

Archana Narasimhan

Student ID: 2321224

Cohort M

Module 2: BMPF 7323D

22 August 2024

Word Count: 4036

Critically evaluate a range of methodological approaches, research designs and research methods appropriate to gather data from complex work-based settings. Apply due consideration to research ethics and issues of insider research.

Introduction

In order to adequately prepare to address gaps in research and discovery in new subfields in the realm of vocal pedagogy, this paper will systematically analyze the various building blocks for designing a research project. The various research questions I am pondering for subsequent research generally fall under one umbrella category; hence, to limit the vast scope possible by this topic and to better guide my next steps, these considerations revolve around the field of Singing for Health, with an emphasis on mental health and therapeutic modalities utilizing the voice. With this in mind, the evaluation itself will include an analysis of ontological and epistemological positions; the strengths and limitations of various research paradigms; comparison of quantitative, qualitative, and mixed methods research; critical evaluation of applicable methodologies; and the practical relevance of various research methods.

Coincidentally, by the completion of the current module and the beginning of the implementation of its findings in running the planned project, I will be officially certified as a vocal coach through a concurrent program, New York Vocal Coaching. Charged then with this academic task as a budding voice practitioner, such research is further complicated by the introduction of being an “insider,” especially in cases where I may be involved in conducting research on students who I would be simultaneously voice-coaching due to subject availability, interest in and by the focus population, and convenience. This is crucial for two reasons: ensuring the goal of injecting the least amount of bias as possible into the research so as to sustain the integrity of all data and findings and allow its maximization to be applied in cumulative and subsequent research, and upholding the ethical standards required by the University of Wales Trinity Saint David and my own home country, the United States of America,

along with overarching human principles of ethical practice. Thus, this paper will also consider research ethics and implications of insider research. By way of such analysis, this paper aims to provide a comprehensive overview of the most suitable research strategies for complex work-based settings that I may encounter before concluding with a suggestion comprising the optimal elements above for a research framework and direction for the subsequent project.

An Ayurvedic Perspective on Reality

Ontology: Truth As Interplay of Dynamic and Fixed

How one understands the nature of being and reality shapes one's research (Hamidi *et al.*, 2022). I draw on my own inner experiences and Ayurveda, a philosophical system of medicine originating in ancient India, which has been passed down in my heritage and upbringing and which I am also studying in a concurrent Master's program at the Maharishi International University (MIU), focusing on integrative medicine. My perspective is that the universe is composed of frequencies that represent multitudinous layers of reality (Pearson, 2016): These layers range from the material, relative fields to the Absolute field, which transcends physical existence and embodies the ultimate, unchanging truth (Wallace *et al.*, 2023). This is not only philosophical but also rooted in metaphysics, as String Theory now encompasses the understanding of relative fields arising from the Absolute field (Wallace *et al.*, 2023).

I believe that individual perspectives on reality contribute to the rise of the relative fields. To employ a metaphor, artists given the same prompt will automatically interpret the same object/ model differently, whether stylistically or in the sense that one's canvas is simply in a different space-time point than another's and thus a different piece of art; in the same way, each person has a unique perspective on and experience of reality. To me, this suggests that truth is not entirely subjective, constructed upon individual perception as symbolized by the artists, nor entirely objective, as exemplified by the common model. Rather, reality exists as the interplay of independent fact and dependent observer/participant perspective that also vary in the level of awareness.

Always evolving, reality is hence a dynamic process that progressively approximates a higher Absolute Truth, symbolized by the notion of a curve approaching infinity but not quite reaching its destination in our current perception as a human collective. As researchers continue refining methods of inquiry and gathering successive data, all associated relative fields move closer to the Absolute Truth. However, there will always be a margin of error, which is essential for accommodating the complexities of material truths. This perspective is particularly

relevant in person-based medicine and therapeutic modalities, where understanding and treating individuals requires acknowledging the diverse factors that influence their health and experiences.

Epistemology: Objectivist Constructionism

This dualistic approach to truth leads to my epistemological stance, which I describe as Objectivist Constructionism. This combines the natures of both objectivism, where truth exists independently, and constructionism, where truth arises through engagement with realities (Erwin, 1999). Thus, through the lens of the Maharishi AyurVeda™ system, I maintain that knowledge exists on its own independently, from the Absolute field, and also by interactions with vast numbers of realities, the relative fields (Wallace *et al.*, 2023).

