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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. (4500 words +/- 10%)

INTRODUCTION

This paper will be a brief overview of different considerations one must make as a person doing research within the realm of professional practice. I am currently employed as a school-based speech language pathologist (SLP) in the United States, but my ultimate goal is to specialize in the treatment of voice disorders, particularly Functional Voice Disorders (FVD). I am drawn to this subject because of my own experience as a singer with a FVD. My goal in undertaking research is to devise new and more effective treatment methods for FVD, and this goal was a driving force behind what elements I paid most attention to for this assignment.

ONTOLOGY, EPISTEMOLOGY, AND PARADIGMS

When conducting research, one must first ascertain one's **ontological position**, or how one views reality and what one can know about it (Laverty, 2003, citing Lincoln and Gruba, 1985). This is combined with **epistemology**, which Laverty (2003) defines as the "relationship between the knower and what can be known" (pg 26, citing Lincoln and Gruba 1985). These two concepts are combined to form a **paradigm**.

Within the **positivist paradigm**, researchers believe that the social world can be studied with the same level of objectivity as the natural world (Mackenzie and Knipe, 2006, citing Mertens, 2005). Research within this paradigm is usually quantitative, objective, and focused on testing theories with **deductive reasoning** (Mackenzie and Knipe, 2006).

The **constructivist paradigm** posits that there are actually multiple socially-constructed realities. This type of research is focused on participant views and opinions. The research is usually qualitative, but may use mixed methods to expand upon what is learned from the qualitative data. Instead of starting with a theory and

testing it, as in the positivist paradigm, constructivist researchers use **inductive reasoning** to gather information and come to conclusions (Mackenzie and Knipe, 2006, citing Creswell, 2003).

The **transformative paradigm** is focused on social justice. It should have a political agenda to improve the lives of the participants. This type of research most often uses mixed methods (Mackenzie and Knipe, 2006, citing Mertens, 2005, and Creswell, 2003).

The **pragmatic paradigm** is focused on finding practical ways to solve problems and is not tied to quantitative or qualitative research methods. Instead, researchers within this paradigm select the methods that are most likely to lead to practically applicable results. Because of this, mixed methods are often used (Mackenzie and Knipe, 2006).

In figuring out my own position, I found value in each one of these paradigms. The positivist paradigm is often used within SLP research because of its objectivity and replicability. However, as I am especially interested in research centered on patients' lived experiences with FVD, this paradigm may not always be useful, as lived experiences are inherently subjective. On the other hand, in the future I hope to conduct quantitative studies on autonomic nervous system responses and in those cases a positivist approach would be more appropriate.

I was drawn to the constructivist paradigm because of its flexibility and acknowledgement of how reality is often socially constructed, but found many of the methods, outlined below, to be too theoretical to be practically useful. Likewise, while I appreciated how the transformative paradigm emphasizes social justice, studies within this paradigm often take a considerable amount of time. This may impact how quickly findings may be applied to my clinical practice.

The paradigm that I ultimately found to be the most useful is the pragmatic paradigm. While I find the others to be theoretically fascinating, my ultimate goal in pursuing voice research is not so much the pursuit of knowledge as it is the pursuit of ways to make patients' lives easier. I appreciate this paradigm's ability to draw from whatever methods are most likely to lead to usable results.

METHODOLOGIES

In designing a study, one must consider whether they wish to use a quantitative, qualitative, or mixed methods methodology. Mackenzie and Knipe (2006) define **methodology** as “the overall approach to research linked to the paradigm or theoretical framework” (pg 197). Stated more simply, a methodology is how one finds knowledge (Laverty, 2003, citing Lincoln and Gruba, 1985). Sometimes one’s epistemological viewpoint will lead to a specific methodology, but this is not always the case. As I find myself primarily in the pragmatic paradigm, I view all three methodologies as potentially useful. In addition, as Creswell (2014) notes, there need not always be a clear dichotomy between quantitative and qualitative methodologies.

Qualitative research typically uses inductive reasoning, in which someone gathers information and then uses that information to construct new ideas or theories. It is concerned with words, open-ended questions, and the meanings that people ascribe to problems and experiences (Creswell, 2014). I can imagine qualitative research being useful in my field for examining how patients feel about their experiences receiving voice therapy or how their identities have shifted as a result of a voice disorder diagnosis.

