Volpe, 2012, p. 41) ontological and axiological "what values go into knowing what we know" (Bloomberg & Volpe, 2012 p. 41) stances regarding research to that of the diver exploring the sea. As a novice diver, I am fearful of what I do not know about the ocean. Pictures, conversations, and training, all contribute to my pre-understanding but until I actually dive in, I really do not know. The epistemological stance is formed from this perspective. My truth, at this point, is what I learn through experience, from reading, through the knowledge of experts, and through study. Until I actually dive into the sea, my epistemological

stance is reliant on others' truths. The transformation of my epistemological stance is best influenced by my experience. In experience, I find new truth; that the sea is murky, the water difficult to navigate, and the glimpses of beautiful sea life intriguing, calling me deeper; and because I value knowledge and its contribution to a stronger world, my axiological stance invites me to new depths.

Reflecting on the sea, I wonder if my ontological and axiological stances are determined prior to my epistemological stance, in conjunction with it, or constructed with experiences and beliefs relative to it. I believe that the depth of the sea is a fascinating world of discovery to which I am drawn. As a risk taker, I want to get to the depths of the sea: as a researcher, I want to have the courage to ignite social change that benefits humankind. My ontological stance believes in good intention. As a diver, I am mindful of the power of the sea. I know that in order to get to the enchantment of the deep sea, I must respect its forces, its ecosystems, its dynamics and the existing relationships. As the sophisticated researcher in comparison to my early teaching years, my axiological stance is one of respecting my role as researcher within the context of the research. In taking up the praxis of research, I must reflect on the ontology and axiology which I bring to the work in order for me to clearly identify and be aware of the biases, which without care, may influence the interpretations of the contributions from participants and I can quickly be swallowed by the sea.

This paper navigates a journey of learning; my journey to research. I reflect on early experiences which impact my ontological and axiological stances. Through the lens of participatory action research, I explore key influential elements, researcher and participant relationship, the research question, the impact of power in research, and validity and reliability of which as researcher, I must be cognizant when I consider and select an appropriate methodology

for my inquiry. Through this exploration of research, I will reflect on a paradigm shift in my epistemological stance vis-à-vis my research into administrator competency in meeting the teacher and principal quality standards as set by Alberta Education (2016) in the area of technology.

My Research Journey to Now

Early work in my career, includes *Introduction to Research in Education* (Ary, Cheser Jacobs & Razavieh, 1990) which places emphasis on sources of knowledge as experience, authority, deductive reasoning, inductive reasoning and scientific approach. Scientific in its context, from a positivist perspective, the content identifies personal experience as a limitation for truth “how one is affected by an event depends upon who one is” (Ary, Cheser Jacobs & Razavieh, 1990, p. 485). Further content from my early learning speaks of the research of a specific question having a specific solution. The text acknowledges the advancement of research with the development of the computer as a tool allowing for more sophisticated data, with multiple variables, to be analyzed and tabulated which ultimately allows researchers to answer research questions without concern for the complexity necessary to reach a solution. The text even provides caution to the researcher regarding proper programming of data to receive meaningful results emphasizing that most research is statistical in nature.

In the spring of 2000, the Alberta Initiative for School Improvement (AIS I) (as cited in Duvall, 2003), a school-based research opportunity to improve teaching and learning, provided the first opportunity in which I was able to engage in action research within the school environment and enter into research from a post-positivist perspective. The opportunity was an initiative by the Government of Alberta that provided opportunities for schools and school jurisdictions to identify problems of practice within individual contexts and initiate collaborative

professional development to improve pedagogy; with the result of enhanced student learning.

Reflecting on how I prepared project applications and how I led schools in AISI projects, I note the nature of Cycles I and II of AISI as having required significant data analysis in reporting on the research.

