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**A Preliminary Exploration of Research Design for an
Emerging Voice Practitioner Researcher**

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Research Question

What research paradigms, methodologies, and methods are available for gathering and analysing data pertaining to vocal instruction strategies? What are the benefits, limitations, and possible applications of these different approaches?

Introduction

This project is an exploration of research paradigms, methodologies, and methods, in an effort to compare different avenues of gathering and analysing data and their possible applications in work-based research for voice practitioner researchers.

I will begin with a short reflection on my philosophical foundation, as it stands at this early stage in my development as a researcher. This will provide context for my choices in research paradigms, namely, interpretivism, pragmatism, and post-positivism. These give way to an exploration of qualitative research methodologies, namely, grounded theory, action theory, and ethnology, with reflections on how they provide insight into the nuanced and layered experiences of individuals and groups (Lim, 2024). This will be followed by an exploration of methods for sampling, data gathering, and analysis, evaluating each on the basis of their potential applications and limitations in the field of vocal instruction. I will also be reflecting on ethical considerations as well as factors that may emerge due to insider research. Through this study, I hope to learn about different approaches to research and how they might impact the field of vocal instruction.

Philosophical Foundations

One aspect of the researcher's philosophical foundation is axiology, which defines what a person considers valuable and ethical (Brown and Dueñas, 2020). Defining one's axiology narrows the field of study for the researcher, providing justification for the effort and practice of research, and acting as a guide for the way the study is designed and executed (Brown and Dueñas, 2020; Biedenbach and Jacobsson, 2016).

Another aspect, ontology, makes claims about what exists in one's reality, how these elements are observed and measured, and how they might exist in relation to each other (Blaikie, 2010). It offers a perspective through which one can view the the nature of their reality, which consequently informs the way that their reality is studied (Grix, 2002). My lived experience, particularly with the dialectic of familiarity and mystery in the human voice, lends itself to an ontological position of critical realism, which sees reality as an established entity outside of

those that exist and co-facilitate events within it, but sees this reality as layered such that it is not observable in its entirety (Blaikie, 2007; Bhaskar, 2020).

Whereas ontology is about the nature of reality, epistemology is about “the nature and scope of knowledge” (Carter and Littlejohn, 2021, p. 5) – what constitutes knowledge, and how we go about gleaning, formulating, and validating it (Yin, 2016). In my view, the ongoing evolution and interpersonal nature of vocal pedagogy, both as a field of study and as a sociocultural art form, aligns with interpretivist epistemology, which claims that what we know of reality results from our interpretations of and interactions with shared social constructs (Sol and Heng, 2022). My experience is that singing and vocal instruction exists within relationships between individuals – singers learning from teachers, pedagogues collaborating with and challenging each other, performers influencing and being influenced by audiences, and so on. These interactions form our evolving knowledge and understanding of culture, music, performance, and vocal instruction (Stark, 2008).

Research Paradigms

Ontology, epistemology, and axiology influence the choice of a research paradigm, which is the framework through which one would address the process and analysis of research (Brown and Dueñas, 2020). One can imagine how different individuals might view the world differently, and these different worldviews form a lens through which scholarly work is conducted, resulting in a vast array of approaches to research that are as contrasting as the schools of thought from which they arise (Grix, 2002). For example, the positivist research paradigm springs from the realist ontological position, which claims that there is only one objective reality which can be observed and understood through study (Brown and Dueñas, 2020). On the other hand, critical theory is influenced by a more relativist ontological position, one that sees multiple versions of reality based on the subjective experiences of individuals, particularly with regards to relationships of power (Brown and Dueñas, 2020).

For the purpose of this assignment, I have chosen paradigms based on the ontological position of critical realism, which balances the objectivity and empiricism that traditionally characterises scientific research with the subjectivity and evolutionary nature of human experience (Vincent and O'Mahoney, 2018; Willis, 2023). Informed by this ontological position, I will be exploring interpretivism, pragmatism, and post-positivism.

Interpretivism is rooted in a relativist ontology and an epistemology that claims knowledge as something that emerges from the individual's subjective experiences (Buzzanell, 2017).