In practice, this provides meaning for me in the Singing for Health initiatives. For example, research in this area often involves both objective measurements, including physiological responses to singing, and subjective experiences, such as participants' self-reported improvements in mental health. Integrating these objective and subjective aspects allows for a holistic framework, as both aspects contribute to a fuller understanding of the therapeutic potential of singing and healing of the voice production mechanisms themselves. Moreover, each person experiences trauma and healing differently, so this dualistic framework supports micro-changes that may be otherwise difficult to pinpoint in broader surveillance of research subjects. This idea is also supported by the belief that souls are born into bodies to work through samskaras, or karmic impressions, and so each person's journey and needs are individual to themselves no matter the overarching themes of human suffering and bliss (Maharishi Mahesh Yogi, 2019). In the same way, each patient, student, and research subject will experience and need nuanced therapeutic approaches to fully address diverse individual issues, and the ontological and epistemological views I hold keep this in due consideration.

Axiology: Hierarchy of Values

As I believe everything has value regardless of our perceptions or interests towards particular goals, I approach axiology, or the study of values, in research by developing a hierarchy of value in the sources from which I derive knowledge (Moon & Blackman, 2014). While subject to change with more experience, foremost is knowledge derived by books, research, and expert opinions, followed by logical reasoning, intuition, and practical experience. This hierarchy reflects my commitment to obtaining information from reliable and demonstrable sources, while also recognizing the importance of personal intuition and experience in contexts

where empirical data may be limited or incomplete. Rather than casting aside data that may not fit within the research goals, this allows for broader understanding of knowledge so that the research may constantly expand.

Within vocal pedagogy research, this axiology supports a balanced approach to knowledge acquisition and synthesis, where insights gained from practitioners' experiences and participants' intuitive responses are also valued highly: This can offer perspectives that quantitative research might not fully capture. By integrating these sources, I aim to ensure that therapeutic practices are both evidence-based and responsive to the needs and experiences of individuals. This also ensures interplay of subjective and objective realities and truths and the continued acknowledgment of the interplay of relative fields with the Absolute field.

Research Paradigms

Positivist, post-positivist, constructivist, pragmatist, and the transformative paradigms seem progressively expansive and align in terms of how I view reality.

Positivism is objectivist in nature and provides rigorous and replicable methods but may overlook subjective experiences (Anderson *et al.*, 2021). For instance, in vocal pedagogy research, particularly in studies focused on Singing for Health, positivism may fall short in capturing the nuanced emotional and psychological impacts of singing, which are deeply personal and context-dependent.

Post-positivism offers methodological flexibility but can complicate data integration (Anderson *et al.*, 2021). While it retains positivism's belief in an objective reality, post-positivism acknowledges that pitfalls of human perception and undetected personal biases limit this reality to incomplete comprehension (Anderson *et al.*, 2021). Methodological pluralism is used, blending both qualitative and quantitative backdrops, to gain a highly nuanced grasp of phenomena (Anderson *et al.*, 2021). For example, in a study on the therapeutic effects of singing on mental health, a post-positivist approach might combine statistical analysis of health outcomes with qualitative interviews to explore participants' personal experiences. However, post-positivism reliance on multiple methods may be limiting in that it could lead to challenges in integrating diverse data types and interpreting results cohesively (Anderson *et al.*, 2021).

Constructivism captures the richness of human experience but faces challenges in generalization (Anderson *et al.*, 2021). Constructivism emphasizes the subjective nature of reality, asserting that meaning is created through the interpretation of individuals within their social contexts. The strength of constructivism lies in its ability to delve deeply into the

contextual and interpretive aspects of human experience (Anderson *et al.*, 2021). In vocal pedagogy, constructivism can be used to explore how different cultural contexts shape individuals' perceptions and experiences of singing. However, the subjective nature of constructivist research may make it challenging to generalize findings beyond the specific contexts studied and/or introduce biases that may affect the validity of the results (Anderson *et al.*, 2021).

Pragmatism emphasizes practical outcomes but may lack theoretical depth (Allemang *et al.*, 2022). Pragmatism prioritizes practical outcomes and solutions over adherence to any single philosophical doctrine (Allemang *et al.*, 2022). With a strength in flexibility and focus on actionable results, this paradigm is particularly effective in applied research, where the goal is to solve real-world problems rather than to contribute to theoretical knowledge (Allemang *et al.*, 2022). In Singing for Health research, a pragmatic approach might involve using both quantitative and qualitative systems to evaluate the effectiveness of a singing intervention while also considering the practical implications for implementation in different settings. However, pragmatism's focus on outcomes may lead to a lack of theoretical depth and a tendency to overlook the broader philosophical implications of research findings (Allemang *et al.*, 2022).

