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Module 2

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

4107 words

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1. Introduction

Within this paper I will aim to analyse a variety of methodological approaches, research methods and designs and critically evaluate their effectiveness when used within the field of professional voice. As a vocal coach working predominantly with students in the Musical Theatre industry, both in training at a drama school and also with working professionals, my research has been focused on the effects of a heavy vocal load on the voice, linking closely with the ways fatigue can present itself and exploring the ways professional voice users can mitigate fatigue.

Within the first section I will critically evaluate and offer definitions for ontology, epistemology and axiology, then explore their relevance through the lens of multiple paradigms. Various methodological approaches and research methods will then be evaluated along with the importance of ethical consideration within insider research. In addition, I will begin to examine my own philosophical stance and discuss the way my findings and development of knowledge will influence the next steps of research within my master's degree.

2. Ontology, epistemology and axiology

Ontology is the philosophical study of being or what we believe can exist (Berryman, 2019; Lawson, 2004). The German philosopher Heidegger discusses three theses which he described as 'prejudices' stating that, being is universal, indefinable and self explanatory. He believed these 'prejudices' became barriers when asking the question 'What is being?' (Van Inwagen, 2023). Within ontology, the researcher will establish an ontological position, these positions can be contained within the approaches described as 'objectivism' and 'constructivism' (Grix, 2010). Constructivism supports the idea that social phenomena and reality has been constructed through human research and negotiation (Dieronitou, 2014), whilst objectivism declares that reality and social entities exist separately from humans (Kant, 2014).

Intimately connected to ontology is **epistemology**, often referred to as the theory of knowledge (Audi, 2010). A philosophical approach exploring the depths of human knowledge, why do we believe what we believe? How do we know what we know? Some philosophers explore the idea that knowledge is gained from perception and other human processes (Sosa *et al.,* 2008). Other epistemologists strive to explicate the difference between opinion and actual knowledge (Cruz, 2006), often posing the question, what is true knowledge? (Sol and Heng, 2022). Similarly to ontology, there are multiple epistemological stances such as; constructivist, objectivist, and subjectivist. Constructivist theories conclude that knowledge is a reflection of our objective world (Ültanır, 2012) and that we do not discover knowledge but we construct it in ways that reflect our interests and social standing within reality (Boghossian, 2006). An objectivist stance suggests that reality exists regardless of whether we are conscious of it and gaining knowledge can be achieved through an accumulation of intricate observations (Hiller, 2016). Finally, the subjectivist stance

implies that what we perceive is what is real and there is no reality that exists independently of our perception (Feast and Melles, 2010).

Alongside the ‘theory of knowledge’ and the ‘theory of being’ we have ‘the theory of values’ otherwise known as **axiology** (Hart, 1971). Many questions encompass this theory; are values a result of the interactions between humans and reality?, Do we have a standard of values and if so, how are these standards created? (Hart, 1971). Combining with epistemology, all research should involve a multitude of epistemic values which will all influence the research indirectly, therefore axiology should be a central theme when conducting research (Biedenbach and Jacobsson, 2016).

My own ontological stance leans to that of a constructivist, in that I believe reality is subjective and unique to each individuals experience. When exploring the effects of vocal fatigue within professional voice users, a constructive ontological stance would question what each individual participant perceives as being vocally fatigued? An objectivist stance would perhaps offer a definition for fatigue and the participants would then respond to this presumption, potentially using more of a statistical approach. Exploring vocal fatigue through the different epistemological lenses would retrieve interesting responses. A constructivist approach would enable participants to analyse their knowledge of fatigue, their previous experience and their current situation to ‘construct’ a view as to what they experience vocal fatigue to be. Contrastingly, an objectivist approach would support the theory that fatigue exists independently of the participants personal experience and research gathered would be factual and evidenced when evaluating the effects of vocal fatigue. The subjectivist stance would rely entirely on the perception of each individual participant with the researcher embracing each unique viewpoint. After examining my own axiological stance, it led me to the conclusion that values will be a key factor when designing my research and selecting the appropriate methodology. Due to my own personal experiences within the professional voice field, to keep my own values and my research design independent and to hold an objective stance would pose a challenge.