An important opportunity that informed my early academic work in research was a project on which I collaborated with Dr. Michael Pollard and Janice Sheets in examining the results of literacy projects in Alberta. *Supporting the Literacy Learner: Promising Literacy Strategies in Alberta* (Alberta Education, 2000) is an academic work that presents the first challenge with which I struggled in interpreting data. In this instance, the researchers did not interact with the data collection and were seconded to simply review the results and provide conclusions. As I now reflect from an informed constructivist perspective, I better understand the frustration of the experience as there was no context to the method by which the data was collected nor to its relationship with the research methodology. From the onset of the project, I recall feeling inadequate. I now understand that a researcher who is unaware of the purpose beyond a basic statement of intent, and who has little opportunity to investigate findings and data, has little opportunity to interpret and contextualize research. The meaning of the findings is lost other than for the purpose of reporting to a sterile authority such as Alberta Education. In such a scenario, the energy and enthusiasm I bring to research quickly dissipates into confusion and disillusionment as a result of the inability to further investigate findings. I gasp for air as I come to the surface from a murky experience and from my perception of self as an inept researcher who cannot make sense of data and I am overwhelmed.

At this point in time, my axiological perspective was grounded in quantitative results which I think at the time to be the right perspective. My ontological stance was grounded in a

belief that there is one truth because epistemologically that is what I know. Yet, I can look back and marvel at the number of times I have been confused by the numbers. I recall often wondering why others can understand the explicit finite entity of the results and I always have questions. Why can't I see the numbers clearly? I have analogized this to swimming in the ocean and not being able to see past the seaweed. My underdeveloped conceptual knowledge of research negatively impacted conclusions because I was unable to draw effective conclusions from the research.

Dr. Reinhard Golz, Professor University of Magdeburg, Germany has been a transformational influence in my path as a researcher. Dr. Golz offers an international perspective to educational reform grounded in the work of Ellen Keys, Maria Montessori, and John Dewey, all early constructivist advocates for understanding children and learning. Learning with Dr. Golz, I find my own ontological philosophy of viewing education in the context of the learner as well as the political, social and economic realities of the education system. I also have come to realize that while activists like Keys advanced new ideas, the process for participatory engagement research to effect social transformation takes decades. Why does educational change take so long to implement? What role does positivist thinking play in this slow advancement? Does a constructivist paradigm advance change more quickly? Such questions suggest complexity to the research paradigm.

The purpose of my current research is to advance education by examining the capacities that educational leaders require to move technology forward collectively in schools. In thinking about the spectrum from quantitative to qualitative perspectives, and knowing that educational knowledge involves teaching children, I wonder about positivist epistemology and its place in the advancement of educational reform. Can true data be ascertained through human

participants? Can thinking, opinion, relative perspective and environmental impact be negated in findings? Should they be? Can we authentically address educational issues without attention to critical consciousness as Freire (1970) proposes in his critical pedagogy project in Brazil? As Brydon-Miller, Kral, Maguire, Noffke, and Sabhlok (2011) contend, “knowledge generation is a collaborative process” (p. 807). These wonderings lead me to my axiological stance that those closest to the transformation must have an opportunity to participate in the transformation.

The Lens of Participatory Action Research

Participatory Action Research (PAR) grounds collaboration, participation and research methods in the context of current educational practice. Returning to the analogy of the sea, a deeper dive into understanding the postulates of research through the lens of PAR brings my understandings beyond the surface of the seaweed to a profound grasp of the role of researcher in relation to participant, to conceptualizing the research and constructing the research question, to political discourse in the collaboration and the influence of power, and to validity and reliability of the findings:

While the theories, methods and the methodologies in PAR are varied and evolve differently within every context, it is the belief in collaboration and respect for local knowledge, the commitment to social justice, and trust in the ability of democratic processes to lead to positive personal, organizational, and community transformation that provide the common set of principles that guide this work. (Brydon-Miller, Kral, Maguire, Noffke & Sabhlok, 2011, p. 389)

The qualitative nature of PAR adapts the purpose of the research from that of seeking proof, which is itself complex, to that of seeking solutions. Saviano (2007) states that proof is irrefutable because it is partial. It is an interpretation presented from a human perspective and

therefore not necessarily pure truth. I have questioned throughout my journey the discourse of subjectivity and objectivity as it relates to proof, particularly in educational research. As Conole (2010) suggests, the human dimension of research participants always brings an element of interpretation to the contributions. Kant (as cited in Parchoma, 2014) also supports this notion when suggesting that we may all listen but what and how each of us interprets what we hear regarding what we think we may have heard, is not always commensurate. The result may not be as definitive and may involve several iterations spiraling through a process of posing problems and seeking collective understanding.