Therefore, the interpretivist research paradigm aims to explore the individual's perspective in order to derive meaning (Ryan, 2018). It serves as a counterpart to constructivism, which sees reality as something that is constructed by the individuals that live within it (Buzzanell, 2017). An example of this paradigm at work within the field of vocal instruction is Bartlett and Naismith's (2020) research on contemporary commercial music in voice pedagogy. The study is an in-depth exploration of voice pedagogy in a genre that is still emerging in scholarship (LoVetri, 2008). The outcomes of the study are derived from literary review and expert interviews, as well as from the perspectives of the authors themselves (Bartlett and Naismith, 2020). While the insights gleaned from this study may not be directly translatable into practical systems or strategies, this type of research promotes the understanding of an emerging field of study within vocal pedagogy, giving voice and credence to the experiences of its participants (Bartlett and Naismith, 2020). In-depth individual accounts allow researchers to analyse data within context, facilitating reflections that consider not just the explicit value of the information collected but also surrounding factors that are less explicitly stated and more implied, such as culture, organisational structures, and prevalent belief systems (Buzzanell, 2017). By drawing narratives on a range of topics relevant to the individuals being interviewed, interpretive studies such as this form an understanding of individuals' experiences which may be specific to them but are also applicable to audiences that share commonalities with them (Buzzanell, 2017).

Pragmatism concerns itself with the usefulness and practical nature of knowledge (Brinkmann, Jacobsen, and Kristiansen, 2020). For pragmatists, the end goal of research is not just the representation of truth, but finding problems and presenting practical solutions to them (Brinkmann, Jacobsen, and Kristiansen, 2020). For example, a study by Sezin et al. (2020) explores the effectiveness of a vocal training program specifically designed to address the vocal health and educational needs of musical theatre conservatory students. It identified a problem, hypothesised a solution, tested the solution, and presented its findings – a process of enquiry that characterises the pragmatic research paradigm (Brinkmann, Jacobsen, and Kristiansen, 2020). When conducted effectively, pragmatic research could be very helpful in vocal instruction, where challenges are commonplace and solutions are not always self-evident (Bartlett and Naismith, 2020). Many vocal instructors unconsciously operate within the pragmatic paradigm in their own teaching, as they work to find solutions to the vocal challenges presented by their students (Bartlett and Naismith, 2020). Particularly for vocal instructors in contemporary genres such as pop and musical theatre, whose clients contend with aesthetic standards and vocal challenges that are not typically represented in the majority of extant literature within vocal pedagogy (Sezin et al., 2020), a pragmatic approach is not only an option but a necessity (Bartlett and Naismith, 2020). However, not all vocal instructors have the training

or the resources to formally and effectively research instructional methods on their own, and therefore many run the risk of doing more harm than good by teaching through trial-and-error (Bartlett and Naismith, 2020). Pragmatic research, when conducted systematically, can leverage resources and expertise in exploring solutions to instructional challenges (Welch et al., 2005).

Post-positivism makes use of the scientific method, wherein experimentation and observation are used to either confirm or reject a hypothesis and formulate a conclusion, but subjects itself to the possibility of being disproven by future discovery and assumes the notion that there is more than one perspective of the same reality (Cohen, Manion, and Morrison, 2018). Research on twang quality conducted by Perta, Bae, and Obert (2020) demonstrates the post-positivist paradigm in its approach and presentation of findings. The study is framed as a continuation of past studies on twang quality, emphasising its role as an expansion on existing research (Perta, Bae, and Obert, 2020). In its discussion and conclusion, the authors make several inferences based on the evidence gathered, while also presenting potential avenues for future study which could add further clarity and value to the topic under examination (Perta, Bae, and Obert, 2020). Studies such as this offer tangible observations on measurable aspects of vocal production, which can act as a counterbalance in a field such as vocal instruction which can often be mired with abstractions, contradictions, lack of consensus, and outdated information (Herbst, 2020). At the same time, by referencing and integrating past studies on the same subject, it illustrates the continuum of knowledge creation which involves several iterations of scientific research and human interpretation, conducted through different perspectives, cultivating a holistic and dynamic view of the same concept (Perta, Bae, and Obert, 2020). From the perspective of a voice practitioner, this approach to scholarship can encourage resistance against complacency in established knowledge, and instead cultivate curiosity that continually seeks greater depth of understanding.

Research Methodologies

For the purpose of this assignment, I will be exploring qualitative research methodologies. Qualitative research is driven by the exploration of insights, contexts, interactions, and other elements of the lived human experience, through in-depth information gathering, analysis, contextualisation, and interpretation (Lim, 2024). It is my view that this approach to research is well-suited to the study of the voice insofar as it pertains to the position of the voice practitioner researcher. Following a critical realist ontology, qualitative research allows those who are seeking to contribute to scholarship in vocal pedagogy, while actively working as vocal instructors and singers, to explore the depths of individual experience in order to uncover what

might be hidden from view, as a means of participating in the social act of producing and refining knowledge (Willis, 2023).

