

Jillian Carelli 2319770

Examining the research practices, and their potential use for research in the field of teaching voice to trans individuals

Module 2

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Introduction

This paper will critically evaluate a range of methodological approaches, research designs, and research methods and their applicability to research for transgender and non-binary singers who have experienced trauma and its impact on the transitioning voice. By examining the philosophical concepts of ontology, epistemology, and axiology, I will evaluate how these terms apply to the specific paradigms of critical theory, interpretivism, and positivism. Then I will discuss research designs such as queer and gender theory, phenomenology, and causal-comparative which correspond with those paradigms and research methods used to gather information such as surveys and various kinds of interviews, I will also pay great attention to ethical means of conducting that research concerning the lived experience of trans folk and their trauma while evaluating any issues that could arise related to ethics.

Ontology Epistemology and Axiology

Ontology is the philosophical study of how individuals perceive reality (Patton 2002). Ontology delves into researchers' fundamental assumptions about the nature of being, existence, and reality. Kivunja and Kuyini (2017) note these assumptions about reality's nature are crucial in shaping how researchers interpret meaning from their collected data. Realism believes there is one objective reality, and will exist independent of human perception. On the other end of the spectrum, nominalism views reality as a product of the human experience and that no truth exists outside of our perception. Within the extremes of this scale, lies internal realism and relativism. Relativism accounts for the perceptions and experiences of all participants and researchers, whereas internal realism is, according to Putnam (1977), "committed to the idea that truth is epistemically constrained, and to (some version of) conceptual relativism." Scott and Usher (2004) highlight the role of ontology in research paradigms, as it creates a framework for understanding the world around us.

Epistemology is the study of how knowledge about reality is acquired (Kivunja and Kuyini, 2017). Axiology refers to ethical values and their role in research (Finnis, 1980). Axiology

concerns making morally sound choices throughout the research process. One's ontological perspective influences the epistemological approach to the research since perspective will influence how they go about gathering knowledge. This highlights the significance of researchers maintaining awareness of their philosophical standpoints and how these may impact their interpretations of data gathered.

Quantitative, Qualitative, and Mixed Methodologies

Research methodologies can be categorized into two main branches: qualitative and quantitative approaches. Quantitative methodology utilizes deductive reasoning (Kivunja and Kuyini, 2017). Deductive reasoning begins with a tentative explanation (hypothesis) which is tested through empirical observation and analysis involving measurable data (Patton, 2002). An example of quantitative methodology in trans voice would be a study by Hughes, McGarey, Morrison, Gawlik, Dominguez, and Dion which examined a "hypothesis that this [glottal] gap can be quantified and results from hormone replacement therapy impacting laryngeal tissues". The numerical data of measuring the glottal gap indicates to what degree hormone replacement therapy has an impact on the larynx, so researchers can develop a greater understanding of HRT's role in trans voice and speech therapy (Hughes et al., 2023). By measuring the differences in size of the glottal gap, patterns can be identified and conclusions can be deducted based on the quantitative methods used.

Non quantifiable data can be explored and conveyed using a qualitative methodology, which uses inductive reasoning to gather data and then form a hypothesis (Renjith et al., 2021). Inductive reasoning involves drawing specific conclusions based on general observations (Burns, 2000). Oftentimes, this data gathered tends to be focused on information and data that describes a situation rather than focusing on measurable numerical data. A qualitative study in trans voice research by William Saurland notes that the purpose of the study was to explore the impact of music on identity in trans folk, describe the experiences of trans folk talking voice lessons, and analyze the strategies of their instructors (2018). Impact on identity is not something that can inherently be measured, as identity, being how one perceives and relates to themselves (Graham, 2019) is not a measurable quality. Describing experiences and analyzing strategies is also not something that can be measured, yet is still valuable data which can inform the conclusions one makes to these discoveries.

Mixed methodology is another approach researchers can take that would involve combining features of both qualitative and quantitative methodologies to gain a more comprehensive understanding of complex phenomena (research guides, 2023). I recently participated in a study titled AMEND: Assessment of Music Experiences in Navigating Depression. The study investigated “the clinical and ‘socially prescribed’ impact of music and music therapy experiences across several distinct populations prone to depression” (Loewy, 2024). At the beginning and end of the study I filled out a questionnaire which quantified my experience on a numerical scale. However, the study conducted research using mixed-methods. My music therapist intern also took notes on my sessions each week, observing my choices, experiences, and insights. By quantifying my experience of depression on a numerical scale, this data could be easily compared with other participants in the study, so concrete conclusions could be drawn from the information. This combined using quantified data with inductive reasoning. By also gathering qualitative data from observations from the intern music therapists, there was more depth to contextualize the information of the individual's experience.

