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Methods in Practice: Grounded Theory in Media Arts Education Research

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Abstract

Grounded theory qualitative research is a powerful method of practice, particularly for researchers aiming to explore complex processes through the perspectives and experiences of others. Grounded theory is also a powerful method of practice for researchers seeking to deepen a field of study in which the literature is thin and few theories exist. However, grounded theory is an often-overlooked research method, perhaps due to its inherent messiness. The purpose of this article is to demystify grounded theory practices by walking the reader through a grounded theory study conducted by the author in the field of media arts education. The study's findings led to the development of *The Theory of Dispositions in Filmmaking*, which will be used to illustrate the data analysis process. The article will describe the process of moving from raw qualitative data to open, axial, and selective codes. The study will also demonstrate how techniques such as sketching can be used to develop figures and diagrams in order to draw connections between codes and cultivate the data's visual narrative. Providing readers with an example of grounded theory methods in practice, specifically in the field of media arts education, will hopefully encourage additional studies in the realm of media arts research and education leadership, while also illustrating the methodological process for researchers new to grounded theory.

Keywords

Grounded theory, methods, inclusive filmmaking, media arts education, disposition, Australia

Author Bio

Kyja Kristjansson-Nelson, Ed.D., is a filmmaker and media arts education researcher. K-Nelson has screened her films at venues such as the Walker Art Center, the D.C. National Museum for Women in the Arts, the Queensland Gallery of Modern Art, Slamdance, and the Wexner Center for the Arts. K-Nelson was a Fulbright Scholar to Iceland in 2005, and was a 2007 Bush Artist Fellow. K-Nelson was named the 2014 Minnesota CASE Professor of the Year by the Carnegie Foundation. She is a co-founding member of EDIT Media (Equity, Diversity, and Inclusion in Teaching Media). Her research interests include accessible filmmaking, inclusive films, media arts education, and education leadership. She is currently a Professor of Film at Minnesota State University Moorhead.

Introduction

Grounded theory qualitative research is a powerful method of practice, particularly for researchers aiming to explore complex processes through the perspectives and experiences of others. Grounded theory is also a powerful method of practice for researchers seeking to deepen a field of study in which the literature is thin and few theories exist. However, grounded theory is an often-overlooked research method, perhaps due to its inherent messiness. Indeed, one must take a leap of faith when diving into the seemingly chaotic coding process, and trust that a theory will emerge from the data. The novice researcher may feel overwhelmed by the amount of data and might waver when given the Jedi-like advice to "trust the process" which may feel a bit like being told to "use the force" while in the thick of data analysis and no theory in sight (Lucas, 1977).

To that end, the purpose of this article is to demystify grounded theory practices by walking the reader through a media arts education research study that used grounded theory methods. This publication uses data collected for and text revised from the author's Ed. D. dissertation, *The Theory of Dispositions in Filmmaking and Leadership* (Kristjansson-Nelson, 2020), as a way to provide readers with an example of the grounded theory data analysis process within the fields of media arts and education leadership. A brief introduction and overview of the study will be provided, along with information pertaining to data collection. Emphasis will be placed on the data analysis phase and the coding process. The article will provide an overview of grounded theory methods and will then use the media arts education study to describe the process of moving from raw qualitative data, to open, axial, and selective codes. This article will also demonstrate how techniques such as sketching can be used to develop figures and diagrams, in order to draw connections between codes and

cultivate the data's visual narrative. A brief summary of the study's results will be presented

within the context of the coding and methodological process. Providing readers with an

example of grounded theory methods in practice, specifically in the field of media arts

education, will hopefully encourage additional studies in the realm of media arts research,

while also illustrating the methodological process for researchers new to grounded theory.

Before delving into the details of the media arts study and the data analysis process, a brief

overview of grounded theory will provide an introduction for those readers new to grounded

theory, and will serve as a review for readers familiar with the methodology.

Grounded Theory

When developing a research design, it is important to choose the right methodological

tool for the job. This is as true for quantitative experimental research designs, as it is for

qualitative grounded theory design. There are many considerations when choosing a research

method, as methodology is associated with researchers' epistemological and ontological

positions. Methodology "is based upon critical thinking about the nature of reality and how

we can understand it… and provides a rationale for the ways in which researchers conduct

research activities" (Morrison, 2012, p. 15). Researchers' philosophical assumptions are

inherently linked to methodologies and approaches to research design. Grounded theory offers

researchers a method to generate new theories that can aid the progress of many disciplines.

"Grounded theory is a research approach and methodology, employing a combination of

inductive and deductive methods, falling within the interpretive paradigm, relying on

conventional qualitative methods of data collection and a unique system of coding in data

analysis" (Dimmock & Lam, 2012, p. 188). Grounded theory has its roots in naturalistic

inquiry, which breaks from positivism with a multidimensional ontology, dismissing the

notion that there is only one reality. Lincoln and Guba (1989) published several ethical concerns related to positivism and urged researchers to shift toward a naturalistic paradigm, which they argued circumvents some ethical dilemmas like the deception of and harm to research respondents (p. 226). In grounded theory, the realities of the participants are key, as the voices of the participants directly impact the development of the theory. Using a circular process of induction and deduction, "naturalistic methods help researchers understand how people view the world, what they value, and how these values and cognitive schemas are reflected in practices and social structures" (Armstrong, 2010, p. 885). The goal is to learn from the perspectives and experiences of the participants.

