

Synergistic Research in Medical Education: Some Philosophical Reflections

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Abstract

In this paper, we present and discuss the “synergistic research approach,” from quantitative and qualitative through mixed methods, as a term that refers to an academic endeavour in which researchers are not only committed to comprehensiveness and rigor, but also – and importantly – to excellence in peer processes that further enhance knowledge generation by emphasizing the philosophical underpinnings thereof. We outline the hermeneutic wager, which provides the philosophical grounds for synergistic research, and explain the reasons why we consider this perspective to be of particular interest in the health profession education field of inquiry.

Keywords

Synergistic research, medical education, philosophy of science, hermeneutic wager, person-centred care, research methods

As in other health-profession domains, health profession education’s connection to empirical research, traditionally dominated by quantitative methods, has become increasingly open to qualitative research and mixed-methods approaches (Lavelle, Vuk, & Barber, 2013; Tavakol & Sandars, 2014). Positivist/post-positivist paradigms have framed research conducted in natural sciences, and provided the basis for the evidence-based trend in medicine, dentistry, and allied medical sciences. Qualitative research approaches, the origins of which can be traced through their application within social sciences, have in turn shaped important medical movements, such as narrative medicine and professionalism.

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Concomitantly, the mixed-methods movement has forcefully emerged as a new orthodoxy in health, social and educational research, particularly since the 1990s. The mixed-methods research community has in fact been very successful in introducing mixed-methods studies and pragmatism as the third paradigm in education research (Johnson & Onwuegbuzie, 2004). As emphasized by Creswell and Garret, “[a]t this moment in the development of research approaches, the educational researcher needs a large toolkit of methods and designs to address complex, interdisciplinary research problems” (2008, p. 321). Some view mixed methods as “direct descendants of classical experimentalism and the triangulation movement of the 1970s” and believe that they “presume a methodological hierarchy, with quantitative methods at the top” and “with qualitative methods playing a subordinate, ancillary role in illuminating quantitative data/findings” (Denzin, 2012, p. 81). Mixed methods researchers themselves, however, define their approach as “a movement that moves past the paradigm wars by offering a logical and practical alternative” (Johnson & Onwuegbuzie, 2004, p. 17), one which they view as superior to any *purist* approach for fulfilling research needs.

Despite its unquestionable popularity, mixed methods is, according to its tenets, a research movement that is still very much in development (Tashakkori & Creswell, 2008). This may be due, at least in part, to the controversy it has provoked (e.g., Denzin, 2010; Giddins, 2006; Symonds & Gorard, 2010). Interestingly, although the reflexive stance displayed by some leading mixed methods researchers is laudable (e.g., Bergman, 2011; Creswell, 2011), a sort of *purism* can also be identified in this community of scholars: the same purist stance that they associate with scholars framed within the first and second research paradigms (Johnson & Onwuegbuzie, 2004) when they in turn state that research innovation, interdisciplinarity, and best ways to face complex problems seem only possible through mixed methods research (e.g., Hesse-Biber & Johnson, 2013).

Advocating for Synergistic Research in Health Education

Our intention in this paper is to respectfully contribute to this debate by proposing a *synergistic research approach* to health profession education. Two main, intertwined arguments support our proposal. First, in contrast to Morgan (2007) who argued that there is “little reason why purely epistemological issues should be of major interest to social science research methodologists” because “that is the province of philosophers” (p. 68), we contend, with others, that this is precisely the researcher’s philosophical stance when conducting research that “fleshes-out” the research process and makes it truly substantive. In support of this position, see for instance Vattimo (2011), who stated that we cannot simply accredit the truth of our practices to science or the application of science without appealing to what he terms “the paradigmatic horizon within which every correspondence is verifiable” (p. xxxiii). Vattimo agreed with Gadamer’s (1996) argument of practice, in terms of phronesis, that is to say that we should not merely accept a theory or research outcome as truth without paying heed to context(s) that require attention and a depth of understanding (Lund, Panayotidis, Smits, & Towers, 2012).

Secondly, at a more practical level, we view synergistic research as an academic endeavour that aims not only to examine complex problems in a comprehensive and rigorous way (something empirical researchers of any allegiance agree with), but also to emphasize excellence in peer processes whereby new knowledge is generated precisely by considering the philosophical

underpinnings of thereof. In an era in which specialization is rewarded everywhere and seen as preferable, the intention of synergistic research is to bring together researchers from different disciplines and experts in specific domains who hold uniquely different backgrounds and experiences and whose research may be framed in different paradigms, but who are united by *their shared concern with the philosophy of research*. Synergistic research would therefore be instantiated in interdisciplinary research programs that, beyond the mere use of multiple toolkits for research, are respectful of different paradigmatic requirements for exploring the same phenomenon in a complementary, comprehensive, and inclusive manner.