3. Exploration of paradigms

Philosopher’s Guba and Lincoln define a **paradigm** as a set of basic beliefs, or the researchers worldview and the way they view themselves and their place within that world (Guba and Lincoln, 1994). Essentially, a paradigm is the researchers lens through which they examine a topic, combining their beliefs and principles that shape the way in which they view and act within the world. In order to conduct and examine research that we define as valid, as researchers we must be aware of the paradigm that best describes our philosophical orientation (Khatri, 2020).

Positivism is a paradigm that was unveiled in the early nineteenth century, in light of the works of the French philosopher, Comte (Turner, 2001; Rehman and Alharthi, 2016). Positivists believe there is a cause-effect relationship between phenomena, using natural science as the main method of inquiry and once this has been understood, such things can be predicted with near

certainty in the future (Rehman and Alharthi, 2016). Both the epistemological and ontological positions of a positivist follow an objectivist stance. Meaning they believe researchers are objective observers and that reality, knowledge and being exists independently of themselves and of social actors (Saunders, Lewis and Thornhill, 2009). Positivist research often focuses on empirical testing, sampling and measurement and can be referred to as the scientific approach (Rehman and Alharthi, 2016; Hiller, 2016). However, researchers discovered some limitations within the positivist paradigm, for example, the method insinuates that conclusions gathered will always be the same irrelevant of who undertakes the research, meaning that variation in their social, cultural or personal stance in society remains irrelevant (Hammersley, 2012). A positivist approach in exploring the effects of vocal fatigue on professional voice users could involve the collection of dosimetry data which could be analysed using a statistical approach, such as the study undertaken by Carroll *et al.* This study used a dosimeter to measure vocal loading on classically trained singers with a goal to objectively measure fatigue (Carroll *et al.,* 2006). However, the study also recorded subjective data, as fatigue is often described using sensations and emotions through self perception, therefore the positivist approach would not appear to be solely the most logical paradigm of choice for this nature of study.

Through the limitations of positivism, a new paradigm was developed, **post-positivism**. This paradigm supports the theory that knowledge is not always developed from inflexible, unchallengeable foundations but knowledge can be conjectural (Phillips and Burbules, 2000). Although the American philosopher Kuhn did not define post positivism, he began the movement when highlighting the importance of personal experience, training and practise, alluding to the idea that science cannot claim certainty or generality (Kuhn, 1997). Post-positivism encourages the researcher to investigate their own epistemology and understand how this effects their motivation when undertaking research, within post-positivism, theory and practise must remain connected and influence one another (Ryan, 2006). There are still some limitations in using this paradigm, as similarly to positivism, post-positivism also focuses on using a quantitative approach and human behaviour cannot solely be analysed using quantifiable data (Nawrin and Mongkolsirikiet, 2012). When analysing the effects of vocal fatigue within professional voice users, post-positivism would allow the researcher to analyse their own motivation for their research and the importance of self experience in line with developing knowledge.

Transformativism is a paradigm that focuses on addressing individual researcher privilege when attempting to analyse and define the lived experience of others, including subjects (Yawson, 2021). A transformativist ontological stance is that realities are socially constructed yet heavily defined by key values such as; race, gender, economy and culture (Mertens, 2007). Epistemologically, the transformative paradigm relies on developing a trusting partnership between researchers and participants (Mertens, 2007). Research is undertaken using a collaborative approach between the researcher and subject(s), subjects will be invited to be involved and influence throughout the research, with a goal for participants to feel liberated throughout the process (Leach Sankofa, 2022). Transformativism would be an interesting approach within the field of professional voice,

particularly when exploring the effects of vocal fatigue. With the political agenda of the paradigm and the endeavour to enhance existence and challenge power imbalances, the exploration of the cause and support of fatigue within communal settings involving hierarchy would pose an interesting study (Boland, 2024).

Another paradigm that strives for change within the social climate is **Pragmatism** (Prasad, 2021). Pragmatism has an epistemological viewpoint that knowledge should not only analyse the current and the past but be used in a constructive way to develop and improve the future, also known as prospective knowledge (Goldkuhl, 2012). Pragmatism encourages the researcher to be flexible in approach and explore the use of both subjective and objective methods (King, 2022), with the philosophy that finding solutions and developing knowledge is the ultimate goal, therefore methods should be chosen in accordance with what best suits the research objective (Elgeddawy and Abouraia, 2024). Conversely, a criticism of pragmatism is it's potential to prioritise the research question above all else, including both the epistemological and ontological stance (Hampson and McKinley, 2023). Identifying the effects of vocal fatigue on professional voice users requires a range of inquiry and methods (D'haeseleer *et al.,* 2017), a pragmatic approach would allow the researcher to undertake a mixed method study, meaning the researcher could use both quantitative and qualitative methods of data collection within an individual study (Creswell, 1999), allowing the research objective to guide the design, therefore this could be a beneficial approach.