Like naturalistic inquiry, grounded theory enables one to more deeply understand human experiences and does so through purposive sampling. "The aim is not to find a representative case from which to generalize findings… [but rather] to develop interpretations and local theories that afford deep insights into the human experience" (Armstrong, 2010, p. 880). Rather than focusing on a person's story through narrative research, or shared experiences through phenomenology, grounded theory aims to generate a theory that "might help explain practice or provide a framework for further research" (Creswell & Poth, 2018, p. 82). To that end, grounded theory "is well suited to studies in education leadership… because of its ability to offer a theory or explanation of complex interactive situations involving human beings in their natural or organizational settings" (Dimmock & Lam, 2012, p. 189). Grounded theory is likewise "well suited to exploring the complexity of a social process, attempting to view an external reality through the imperfect lens of human perception and thought" (Sutcliffe, 2016). Grounded theory has a lot to offer researchers who are examining complex systems in fields where few substantive theories exist.

Glaser and Strauss (1967), founders of the method, wrote that grounded theory uses the "strategy of comparative analysis… [placing] high emphasis on *theory as process*; that is, theory as an ever-developing entity, not as a perfected product" (p. 32). Grounded theory is unlike other methods that are in pursuit of one definitive answer. "Grounded theory does not seek to verify or test hypotheses, to provide evidence or 'proof'; rather it is a vehicle for generating 'middle range' or 'substantive' theories" (Sutcliffe, 2016). Together, Glaser and Strauss developed the methodological framework for grounded theory, however over time became divided on some of the key methodological aspects of the process. If planning a grounded theory study, it is important to understand the differences between Glaser's school of thought and the Straussian approach to grounded theory. Additionally, Charmaz (2012) developed a third variation, placing emphasis on "researchers' roles and standpoints" (p. 3), and taking a constructivist approach.

Approaches to Grounded Theory

In 1967, Barney G. Glaser and Anselm L. Strauss published *The Discovery of Grounded Theory: Strategies for Qualitative Research*, a book that outlined their newly discovered research methodology. Their seminal text covered everything from the use of theoretical sampling and constant comparative methods, to the process of generating a theory. However, since publishing their 1967 text, the authors' respective approaches to grounded theory evolved and diverged in terms of methodological practices, with Glaser maintaining a more classic approach, and Strauss developing variations on the original coding process. In more recent years, Charmaz (2012) developed yet a third approach concerned with "research relationships" (p. 3). With these changes, some authors have argued that "grounded theory has evolved along three main pathways… from positivism to constructivism via post-

positivism… [and though the] core aspects of the process are the same for all three versions of the method, they each sit within a different 'conceptual framework'" (Sutcliffe, 2016, p. 45). By contrast, Heath and Cowley (2004) maintained that "it is methodological rather than ontological and epistemological aspects that have been cited as the main source of divergence" (p. 142). While the philosophical assumptions for each approach could be debated, there are methodological differences in each approach. These differences can be found in the timing of the literature review within the research cycle, and in the process of coding. One way to distinguish the various schools of grounded theory is through their research designs: *emerging design*, *systematic design*, and *constructivist design*.

Glaser's approach to grounded theory has been referred to as *emerging design*, in which "research questions emerge as the research is under way, and where no preconceived theories or frameworks are endorsed; the literature review is done after data collection" (Dimmock & Lam, 2012, p. 190). Within the emerging design, the data drives the theory and the literature review serves to support or contest the emerging theory. Doing the literature review after data collection and analysis is "to ensure that pre-existing theories do not bias the researcher and contaminate the theory" (Sutcliffe, 2016, p. 46). In 1989, Strauss partnered with Juliet M. Corbin and published *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, which arguably provided greater detail in the process of data analysis, creating memos, diagramming, and coding. Strauss and Corbin's approach is known as *systematic design*, as it is "more structured… [and] allows research questions, literature searches and heuristic frameworks to be considered before data collection" (Dimmock & Lam, 2012, p. 190). Within the systemic design, the researcher is able to conduct the literature review and develop research questions prior to data collection.

While traditional grounded theorists following the emerging design developed by Glaser may argue that the researcher's ideas will be influenced by pre-existing theories if the literature review is conducted first, others following the systematic design developed by Strauss and Corbin believe there is necessary practicality in doing so. For example, researchers need "to have some knowledge of the literature: to identify a topic and to justify its importance to funders and ethics boards" (Sutcliffe, 2016, p. 46). In a Straussian approach to grounded theory, the researcher employs the review of literature to understand the broader landscape of the research topic.

Yet a third variation of grounded theory methods should also be considered, which is known as the *constructivist design* developed by Charmaz, who "stresses a more proactive, interpretive role taken by the researcher, who she sees as interacting with the participants and the data to an extent that leads both parties to *co-construct* the theory" (Dimmock & Lam, 2012, p. 190). Charmaz's approach to grounded theory is built upon critical inquiry, and "locates the research process and product in historical, social, and situational conditions" (Charmaz, 2016, p. 35). Charmaz urges researchers to develop methodological self-consciousness, which "requires scrutinizing our positions, privileges, and priorities and assessing how they affect our steps during the research process and our relationships with research participants" (Charmaz, 2016, p. 35). While the researcher's positionality is not ignored in systematic grounded theory, Charmaz's constructivist design places significant emphasis on the researcher's positionality throughout the process, as the researcher co-constructs meaning through their own personal lens and through the lens of the research participants. Between the emerging, systematic, and constructivist designs, these variations in grounded theory lead to different methodological processes for the researcher.