Below, I will explore grounded theory, action research, and ethnography. Brief reflections will be included on considerations regarding ethics and insider research. I will also explore different methods for sampling, data gathering, and analysis, comparing and contrasting them in terms of their function and practicality.

Grounded theory begins with observation and results in theorisation – it involves the collection and, simultaneously, the analysis of data, which is then coded, categorised, and compared, leading to the development of new theories (Berterö, 2012; Lim, 2024). Literature review is suspended until after data gathering and analysis to ensure the neutrality of the process, with the exception of identifying areas that require development in existing research (Lim, 2024; Bryant and Leavy, 2020). Rather than verifying existing theories through data gathering and analysis, it uses the process of data gathering and analysis to drive the formulation of new hypotheses, which in turn becomes a driving force for the innovation of new ideas and further research (Glaser and Strauss, 2017; Bryant and Leavy, 2020).

This methodology examines concepts and issues for which there may be insufficient evidence, or for which existing evidence no longer applies (Glaser and Strauss, 2017; Bryant and Leavy, 2020). Especially for vocal instructors specialising in emerging or evolving genres of music and performance such as pop, where the demands on vocal technique and stylisation may vary and shift (LoVetri, 2008), methods of inquiry that promote the formulation of new theories from the ground up can be helpful for answering questions that have not yet been answered by extant research. For example, a study by Parker (2018) formulated a grounded theory of how female adolescent high school choir singers develop social identity. While this study primarily focused on a sociological topic, a similar approach could be used to investigate topics and formulate theories related to vocal pedagogy and music education, such as instructional approaches and feedback delivery strategies within the context of a pop-specialising music studio.

One challenge to grounded theory is in its insider research approach, wherein the researcher is part of the group that is being studied, which may make it difficult to assume a position of neutrality (Dwyer and Buckle, 2009). Insider status precludes a researcher from complete objectivity, because their experiences inevitably form a filter through which they perceive and interpret events, relationships, and information (Dwyer and Buckle, 2009). This filter influences the way insider researchers conduct scientific inquiry, and can also impact the way their

research outcomes are assessed by outsiders (Dwyer and Buckle, 2009). For example, a voice teacher who wishes to examine the relationship between vocal production and articulation may have certain biases if they have experienced considerable success at achieving aesthetic results through certain vowel modification strategies. It may be difficult to ensure that the process benefits from the insider researcher's perspective while still resulting in theories that emerged organically from data and analysis (Goulding and Lee, 2005).

Action research is a process of inquiry that combines practice with reflection, with an aim to utilise practitioner insight to solve problems or facilitate change within an existing system (Costello, 2011; Lim, 2024). It is both pragmatic and socially constructive, an approach that is conducted by practitioners in an effort to make developments to their practice and facilitate improved outcomes for their stakeholders (Efron and Ravid, 2020). It is a research method that is carried out by its practitioners, and in the educational sense has been referred to interchangeably as “teacher research” (Efron and Ravid, 2020, p. 2).

One example of action research is a study conducted by Welch et al. (2005), which aimed to explore the impacts of using visual feedback technology in real time during voice lessons. Studies such as this exemplify the value of action research as a means of exploring new teaching tools in order to ascertain their efficacy and potentially find novel solutions to existing shortcomings in pedagogy (Efron and Ravid, 2020). Action research lends itself to practical applications within the voice studio, but sample sizes could potentially be limited to the teacher's scope of influence and availability (Bhardwaj, 2019). The success of the study would also depend on the practitioner's teaching and research proficiency – their ability to adapt their teaching to the research design, to clearly define and adhere to their research goals, and maintain a reflexive practice in order to document and facilitate learning (Lim, 2024).

Where action theory may present a challenge is in its susceptibility to insider research issues such as bias, and ethical concerns with conflict of interest (Lim, 2024). Action researchers are advised to start the research process by selecting a topic that is of interest to them (Efron and Ravid, 2020), but researchers need to be clear about their intent to investigate a teaching system from a position of neutral curiosity, as opposed to conducting research with an express intent to establish the credibility of a specific teaching concept or confirm the researcher's personal stance. It is also important that protocols are formulated to ensure the clear distinction between the roles of practitioner and researcher (Lim, 2024).

Ethnography obtains in-depth information and insight into a specific culture or community through long-term immersion, participation, and observation (Vivanco, 2018; Lim, 2024). This methodology synthesizes the perspectives of the community being researched with that of the researcher, as well as outsider perspectives that offer greater depth and meaning (Goulding and Lee, 2005). This requires a high level of participation on the part of the researcher, in order to ensure that the narratives and insights of the participants are captured in depth and with context (Lim, 2024). It also requires data from a variety of sources, through a variety of methods, to provide information from multiple angles (Goulding and Lee, 2005).