4. Methodology

Methodology is the theoretical framework that allows us to have control and navigate the trajectory of our research endeavours, ensuring our research process remains structured and analytical. Our methodological approach will be influenced by our philosophical stance and paradigmatic approach (McGregor and Murnane, 2010).

Quantitative methodology is often referred to as the scientific approach (Franklin, 2008; Solomon, and Draine, 2010) and studies any data that can be counted, measured or presented in a numerical form. Researcher's Geno, Braakmann and Benetka state that *"quantitative research requires the reduction of phenomena to numerical values in order to carry out statistical analysis"* (Gelo, Braakmann and Benetka 2008, p.268). Quantitative research can then be divided into different categories of research design; **descriptive** design collects data regarding variables without adjusting the environment or any other variable and aims to systemically describe a phenomenon (Baker, 2017). Descriptive design studies are often referred to as a logical starting point for a research project, they are a helpful aid in determining a hypothesis which could then be expanded on using another research design (Aggarwal & Ranganathan, 2019). When researching the effects of vocal fatigue on professional voice users, a descriptive study may use Phyland et al's EASE (evaluation of ability to sing easily) scale to measure and analyse the effects of vocal loading (Phyland *et al.,* 2013). **Correlational** research design involves the analysis of variables to

determine patterns or relationships within data (Walker, 2005) and although as researchers we can identify relationships, correlational research is not a tool to identify the cause of the correlation (Kothari, 2013). When researching the effects of vocal fatigue, the researcher could use a correlational approach to analyse correlation between the hours a professional voice user spent rehearsing and then their perception of vocal fatigue either using the EASE scale or the VFI (Vocal fatigue index) survey (Nanjundeswaran *et al.,* 2015). **Experimental** research design possess the ability to manipulate the independent variable and observe the effect on the dependant variable, enabling the researcher to examine cause-and-effect relationships (Mulhall, 1994). Prior to undertaking research with this approach, there must be a well developed theory and existing knowledge into the relevant variables, which is why another research design such as 'descriptive' could be explored prior to an experimental research approach (Mulhall, 1994). An interesting study using an experimental research design was undertaken in 2020 by Lei *et al,* using vocal loading tasks to explore the relationship between voice use and vocal fatigue. This study enabled the researchers to gather quantifiable data to successfully analyse the relationship between the variables, also validating previous studies and hypotheses (Lei *et al.,* 2020). However, the study did present some limitations, one being that the study did not measure all fatigue-indicative symptoms prior, therefore the analysis of these symptoms lacked a baseline to refer to (Lei *et al.,* 2020).

Researcher's Denzin and Lincoln describe **qualitative** research as *"a set of complex interpretive practises"* (Denzin and Lincoln, 2011, p.6). Qualitative research is often used to explore a theory through variables and data that cannot easily be measured (Cresswell, 2013). Similarly to quantitative research, there are multiple theoretical frameworks that can be used within qualitative research design. **Ethnography** studies the behaviour, interactions and cultures of people in society specifically within classes, communities or similar communal environments (Reeves, Kuper and Hodges, 2008). This particular framework requires the researcher to be immersed within the study, either actively involved within the field of research or within the chosen subjects (Brewer, 2000). When investigating the impact of vocal fatigue on professional voice users, an ethnographic approach would allow the researcher to be heavily integrated within the subjects natural environment to observe their every day practises. This would enable the researcher to collect first hand data and potentially identify unexpected issues (Ybema and Kamsteeg, 2009), however, a potential disadvantage would be observer bias. **Grounded theory** is an inductive approach to research, meaning the researcher begins with a question or broad area of study and uses the data and findings to develop a general theoretical conclusion from specific observations. The fundamental aspect of grounded theory is the connection between the research process and the development of a theory (Charmaz, 2015). Grounded theory instantly piqued my curiosity, as with an area so vast as examining the cause and effects of vocal fatigue, the ability to simultaneously collect and analyse data would enable the researcher to construct hypotheses whilst comparing them against the collected data (Charmaz, 2016). **Phenomenology** and **Hermeneutics** are often closely linked when discussing methodology, due to their aim to explore and analyse the lived experiences of subjects (Winter, 2020). **Phenomenology** holds some similarities to the previously