The Relationship of Researcher and Participants

The collaborative nature of PAR methodology revolutionizes the relationship of researcher to participant(s). As evident in the work of Roberts, Brown, & Edwards (2015) in Tanzania, the success of PAR is in the ability of the researcher to engage in the research. Cornwall & Jewkes (1995) describe authentic PAR as a methodology where the participants set the agenda, own the results and maintain the direction of the iterations of the research. Those to be affected by the change, are involved and contribute to the social action of the change. Cornwall & Jewkes (1995) further emphasize that “researchers become learners and facilitators, catalysts in a process which takes on its own momentum as people come together to analyze and discuss” (p. 1668). The researcher is not an external observer or data collector but is immersed in the culture of the research so as to be an equal participant familiar with the perspectives of the community thus making the closest interpretations of the contributions and making the research relevant. Bradley & Schaefer (1998) point out the axiology of what is most useful in the community and therefore more meaningful to the research is more important and worth more emphasis than judging what is real. From a constructionist perspective, the immersion of the

participants in conceptualizing the research process and in contributing to the development of the core question and in the case of PAR, its iterations, is critical to the sustainability of the paradigm shift.

Conceptualizing the Research and Constructing the Research Question

The research question and its relevance to the values, not only of the researcher but to the community of research, is critical to the authenticity of the contributions from the participants. Bloomberg and Volpe (2012) emphasize that effective research questions are tied to the purpose of the research and, when answered, shed light on the problem. In reflecting on early personal experiences, I believe that my own lack of involvement in the development of the conceptual lens of the project, has in the past been a contributing factor to my questioning of results and my inability to connect the relevance of the work to forward action. Bower (1984) discusses the importance of research design, inclusive of researcher and participants, to allow for opportunities for self-reflection and to enhance conceptual conversations. Lather (1986) furthers this notion through his work in the area of emancipatory research which emphasizes a reciprocity between researcher and participants, to more deliberately probe the research issue and to foster a mutually trusting relationship. Agency within the research, as Cornwall & Jewkes (1995) present, must be acknowledged by the researcher. Agency speaks to how choices will be made, who the contributors within the community are, and how the community will be consulted. The research question in PAR is key to the methodology and explicitly indicates “how and by whom is the research question formulated and by and for whom are the research findings used” (Cornwall & Jewkes, 1995, p. 1668). The collaborative process of designing and posing the research question and process as a community speaks to the successful engagement and grassroots persona of PAR and the resultant equitable distribution of power.

Political Discourse and Influence of Power

The most definitive impact of the current inquiry into research is the role and influence that power has on the outcome of research. Cornwall & Jewkes (1995) differentiate PAR from other research methodologies based on the positioning of power in the stages of the research process. It is evident that the political discourse that informs the researcher has the potential to mar research outcomes. A review of the research by Roberts, Brown & Edwards (2015) in Tanzanian primary schools, clearly demonstrates the potential power of the researcher to misguide the inquiry process to arrive at what may appear to be predetermined outcomes. Given the passion of the researcher to immerse oneself in the process, it is quite possible that the researcher only hears the desired results and therefore the collaborative nature of PAR along with its essential purpose is lost.

Cornwall & Jewkes (1995) state that the attitudes of the researcher are key to successful participatory action research and I add: So is the attitude of the participants. Not only must the researcher be aware of one's own political, social and academic opinions, they must also be wary of the personal agendas of participants. In collecting data, all voices must be equally valued. I have reflected on the talented researcher, skilled in the consensus decision-making model often through my study of PAR. Kauffman (2015) portrays consensus decision-making, as a conflict resolution model that has been used by Quakers and Anabaptists for centuries, ensures that all members of the community have equal opportunity to contribute to conversations, that all discussions are transparent and that the group work together towards a resolution to the issue. This model mitigates strong personalities, controls for racial and gender discrimination and diminishes power-play persuading processes. I have come to value this process and I have

learned that when we invoke the consensus decision-making process, the work continues forward as all contributors are collectively progressing in the same direction.