Quantitative research, on the other hand, is more concerned with numbers and closed-ended questions. Quantitative researchers use deductive reasoning to examine how variables interact and to test theories (Creswell, 2014). This type of research is common within SLP, particularly in voice research, when examining variables such as acoustics and measures received from standardized questionnaires such as the Voice Handicap Index.

In the middle of the two is **mixed methods research**, which draws from both quantitative and qualitative methodologies (Creswell, 2014). Creswell (2014) states that mixed methods often allow researchers to get a more complete understanding of a given phenomenon.

I am most drawn towards mixed methods. According to Feilzer (2009), reality has layers and is sometimes objective, sometimes subjective, and sometimes both. My ultimate goal in research is to be clinically useful rather than to objectively understand

reality (using purely quantitative methods) or to understand people's lived experiences without actionable implications (using purely qualitative methods).

For this assignment, I have chosen to focus on common qualitative methodologies, as they were less familiar to me prior to starting this assignment given my prior experience with SLP research.

Ethnography

An **ethnography** is a type of qualitative methodology that has its roots in anthropology. Its "intent is to provide a detailed, in-depth description of everyday life and practice" (Hoey, 2014, pg 1). It is primarily concerned with interpreting culture. An ethnographic researcher often lives with the research subjects for an extended period of time and thus has a dual role of participant and observer. Ethnographers often spend months observing and interviewing subjects, but ultimately the goal is to interpret the underlying meanings behind the observations rather than to just explain them. Ethnographers often conduct interviews with lots of open-ended questions, record the participants' responses, and take detailed field notes (Hoey, 2014).

As I am neither interested in studying a particular cultural group nor able to spend months living with my subjects, a purely ethnographic approach is not likely to be useful for me in my future research. However, I do appreciate the recommendations to get to know my subjects, ask open-ended questions, take detailed notes, and interpret the deeper meaning behind my findings.

Grounded Theory

Grounded theory as a qualitative methodology was developed by sociologists Glaser and Strauss in the 1960s. Its goal is to create new theories that are grounded in data. Similar data is grouped into categories and these categories help develop theories. Within grounded theory, researchers use a thorough coding system to label information. They start with broad descriptive categories that can be built into more analytical frameworks over time. Researchers within grounded theory repetitively examine data from interviews, making subcategories based on similarities and differences within the data, until they cannot identify any more categories, termed "theoretical saturation" (Willig, 2014).

I find the non-linear coding process used in grounded theory to be interesting and potentially useful, however, as grounded theory in its purest form is intended to be conducted without preconceived theories (Willig, 2014), I do not think I can honestly conduct research within this theoretical framework, as I have years of personal and professional experience learning and theorizing about my topic of interest, FVD.

Phenomenology and Hermeneutics

Laverty (2003) states that, while people often use the terms **hermeneutics** and **phenomenology** interchangeably, they actually have distinct differences. Phenomenology was developed in the early 20th century by Husserl while hermeneutics (often called hermeneutic phenomenology) was developed later by Heidegger and then refined by Gadamer.

Husserl took issue with a phenomenon he saw within research at the time, in which people were applying hard science methods to human issues. He believed that people interpret and make meaning of what happens to them instead of just reacting to stimuli, and thus positivist methods were inappropriate. He then developed phenomenology, a qualitative methodology that tries “to understand or comprehend meanings of human experience as it is lived” (Laverty, 2003, pg 22, citing Polkinghorne, 1983). Husserl believed that the researcher must bracket out their own experiences when interpreting data in order to truly find the “essence” of a given issue (Laverty, 2003).

Heidegger worked with Husserl and was trained in phenomenology, but eventually took his own path to begin developing hermeneutics. Like phenomenology, hermeneutics is also concerned with human experiences and how people interpret what happens to them. However, one key difference is that Heidegger believed one must consider one’s history while interpreting data/texts (Laverty, 2003). Gadamer further developed hermeneutics and also believed that phenomenological bracketing was impossible (Laverty, 2003, citing Annells, 1996). In hermeneutics, the researcher looks at small pieces of data, relates them to the whole data set, and then looks back at the small pieces. This process is known as the hermeneutic circle (Laverty, 2003, citing Annells, 1996 and Polkinghorn, 1983).

When comparing these two methodologies, I am drawn more towards hermeneutics because of the ability to integrate one's own experiences into the interpretation of data. As an SLP and a person with a FVD, I do not see how I could possibly interpret data on this subject without taking my own experiences into account. I appreciate how both of these methodologies are concerned with the meanings that people assign to their experiences and think that this could be especially interesting to apply to issues such as patient satisfaction with voice therapy. However, I find both of these methodologies to be too theoretical. As someone grounded in the pragmatic paradigm, I have difficulty seeing how these methods, in their purest form, can be quickly applied to solving very real and immediate clinical problems.