One distinction between the different grounded theory methods is in the data analysis phase, specifically in the coding process. For example, the Glaserian approach calls for two levels of coding whereas the Straussian approach calls for three. The first level of coding in the Glaserian approach is referred to as substantive coding, whereas the Straussian approach begins with open coding (Heath & Cowley, 2004, p. 146). The Straussian approach then "involves two further types of coding, each representing a successively higher level of abstraction; these are axial and selective coding… both are based on exploring the relationships and interrelationships between categories" (Dimmock & Lam, 2012, p. 197). Because of the variation between the Glaserian and Straussian approaches to the process, there are "two issues… the role of induction, and emergence vs. deduction and speculation" (Heath & Cowley, 2004, p. 143). Glaser believed Straussian grounded theory shouldn't use a "deductive emphasis, which requires the asking of numerous questions and speculation about what might be rather than what exists in the data" (Heath & Cowley, 2004, p. 144). However, due to the systematic design and specific coding steps, Strauss and Corbin's process is likely a stronger choice for researchers new to grounded theory methods.

Since each approach has its own method for analyzing the data, it is important for the researcher to choose which approach to take. Whichever method is chosen, authors across the literature agreed that "when a researcher does not adequately position his or her grounded theory study as adhering to either the Glaserian or Straussian approach, several crucial errors can be made" (Howard-Payne, 2016, p. 59). Heath and Cowley (2004) agreed, stating that "the researcher should mix the two approaches with caution, aware that they may violate philosophical underpinnings of both; boundaries between the two should be maintained rather than a synthesis attempted" (p. 147). In other words, if embarking upon a grounded theory

study, it is important for the researcher to choose an approach and stick to the methods appropriate for that particular school of grounded theory, whether the researcher follows Glaser's methods, Strauss and Corbin's approach, or that of Charmaz.

In order to illustrate grounded theory in practice for researchers new to the method, this article will turn to a grounded theory study within the field of media arts education research, which was conducted by the author. The media arts study took a Straussian approach to grounded theory, with research questions and the literature review developed before data collection, and with a data analysis process that used open, axial, and selective coding.

Grounded Theory in Practice: A Media Arts Education Study

As noted in the introduction, this publication used data collected for and text from the author's dissertation, *The Theory of Dispositions in Filmmaking and Leadership* (Kristjansson-Nelson, 2020). The study found that disposition factors into the dimensions of filmmaking and leadership and emerged as the most significant active catalyst across themes. Though the emergent theory is limited to the organization studied, The Theory of Dispositions in Filmmaking suggests that disposition impacts filmmaking practices, leadership practices, and purpose, which in turn contributes significantly to culture and the way that people work with one another. Since a number of major and minor themes and figures were generated from the data, a thorough presentation of the findings and related discussion are outside the scope of this article, as the focus here is on grounded theory methods in practice. To that end, this media arts education study will be used to provide readers with an example of the grounded theory data analysis process within the fields of media arts and education leadership. Before

digging into the data analysis process, a brief background on the study will be provided, along with information on site selection and data collection.

Background

The Theory of Dispositions in Filmmaking and Leadership (Kristjansson-Nelson, 2020) was a grounded theory qualitative study conducted under the paradigm of pragmatism. Patel (2015) noted that pragmatists "believe that reality is constantly renegotiated, debated, interpreted, and therefore the best method to use is the one that solves the problem" (para. 7). Thus, under the paradigm of pragmatism, methodological tools were chosen as a means to best answer the research questions, with the goal of advancing inclusion in media arts education through leadership practices. The literature review was conducted prior to data collection, and demonstrated that few studies existed in the area of media arts education, let alone studies on leadership and inclusion in media arts education programs. Seemingly basic things like defining media arts as a discipline or ensuring proper teacher training and licensure are problematic issues for media arts education that are entangled within complex systems. Despite the benefits of media arts education, not all youth are offered media arts education opportunities. Thus, the research problem is complex, involving systems like schools and university systems, as well as social hierarchies. Which districts are able to offer media arts education, and which are not? Whose voices are being heard in post-secondary media arts programs, and whose are not? Who is included in media arts industries or in the creation of media arts, and who is not? How do we address these issues within media arts education? Dimmock and Lam (2012) stated that grounded theory is "an appropriate methodology when no previous existing theories exist" (p. 189), and that "it is especially apt when a study involves a complex process" (p. 189). Furthermore, the authors noted that grounded theory "is

also suited to explaining leadership practices and actions in certain school or university

events" (p. 189). Conducting language-driven research offered the opportunity to dig deeply

into the constructs of leadership, inclusion, and success as defined by research participants.

Thus, qualitative methods became the clear frontrunner for this study, and grounded theory

was identified as the best suited approach.

The purpose of the study was to determine how best to create more inclusion in media

arts education through leadership practices. The paradigm of pragmatism was chosen

specifically with the long-term goal of facilitating change through an emergent theory. The

research objectives were to study how leadership best serves a highly successful inclusive

media arts organization, and to make recommendations based on the findings with the long-

term aim of transferability to other media arts education programs. Grounded theory

methodology was a good fit for the study because it "focuses on a process or an action that

has distinct steps or phases that occur over time. Thus, a grounded theory study has

'movement' or some action that the researcher is attempting to explain" (Creswell & Poth,

2018, p. 83). This study examined leadership in the context of an educational setting.

Leadership is well suited to grounded theory, as "leadership is a process whereby an

individual influences a group of individuals to achieve a common goal" (Northouse, 2001, p.