An example of ethnographic research is a two-part study conducted by Gross and Musgrave (2016, 2017) aimed to understand and propose solutions to the high levels of anxiety and depression among professional or aspiring professional musicians. The research project was published over the span of two years, with data sources ranging from online surveys to semi-structured interviews with individuals within the study group as well as experts outside of the study group (Gross and Musgrave, 2016, 2017). Studies such as this may not be feasible for the independent voice practitioner researcher who is not affiliated with or funded by an institution. However, they are extremely valuable for uncovering concerns that impact the performing arts culture and industry, and are therefore extremely valuable in order to preserve the arts community within which vocal instructors operate (Goulding and Lee, 2005).

The close proximity between ethnographic researchers and participants could raise a number of ethical concerns (Goulding and Lee, 2005; Lim, 2024). Researchers must take measures to ensure transparency as they gain access into social groups and facilitate data gathering (Goulding and Lee, 2005). They also need well-defined processes for ensuring the privacy of participants' identities (Lim, 2024). Power dynamics must also be considered by practitioner researchers when entering into communities as a participant, in order to ensure that participation is truly voluntary and that power dynamics do not influence the collection and analysis of information (Lim, 2024).

Research Methods

In the following section, I will discuss a selection of methods used in qualitative research.

Purposive sampling is a sampling method wherein participants are intentionally selected according to criteria that meet the research design (Bhardwaj, 2019). This sampling method is used to ensure that the participants have the desired level of knowledge, experience, or insight

in the subject being studied (Palinkas, Horwitz, and Green, et al., 2015). Depending on the selection criteria, this sampling method can involve different levels of complexity. On the other hand, purposive sampling allows for in-depth data collection and analysis that is specific and relevant to the research goals (Palinkas, Horwitz, and Green, et al., 2015).

Semi-structured interviews are a means of gathering data using a prepared outline of interview questions or topics for discussion, while still allowing for flexibility should other insights happen to arise (Dawson, 2009). The pre-determined set of conversation topics serve as a guide for the interview that enables comparative analysis between responses (Lim, 2024). This method also allows the researcher to adapt their interview approach to each individual participant (Madondo, 2021). However, this individualised approach to data collection requires considerable time and preparation on the part of the researcher (Lim, 2024). The quality of the information gathered also heavily depends on the participants' verbalisation skills (Lim, 2024), which could be a limitation for researchers looking to conduct interviews with participants where language barriers are a factor.

Focus groups collect information through small group discussion, ideally limited to five to ten participants (Lim, 2024). This method capitalises on the group's interactions, as well as the varied backgrounds and perspectives of the participants, to collect rich insights that are representative of prevalent thought patterns in the greater culture (Lim, 2024). On the other hand, the dynamics within a group may impact the way individual participants think or present their thoughts, and may interfere with the open sharing of ideas and opinions (Lim, 2024). It can also be challenging to keep group discussions productive, so the researcher's moderation skills are of great importance (Madondo, 2021).

Observation is a means of data gathering wherein the researcher personally enters the subject's domain and, just as the name suggests, observes the behaviours and interactions that take place (Dawson, 2009). It allows researchers to collect information about individuals within specific locations or circumstances, usually ones to which they are more accustomed, which may reveal aspects that they might not present otherwise (Lim, 2024). One disadvantage to observation is that some individuals may consciously or unconsciously modify their behaviour when they are conscious of being observed (Lim, 2024).

A variety of methods for data gathering were used in the studies sampled in this assignment (Welch et al., 2005; Parker, 2018; Gross and Musgrave, 2018; Bartlett and Naismith, 2020), illustrating the need for a multi-faceted approach in scholarly work pertaining to singers and

vocal pedagogy. My own field of interest as a voice teacher is in studying the effectiveness of teaching tools and strategies, and I could conceive of utilising all three data collection methods explored above in potential research scenarios. Semi-structured interviews may be a good tool for learning about how singers are responding to teaching tools. Focus groups may be helpful for collecting feedback from vocal instructors who are evaluating their practicality. Observation may be practical when assessing their effectiveness in real time. For all of the above methods, protocols to ensure transparency, data privacy, and consent are critical.