Thematic Networks

The final qualitative methodology that I wish to explore is **thematic network analysis**, as described by Attride-Stirling (2001) and Braun and Clark (2006). Although thematic networks can be used with any methodology and thus may be better described as a method, the aforementioned authors describe it in such a manner that I argue that it can be approached as a methodology in its own right. I have selected thematic network analysis as my primary qualitative research methodology because I think that it fits nicely with the pragmatic paradigm. Like grounded theory, thematic networks have an intricate coding system (Attride-Stirling, 2001), but unlike grounded theory, it is not bound by a specific theoretical perspective (Braun and Clark, 2006). In addition, while it has similarities with hermeneutics (Attride-Stirling, 2001), I have found it to be much more easily applicable to practice and less theoretical in its scope.

According to Attride-Stirling (2001), thematic networks are “web-like illustrations... that summarize the main themes constituting a piece of text” (pg 386). Once a researcher has a text, such as a transcribed interview, they organize the information into **basic themes** (small pieces of information that need to be combined with other information in order to be significant), **organizing themes** (groups of similar basic themes) and **global themes** (groups of similar organizing themes that include an element of interpretation) These themes are visually represented on a web-like map. Throughout this process, the researcher codes pieces of information and looks for patterns. However, the primary purpose of thematic network analysis is to interpret the

findings that emerge, not the construction of the web itself (Attride-Stirling, 2001). Depending on the researcher's position, they can analyze the data inductively, deductively, or abductively. They can look for surface level or latent meanings. The process is non-linear, like other qualitative methodologies described above, and involves moving between smaller and larger parts of the text (Braun and Clarke, 2006).

METHODS

Sampling

Sampling methods are important to consider regardless of the type of research (qualitative, quantitative, or mixed methods). The two overarching categories for sampling are probability sampling and nonprobability sampling (Martyn Denscomb, 2003).

Probability sampling is meant to be representative of the whole population. These include random samples, systematic samples, stratified samples, quota samples, cluster samples, and multi-stage samples. In **random samples**, participants are literally chosen at random, but the sample size must be big enough in order to have a significant chance that the random sample is actually representative of the whole population. **Systematic samples** are slightly different in that, instead of choosing participants at random, the researcher chooses every "Nth" (whatever number they have chosen) person. In a **stratified sample**, participants are randomly chosen but at numbers that are consistent with proportions that exist in the whole population. This is similar to a **quota sample**, but a quota sample is often a smaller group and more based on who is readily available. Finally, in a **multi-stage sample**, the researcher looks at smaller and smaller groups within the initial larger sample (Martyn Denscomb, 2003).

Nonprobability samples, on the other hand, are not gathered to be representative of the population as a whole. They are useful for studies where it is difficult to gather a sufficiently large number of people. These include purposive samples, snowball samples, and convenience samples. Martyn Denscombe (2003) describes **purposive sampling** as applying to "those situations where the researcher already knows something about the specific people or events and deliberately selects particular ones because they are seen as instances that are likely to produce the most valuable data" (pg 15). They may even deliberately select extreme or unusual

cases to study. **Snowball samples** generally involve word of mouth recruitment between subjects. The researcher recruits a certain number of people and then asks the participants to invite acquaintances who fit a certain description to also participate in the study. Finally, **convenience samples** involve recruiting participants based on whoever is readily available to the researcher (Martyn Denscombe, 2003).

I think that all of the above mentioned sampling methods have the potential to be useful depending on the resources available to a researcher, as well as what their goals are. However, since I am currently most interested in studying a fairly specific patient group (people with FVD) and I do not have access to large amounts of time or funding, probability sampling is unlikely to be useful to me at least for the time being. Nonprobability samples, while they do have an increased risk of unintentional bias, are far more accessible. I am particularly interested in purposive samples for conducting qualitative research.

Qualitative Methods

The primary types of qualitative research methods are **interviews** and **focus groups** (Gill et al., 2008). There are three types of interviews: structured, semi-structured, and unstructured. **Structured interviews** are quite similar to questionnaires in that the questions are specified ahead of time and the researcher is unable to ask follow-up questions. Advantages to this type of approach are that it can be time efficient. Conversely, findings can be shallow as the researcher is not allowed to ask further probing questions (Gill et al., 2008).