The transformative paradigm advocates for social justice but may introduce bias (Mertens, 2007). It is rooted in the belief that research should not only generate knowledge but also promote social justice and empower marginalized groups, addressing power dynamics, oppression, and inequality in research (Mertens, 2007). Transformative research often employs participatory methods, ensuring that the voices of marginalized communities are central to the research process (Mertens, 2007). The strength of the transformative paradigm lies in its dedication to social change and its ability to highlight the experiences of marginalized groups (Mertens, 2007). For example, in vocal pedagogy research, a transformative approach might involve working with communities who have historically been excluded from mainstream singing practices, such as the prison population. However, the activist orientation of the transformative paradigm has been viewed as limiting in that it is primed to introduce potential biases and challenge the notion of objective research (Mertens, 2007).

In highlighting the differences and uses of each paradigm, I find myself gravitating towards constructivism for experience-gathering, pragmatism for multi-modality use, and transformative paradigm for focusing and uplifting marginalized populations.

Quantitative, Qualitative, and Mixed Methods

Considering inductive, deductive, and abductive processes help to pinpoint the ideal methodology. A more deductive process, using a hypothesis to narrow down my scope to what I presume may emerge from the data and evaluating thereafter, may be optimal for social science (Proudfoot, 2023). Additionally, changing policy in government to more ethical processes is dear to my scholarly heart, so testing a hypothesis that would support ethics is quicker for effecting change rapidly and more forward-pushing in the research. In contrast with the given dataset-driven inductive method, the deductive process is conclusion-guaranteed, whether positive or negative towards the hypothesis, which is necessary when desiring policy change (Proudfoot, 2023). This would presumably also inform unshakeable policy changes rather than discoveries that are more subjective to the data pool that could be scrutinized by oppositional parties. Abductive process involves reducing explanations to that which fits most of the data, which may make it difficult to justify to third parties if trying to advance policy changes or treatment modalities (Rinehart, 2021).

Quantitative Research

This form of research emphasizes the collection and analysis of numerical data, making it ideal for research that aims to establish patterns, test hypotheses, or measure specific variables (Campbell *et al.*, 2017). In work-based settings concerning voice training, quantitative methods are useful for assessing outcomes such as performance metrics. A limitation may arise in that findings from a sample are difficult to generalize onto larger populations making it possible to implement broad-scale changes based on empirical evidence (Campbell *et al.*, 2017).

Qualitative Research

This modality centers on understanding the meanings, experiences, and perspectives of participants (Campbell *et al.*, 2017). Techniques such as interviews, focus groups, and ethnography allow for an in-depth exploration of complex issues that are often difficult to quantify (Campbell *et al.*, 2017). In the referential work-based settings, qualitative research allows investigation of the nuances of emotive practices or behaviors, performance blocks, or decision-making processes. The qualitative approach helps to uncover the underlying reasons

for certain behaviors or outcomes, providing contextual insights that are crucial for understanding the human aspects of learning or performance environments (Campbell *et al.*, 2017).

Mixed Methods Research

This integrates both quantitative and qualitative approaches, allowing researchers to leverage the strengths of each to achieve greater insight into the research problem (Campbell *et al.*, 2017). In voice-based therapy, both numerical data and personal experiences are critical to the research. By combining qualitative depth and quantitative data, this form of research provides a holistic window into the project, making it possible to address complex questions that require both statistical analysis and an understanding of individual or student-teacher/patient-practitioner dynamics (Campbell *et al.*, 2017). A wide range of perspectives can be met and synthesized while centering in deductive processing, which makes this my current preferred process.

Research Designs

Case Study

Case studies provide in-depth, contextual analysis of specific instances, making them valuable for exploring complex phenomena (Priya, 2021). In vocal pedagogy, a case study might examine the impact of specific vocal techniques on individuals with unique vocal challenges. An example is a study focusing on the “self-efficacy perceptions of four undergraduate vocal music education students” in different “vocal performance and rehearsal settings,” highlighting how these perceptions influence their career goals (Royo, 2014). However, while case studies offer rich insights, their findings are often not generalizable to broader populations (Priya, 2021).

Experiment

Experimental research involves manipulating variables to observe their effects, often using control groups to establish causality (Fernandes, 2022). In vocal pedagogy, experiments can be designed to test the efficacy of specific vocal exercises on reducing performance anxiety. In voice research, experiments were used to understand the efficacy of various interventions on the larynx of humans in comparison with dogs, rats, pigs, rabbits, and sheep (Fernandes, 2022). While experiments are strong in establishing causality, their artificial settings may limit real-world applicability, particularly in naturalistic practices like singing (Fernandes, 2022).