discussed ethnography, with both approaches exploring the lived experience of subjects, however while ethnography focuses on analysing and describing culture, phenomenology focuses on developing theory through analysing an individuals lived experience (Moser and Korstjens, 2018). Phenomenology also requires the researcher to set aside pre conceptions, personal experiences and values to ensure the research remains credible (Winter, 2020). **Hermeneutics** is often referred to as the theory of understanding and focuses on the way we interpret language and text. Historically this theory began by interpreting old biblical texts (Pokorn, 2011), the German philosopher and theologist, Schleiermacher, believed that although words belong to the subject or author who spoke or wrote them, the exact meaning of the words is dependant on the subject or authors lived experience and ontological stance when the words were spoken or written (Schleiermacher, 1998; Yilmaz, 2012). The German philosopher Heidegger introduced the concept of the hermeneutic circle, referring to the idea that our understanding of the text as a whole will be dependant on our understanding of each part and our understanding of each part dependant on each parts relationship with the whole (Schmidt, 1996; Paterson and Higgs, 2005). Phenomenology and hermeneutics would equally provide an in depth analysis of an individuals lived experience, allowing the researcher to analyse a subject's direct perception. When examining how professional voice users understand and experience fatigue, both methodologies would offer the researcher a first hand authentic account of an individual's experience. A potential limitation could be the researchers interpretation of those lived experiences and ensuring they are not influenced by their own bias. If an interpretive account loses its authenticity and is relayed as an assertion through time, then the study or data will no longer be credible (Plager, 1994). To avoid this, researchers must ensure their individual subjectivity does not influence their interpretation of the participants lived experiences. **Action research** is a framework that requires researchers to work closely with participants, it seeks to evoke change with the view that action is required to develop understanding and without action any theory is just speculation (Huang, 2010). A researcher's role within this framework differs from others as the researcher should act as a catalyst and encourage participants to analyse and reflect on their situations ensuring they do not take an authoritative role within the experiment (Stringer, 2007). Action research would be another suitable approach when questioning the cause of vocal fatigue in professional voice users, it would allow the participants to influence the researcher when developing a theory adopting a collaborative nature throughout the process.

5. Methods

Selecting a research method is the next step of the process when preparing to undertake a research assignment. Firstly, the researcher must decide what type of data they are looking to collect and analyse, prompting the decision between selecting quantitative or qualitative data, or both (Opoku, Ahmed and Akotia, 2016).

Interviews are a popular method of collecting qualitative data and offer a valuable insight into the lived experiences of subjects (Winwood, 2019). There are multiple types of interview approaches (Berg, 2009), a **structured** approach uses a formal structure of interview questions carefully formulated with the intention that the answers will provide relevant data in response to the area of study, due to the standardisation of the questions this will also enable the subjects answers to be comparable. On the contrary, an **unstructured** interview does not have a set of structured questions, questions are developed in response to the answers given and dependent on the knowledge and vocabulary of each individual subject. **Semi-structured** interviews fall between the two, the interviewer will have a set of predetermined questions however there will opportunity to ask further questions to develop or further probe an interviewee's answers (Berg, 2009). The success of an interview is determined by a number of factors such as; pre tested questioning, interview environment, neutrality of the interviewer, respectful interview approach and an overall communion between both parties (Roulston and Choi, 2018), if one of these factors is weak then this could result in an unsuccessful interview with a lack of validity, therefore preparation is paramount (Hofisi, Hofisi and Mago, 2014). In 2023 a study was undertaken by Castillo-Allendes *et al,* analysing how teachers' perceive their vocal behaviours in regard to using their voice in a work based setting. A semi structured interview method was used, with an expert panel of voice practitioners creating 15 questions, with the opportunity for interviewers to carefully probe if required. The interviews were audio recorded and a verbatim transcription was created to ensure accurate analysis. The study successfully enabled the researcher to analyse the way teachers' perceive their vocal behaviour and when analysing the data, allowed the researcher to draw hypotheses that could be used for further research projects. In addition, the researcher suggested that it may be beneficial to undertake on site observations to develop a better understanding of the context behind some of the answers (Castillo-Allendes *et al.,* 2023).