Our advocacy for synergistic research in health professions education has an ultimate goal: to meet the imperative need to educate medical and other health providers in a way that enables them to overcome the current tension between science and care. As noted by Dunn and Jones (2010), “[w]e found that care and science logics coexist, moving through periods of balance and imbalance and residing in perhaps an uneasy tension that is not easily resolved in medical education” (p. 139). This is foundational to the understanding that a research project is not interdisciplinary if it merely *borrow*s or *replicates* methodologies from different disciplines without truly understanding the philosophical and theoretical premises that are foundational and that provide rigor and substance.

Why the Tag “Synergistic” Research?

We adopted the term “synergistic” research to help describe this approach because it refers to a collective effect that is greater than the sum of our individual research approaches, pre-understandings, and epistemologies. Etymologically, the term is derived from the Greek word *synergia*, meaning “joint work, a working together, cooperation; assistance,” which is in turn derived from *synergos*, meaning “working together” (from *syn-* “together”+ *ergon* “work”). In English, synergy commonly refers to an advanced effectiveness as a result of cooperation. This is more than a mere application of method but speaks to the possibility of an expanded horizon of understanding, through research that is at its core dialogical, open, and interdisciplinary (Synergy, n.d.). If language matters – which it does – then the words we choose to name our research philosophy also helps to establish the quality of the team’s interactions: that is, how inclusive and relational the co-participants are with each other and, especially, with research participants (Gadamer, 1960/1989; Wittgenstein, 2009).

Researchers become aware that “understanding is not something that takes place at the end of humanistic research about an object, it stands at the beginning and governs the whole process of questioning, step by step” (Gadamer, 2001, p. 50). Within this research approach, we understand that the production of *best or promising* evidence needs to be inclusive of multiple epistemologies, ontologies, methods, statistics, narratives, analyses, and ways of knowing. Research begins with a topic and defines how the questions of interest are to be researched through conversations with scholars from various disciplines, through education, and in particular through different ways of knowing. Through researcher engagement focused on a common or shared topic, we can begin to think creatively about how to best answers questions that generate new knowledge together. By reifying methods, that is, by being method-driven and choosing the research method first and then aligning the topic to fit the method (even mixed methods), we can lose the very essence of what we are trying to understand. Research...

is basically not a problem of method at all. It is not concerned primarily with amassing verified knowledge, such as would satisfy the methodological ideal of science –yet it, too, is concerned with knowledge and with truth. But what kind of knowledge and what kind of truth? (Gadamer, 1960/1989, p. xi)

Philosophical Underpinnings of Research

Our philosophical orientation for synergistic research is grounded in hermeneutics, which advocates that subjectivity is not a barrier to superior objectivity, but rather an opening to it. Subjectivity in the sense of having a distinct but negotiated point of view can be regarded as enabling a new and different understanding to emerge (Davey, 2006; Gadamer, 1960/1989). Learning from the *Other* occurs when the *Other* challenges our knowledge, experiences, and preconceptions. The result of dialogical hermeneutics encounters are intended to leave both parties thinking in different and unexpected ways about the analysis given and received. The formal employment of part/whole figures of thought clearly contributes to the transformation of understanding, yet such transformation happens to us and in unpredictable fashion (Gadamer, 1992). These we contend cannot be achieved by application of method alone, but are actively achieved through encountering and valuing other perspectives (theories). Otherwise, learning may be mistaken for an affirmation of something already known, or for an extension of that knowledge, but not as new learning. To understand conscious subjectivity requires a “positive commitment to deepening and exploring its enabling assumptions suggests that objectivity can no longer be understood as the absence of subjectivity” (Davey, 2006, p. 19). In other words, humans live and experience their world in context and interpretively; consequently all research, including those that methodologically strive for objectivity to determine truth, will always be influenced by the contextual disposition of human experience.

Philosophical hermeneutics distinctly assigns a dignity to the difference between researchers and their participants and/or patients, and contends that the differential space of the *in-between* has its beginning in the process of the hermeneutical encounter, which invites us to allow those who see and think things differently to expand our understanding (Gadamer, 1960/1989, 1992). This is contrary to most traditional methodological research thinking, but intriguing: a process through which one does not deny, suspend, or bind one’s background and biases, but through which one strives to understand and use them, because it is through heterogeneity of thought and commitment to one’s discipline vis-à-vis others that sophisticated new and different understanding may be achieved. Synergistic researchers are aware of the value of the relational within the research process and the need for conversation and reflection as essential properties to successful interdisciplinarity (Hovey & Craig, 2011).