3). There is movement and action inherent in both leadership and in education settings. In

terms of research design, grounded theory offered the best methodological fit to develop a

theory on the leadership of a highly successful inclusive media arts education program.

Method

The study's central research question was process-oriented, and was as follows: How

does leadership impact the success of inclusive media arts programs? Dimmock and Lam

(2012) noted that "grounded theory requires research questions that are *action- and process-oriented*, typically involving interactive and interpersonal processes related to individual and organizational behavior in schools and universities" (p. 191). By focusing on the constructs of inclusive media arts, leadership, and success, research questions and sub-questions targeted processes and actions within the organization studied. The aim was to define those constructs in the context of the organization studied, in order to better understand their relationships within the educational processes at play.

To examine these questions and constructs in depth, the organization studied was delimited to one nonprofit media arts education organization called Bus Stop Films (BSF) located in Sydney, Australia. A method of purposeful sampling was used, as the site and participants were selected prior to data collection. In grounded theory research, purposive sampling (also known as purposeful sampling) means that the researcher chooses participants strategically, specifically because they are likely to provide information that ties directly to the study. Very much opposite of random sampling, in purposive sampling "one needs to refer back to the aims of the research, and the research questions" (Dimmock & Lam, 2012, p. 195). Bus Stop Films, the media arts education organization that participated in this study, was purposefully chosen because of their inclusive mission, the media arts work they do with a diverse range of students, their successful track record, and because of the likelihood that they could add a valuable perspective when speaking to the study's research questions.

At the time of the study, Bus Stop Films offered workshops at three sites in Sydney and the surrounding area. The organization self-identified as an accessible film studies program that teaches inclusive filmmaking, which was evident through their mission, vision, curriculum, and learning outcomes, as well as through the populations they serve. Thus, the

organization fit this study's operational definition of offering media arts education opportunities to marginalized or underrepresented populations with regard to race, ability, gender, sexuality, and socioeconomic status. Bus Stop Films primarily serves young adults (i.e., older teens and those in their twenties), however older adults are also served by the organization. While the organization teaches all disciplines within the media arts, their focus is on filmmaking. Thus, the findings were likewise focused to filmmaking within the larger context of media arts education.

Data collection occurred over a ten-day period of time at two of the three workshop sites run by Bus Stop Films. Interviews, a focus group, and site observations were the primary tools used during data collection. Each of these tools offered benefits and challenges. As a whole, these tools promoted and allowed for the in-depth gathering of data from research participants, which was critical given the small sample of research participants relative to the size of the organization. Combining research tools also provided some benefits. For example, combining a focus group with observations resulted in a trade-off between the naturalness of observations in a field setting and the ability to collect a concentrated set of interactions in a very short span of time via focus groups" (Morgan, 1988, p. 9). Documentary analysis was also utilized to supplement and further inform the primary data collected. Examples of documentary analysis of pre-existing data include films produced by students, the organization's blog, and public speeches made by the students/leaders. The advantage of using pre-existing documents is that they "can provide valuable information about the context and culture of these institutions and… [offer] another window for the researcher in educational leadership… to read between the lines of official discourse and then triangulate information through interviews, observations, and questionnaires" (Fitzgerald, 2012, p. 297).

The documents analyzed spanned the decade of the organization's existence, and thus provided strong support and context for data collected by the focus group and interviews.

The majority of the data collected was through interviews with the organization's staff, teachers, and administrative leaders, as well as a focus group comprised of students. Interviews were conducted with five members of the organization's leadership and staff. Data collection also included a focus group with four current students, all of whom had strong experiences with the organization, having taken multiple classes over at least a year, or in some cases more.

Though data were also collected through site observations and analysis of documents, transcriptions from the interviews and focus group comprised the majority of the data collected for this media arts study. A transcription program called Trint was used to create the first, rough transcript for each interview and the focus group. The transcripts were then manually corrected until a final draft was generated. This was done by listening to the audio recordings and making manual corrections to ensure quality control and to obtain fidelity with the recorded interview.

Since the scope of the study was delimited to data collection from one organization, the findings were specific to that site and not generalizable. Thus, one limit of the study is generalizability. However, the intent was to use grounded theory in order to find an emergent theory, which would then be a starting point for additional research studies.

Data Analysis

When conducting grounded theory research, entering the data analysis phase can be an exciting time in the research process, though it can also be daunting and frustrating. The researcher may be confronted with a significant volume of qualitative data. Coding and

organizing that data, let alone finding the emergent theory, may feel overwhelming or at times even impossible. Though a scarce resource, time is an essential component of the data analysis phase in grounded theory methodology. It is critical that the researcher allows for plenty of time to work with and understand the data. The coding process itself takes more time than one may originally estimate. Allowing extra time will offer the researcher room to mentally process trends in the data, draw comparisons across data, and reorganize the information as themes emerge.

The Coding Process

As Charmaz (2012) pointed out, "many qualitative researchers have adopted coding and memo-writing strategies as an integral part of analyzing their data, but how they code data and write memos differs from grounded theory" (p. 3). If following the Straussian approach to grounded theory, as the study described in this article did, the coding process goes from open coding, to axial coding, and then to selective codes, at which point the theory should emerge from the major themes identified. While the Straussian approach to grounded theory offers researchers a systematic design, the coding process is fluid, which is an important aspect to note from the outset. One may move between the coding steps, as new connections are made or as new data are collected. As qualitative data are broken down, labeled with memos, conceptualized, abstracted, and categorized, the researcher may decide to begin this process again. With that fluidity in mind, data analysis begins with open coding.