Action Research

Action research is a participatory methodology where researchers collaborate with participants to solve problems or improve practices through iterative cycles of planning, action, and reflection (Kemmis and McTaggart, 2000). This approach is particularly relevant in vocal pedagogy when reflexively refining teaching methods based on student feedback (Kemmis and McTaggart, 2000). An example in practice was the action research conducted to create, examine, and modify voice lessons offered to after-school teenagers in a service-learning environment (Mercado *et al.*, 2023). However, the researcher's involvement can introduce bias, affecting objectivity (Kemmis and McTaggart, 2000).

Hermeneutics

Hermeneutics focuses on interpreting and understanding meanings within cultural and historical contexts (Montague *et al.*, 2020). Interpretive phenomenological analysis, or IPA, is one hermeneutic approach that specifically examines lived experiences (Montague *et al.*, 2020). This methodology could be applied in vocal pedagogy for exploring how singers interpret and express their experiences through song. For instance, IPA has been applied to understanding the experiences of individual expressiveness across various cultures and styles, from funk, jazz, contemporary, and classical opera to Estonian songs (Fabian *et al.*, 2014). However, this approach is subjective, with interpretations often influenced by the researcher's perspective (Montague *et al.*, 2020).

Ethnography

Ethnography involves the immersive study of people and cultures through observation and participation (Cox and Forbes, 2022). In vocal pedagogy, ethnography is well-suited for studying how different cultural groups approach singing and vocal training, including practitioners, evidenced by the implementation of this concept in examining one-to-one voice lessons (Cox and Forbes, 2022). Although ethnography offers rich cultural insights, it can be time-consuming and resource-intensive (Cox and Forbes, 2022).

Case studies, experiments, and action research appear to be most aligned with Singing for Health research that I am interested in for the multi-modality approach to experiments and action research and the rich, context-providing narratives arising from case studies.

Research Methods

Interview

Interviews provide qualitative, often transcribable, awareness of a research subject's personal perceptions and experiences (Peters and Halcomb, 2015). For example, Mortimer (2005) explored a particular case in which Tadashi Suzuki's actor training, which has a heavy vocal component, supplemented contemporary Western vocal pedagogy practices in two students. The semi-structured format provides a blend between allowing nuanced data to emerge and also establishing some trends between participants' answers (Peters and Halcomb, 2015). However, interviews could become time-consuming, non-generalizable, and influenced by researcher bias (Peters and Halcomb, 2015).

Survey

Surveys are effective for collecting quantifiable data from large groups to assess general trends and/or outcomes (Ponto, 2015). Treinkman and Johns (2024) used a survey to evaluate the negative effect of vocal fatigue on the lower range of the voice. Nonetheless, surveys may lack depth, opportunities for qualitative meaning-making, and be susceptible to response bias (Ponto, 2015).

Focus Group

Focus groups generate context-rich, interactive data and reveal diverse perspectives on issues common to a sample population (Caretta and Vacchelli, 2015). One documented usage of focus groups is of evaluating the experiences of self-exploration in older singing adults through improvisation (Riabzev *et al.*, 2022). A limitation may be the presence of dominant voices that can skew the discussion, and analyzing the data can be challenging (Caretta and Vacchelli, 2015).

Observation

Observation captures real-time behavior in natural settings, providing authentic insights into practices such as vocal lessons (Bozeman and Ragan, 2022). Bozeman and Ragan (2022) explained how observations allow for in-studio manipulation of vocal techniques based on immediacy of their effectiveness or failure. However, practitioner presence can influence behavior, and interpreting data can be subjective (Bozeman and Ragan, 2022).

Interviews and observations would be the most optimal methods for the trajectory of my projected research questions, as they will provide more opportunities for deductive processing. With wider scope in future papers, I aim to examine the involvement of imagistic presentation via a quotation bank (discrete or embedded quotations that are verbatim) and/or before-and-after word banks to enhance reader understanding and connection and meaning-making of the data, especially when involving experience-collecting of individual participants (Creswell, 2012).

Ethical Considerations

To reduce harm and optimize validity and meaningfulness of obtained data, ethical integrity must be maintained (Cooper and McNair, 2015). To formulate my approach, I synthesize duty-based (deontological), virtue, situation (relative), and consequentialist (results-based) ethics (Lomasky, 2019). This blend reflects my perspective on moral absolutism versus relativism, where I agree that absolutism acknowledges the value of contextualization while upholding overarching themes from which relative ethical stances arise, consistent with my ontological view of relative and Absolute fields (McDonald, 2010).