The Hermeneutic Wager

The hermeneutic wager (Kearney, 2010) is a means of assessing personal and professional risk of engaging within a synergistic research approach; because the researchers are interested in the same topic and each one is already an accomplished investigator with his or her own methodological expertise, this approach invites openness, authenticity, and a focus on the relational aspects of working together (Treanor, 2010). However, our encultured ways of knowing and

understanding one's role may provide hidden barriers to interdisciplinary research, a privileging of certain kinds of research methods or one's perceived status within the research team (Hovey & Craig, 2011). Inspired by Kearney's work (2010), we offer five conversation topics as a reflective process to co-create an interdisciplinary research team that is stronger, more creative, and has greater potential to understand complex health concerns: imagination, humility, commitment, discernment, and hospitality.

The hermeneutic wager from Richard Kearney's philosophy (2010) was adapted into an application or a practical approach to building interdisciplinary teams in research. This approach is relational as it helps to describe what each researcher brings to the table from their discipline specific knowledge. The hermeneutic wager provides a philosophical-relational foundation from which a team can be built (Treanor, 2010). This perspective aligns with the work of philosophy that as Gadamer (1998) stated is "to clarify concepts, not to present a new body of knowledge through empirical research" (p. 101).

Applied hermeneutics is, in brief, a means to gain a deep understanding of a topic, human experience, or event. It does so through conversation with others, who can add other perspectives and understanding to a shared topic or experience of interest, such as the differences encountered when interdisciplinary researchers work to build their team.

The hermeneutic wager is about decision-making and describes a conversational process to guide the interdisciplinary research team's development and to build a highly functional team. In practice, the hermeneutic wager consists of five conversations that are not to be understood as a linear progression nor a series of graduated steps where when one is completed the team graduates to the next step and so on until all five have been achieved. Rather, the five conversations of imagination, humility, commitment, discernment, and hospitality are circular in nature, as each one may resurface, again and again, during the building of the team and will last through the duration of the team's tenure. The hermeneutic wager keeps the conversation alive, promotes understanding through the interpretation of new knowledge, and is open to differences among the team members.

A wager also speaks to the individual team member's perceived risk during their participation. The risk is weighed out through the participant's capacity to change in order to contribute to the team as an equal. This may impinge of one's socially constructed professional identity or perceived hierarchy and status. The hermeneutic wager's conversations help to identify these risks personal and professional and bring them forward so that they can discuss and be addressed, rather than remaining hidden.

Imagination

The first conversation invites *imagination*. For this, all members of the research team imagine what together they could accomplish as an interdisciplinary team with its advantages, challenges, and value. The research teams discuss strengths and limitations from multiple perspectives. These discussions are conducted openly and express pre-understandings, reflections, and attitudes from team participants. The intention of the *imagining* conversations was to begin to creatively explore potential interdisciplinarity without restrictions, limitations, or only discipline

specific encultured thinking. Imagination is where ideas flourish, are discussed, and considered for their potential to exceed individual or siloed understandings. The imagination conversation introduces very little risk to one's perceived research role. The intent is to explore, share, and envision. Although this conversation is mostly hypothetical, it does provide a means to move from ambiguity to a shared perspective of what the interdisciplinary team and research could become.

Humility

The next conversation, *humility*, entails reflection, both personal and professional, to see beyond encultured perceptions, personal/professional identity, wants, and needs and move toward what has been imagined through the previous conversation. Humility invites generosity and thinking that enhances the potential openness to other perspectives, possibilities, and understandings. Humility is meant to alert participants of their beliefs, values, and behaviours that might interfere with team building and function. This conversation for some participants may offer a higher level of risk. It calls into question participants' ability to encounter and understand others perspectives that may be different than one's own. The humility conversation also asks participants to reflect upon how they and others position within the interdisciplinary team. It entails a willingness to be open to other team members' strengths and how these might be utilized within the team structure. This premises that at certain points during the research process some members will take a leadership role while, at other times, they will allow the strengths of others to come to the forefront and lead. The essence of this conversation is related to the etymological root *hume* meaning humanizing which can be found in humility, humour, and humanity (Kearney, 2010). This speaks to the relational aspects of interdisciplinarity in which humility is about humanizing conversations and forming relationships that bring people together.

Commitment

Commitment provokes participants' willingness to assume the risk associated with the team building process. *Commitment* challenges participants to make explicit their intention to follow through with the process and is an essential condition for the building of highly effective interdisciplinary teams. Without *commitment* from all team members, the process may stall in the superficiality of rhetoric or fail all together. All participants should now have made clear their intentions to continue or not with the team building and research. Some participants will be fully supportive, while others may not, and some may remain undecided. If participants are aware of issues that create tension or divisiveness within the team, then specific measures to promote understanding can be taken. *Commitment* to interdisciplinarity must be the unique motivational force that drives the responsibility and desire of team members to work together.