After data were gathered and transcribed to text, a system of open coding was used, which began with labeling and creating memos for each transcript. In many cases while open coding, *in vivo* codes were used, which are codes created verbatim from the words of the participants. Strauss and Corbin (1998) explained that during open coding "data are broken

down into discrete parts, closely examined, and compared for similarities and differences" (p. 102). Microanalysis is key to the process, which the authors described as a "minute examination and interpretation of data" (Strauss & Corbin, 1998, p. 58). Open coding and microanalysis required close attention to detail in the data, looking at words and phrases, and carefully listening. That process facilitated codes and themes to be identified, as a central phenomenon eventually emerged from the collected data.
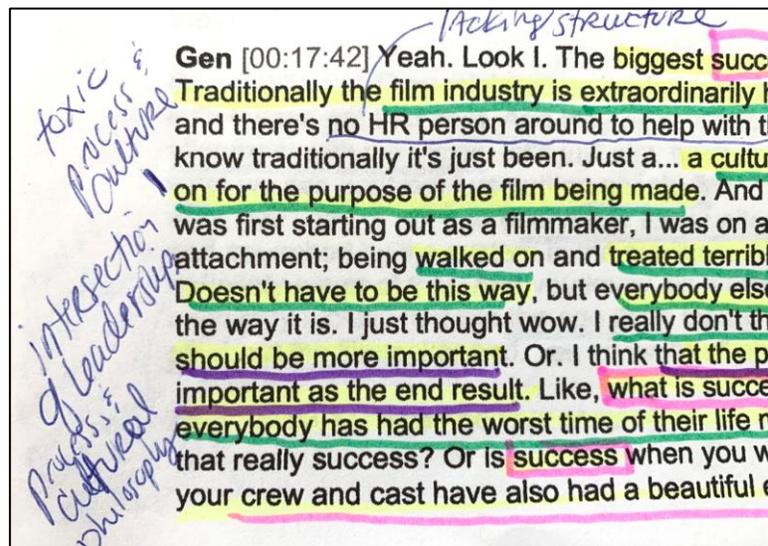
For the media arts education study, memos and coding were conducted both manually and in a word processing system. After reading the transcripts several times, open coding began by identifying patterns and themes across the text. As shown in Figure 1, memos were written in the margins when working manually with the transcripts, and the use of color was incorporated in order to better visualize how themes intersected.

The study then followed Strauss & Corbin's (1998) procedures for asking questions and continually making comparisons across the data. Conceptualizing was central to the process, as memos were utilized extensively, and labels were attached to phenomena found within the data.

After labels were created for this study's data, classification began in order to group concepts into categories, which is the process of axial coding. "The *purpose* of *axial coding* is to begin the process of reassembling data that were fractured during open coding" (Strauss & Corbin, 1998, p. 124). As the authors noted, data analysis between the steps of open and axial coding are not sequential, and thus analysis for this study moved freely between these types of coding throughout the data analysis process. Several readings and passes at open coding were conducted, with analysis continuing into axial coding, and then back for another round of open coding to ensure nothing was missed, and so on.

Figure 1

Memos and Open Coding

Tacking/structure

Gen [00:17:42] Yeah. Look I. The biggest succe
Traditionally the film industry is extraordinarily h
and there's no HR person around to help with th
know traditionally it's just been. Just a... a cultu
on for the purpose of the film being made. And
was first starting out as a filmmaker, I was on a
attachment; being walked on and treated terribl
Doesn't have to be this way, but everybody else
the way it is. I just thought wow. I really don't th
should be more important. Or. I think that the pr
important as the end result. Like, what is succe
everybody has had the worst time of their life m
that really success? Or is success when you w
your crew and cast have also had a beautiful e

toxic & process Culture

Intersection of leadership

Pragmatic & cultural philosophy

Note. As shown written in the margin, memos serve as a method to notate ideas, codes, or draw connections between emergent themes. Color was included early in the coding process to track themes. For example, the color green denoted aspects of culture, whereas pink was used for the theme of success.

Axial coding "is the process of relating categories to their subcategories, termed 'axial' because coding occurs around the axis of a category, linking categories at the level of properties and dimensions" (Strauss & Corbin, 1998, p. 123). Procedures for axial coding included the tasks outlined by Strauss and Corbin (1998), like determining the properties and dimensions of each category, detecting circumstances and aspects related to the phenomena, aligning categories with subcategories through intentional statements, and using the data to determine relationships between categories (p. 126). Axial coding is an important part of the methodological paradigm, in that it addresses both structure and process. "If one studies **structure** only, then one learns **why** but not **how** certain events occur. If one studies **process**

only, then one understands **how** persons act/interact but not why." (Strauss & Corbin, 1998, p. 127). Axial coding can be exciting, as it is the phase during which the researcher can begin to see patterns emerging from the open codes. The axial coding process also facilitated the process of reorganizing the transcribed data according to selective codes and emergent themes.

After axial coding, selective coding was used in order to develop the theory. "Selective coding is the process of integrating and refining categories" (Strauss & Corbin, 1998, p. 143). Eventually, a central category was identified as one to which all other categories could be related, and integration was then facilitated by Straussian techniques (i.e., writing a story and drawing diagrams). At each step of the open, axial, and selective coding process, data were continually reorganized in order to better understand the relationships at play amongst the data. It is important for the novice researcher to remember that grounded theory involves "interplay and movement between methods and processes… [as it] is both iterative and dynamic and is not one directional" (Chun Tie et al., 2019, p. 3). The non-linearity inherent in grounded theory methodology requires the researcher to be well organized with their data, and requires one to develop strategies to look at the data in multiple ways.