Paradigms: Positivist, Interpretist, Critical

Research paradigm is the foundation on which the research methodology is built. The choice of paradigm influences every aspect of the research process such as the generation of research questions, selecting participants, instruments used for data collection and framework for analyzing the data gathered. (Kivunja and Kuyini 2017). A paradigm is a worldview composed of ontology, epistemology, and axiology. The research paradigm will influence what research methodology is being used, and what theoretical framework will be given for the study (Patton, 2002).

The Positivist paradigm is widely favored in scientific research due to its emphasis on quantitative methods for gathering and analyzing measurable data (Fadhel, 2002). This paradigm uses an objective perspective, by testing hypotheses to discover what is true. Researchers will use the scientific method to investigate phenomena and establish objective facts. Burns (2000) articulates four fundamental criteria that are typically used to validate research conducted within the Positivist framework: internal validity, external validity, reliability and objectivity. Prochaska (2017) notes that external validity determines if conclusions are applicable to other contexts. Kirk and Miller (1986) define reliability as the consistency and stability of the research instruments or methodologies used in the research. Myrdal (1969) states objectivity requires unbiased instruments and methods and a willingness to consider input from participants. The positivist paradigm can provide a quantitative foundation for

research in trans voice studies. Measurable data is gathered on the effects of Hormone Replacement Therapy on the voice. This approach is necessary when studying the physiological changes associated with hormone replacement therapy or the acoustic properties of voice in relation to gender identity.

The Interpretivist paradigm seeks to examine and comprehend the lived experience of people (Guba & Lincoln, 1989). The foundation of this paradigm is built upon the idea that reality is constructed by society (Bogdan & Biklen, 1998). Interpretivists use a relativist ontology, which suggests multiple realities are shaped by individual and collective experiences, rather than objective truth. Interpretivists adopt a subjectivist stance in epistemology where claims and findings evolve as the investigation progresses (Cohen, D. and Crabtree, B. (2006). The Interpretivist paradigm can create a concrete basis for gathering and analyzing data on the lived experience of trans folk. By collecting qualitative data, one can examine factors and variables of the individual and group to gain a more thorough understanding of trans folk's lived experience.

The critical theory paradigm addresses issues that are plaguing our society and address how power structures oppress people at whatever levels and communities in which these issues occur. Kivunja and Kuyini (2017) note this paradigm can be referred to as the transformative paradigm because it seeks to change politics, confront oppression, and improve social justice. They also observe that this paradigm works with transactional epistemology where the researcher interacts with the participants and ontology of historical realism, and utilizes a dialogic methodology. The axiology of this paradigm considers the various cultural practices and traditions of the participants, to understand their background and why they behave and interact with their community in the way in which they do. While science and knowledge are tools to understand phenomena and discover truth, science and knowledge are tools that have been wrongfully used to oppress people within society, and critical theorists such as Marx and Freud argue that knowledge must be utilized not for merely discovering the truth but also applying it to emancipate humans oppressed by structures of oppression (Augustyn, 2024).

Research Designs: Causal-Comparative, Phenomenology, Queer/Gender Theory

Research designs are a plan for conducting the research, within the framework of the selected paradigm (Schenker and Rumrill 2004).

Causal-comparative studies analyze differences within the research. The primary objective is to identify and describe relationships between grouping variables (independent

variables) and outcomes (dependent variables). Many tend to think that this kind of research designs tend to identify cause and effect within the variables, however, this is not the case. The researcher would need to alter the variables to determine the cause and effect, and this involvement would be considered researcher intervention. Causal comparative research design does not utilize researcher intervention, but rather determines and analyzes the differences as they occur. Lawrence (2023) notes that causal comparative studies are categorized into two types: retrospective and prospective comparative research. Retrospective comparative research investigates questions after effects have occurred, attempting to determine if specific variables influenced others. This inductive approach examines existing conditions and identifies potential causes. prospective comparative research is initiated by researchers who begin with a deductive approach, by hypothesizing causes and analyzing their effects on given conditions over time (Saunders et al, 2003). Schenker and Rumrill (2004) note these investigations typically involve intact or derived groups where independent variables are nominally coded but not manipulated, a key feature distinguishing them from true experiments.

Phenomenology explores an individual's perceptions and experiences. By conducting in-depth assessments of experience, phenomenology captures the relationships between people, events, and situations. It seeks to describe and explain phenomena from the perspective of those who have experienced it (Alele and Malau-Aduli, 2023). This kind of research design falls within qualitative research methodology. Edmund Husserl formed this methodology within the interpretivist paradigm in response to the limiting perspectives of the positivist paradigm within the field of psychology (Behnke, n.d.). The positivist paradigm provides a framework for discovery that relies upon measurement (Fadhel, 2002) and is founded upon the concept that knowledge can only be certain if it is objective and quantified. This paradigm invalidates qualitative information, and limits the understanding of nuanced experiences, which is why Husserl sought to validate qualitative information.