This conversation asks participants to examine and be honest about their commitment to the team building process, to the interdisciplinarity nature of the team and research, and to the topic itself. The research teams utilize this conversation as a check in about how the team is progressing overall, but also as individual participants within the process.

Discernment

Discernment refers to the reality of this team building and research endeavour -- in essence, asks the practical question: does what the team has envisioned make sense? *Discernment* challenges *imagination* because it recognizes that not all possibilities are equal, valid, or realistic. This conversation tempers *commitment* with the reminder that some wagers are ill advised, impractical, or that some participants may not be ready for the changes to personal/professional selves that the team and the research asks of them. This is the conversation where practical judgment and understandings are confronted and risks are discussed and weighed.

Discernment asks of participants to examine the enablers and barriers to the team working together and in bringing the research to fruition. It is a formative reality check designed to examine who else might need to be invited as new participants to the team if needed to address gaps in ability, knowledge, financial, or system support, access to the population of interest, or other practical process issues. The team is then asked to brainstorm (re-imagine) around resolutions and other resources that have been identified. *Discernment* means to thoroughly examine its progress and make explicit the concerns before the team fails or falters. The practicalities of the research and the demands of team building initial enthusiasm dwindles if not championed or brought forward by all of the team members.

Hospitality

Hospitality means to welcome the research team building process with the participants respecting and honouring their diversity and an unconditional openness with all others with a desire to achieve something extraordinary. This conversation also describes the relational considerations of being with others to ensure the interaction between and among people is just, professional, supportive, and compassionate. Hospitality works to keep the process open because interdisciplinary teamwork will always need ongoing and further conversations, research, practice, and engagement.

Hospitality can also be understood as the relational foundation that keeps the team going. It is the welcoming of, and expectation that there will be, bumps on the road for all research teams during their formation and while they as a team co-exist. It asks of team members to be open to differences in team member's ideas and working styles. How this is brought to fruition will vary from team to team but at its core is a willingness to be open to learning from each other.

These five conversations and reflections cycle back and forth as new considerations, issues, success, set backs or concerns arise. The hermeneutic wager should not be considered a linear or sequential structure but rather as five interconnected conversations and reflections that serve to keep team members open and productive to discuss, address, and readdress topics while the team ebbs and flows in its processes.

In sum, all members of the research team *imagine* what a synergistic research approach could accomplish, its advantages, challenges, and potential. All synergistic research team members are openly included in the discussion on its strengths and limitations. This way, all members get to express their own pre-understandings of, reflections on, and attitudes towards the research. The *imagination* phase subjects the participants to very little risk because this is purely an experience in exploration, sharing and envisioning. *Imagination's* primary purpose is to help people arrive at

a shared understanding and express their own ways of knowing and understanding research as interdisciplinary. This requires reflection, both self and professional, to see beyond encultured perceptions, wants, and needs toward what has been imagined through this activity. *Humility* invites generosity and thinking that enhances being open to each other's perspectives, possibilities, and modes of research. This challenges researchers to make their intention to follow through with the process explicit. It is an essential condition for the development of an interdisciplinary research project to take shape and find its place and culture within the established epistemologies of practice. All of the stakeholders have now made their intentions to act clear – some are supportive, others perhaps not, and others still remain undecided; however, by identifying the issues that create tension within the group, we can then take specific measures to promote understanding. *Commitment* to synergistic research must be the unique motivational force that drives the responsibility and desire for researchers to work together. *Discernment* acts as a reality check to ensure that the synergistic researchers are truly ready to move forward to face the challenges or risks. Finally, *hospitality* keeps the conversation process open because interdisciplinarity will always need ongoing and further conversations and reflections about the research, practice, and engagement.

Conclusion

We contend that synergistic research is essential to exploring health profession education issues that support practitioners in facing complex healthcare conditions where fragmentation of research fails to provide person-centred interdisciplinary health care. The *Theory* (our professional and research methodological expertise and identity) and *Practice* (our professional engagement with learners, peers, and ultimately patients) of research cannot reach its fullest potential without a *Philosophical* foundation that underpins how we offer educational experiences, conduct ourselves as researchers, and focus on interdisciplinarity for enhanced clinical practice. The defragmentation of research means working with others who are different in their ways of knowing, understanding, and researching. Working through difficult conversations – those that challenge or disrupt our habitual ways of knowing and researching – can produce new and different interdisciplinary understandings for enhanced human science research, education, and health professional practice. In closing, we advocate research that is interdisciplinary and conversational ways of teaching, learning, and researching through which we strive to become better at everything we do.

Bios

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