Organizing the Data

After one full round of the coding process, approximately ten themes originally emerged from the data. As previously noted, all data were color coded according to the corresponding theme. As shown in Figure 2, transcripts were then reorganized based on theme and color, so that all data pertaining to a specific theme could be read and analyzed together in one place from across all participants.

Figure 2

Organizing Data by Theme
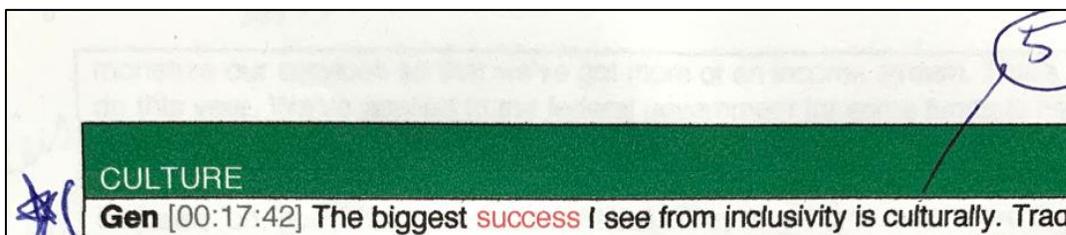
Note. Data from transcripts were reorganized by theme. Shown here is the beginning of the section dedicated to the theme of culture, as denoted by the color green.

After reorganizing data by theme, another round of data analysis and coding was conducted to ensure that no open codes, labels, or memos were overlooked, and to see if any additional themes emerged by comparing thematic data across participants. Rough tables were created to further refine the codes for alignment along dimensions and properties. The tables offered a visualization of the coding evolution, demonstrating the organization of open codes as aligned with axial and selective codes. It was at this step in the data analysis process that the themes were reduced from ten to eight, as it became evident that some redundancy existed between categories.

From there, an additional level of coding was done according to the research questions to ensure that nothing was missed, particularly given the complex nature of the relationships between major categories. Each research question for the study was identified by number. Using those numbers, another round of data analysis was conducted on the transcripts to review how the research questions were answered. To do this, the data were once again reorganized based on research questions, while maintaining the color-coding system used for each emergent theme. As shown in Figure 3, one could visualize which themes emerged within the context of each research question.

Figure 3

Organizing Data by Research Question and Theme
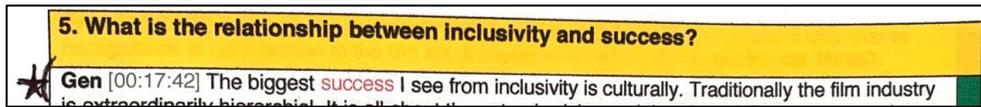
Note. Shown here is research question number five, as answered by each participant. On the right-hand margin, each response is color coded (in this case, green for the theme of culture).

Conducting data analysis with this approach (i.e., doing several rounds of coding, and reorganizing the data multiple times) was most definitely more time consuming than simply coding the data by theme and keeping the transcripts organized as they were originally (i.e., by research question). However, the process of reorganizing the data provided a way to look at the information in several different ways, revealing patterns across participants, and also functioned like a funnel to refine the volume of information to the most salient themes.

Cultivating the Visual Narrative through Sketching

During the coding process, several rounds of sketching occurred, which helped to visualize the data; to see the narrative. As shown in Figure 4, the data visualization first evolved from rough sketches in the margins of transcripts.
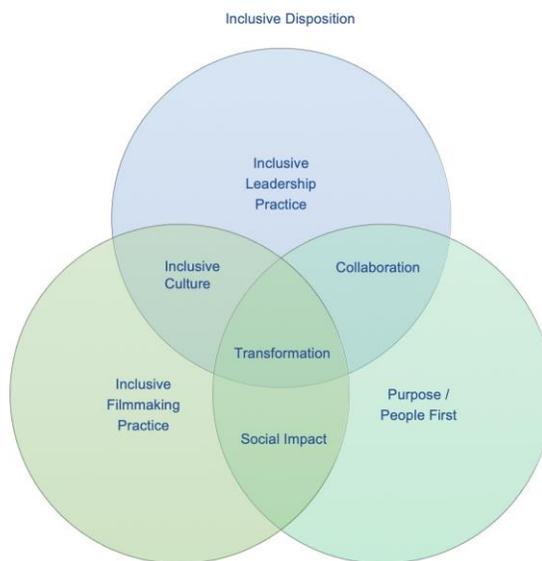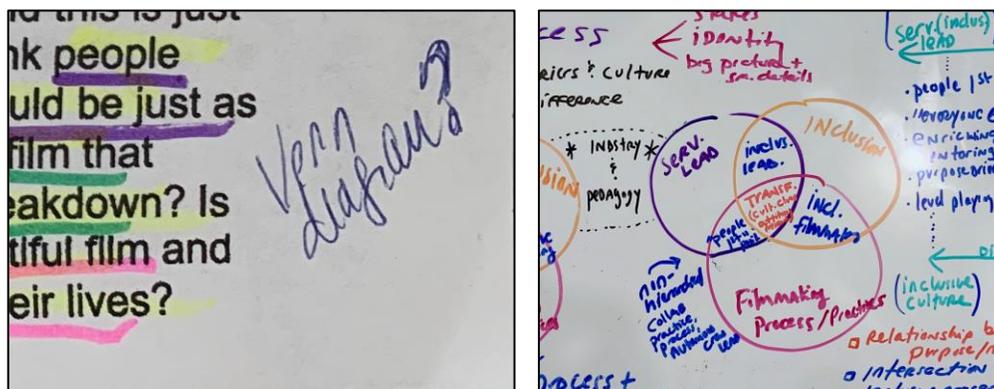
Figure 4

