Rhizomatics: Following the roots in writing and research heuristics

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Abstract

Mobile Internet-based technologies have created the opportunity for many students to view writing and research as an everyday activity. While many students use these kinds of technologies on a daily basis in and outside of the classroom, not many writing pedagogies reflect this shift or capitalize on how beginner writers use them to effectively write and research within the academic institution. In this paper, I will use Dave Cormier's (2008) concept of a rhizomatic model of education to provide beginner writers with a sequence of heuristics for researching and writing using various mobile technologies. I propose teaching beginner writers in workshop-discussion settings, using their own mobile technologies in learning how to research and write. To support this approach, I will develop a sequence of heuristics based on Cormier's description of a rhizomatic approach to education, where "knowledge can only be negotiated, and the contextual, collaborative learning experience shared by constructivist and connectivist pedagogies is a social as well as a personal knowledge-creation process with mutable goals and constantly negotiated premises" (Cormier, p. 1). In order to explain a rhizomatic method to teaching research and writing to beginner writers, I will use the setting of the composition classroom. Rhizomatic heuristics will involve an initial sequence of heuristics that beginner writers can use to start their research, as well as provide a second more complex sequence of heuristics for them to use as they research and write.

Research and writing includes discovering and creating new knowledge. In the academy, many theorists and practitioners have attempted to provide insightful and creative approaches in the form of writing heuristics. Examples of these heuristics come from the fields of rhetoric and linguistics, specifically in the form of Kenneth Burke's dramatistic pentad and Kenneth L. Pike's tagmemics theory. While many of these innovative approaches have contributed to the field of composition and writing studies, they have foundations in traditional notions of writing and research strategies and tactics. In many cases, these approaches view writing as an individual and sometimes a solitary act. However, in our technologically advanced world, information, knowledge, and communication move differently, if not more quickly, which calls into question these traditional notions of how we view writing and research.

Dave Cormier (2008) describes a "rhizomatic model of education" as a place where "knowledge can only be negotiated, and the contextual, collaborative learning experience shared by constructivist and connectivist pedagogies is a social as well as a personal knowledge-creation process with mutable goals and constantly negotiated premises" (Cormier, p. 1). He borrows the word "rhizome" from Deleuze & Guattari's (1987) use of the term in *A thousand plateaus: Capitalism and schizophrenia*. The concept of a rhizome, Cormier states, provides a "flexible conception of knowledge for the information age" (p. 1). Within this theoretical framework, Cormier holds the perspective that "knowledge can only be negotiated" and that learning is a "contextual, collaborative" endeavor (p. 1).

Cormier's description of rhizomatic model of education is important for the field of rhetoric because it provides a possible framework in which contextualized learning and meaning-making is encouraged. The description that Cormier provides tends to lend itself to knowledge-building and knowledge-constructing using technology, such as web-based programs. Ramona

Fernandez (2001) states, “A rhizome is an unlimited and infinitely expandable territory” (Fernandez, p. 82). Similar to Cormier, Fernandez’s description of a rhizome also suggests more of a web-based style of learning and writing. Expansion and reapplication of these theories can influence the way in which composition instructors teach research and writing.

The idea of a “rhizomatic” approach to writing instruction is a complex notion. The complexity exists in theorizing the concept of a rhizomatic approach to teaching writing because writers not only have to negotiate the knowledge they find and create, but they also have to strategize how they will shape and re-shape that knowledge. While rhizomatic writing and researching heuristics follow a general sequence of steps, they serve the purpose of encouraging writer-researchers to (1) fully explore all possible perspectives of an issue, problem, or topic, (2) use all possible networks, something I will call “nectworks,” which is the fusion of “connected networks,” to explore multiple perspectives through discourse as well as develop their own perspectives and discourses concerning an issue, problem or topic, and (3) to create a narrative from these multiple perspectives for an audience to make up their own mind about what action should be taken.

This paper combines concepts from Kenneth Burke’s dramatistic pentad and terministic screens, Bakhtin’s perspectives on language and dialogue, and Kenneth L. Pike’s tagmemic framework. It also uses Cormier’s notions of social constructivist and connectivist pedagogies, which view learning as a negotiating process within a contextual and collaborative framework. For the purposes of this research, I will use Cormier’s concept of a rhizome and apply it to a set of heuristics to teach writing, which I will call “rhizomatics,” or a “rhizomatic method.”