Obtaining informed consent is primary, especially when working with individuals with health conditions (Kirchhoffer and Richards, 2019). Any subject must be granted full transparency of the researcher's goals, methods, risks, and the participant's irrevocable right to withdraw from the study in question at any time sans repercussions (Kirchhoffer and Richards, 2019). This transparency is essential for respecting their autonomy and ensuring ethical compliance (Kirchhoffer and Richards, 2019). Additionally, maintaining confidentiality is critical due to the sensitive nature of mental health and possible substance abuse issues (Cooper and McNair, 2015). Any research I undertake must protect participants' identities and personal information to prevent stigma and other such negative repercussions (Cooper and McNair, 2015).

The principles of beneficence and non-maleficence further underscore the importance of ensuring that the study benefits participants and minimizes harm (Resnik and Ness, 2012). In the context of Singing for Health, this entails that therapeutic interventions do not exacerbate mental health issues but instead support/improve overall well-being. Consistency of form and content between the research goals and ethical conduct is important to me; in that the research itself is geared towards discoveries that increase the health of a populace or generalized to all, the research paradigm should not then cause harm on the journey to those answers. This

resonates with principles of Restorative Justice, where the focus is on healing identified harms (Liebmann, 2007). I could not find this framework linked to research methodology, so I plan to investigate possible implementation in the future.

Insider Research

Insider research presents challenges regarding bias and objectivity, where pre-existing assumptions alter data interpretation and counter my own interest in researching healing modalities (Costley et al., 2010). Reflexivity grounded in participants' experiences will mitigate bias (Costley et al., 2010). Recognizing that bias could obstruct my goal of discovering effective therapeutic methods, I am committed to remaining open to all results, as any result will be a helpful discovery by my epistemological view, regardless of whether it aligns with initial research expectations (Costley et al., 2010).

Power dynamics also pose a challenge, as my dual role as a practitioner and researcher could influence participants' responses; it is important to address these dynamics openly, fostering an environment where participants feel comfortable sharing their experiences honestly and do not experience conflicts of interest or exploitation (Costley et al., 2010). Protecting participant anonymity and confidentiality is paramount, particularly given HIPAA regulations in the U.S. and the importance of safeguarding vulnerable populations as a restorative practice (Costley et al., 2010). I would employ the "profession framework" to center my students and subject (Stefkovich and O'Brien, 2001).

While studies show that the majority of researchers view themselves as more ethical than their peers, I believe I have the experiential background to support my view of myself, with a Bachelor's degree in Philosophy focusing on ethics in medicine, prior position of auditor for multiple student organizations involved heavily in service projects/ volunteering, and work as both medical assistant and pharmacy technician in leadership roles (Lindkvist et al., 2024). I will consider writing a synthesized version of this topic as a "positionality statement" to remain rooted but not static in my acknowledgment of ethical standards (Holmes, 2020). This will also help me reflexively analyze my own impact of my awareness of conducting a study on the voice lessons' quality and my conduct and the impact of participants' awareness of the study (Pope and Patterson, 2019). However, I will take caution in knowing that researchers may sometimes justify biases with these positionality statements rather than correct them (Gani and Khan, 2024).

Conclusion

In narrowing my research curiosities, I have emerged on the following themes: Transcendental Meditation and Music Performance Anxiety; Voice lessons for prisoners, mental health and rehumanization; ACT or mindfulness techniques in relation to optimizing voice lessons or perhaps developing one; Consciousness and singing/ binaural beats/ brain waves; Yoga and voice; Menstruation effects on singing; Biofeedback and singing. The undercurrent for all remains Singing for Health as a motif, which informs my methodological choices for designing any future project.

Based on my ontological perspective, my concept of epistemology that is Objectivism Constructionism, and my axiology, I chose one or more of each of the above frameworks and method categories to string together a successive methodological approach to a research paper in Vocal Pedagogy. Such will involve one or a combination of constructivist, pragmatist, and/or transformative paradigms; deductive process; mixed methods; case studies, experiments, and action research; and interviews and observations.

These can additionally be found on the chart included in the Appendix item A, which is Eva Dissanayake's updated version of Saunderson's "Research Onion" model (Dissanayake, 2023). I also considered various ethical considerations, including bias and the issue of insider research. These evaluations will inform my next steps as a practitioner conducting research.

References

Allemang, B. et al. (2022). 'Pragmatism as a paradigm for patient-oriented research', *Health Expectations*, 25(1), pp. 38-47.