Visualizing the Narrative
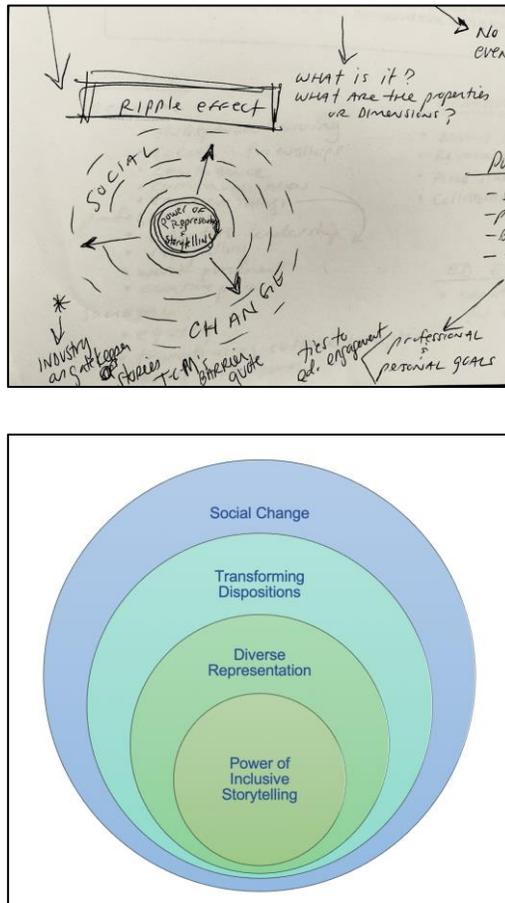
Note. In the process of writing memos and coding (as shown on the left), quick sketches fostered conceptualization early in the coding process, and served as a means to visualize relationships between themes. Much later in the process, refined infographics were created to illustrate aspects of the study's findings.

Just as the coding process took time, so too did the process of sketching. Numerous versions were created during the coding process and evolved along with the themes. Sketching was critical to the process of developing the emergent theory, as it helped to visualize the complex systems and relationships at play, as shown in Figure 5.

Figure 5

The Sketching Process

Note. Early in the process of labeling, a memo was made to explore relationships found in the

data through a Venn diagram, which evolved over time.

Both Figure 4 and Figure 5 feature a completed infographic taken as a sample from the

author's Ed.D. dissertation, *The Theory of Dispositions in Filmmaking and Leadership*

(Kristjansson-Nelson, 2020). Figure 4 features The Ripple Effect of Inclusive Filmmaking,

while Figure 5 features The Inclusive Disposition in Filmmaking. The study featured

numerous graphics, which helped to convey the story of the data in a quick, visual snapshot.

None of those graphics would have been possible without engaging in the sketching process from the start of data analysis.

Like the coding process used for interview and focus group transcripts, coding for the analysis of documents aligns well with methods in grounded theory design. To analyze pre-existing documentation, Fitzgerald (2012) described data analysis procedures that are "accordingly, a form of grounded theory in which data are constantly revised to assist with conceptualization, interpretation and the development of a narrative" (p. 302). The researcher involves themselves in "the systematic identification of underlying themes in materials, analyzing these themes and providing an interpretation that augments a theoretical argument" (Fitzgerald, 2012, p. 302). Thus open, axial, and selective coding were also used in the analysis of documents to assist in finding a central phenomenon.

Finally, it is important to note that during the coding process, one must give attention to codes or themes that stray from the patterns emerging. "Not all evidence will fit the pattern of a code or a theme. It is necessary to then report this negative analysis, and in doing so, the researcher provides a realistic assessment of the phenomenon under study" (Creswell & Poth, 2018, p. 261). Reporting discrepancies or negative case analysis is important to the quality of one's research. Likewise, the quality of any study is affected by its validity and trustworthiness.

Validity & Trustworthiness

While quantitative researchers concern themselves with objectivity and reliability in terms of replication of results, "qualitative researchers consider that dependability, credibility, transferability and confirmability as trustworthiness criteria" (Anney, 2014, p. 272). Indeed one of the methodological disadvantages of this study is that "generalizations beyond the

research site are not appropriate" (Armstrong, 2010, p. 884). However, validity "is used to judge whether the research accurately describes the phenomenon that it is intended to describe" (Bush, 2012, p. 81). Though generalizations and measures of establishing external validity were not attempted or applicable for this study, internal validity and trustworthiness were addressed through methods of triangulation.

Triangulation allows for the researcher to compare data across multiple sources. Anney (2014) "recommended that qualitative research should include one or two triangulation techniques" (p. 277), and listed three techniques that included investigator triangulation, data triangulation (or informants triangulation), and methodological triangulation. Bush (2012) included a fourth technique, which is theoretical triangulation (p. 85). While investigator triangulation (i.e., having more than one researcher engage in data collection) was not logistically feasible for this study, and while a grounded theory design complicates theoretical triangulation, data triangulation and methodological triangulation were used.