When discourse arises, it is at the point of discourse that deliberate debate resolves and forward motion resumes. I liken this movement of positive force to that of the wave that begins far out in the ocean. As it moves toward shore, it collects momentum and builds strength. It can easily be disrupted and may change course, may dissipate or may swell and gain even more momentum. It does reach the shore. The talented researcher in action research, is able to sort through the rhetoric and personal agendas of participants to arrive at the essence of the voices of the concerned and of those committed to the transformation. This is not a hurried process. The wave does not build in minutes. Tuck (2009) speaks of ethical and epistemic change and of the notion that patience is important to a successful PAR process. The author uses the analogy of “filling the hungry belly” (Tuck, 2009, p. 55) whereby we grasp a quick revolutionary rounding of the masses to revolt against cause or we methodically follow an iterative process of collaborative conversation, seeking understanding of the problem and working through incremental change to arrive at a sustainable outcome. Haste may impact the validity and reliability of the progression.

Validity and Reliability

Positivist perspectives to research heavily emphasize validity and reliability as cornerstones of respectable research. Brock-Utne (1996, as cited in Cohen, 2007) advocates for the explosion of the notion of reliability as the sole preserve of quantitative research and argues that qualitative research too is valid. In order for research to have sustainable impact, it must be valid. Discourse around the issue of the validity of PAR centers on the nature of soft data collection and the role of reliability in determining validity. Winter (as cited in Cohen, Manion

& Morrison, 2007) argues that “honesty, depth, richness and scope of the data achieved, the participants approached, the extent of triangulation and the disinterestedness or objectivity of the researcher” (p. 133) contribute to validity. Triangulation, “the use of two or more methods of data collection in the study of some aspect of human behavior” (Cohen, Manion & Morrison, 2007, p. 141) reduces the risk of invalid or unreliable conclusions. As Cohen, Manion & Morrison (2007) contend, in considering a measure of standard error when working in educational research, all data will have some degree of bias. Therefore, the conversations regarding validity and reliability of PAR should focus on discussions of how to minimize invalid data collections and maximizing overall validity. The value gained in the debate around the issues of validity and reliability centers on the acceptability and utility of findings. If we trust the intent and integrity of the researcher, on a journey to improve humanity, or in the case of education, to improve student learning, unless the work is valid and reliable, I do not believe we will observe a transformational paradigm shift. PAR is a community driven process, collaborative in nature with the intent that all members of the community of research owe responsibility to the ethical integrity of the process, which includes the acquisition of informed consent and the emotional, physical and social safety of all participants. Hence the validity and reliability in PAR as Cohen, Manion & Morrison (2007) argue is in the talent of the researcher to choose methods of information collection which are authentic to a qualitative process; socially situated, process driven, and native to the eyes of the participants.

By diving deeply, I have come to understand key principles of PAR and have been able to sort through the continuum from positivist to post positivist perspectives with an understanding that there is not a dichotomy but instead degrees of meaningful well intentioned desire to enact social change.

Here I am

First dives are intimidating. I believe that I have been intimidated by what Onwuegbuzie (2003) defines as two research subcultures and I, until unpacking PAR, have fallen into the trap of emphasis on proof rather than story. I have been viewing quantitative and qualitative research as an either-or scenario, rather than thinking about the commensurability of both. This too is where I have found the ocean water murky. The incommensurability of my epistemological and ontological stances has been a source of frustration in my research journey. I have believed in the absolute truth of my interpretation of the epistemological paradigm, yet I have always found reason to doubt it. I am supposed to know that there is a truth and efficacy in empirical results far beyond that of any other form of information collection. In my educational journey, I have always known that what matters most is the voices of those closest to the work. The vision of Freire (1970) the researcher as facilitator to the oppressed, or culture needing change, has always been my ontological stance to research. I have known this to be the answer to social and educational change. I think that all along, I have been true to my axiological stance, that educational change must involve those closest to the work. This applies to my current research; that is, that school administrators empower teachers in the classroom to effectively use technology to advance student learning. Onwuegbuzie & Teddlie (2003) suggest conceptualizing quantitative and qualitative paradigms under one framework which looks at the specific perspectives of each paradigm through the lenses of exploratory and confirmatory methods in which:

Quantitative data analysis techniques are labelled as exploratory (e.g. descriptive statistics, exploratory factor analysis and cluster analysis), and exploratory qualitative

data analysis involves the traditional thematic analyses. With regard to confirmatory methods, qualitative data-analytical techniques incorporate the assortment of inferential statistics, whereas qualitative data-analytic methods involve confirmatory thematic analyses, in which replication qualitative studies are conducted to assess the replicability of previous emergent themes (i.e. research driven) or to test an extent theory, when appropriate. (Onwuegbuzie & Teddlie, 2003)

What is clear is that methodology is influential in the research design. A pragmatic researcher is able to sort through the key attributes of several methodologies on the continuum of beliefs of a positivist, post positivist perspective with a preference for quantitative measures and analysis to that of constructivist, constructionist perspective with a preference for qualitative measures and analysis (Parchoma, 2014).

Moving forward with focus on the research question: ‘What attributes will school leaders in Alberta require to successfully meet the competencies and indicators of the draft *School Leadership Standard* (2016) and to successfully support teachers in their schools with the draft *Teaching Quality Standard* (2016)’, what is most important is the engagement of Alberta school leaders in the opportunities to have voice in a work that will help to identify areas of need, and effect professional development to support school leaders. Lather (1986) advocates for developing emancipatory theory by establishing data credibility and a collaborative approach to critical inquiry. Engaging in critical conversations, sharing relevant literature in the field of educational technology, surveying a significant number of school leaders, scanning Alberta schools for technology inventory and staffing, designing a transparent tool which school leaders can share and utilize to make appropriate analysis of their own school needs, are the methods by which I intend to create a wave of shared understanding and support for Alberta school leaders to

lead technology in their schools. What is most important is that the research connects the voices of school leaders to data about the use of technology in schools. Wisdom and Creswell (2013) speak of mixed methods as an emergent methodology that integrates quantitative and qualitative data to permit a synergistic unitization of the data. To this point, my research must go beyond an analysis of the technology opportunities available in Alberta schools, to examine frameworks and capacities of educators and finally to look at leadership attributes which are most likely to advance technology learning opportunities for students. Further I hope that in my research, as Polkinghorne (1983) suggests, I have the opportunity to experiment with my research design and expand it through feedback and examination from peers. It is through debate that my questions are refined and that I learn with my research participants, as questions are answered that we have developed in the research journey.

Conclusion

My experience is my truth and in my journey through understanding the foundations of research, my experience continues to transform. I have reflected on how early experience in my educational journey defined my initial understandings of myself as researcher. The lens of participatory action research, with an emphasis on relationship, questions in research, the influence of power, and the relevance of validity and reliability in the work, are foundational elements which impact any methodology of research but more importantly impact a paradigm shift in my epistemological stance about research and its purpose. I believe that well grounded research has the potential to shape society for the ultimate aim of advancing an agenda of social justice where participant and researcher act as one always mindful of safely caring for humankind.

Barth, R. (2006) speaks of education foundationally reliant on relationships. This reliance suggests that educational research will have a human dimension as identified by Conole (2010), in the methodology. The opportunity to combine the story of the human dimension with statistical evidence of proof to land somewhere meaningful on the methodology spectrum is a motivating challenge. Once I have pushed through the murky upper levels of the sea, thrust away the seaweed, and propelled to be surrounded by the wonders of a new ecosystem, I will be able to look back on my journey knowing that the sea is deep, there are many echelons to uncover and I am as always the learner, the diver.