In phenomenology there are various perspectives such as phenomenology of spirit, perception, and mind (Smith, 2007). Behnke (n.d.) notes, "In Husserl's phenomenology of embodiment, then, the lived body is a lived center of experience, and both its movement capabilities and its distinctive register of sensations play a key role in his account of how we encounter other embodied agents in the shared space of a coherent and ever-explorable world." Husserl acknowledges that as human beings we sense and perceive things through our physical form, and we interact with other people, events, and objects in the physical world. Our experience is based upon the reality that we sense and perceive things around us because we

are alive in a physical human body. Using this framework of how the body is the center of the lived experience would be ideal to examine the lived experience of trans folk and the impact of their experience on the physical aspects of the voice. It takes into account the aspects of perception and experience, and acknowledges that the information and data gathered is due to the fact that one is inhabiting and living in the body. This helps gather a more nuanced understanding of how one relates to themselves, and the world around them.

Queer and gender theory examines and critiques society's definitions of gender and sexuality, with the goal of revealing the social and power structures at play in our everyday lives. Seeing as this research design seeks to understand the dynamics of power within society, this would fall under the critical theory paradigm outlined previously. Queer theory examines subjects outside the boundaries of traditional gender and sexuality binaries that assume that heterosexuality and cisgender are "the norm." (Libguides, 2024) This research design is significant for understanding how trans voices have been marginalized and silenced by phobias upheld by structures of oppression in social settings.

Graham (pg. 2, 2019) cites "Contemporary research is riddled with examples of gendered exclusion – cases of women denied access to instruments, leadership positions, teaching positions that are traditionally seen as masculine are an undeniable issue that remains problematic well into the twenty-first century; the literature also recognizes instances of men being excluded from feminine-labeled opportunities or derided for their participation therein." Graham cites various studies which analyze the biases in music education impact students and educators of all genders. Queer and gender theory beckons us to question the biases we have in our research which impact how we educate our youth, and how we interact with others. It challenges us to utilize this knowledge and find conclusions to create a more fair and equal society. Conducting research which examines the structures of oppression in our communities and using the conclusions to criticize the systems of power which harm others is crucial to creating a more inclusive space for all voices of all gender identities.

Research Methods: Analysis/Review, Types of Interviews, Questionnaires,

Research methods are devices and strategies for researchers to obtain information. These are implemented depending on the research design that is chosen as the framework for the research conducted. Various methods of gathering data would be literature review and analysis, various types of interviews, questionnaires, focus groups, and experiments (Kaluza, 2023).

Questionnaires are useful for obtaining background information to get the full scope of the participants' experience. Schultz (2017) observes “Most...surveys...administer questionnaires...to collect contextual data or to measure non-cognitive outcome variables.” Scalable questionnaires can be useful for quantifying data, comparing contextual information, and can be ideal for measuring the scope of participants' background and experiences which would be beneficial when working within the positivist paradigm. These kinds of surveys could include examples of questions such as “rate your experience on a scale from 1-10, or describe the experience or perception on a scale of 1-5. This method of research combines the benefits of quantitative and qualitative data, by requesting the participant measure the perception of their experience. I plan on utilizing a questionnaire in my research to categorize the kinds of identity intersections and measure their perception on the intensity of their prior experiences.

A review of evidence found in literature is a method which can fall under the design of phenomenology. Phenomenological research uses methods such as unstructured interviews, observation of participants, and analysis of existing evidence and literature (Behnke, n.d.). These qualitative methods leave room for flexibility to change as new data is gathered. Flexibility can be beneficial as people's perspectives and conclusions on their experiences tend to change. This is reflective of phenomenological research designs which investigate perceptions and experiences. These approaches acknowledge the complexity of social phenomena and capture the nuanced, lived experiences of individuals and groups. (Alele and Malau-Aduli, 2023). A study by Azul, Nygren, Södersten, and Neuschaefer-Rube uses a “comprehensive review of the voice literature” on transmasculine people's voice function reviews discourse and empirical data and analyzes factors and practices that impact voice function in transmasculine people. “The quality of the evidence was appraised” (Azul et. al 2017). By conducting an analysis of the data previously gathered by other researchers, this study contextualized the data and analyzed various studies as a whole, giving insight into the phenomena.

Causal Comparative research can be conducted by gathering quantitative data such as questionnaires, and qualitative data such as interviews. This mixed method approach uses quantified data in order to compare the variables, but the qualitative information still gives context and depth to the measurable data (Bogdan & Biklen, 1998). However, researchers employing causal-comparative methods examine differences between groups formed based on significant characteristics such as race, gender, disability type, or educational attainment (Lawrence, 2023). There are various types of interviews: structured, semi structured, and

unstructured. Kaluza (2023), describes structured interviews as a means to eliminate bias with the focused and efficient manner the interviewer asks the participants. The questions are created prior to the interview and are uniform in order and oftentimes setting for all participants. These interviews are easier to analyze due to the uniformity of the process. Unstructured interviews involve an open ended and informal way of asking questions and notating responses. This can create an environment where answers tend to be more honest and authentic, however, due to the free flowing nature of the conversation, it may be more difficult to compare and contrast responses among all the participants (Kaluza, 2023). A semi structured interview is the happy medium between those two extremes. These interviews can gather data that is easily comparable, but also, keep the participants more relaxed and therefore more truthful and authentic in their replies.