Methodological triangulation, "where strategies or methods are mixed to corroborate one against the other" (Bush, 2012, p. 85), allow a researcher to explore the research problem using several different methods. As previously noted, this study's research design incorporated several methods of data collection, including interviews, a focus group, site observations, and documentary analysis. "When qualitative researchers locate evidence to document a code or theme in different sources of data, they are triangulating information and providing validity to their findings" (Creswell & Poth, 2018, p. 260). Data gathered from across data collection methods was triangulated to determine how data aligned or where there were discrepancies. In addition to methodological triangulation, data triangulation (specifically, respondent triangulation) was used as an added measure of internal validity.

Data triangulation capitalizes on "data sets [that] are collected at different times. Respondent triangulation can be seen as one type of data triangulation" (Bush, 2012, p. 85). Responses from participants, which were collected at different times, were cross-referenced. This included not only comparing responses from one interview to another, but also comparing responses across interviews and the focus group. Responses were also cross-referenced with the data gathered from the analysis of documents, which represented data gathered from across a decade of the organization's existence.

In addition to methods of triangulation, member checks were used as an additional strategy for validation. According to Anney (2014), "researcher(s) are required to include the voices of respondents in the analysis and interpretation of the data. The purpose of doing member checks is to eliminate researcher bias when analyzing and interpreting the results" (p. 277). The author also noted that the "member checks strategy involves establishing structural corroboration or coherence, i.e. testing all the data to ensure that there is no internal conflict or inconsistencies" (Anney, 2014, p. 277). In this study, member checks were performed to ensure the accuracy of the findings. Feedback from participants was then accounted for and incorporated into the study.

Results

While an extensive summary of the study's results is outside the scope of this methods-focused article, a brief overview will be provided with the aim of demonstrating how the data analysis and coding process led to the creation of tables and the emergent theory.

The media arts education study described in this article set out to determine how leadership impacts the success of inclusive media arts programs, and though the findings of the study related directly to leadership in inclusive filmmaking, disposition was found to be

the most significant, active catalyst, as it emerged in various ways across most themes. The Theory of Dispositions in Filmmaking was developed as the emergent theory to illustrate how dispositions impacts the leadership of a successful inclusive filmmaking program. The Theory of Dispositions in Filmmaking also suggested how dispositions may impact exclusionary practices in filmmaking. Disposition was found to be a common dimension across all major themes that emerged from the data. The research also found significant relationships between and among major and minor thematic categories.

Eight thematic categories emerged from the data during the coding process, which included inclusive leadership, dimensions of filmmaking culture, inclusive filmmaking practice, purpose, transformation, barriers, success, and diversity. Of those categories, the four major themes identified were inclusive leadership, dimensions of filmmaking culture, inclusive filmmaking practice, and purpose. Those four were identified as major themes due to the pattern of emergence and their pronounced relationship with one another. Axial codes from each of the major themes (specifically, inclusive dispositions, inclusionary culture, dispositions, and mindset) revealed a common dimension of dispositions across categories, which was significant to the development of the emergent theory. The findings also revealed the minor categories of transformation, barriers, success, and diversity, which were strongly connected to the major themes and likewise served to reinforce the theoretical findings. Table 1 illustrates the major thematic categories and identifies the axial codes for each selective code.

Table 1

Major Thematic Categories

Axial code	Selective code
Servant leadership Inclusive dispositions Inclusive purpose Strengths-based teams	Inclusive leadership
Inclusionary culture Exclusionary culture	Dimensions of filmmaking culture
Process vs. product Dispositions External values Internal values	Inclusive filmmaking practice
Mindset Impact	Purpose

Tables were created for the major thematic categories, as shown in Table 1, as well as for the minor thematic categories found in the study. Additionally, tables were created for each individual thematic category, identifying a sample of *in vivo* and open codes, axial codes, and selective codes. For example, Table 2 offers a sample of open codes related to one of the major thematic categories: inclusive filmmaking practice.

Both Table 1 and Table 2 are taken as samples from the author's Ed.D. dissertation, *The Theory of Dispositions in Filmmaking and Leadership* (Kristjansson-Nelson, 2020).

Table 2

Thematic Category: Inclusive Filmmaking Practice

Open codes	Axial codes	Selective code
How a film is made Open film set Behind-the-scenes practices Authentic casting Representation Flexibility	Process vs. Product	Inclusive filmmaking practice
Embraces people Opportunity Overcoming judgement, bias, stigmas, and low expectations Open mind Community Clear expectations	Dispositions	
Shifting perspectives Authenticity	External Value	
Students' pride in creating Access and accessibility Inclusive perspective Autonomy	Internal Value	

These tables are the result of the data analysis process previously described; moving from writing memos and identifying open codes, to grappling with the properties and dimensions of axial codes, and finally landing on a selective code. Across the data, disposition came up repeatedly, whether surfacing as an open code, or revealing itself as a property of an axial code. Disposition was omnipresent, and therefore became the focus of the emergent theory.

Discussion

The themes, narrative, and data visualization that resulted from the study tell the complex story of how leadership can impact the success of an inclusive media arts education program. While an extensive discussion of the study is outside the scope of this methods-in-practice article, the findings offer a starting point for additional research and a framework from which education leaders can begin work as they meditate on their own dispositions and practices in both leadership and media arts. In other words, The Theory of Dispositions in Filmmaking is a starting point for additional research.

As a methodology, grounded theory allows researchers to deepen their field of study and develop theories where few may exist. This article was written in the spirit of sharing methods of practice to encourage additional theory development in the intersecting fields of media arts education and education leadership, and to demystify grounded theory practice for those interested in taking the leap and trusting the process.

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