Anderson, A. et al. (2021). *Research Paradigm Considerations for Emerging Scholars*. 1st ed., UK, Channel View Publications. Available at: <https://doi.org/10.21832/9781845418281>.

Bozeman, K. and Ragan, K. (2022) 'Evidence-Based Voice Pedagogy (EBVP), Part 2: Voice Teacher Expertise and Experience', *Journal of singing*, 78(3), pp. 389–393.
Available at: <https://doi.org/10.53830/XJOX9734>.

Campbell, A. et al. (2017). *Research design in social work : qualitative, quantitative & mixed methods*. 1st edition. Los Angeles, CA: SAGE Publications, Inc.

Caretta, M. and Vacchelli, E. (2015). 'Re-Thinking the Boundaries of the Focus Group: A Reflexive Analysis on the Use and Legitimacy of Group Methodologies in Qualitative Research', *Sociological research online*, 20(4), pp. 1–13.
Available at: <https://doi.org/10.5153/sro.3812>.

Cooper, J. and McNair, L. (2015). 'Simplifying the Complexity of Confidentiality in Research', *Journal of Empirical Research on Human Research Ethics*, 10(1), pp. 100-102. Available at doi: 10.1177/1556264614568783.

Costley, C. et al. (2010). *Doing Work Based Research : Approaches to Enquiry for Insider-Researchers*. London: SAGE Publications Ltd.
Available at:
<https://research-ebsco-com.ezproxy.uwtsd.ac.uk/linkprocessor/plink?id=be9c1ad7-9872-370e-be25-ac89a2b44f03>.

Cox, D. and Forbes, M. (2022). 'Introducing multi-sited focused ethnography for researching one-to-one (singing voice) pedagogy in higher education', *Music Education Research*, 24, pp. 1-13.
Available at: doi: 10.1080/14613808.2022.2138842.

Creswell, J. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.

Dissanayake, E. (2023). 'Research Onion: A Systematic Approach for Designing Research Methodology: Part One.'
Available at doi: 10.13140/RG.2.2.24466.12489.

Erwin, E. (1999). Constructivist epistemologies and therapies. *British Journal of Guidance & Counselling*, 27(3), pp. 353-365. Available at:

<https://www.proquest.com/scholarly-journals/six-objectivist-relativist-shift-epistemology/docview/1080809869/se-2?accountid=130472>.

Fabian, D. et al. (2014). *Expressiveness in music performance : empirical approaches across styles and cultures*. First edition. Oxford: Oxford University Press.

Available at: <https://academic.oup.com/book/27746?login=true>.

Fernandes, A. et al. (2022). 'Methodological Approaches for Vocal Folds Experiments in Laryngology: A Scoping Review', *Journal of Voice*.

Available at: doi:10.1016/j.jvoice.2022.07.025.

Gani, J. and Khan, R. (2024). 'Positionality Statements as a Function of Coloniality: Interrogating Reflexive Methodologies', *International studies quarterly*, 68(2).

Available at: <https://doi.org/10.1093/isq/sqae038>.

Hamidi, H. et al. (2022). 'Multidimensional Science Education: Overview Of Philosophy Foundations (Ontology, Epistemology, Axiology)', *Traektorii nauki : mezhdunarodnyĭ elektronnyĭ nauchnyĭ zhurnal*, 8(10), pp. 5001–5006.

Available at: <https://doi.org/10.22178/pos.86-6>.

Holmes, A. (2020). 'Researcher positionality – A consideration of its influence and place in qualitative research – A new researcher guide', *Shanlax International Journal of Education*, 8(4), pp. 1–10.

Available at: <https://doi.org/10.34293/education.v8i4.3232>

Kemmis, S. and McTaggart, R. (2000). Participatory action research. *Handbook of qualitative research*. 2nd ed. Thousand Oaks: SAGE Publications, pp.567-605.

Available at:

<https://researchoutput.csu.edu.au/en/publications/participatory-action-research-communicative-action-and-the-public>.

Kirchhoffer, D. and Richards, B. (eds) (2019). *Beyond autonomy : limits and alternatives to informed consent in research ethics and law*. Cambridge: Cambridge University Press.

Liebmann, M. (2007). *Restorative justice : How it works*. 1st ed. Philadelphia: Jessica Kingsley Publishers.

Lindkvist, A. et al. (2024). 'Bounded research ethicality: Researchers rate themselves and their field as better than others at following good research practice', *Scientific Reports*, 4(3050).

Available at: <https://doi.org/10.1038/s41598-024-53450-0>.