Through the dialectical process, interpretivists strive to create a more informed and sophisticated understanding of the social world, recognizing that all interpretations are open to re-examination and negotiation through ongoing discourse (Cohen and Crabtree, 2006). An example of research that explores the lived experiences of individuals would be a narrative study conducted by Dr. Felix Graham, which explored the personal narratives of six AFAB (“assigned female at birth”) singers...by using a semi-structured interview process, the singers recounted their memories and understanding of significant events in their development...” (Graham, 2019). This study gave deep insight into the lived experiences of trans and non-binary AFAB voices, and how their identity and experiences impacted their singing by using a semi structured interview process, proving the benefits of a semi fixed structure to compare data, and an honest interaction to obtain authentic responses.

Ethics issue of insider research

Interpretivist research emphasizes pragmatic and ethical considerations. Intentionally creating dialogue between researchers and participants is essential for developing a more nuanced understanding of social phenomena. Interpretations are considered context-specific so researchers must remain open to reinterpretation through ongoing conversation (Cohen and Crabtree, 2006). Angen (2000) proposes a set of criteria for evaluating interpretivist research, emphasizing the importance of a thoughtful and ethical approach throughout the research process. Researchers must remain self-aware, and investigators must articulate and take responsibility for the choices and interpretations made during the research process. This perspective emphasizes two aspects of validity: ethical and substantive. Ethical validity recognizes the political and ethical implications of research choices. Researchers are

encouraged to consider whether their work benefits the target population and to actively seek out alternative explanations to challenge their own constructions. Substantive validity focuses on evaluating the content of the research work ensuring that the research has substance (Angen, 2000).

In the pursuit of knowledge and understanding, one must be aware and mindful to gather and analyze information in an ethical manner. The Belmont Principles outline how to conduct research that is positively contributing to knowledge: Respect for persons and their autonomy, benefit to society and humanity, no malicious intent to harm, and distributive justice (Beauchamp and Childress, 2001). In order to work with fully consenting participants in an ethical manner, researchers take care to inform participants of any potential risks, permit participants to withdraw from the study, guarantee confidentiality, and securely collect and log the data. researchers also must consider any potential bias, especially concerning insider research (Holm, 2002). The researchers must consider their position as they go about gathering and analyzing data. I must consider my role as an educator to transgender singers, someone who identifies outside of the gender binary, and my relationship with trans folk in my community. While personal connections motivate my efforts, I must reflect upon my position in the field and how that may influence how I gather information, how study participants will perceive me, and how perception could skew results. While I am also an insider in this field, this area has very little existing research. Graham (2022) concludes, "Though this synthesis does not give the surety that primary research can provide, adjacent knowledge can assist the voice practitioner in offering training that at least minimizes physiological and psychological harm until research offers definitive answers."

Conclusion

As I have investigated various research approaches and designs I have thorough insight on how research methods are employed in accordance with the researchers philosophical perspectives. As I have researched both positivist and interpretivist ontologies, I fall in between the two which would align me with pragmatism. This ontological perspective accepts realities existing independent of any observers, but at the same time emphasizes perspectival thought (Goldkuhl, 2012). Pragmatism can be described as taking a middle or dual position between positivist and interpretivist ontologies (Goles, 2000), both of which I see benefit from in the field of trans voice study. Utilizing mixed methodology will assist me in creating a full scope of the impact of trauma on the voice and how trauma and the trans experience intersect. I am still determining which paradigm to align myself with in this research. There are various benefits to

critical theory given the oppression and phobia the trans and gender non conforming community has experienced. I would also benefit from using phenomenology to obtain a full understanding of how trans people perceive their voice and comprehend their insights given that trauma is a lived and perceived experience. However, I aim to identify and describe relationships between independent variables, such as trauma, the trans experience on HRT, and the trans perspective living with trauma with dependent variables, such as how that impacts the vocal apparatus in trans people, so a causal comparative paradigm may be ideal. As I work in the studio with trans voices, this gap in direct knowledge motivates me even further to conduct research to benefit the trans community and give them a foundation of research to use their voices in a healthy, fulfilling manner. Understanding my positionality in this field as I labor within the practice is crucial as I formulate questionnaires, conduct interviews, and analyze data, however, my personal motivations for research are also to be considered a strength to carry out research in a compassionate and considerate manner.

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