In **semi-structured interviews**, the researcher prepares a set of questions, but is allowed to ask follow-up questions as necessary (Gill et al., 2008, citing Britten, 1999). This allows the researcher to explore areas they might not have accounted for ahead of time, potentially allowing for a deeper understanding. The researcher is encouraged to focus on building positive rapport with the participants, ask open-ended questions, and intentionally use silence to allow the participants to talk more. These types of interviews may be more time consuming to analyze than their structured counterparts (Gill et al., 2008).

Unstructured interviews are quite different in that the researcher often has no theories or predetermined questions before the interview begins (Gill et al., 2008, citing

May, 1991). This means that these interviews can often take a long time and may be uncomfortable or awkward for participants. They are often used if there is little known information on a new topic (Gill et al., 2008).

Finally, Gill et al. (2008) defines a **focus group** as “a group discussion on a particular topic organised for research purposes” (pg 293). These are useful when the researcher is interested in studying collective experiences. Considerations for this type of method include whether to include people who already know each other (for comfort) or people who are strangers (for anonymity) (Gill et al., 2008). Six to eight participants is the ideal number and it is best to over-recruit in the event that participants do not show up (Gill et al., 2008, citing Bloor et al., 2001).

Of the above qualitative methods, I think that semi-structured interviews and focus groups are likely to be the most useful for my purposes. I think that structured interviews would likely fail to capture the complexity of patients' lived experiences with FVD. Further, as having a FVD is an often traumatic or upsetting experience, I desire to put my participants at ease as much as possible. As such, unstructured interviews are likely not to be the most useful for this participant population.

One important aspect to consider is whether individual interviews or focus groups would be the most useful for this type of research. While individual interviews yield rich information, the recruitment and analysis process can be quite time consuming. Focus groups may be a better option in terms of time efficiency, however they increase the risk that participants may not share sensitive information, especially if the group is made of relative strangers. On the other hand, focus groups may help participants dealing with an often isolating experience feel a sense of community and thus help them share experiences that they may not otherwise.

Quantitative Methods

Although quantitative methods are not my primary area of interest, they are important to examine. In **surveys**, the researcher gathers a representative sample (as described above), distributes a questionnaire, and then generalizes the sample's responses to the larger population. **Structured interviews** can also be used with quantitative methods, depending on the questions asked, especially if they can be analyzed numerically (Creswell, 2014, citing Fowler, 2008). **Experimental research** is

also common. One such example is when a researcher gives a treatment to one group and not another in order to compare their responses (Creswell, 2014).

Mixed Methods

Mixed methods, as described above, use a combination of quantitative and qualitative research methods. There are three primary timelines for mixed methods research: convergent parallel, explanatory sequential, and exploratory sequential. In a **convergent parallel** mixed methods study, quantitative and qualitative data are collected at the same time and then analyzed. In **explanatory sequential** studies, quantitative data is collected first, analyzed, and then a second qualitative study is conducted in order to explain or learn more about the quantitative findings. Conversely, in **exploratory sequential** studies, qualitative data is collected and analyzed first and then quantitative measures are taken in order to learn more or to generalize findings to the wider population. This type of design is often used to build instruments (Creswell, 2014).

As already mentioned, I am particularly interested in mixed methods research. I can imagine using a convergent parallel design to collect acoustic measures during voice therapy while also conducting patient interviews to compare their thoughts during therapy with more objective measures. I could imagine using an explanatory sequential design to collect quantitative data, such as laryngeal sEMG measures, as a result of treatment, such as laryngeal massage, and then later ask the participants to share their thoughts on what they thought was most effective about the treatment. I am also interested in exploratory sequential studies, such as interviewing a small group of FVD patients about their experiences, using the results to construct a survey, and then distributing the survey to a larger group of people to examine if the experiences of the initial sample apply more broadly.

VALIDITY AND RELIABILITY

Validity can be defined as how accurate or truthful the findings of a study are (Brink, 1993, citing Le Compe and Goetz, 1982). **Internal validity** refers to how well a study's results actually reflect reality (i.e. have they been interpreted correctly, or does the researcher put too much weight on extraneous variables?). **External validity** refers to how well findings can actually be applied across different groups (Brink, 1993, citing

Denzin, 1970). Validity is especially important in qualitative research due to its subjective nature (Brink, 1993).