Lomasky, L. (2019). 'The Impossibility of a Virtue Ethic', *Ethical theory and moral practice*, 22(3), pp. 685–700.

Available at: <https://doi.org/10.1007/s10677-019-10017-7>.

Maharishi Mahesh Yogi (2019). *Maharishi Mahesh Yogi on the Bhagavad-Gītā: A new translation and commentary with Sanskrit text, chapters 1 to 6*. Maharishi International University Press.

McDonald, G. (2010). 'Ethical relativism vs absolutism: research implications', *European business review*, 22(4), pp. 446–464.

Available at: <https://doi.org/10.1108/09555341011056203>.

Mercado, E. *et al.* (2023). 'Secondary choral students' and preservice music educators' perceptions of a service-learning experience in the United States: An action research study', *British journal of music education*, 40(3), pp. 325–337.

Available at: <https://doi.org/10.1017/S0265051723000256>.

Mertens, D. (2007). 'Transformative Paradigm: Mixed Methods and Social Justice', *Journal of mixed methods research*, 1(3), pp. 212–225.

Available at: <https://doi.org/10.1177/1558689807302811>.

Montague, J. *et al.* (2020). 'Expanding hermeneutic horizons: Working as multiple researchers and with multiple participants', *Research methods in medicine & health sciences*, 1(1), pp. 25–30.

Available at: <https://doi.org/10.1177/2632084320947571>.

Moon, K., and Blackman, D. (2014). 'A Guide to Understanding Social Science Research for Natural Scientists', *Conservation Biology*, 28: 1167–1177. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/cobi.12326/full>.

Mortimer, W. (2005). 'Researching the Potential of Merging Suzuki's Method of Actor Training with Western Vocal Pedagogy: An Interview with Robyn Hunt and Steve Pearson', *Voice & speech review*, 4(1), pp. 319–326.

Available at: <https://doi.org/10.1080/23268263.2005.10739488>.

Murray, T. *et al.* (2011) 'Privacy, Confidentiality, HIPAA, and HITECH: Implications for the Health Care Practitioner', *Journal for nurse practitioners*, 7(9), pp. 747–752. Available at: <https://doi.org/10.1016/j.nurpra.2011.07.005>.

Pearson, C. (2016). *The Supreme Awakening: Experiences of Enlightenment Throughout Time — And How You Can Cultivate Them*. Maharishi University of Management Press.

Peters, K. and Halcomb, E. (2015). 'Interviews in qualitative research', *Nurse researcher*, 22(4), pp. 6–7.

Available at: <https://doi.org/10.7748/nr.22.4.6.s2>.

Ponto, J. (2015). 'Understanding and Evaluating Survey Research', *Journal of the Advanced Practitioner in Oncology*, 6(2): pp. 168–171.

Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4601897/>.

Pope, A. and Patterson, T. (2019) 'Using Music to Inform Researcher Positionality Statements', *Curriculum and teaching dialogue*, 21(1–2), pp. 81–162.

Priya, A. (2021). 'Case Study Methodology of Qualitative Research: Key Attributes and Navigating the Conundrums in Its Application', *Sociological Bulletin*, 70(1), pp. 94–110.
Available at: <https://doi.org/10.1177/0038022920970318>

Proudfoot, K. (2023). 'Inductive/Deductive Hybrid Thematic Analysis in Mixed Methods Research', *Journal of mixed methods research*, 17(3), pp. 308–326.
Available at: <https://doi.org/10.1177/15586898221126816>.

Resnik, D. and Ness, E. (2012). 'Participants' responsibilities in clinical research', *Journal of medical ethics*, 38(12), pp. 746–750.
Available at: <https://doi.org/10.1136/medethics-2011-100319>.

Riabzev, A. *et al.* (2022). 'My Voice is who I am' - Vocal Improvisation Group Work with Healthy Community-Dwelling Older Adults', *Voices : a world forum for music therapy*, 22(1).
Available at: <https://doi.org/10.15845/voices.v22i1.3125>.

Rinehart, E. (2021). 'Abductive Analysis in Qualitative Inquiry', *Qualitative inquiry*, 27(2), pp. 303–311.
Available at: <https://doi.org/10.1177/1077800420935912>.

Royo, J. (2014). *Self-efficacy in music education vocal instruction: A collective case study of four undergraduate vocal music education majors*. Tucson: University of Arizona.
Available at:
https://repository.arizona.edu/bitstream/handle/10150/320010/azu_etd_13281_sip1_m.pdf?sequence=1&isAllowed=y.