References

- Alberta Education. (2000). *Supporting the literacy learner: Promising literacy strategies in Alberta*. Retrieved from <http://site.ebrary.com.ezproxy.lib.ucalgary.ca/lib/ucalgary/reader.action?docID=10410983&ppg=1>
- Alberta Education. (2016). *Draft school leadership standard*. Retrieved from <http://www.albertaschoolcouncils.ca>
- Alberta Education. (2016). *Draft teacher quality standard*. Retrieved from <http://www.albertaschoolcouncils.ca>
- Ary, D., Jacobs, L. & Razavieh, A. (1990). *Introduction to research in education* (4th ed.). Orlando, Florida: Holt, Rinehart & Winston, Inc.
- Barth, R. (2006). Improving relationships within the schoolhouse. *Education Leadership*, 63(6), 8-13.
- Bowers, C. A. (1984). *The promise of theory: Education and the politics of cultural change*. New York: Longman.
- Bradley, J., & Schafer, K. (1998). *The uses and misuses of data and models*. Thousand Oaks, CA: Sage.
- Brydon-Miller, M., Kral, M., Maquire, P., Noffke, S. & Sabhlok, A. (2011). Jazz and the banyan tree: Roots and riffs on participatory action research. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage handbook of qualitative research* (4th ed., pp. 387-400). Thousands Oaks, CA: Sage.
- Cohen, L., Manion, L. & Morrison, K. (2007). The Ethics of educational and social research. In L. Cohen, L. Manion & K. Morrison, *Research Methods in Education* (6th ed., pp. 52 – 77). New York: Routledge.
- Cohen, L., Manion, L. & Morrison, K. (2007). Validity and reliability. In L. Cohen, L. Manion

- & K. Morrison, *Research Methods in Education* (6th ed., pp. 133 – 164). New York: Routledge.
- Conole, G. (2010). Theory and methodology in networked learning. Unpublished manuscript, London, UK: The Open University.
- Cornwall, A. & Jewkes, R. (1995). What is participatory research? *Social Science and Medicine*, 41(12), 1667-1676.
- Creswell, (2011) Controversies in mixed methods research. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage handbook of qualitative research* (4th ed., pp. 269-283). Thousand Oaks, CA: Sage.
- Denzin, N. K., & Lincoln, Y.S. (2011). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of Qualitative research* (4th ed., pp. 1-19). Thousand Oaks, CA: Sage.
- Duvall, Debbie. 2003. Alberta: reshaping the education system. Retrieved from <http://search.proquest.com.ezproxy.lib.ucalgary.ca/docview/213734067?pq-origsite=summon&accountid=9838>
- Freire, P. 1970. *Pedagogy of the oppressed*. New York: Herder and Herder.
- Lather, P. (1986). Research as praxis. *Harvard Educational Review*, 56(3), 257-278.
- Kauffman, L. A. (2015). The theology of consensus. *Berkley Journal of Sociology*. Retrieved from http://www.consensusdecisionmaking.org/?page_id=47 consensus
- Maslow, A. H. (1999). *Toward a psychology of being* (3rd ed.). New York, NY: J. Wiley & Sons.

- Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology*, 8(5), 375-387.
- Onwuegbuzie, A. J., & Teddlie, C. (2003). A framework for analyzing data in mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 351–383). Thousand Oaks, CA: Sage.
- Parchoma, D. (2014). Commensurability in research designs. Powerpoint. Retrieved from D2L, University of Calgary
- Polkinghorne, D. (1983). *Methodology for the human sciences: Systems of inquiry*. Albany: State University of New York Press.
- Saviano, R. 2007. *Gomorra*. New York: Farrar, Straus and Giroux.
- Tuck, E. (2009). Re-visioning action: participatory action research and indigenous theories of change. *The Urban Review*, 41(1), 47-65. Doi:10.1007/s11256-008-0094-x
- Wisdom, J. & Creswell, J.W. (2013). Mixed methods: Integrating quantitative and qualitative data collection and analysis while studying patient-centered medical home models. *Agency for healthcare research and quality (13-0028-EF)*.