Reliability, or how well a study can be replicated, is a concept closely linked to validity. Sources that may reduce reliability of a study include the researcher, the participants, the social context, and the methods. *Researchers* must examine, reduce, and report biases, be competent, and make sure they have the participants' trust, being aware of power dynamics in the researcher/participant relationship (Brink, 1993, citing Leninger, 1991 and Lecomple and Goetz, 1982). The researcher must insure to the best of their ability that participants respond truthfully to questions. *Participants* may downplay or overplay the severity of their experiences. Depending on the topic, participants may worry about negative consequences of speaking truthfully. Some participants may only answer the questions in the way they think the researcher wants them to or may withhold information. In order to address these issues, the researcher should make the purpose of the study clear as well as what will be done with the collected data. Building trust with participants and clarifying that their words have been interpreted correctly may also be useful. Researchers should examine the *social context* and consider whether it is better to interview participants alone or in groups as well as where the interview will take place and what effect, if any, this will have on participant responses. In terms of *methods*, the researcher should take care to explain the study design well, ensure they are using appropriate sampling methods, consider alternative hypotheses or conclusions, and try to disprove their own conclusions to insure they are correct (Brink, 1993).

ETHICS

Ethics are also highly important when designing and conducting a research study. Researchers have responsibilities both towards their readers and towards their subjects. In addition, researchers have legal responsibilities they must adhere to. These include the following:

- 1) **Do no harm.** Researchers must not hurt participants, manipulate them into giving up their rights, or knowingly withhold treatments.
- 2) **Fully informed consent.** Participants must have full and accurate information so they can make their own decisions.

- 3) **Protection of privacy and confidentiality.** Researchers must not share personal information without the subjects' express permission. Researchers should also be especially careful with electronic records.
- 4) **No deception.** Researchers must be honest and avoid lying to their participants.

In addition to these legal responsibilities, researchers must consider whose agenda their research furthers, who benefits from the research, and why their research is being funded (Lincoln and Guba, 1989).

INSIDER RESEARCH

According to Saidin and Yaacob (2016), an "...**insider researcher** could be defined as someone who shares a particular characteristic such as gender, ethnicity or culture, whereas the outsider researcher could be defined as someone who does not share the same characteristics mentioned above" (pg 849-850, cites Mercer 2007). I would add that this could also include researchers who share the same profession or medical diagnosis as their subjects. This is especially important for me to consider as someone interested in researching SLPs and people with FVD, as I fall into both groups.

There are several advantages to being an insider researcher. Insider researchers are often passionate and highly committed to their topics of interest. They also may have a better understanding than researchers who do not possess insider knowledge. They may be able to get truthful information from participants more easily because of their higher understanding and potential sense of trust. This may help with the interview process (Saidin and Yaacob, 2016, citing Bonner and Tolhurst, 2002 and Oakley, 1981).

However, there are also elements that insider researchers should be cautious of. There is the possibility that insider researchers, due to their personal connection to the topics, may be less objective than researchers who are more external. This may lead to bias in analyzing and reporting. Participants may also assume that the insider researcher already knows something and then not share certain information, making it so that it is unavailable for analysis (Saidin and Yaacob, 2016, citing Simmel, 1950 and Schulz, 1971). Many of these pitfalls can be avoided with stringent validity, reliability, and ethics requirements.

These are all considerations that are highly relevant to myself as I embark on FVD research. I need to recognize that while I have a thorough understanding of my own experiences with FVD, my experiences may not be congruent with those of my participants. I must be cautious not to overemphasize experiences similar to my own while devaluing those that contradict my own experiences. I can minimize these risks by collecting a sample that is as random as possible, being thorough with my coding process, and making my personal biases known when reporting my analysis.

CONCLUSION

For my next assignment, I plan to conduct a qualitative study focusing on the experiences of people with chronic FVD, a group that I have found is often under-represented in the literature. I will collect a purposive sample of people in this specific patient group, but will endeavor for this sample to be as random as possible by recruiting from online FVD support groups. I will conduct a series of semi-structured interviews focusing on questions related to patient satisfaction with therapy as well as patient perceptions of what methods are most useful for managing a FVD. I will analyze my findings using thematic network analysis.

Throughout this study, I will be grounded in the pragmatic paradigm and my ultimate goal will be to improve treatment recommendations for FVD. While this initial study will be qualitative in nature, I am highly interested in doing further phases of this study, using an exploratory sequential mixed methods approach to construct a survey to be distributed to more people with FVD than I could reasonably interview in the initial stage of my study.

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