Thematic analysis is a method of data analysis that involves assigning labels and categories in order to identify underlying patterns and themes (Schreier and Flick, 2014). Labeling and categorisation can be based on existing knowledge or concepts according to the research objectives, or solely on the data collected (Schreier and Flick, 2014). Its basic framework includes preparing and reviewing the data, formulating initial labels or codes, identifying relationships between codes to identify broader themes, and refining, defining, and presenting the themes as a whole (Lim, 2024).

Grounded theory as a data analysis method seeks out the relationships between gathered data in order to identify emergent themes and theories (Cohen, Manion, and Morrison, 2018). A coding process is used to label and organise information into categories and subcategories according to the research objectives, outlined as follows (Lim, 2024):

1. **Open coding**, wherein data is analysed to identify concepts and issues;
2. **Axial coding**, wherein data is correlated to identify categories from interactions, events, and circumstances; and
3. **Selective coding**, wherein the researcher identifies intersections between identified categories to determine the proposed theory.

This facilitates a structured process for interpretation, which is crucial for streamlining information and formulating novel theories based on data (Cohen, Manion, and Morrison, 2018). It also requires a high level of organisation, planning, and documentation of thoughts and ideas throughout the data gathering process (Madondo, 2021).

Concept mapping uses visual models to interpret, encapsulate, and represent information (Kane et al., 2009). It uses graphics to present how ideas are related and organised, and is an alternative and more visual way of identifying patterns and hierarchies within collected information (Novak and Cañas, 2008). It can be a helpful tool for analysing or learning a concept or process (Novak and Cañas, 2008), and could potentially be used for illustrating teaching systems or workflows.

Thematic analysis and grounded theory are both highly rigorous methods for data analysis (Lim, 2024), but the amount of planning, coding, interpretation, and ongoing documentation can be overwhelming, especially to a beginning researcher such as myself (Faulkner and Atkinson, 2023). While outside the scope of this paper, it may be beneficial to learn about Computer-Assisted Qualitative Data Analysis Software (CAQDAS), which would enable me to leverage technology to process and organise information efficiently (Faulkner and Atkinson, 2023).

Ensuring Rigour

It is important to have a system for assessing rigour, to serve as a guide for quality assurance throughout the research process (Daniel, 2018). The “TACT” framework proposed by Daniel (2018) offers a simple and accessible perspective through which one can view the research process, through the lens of trustworthiness, auditability, credibility, and transferability (Daniel, 2018). Some practices that can help achieve these end goals include careful data collection and organisation, detailed note-taking and outlining of the research process, triangulation by using multiple sources of information, and a thorough description of the study’s contextual background in order to help readers to apply it to their own circumstances as appropriate (Daniel, 2018).

Conclusion

By exploring different approaches to conducting research, it is clear that scholarship in vocal pedagogy can take on numerous forms, influenced by the researcher’s philosophical foundations (Brown and Dueñas, 2020). The philosophical diversity in research is reflected in the variety of possible research paradigms (Grix, 2002), but my own philosophical leanings led me to explore qualitative approaches: interpretivism, pragmatism, and post-positivism. Within my own interest in researching the effectiveness of teaching tools and strategies, there are possibilities of utilising a number of methodologies, including grounded theory and action theory, as well as a variety of methods for data gathering and analysis, such as semi-structured interviews, focus groups, thematic analysis, and concept mapping.

It is humbling and exciting to learn about the many ways to conduct enquiry within the context of a teaching practice. This assignment revealed many areas of growth, noted in the Appendix, which I hope to pursue in an effort to prepare for future scholarly work.

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Appendix

Areas of growth

A wide variety of concepts were studied in this assignment, pointing to the vast array of research designs that could be employed in the field of vocal pedagogy. An area of growth would be to continue studying extant literature related to vocal instruction, vocal performance, and performing arts culture, in order to develop an even greater appreciation for various approaches to research and to have a better sense of what approaches best suit potential research projects (Brown and Dueñas, 2020). Ongoing reflective practices such as Kolb's experiential learning cycle would be helpful for integrating new knowledge into teaching experiences, reflecting on those experiences, thinking about what these new experiences and insights mean and how they might apply to future events or research, and then applying these new concepts into new experiences, including work-based research (Kolb and Kolb, 2018). Internalising qualitative research standards such as the "TACT" framework (Daniel, Asil, and Carr, 2024) and being attentive to ethical considerations outlined in literature are also helpful for developing a stronger sense of academic rigour and ethical practices. Lastly, cultivating the practice of citing evidence whenever possible within the context of presenting information or knowledge to students and colleagues is an effective way to cultivate an academic mindset and help foster the continuation and proliferation of scholarly work within the field of vocal pedagogy (Howell, 2018).