The **observation** method allows researchers to observe and analyse subjects in their natural environment with the aim of viewing a scenario or situation from the perspective of the subject (Baker, 2006). According to the anthropologist Spradley, there are 5 roles a researcher can take within the observation method (Spradley, 1980). Firstly, the **non participation** role which requires the researcher to have no involvement with the subject or group and observe from an entirely different environment. The **passive participation** role, in which the researcher will have no involvement with the subject however can be present within the same environment. The **moderate participation** role, meaning the researcher predominantly observes the subject(s) however may conduct short interviews and have minimal engagement. Slightly more involved is the **participant as observer role**, allowing the researcher to interact and participate alongside the subject but remain separate from any core values or key group activities. Finally, the **complete participation** role, where the researcher studies a group that they are already a part of and have pre existing relationships with, this can be a difficult position for the researcher when observing from the perspective of an insider (Spradley, 1980).

6. Ethics and Insider Research

Insider research enables the researcher to be in a prime position to investigate and influence a practise situation. As an 'insider' the researcher has access to a wealth of valuable information and knowledge from a first hand perspective. Yet with this privilege comes greater ethical considerations as ***"greater familiarity can lead to a loss of objectivity"*** (Unluer, 2012, p.1) . The researcher must ensure that they are engaging in self reflection and adopting a reflexive practise throughout their process (Costley, Elliott, and Gibbs, 2010). Insider research has it's own challenges and a common criticism is the potential for bias. Naturally there will be an element of subjectivity, however to minimise this and avoid bias, the researcher's own philosophical stances must be considered and analysed prior to the research process (Scott, 2022). All researchers must ensure ethical considerations have utmost priority in research design. As an insider the researcher may be a member of an institution, educational environment or community and may choose to interview or observe participants whom they already have established relationships with. If so, 'incidental data' must be considered, meaning data that has been discussed or observed in relation to the research topic but outside of the negotiated research terms or environment (Mercer, 2007). Using incidental or privileged data for research purposes may be a breach of confidentiality (Fleming, 2018). Gaining trust as an insider researcher is paramount and to do so we must establish; credibility, dependability, transferability and confirmability (Greene, 2014; Guba, 1981). Research participants must be wholly aware of the intention behind the research, the research process and how their data will be used, along with assurance of confidentiality (Chammas, 2020). Insider research is a very common method of inquiry within the professional voice industry, as practitioners are often conducting research through work based practise within a studio, an institution or an alternative educational environment. As a vocal coach working both at a drama school with undergraduate students and running a private studio practice, my researcher position is that of an insider. When undertaking further research within my studies, it is likely I will be using a non-probability sampling method, either purposive, meaning participants will be selected on their suitability for the research, or snowball sampling, meaning I will select a student fitting the requirements of the research and ask them to identify other potential subjects (Etikan and Bala, 2017). Therefore, ethical consideration is of the utmost importance and ensuring reliability, credibility and maintaining trust as an insider will be a priority.

7. Conclusion

Understanding and analysing our own epistemological, ontological and axiological stance is paramount when preparing to undertake a research assignment. This initial self evaluation will lead us to explore the paradigms that align with our own view point and then select the appropriate methodological approach and design to conduct our research. Upon reflection, both the transformative and pragmatic paradigms best align with my overarching research goal; to analyse the cause and effects of vocal fatigue on professional voice users and ways in which they can

mitigate fatigue. The pragmatic approach would allow the research question to influence the trajectory of the research design, offering flexibility and the potential to use a mixed method approach (Kaushik and Walsh, 2019). Whilst the transformative paradigm with it's political agenda would offer the opportunity to challenge power imbalance (Yawson, 2021). Both paradigms offer valuable perspectives that would facilitate interesting research aims and challenge important factors within this area of study. Having previously discussed my own philosophical stances, this is something I will continue to explore and and reflect upon in preparation for my upcoming modules.

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