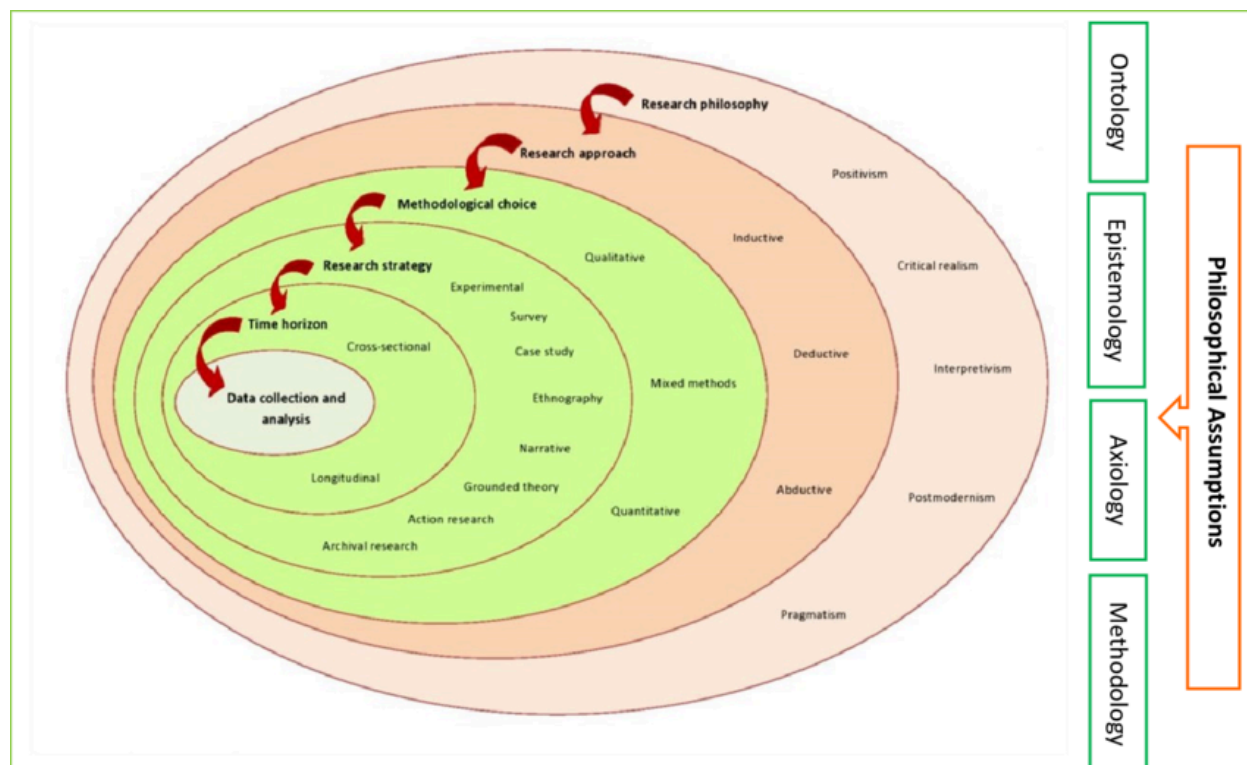
Smith, J. *et al.* (2009). 'Interpretative Phenomenological Analysis: Theory, Method and Research', 6(4), pp. 346–347.
Available at: <https://www.tandfonline.com/doi/full/10.1080/14780880903340091>.

Stefkovich, J., and O'Brien, M. (2004). 'Best interests of the student: an ethical model', *Journal of Educational Administration*, 42(2), pp. 197–214. Available at:
<https://doi.org/10.1108/09578230410525603>.

Treinkman, M. and Johns, M. (2024). 'Does Vocal Fatigue Negatively Affect Low Vocal Range in Professional, Female Opera Singers? A Survey Study and Single-Subject Pilot Study', *Journal of Voice*, 38(3), pp. 688–696.
Available at: <https://doi.org/10.1016/j.jvoice.2021.12.005>.

Wallace, K. *et al.* (2023). *Basic Principles of Maharishi Ayurveda II* (Fall 2023 ed.). Maharishi International University.
<https://miuonline.instructure.com/courses/2803/files/620052?wrap=1>.

APPENDIX A



Citation: Dissanayake, E. (2023). 'Research Onion: A Systematic Approach for Designing Research Methodology: Part One.' Available at DOI: 10.13140/RG.2.2.24466.12489.

Developed upon original image: The Research Onion of Mark Saunders.

Source: ©2019 Mark Saunders, Philip Lewis and Adrian Thornhill.