The need for rhizomatics heuristics

Technologies such as laptop computers, iPads, iPhones, as well as access to wifi Internet

have allowed many beginner writers the opportunity to experience writing and research from a whole other perspective. In a sense, technologies such as these have become commonplace in and outside of the classroom. Ferris (2002) claims that there are "oral characteristics [that goes] into electronic writing" (Ferris, 2002, p. 1). Ferris' argument is situated around the concept that electronic writing, similar to the concept of "orality," is more "fluid" (Ong, 1982; Ferris, 2002, p. 1). Words are no longer "fixed" or confined to interpretation, but are viewed through a communicative and "interactive" lens rather than a textual one (Ferris, p. 1). Grigar (2007) claims that new media—computer-medicated discourse—allows the writer more agency by being a "creator of knowledge" (Grigar, p. 215). Grigar cites Roland Barthes' "write aloud" as a way of communicating (p. 215). Grigar seems to be placing emphasis on certain aspects that electronic (or digital) writing shares with oral communication.

Electronic communication through the Internet, such as emails, chartrooms, and interfaces such as Facebook, Twitter, and MySpace, have somewhat altered how people view and create meaning and knowledge in their world. A recent study in England and Scotland determined that almost 60% of adolescents surveyed believe that computers "allow them to be more creative, concentrate more and encourage them to write more often" (Clark and Dugdale, 2009, p. 4). Another survey revealed that 93% of adolescents 12-17 and 93% of young adults 18-29 year-olds are online using some sort of social networking site (Lenhart, Purcell, Smith, & Zickuhr, 2009, p. 5). Others have indicated a need for a "new pedagogy" to emerge that incorporates social networking sites and new media richness levels of instruction in elementary and junior high school levels (Pascopella and Richardson, 2009, p. 2). This trend in social media has created areas of research interest new media writing and use of web-based programs.

Lenhart, Arafeh, Smith, and Macgill's (2008) survey on how technology effects teens' attitudes toward writing found that 15% of teens claim that "internet-based writing of materials such as emails and instant messages has helped improve their overall writing while 11% say it has harmed their writing" (Lenhart, Arafeh, Smith, & Macgill, p. 10). However, 73% of teens claimed that using the Internet and/or computers has made "no difference to their school writing" (p. 10). Lenhart et al. also found that 57% of teens agreed that "when they use computers to write they are more inclined to edit and revise their texts" (p. 10). While the survey results conducted by Lenhart et al. yielded positive results for teens revising their writing when using computers, there is still the question of what types of programs are being used as well as how those programs can be incorporated into the classroom.

Developing rhizomatic writing and researching heuristics

The concept of "languaging" problematizes traditional notions of how beginning writers go about researching and writing. In order to be an effective writer one must also be an effective researcher. In our current paradigm, many theorists and instructors share the common view that research and writing should co-exist in the teaching of beginner writers. The emphasis on teaching beginner writers how to research *and* write is evident in many first-year writing programs' curriculum around the country, and has been the case for many years now. For the purposes of this research, I would like to shift our perspectives away from teaching writing in standard classroom settings to holding less traditional writing workshop courses.

Shifting our perspective to a rhizomatic model involves re-evaluating and eventually re-designing many current writing curriculums. However, reshaping the writing classroom into a workshop-discussion environment involves more than just using technology to create a hybrid space or allowing in-class time for writing and researching. Writing classrooms that incorporate

rhizomatics involves beginner writers applying a series of strategies while the instructor acts as a guide or facilitator. The workshop-discussion setting would involve the use technology and collaboration between beginner writers during the researching and writing processes. My definition of a "workshop-discussion" setting involves having beginner writers learn how to use various technologies to conduct research and write. A workshop-discussion course within this design would involve a mixture of explicit instruction on how to use physical and technological networks effectively for research purposes, as well as allowing beginner writers to actually practice and develop their research methods. This does not necessarily mean that writing should be taught in a computer classroom, rather that instructors should encourage their students/beginner writers to bring and use their mobile technologies to class in order to conduct research and write.

My goal here is to create a set of heuristics for instructors and beginner writers to use during the whole process of an assignment that involves research and writing. The concept of "nectworks" or "nectworking," the act of connecting ideas through multiple networks, information, discourse, and knowledge together through various networks for writing and research purposes, is an important factor in implementing rhizomatics. In the next section, I will describe an in-class assignment and discussion that instructors can use in order to understand what role nectworks and nectworking play in rhizomatics.

Constructing, creating, and using nectwork pathways/patchways

"Nectworks" are physical and technological communities. We interact with various nectworks on a daily basis. There are three different kinds of nectworks. Primary nectworks are ones that we interact in more than two or three times a day. Secondary nectworks are ones we create a connection to from our primary nectworks and interact in at least once a day. Tertiary

nectworks are ones that we learn to use for educational or professional purposes and usually only use in those kinds of settings. By interacting with these various nectworks, we establish a certain kind of ethos, lines of credibility, between them that helps to describe us as active participants in those communities as well as how others perceive us within those communities. In order to understand better the significance of how these various nectworks connect and are relevant to our daily lives, we need to ask ourselves these questions (I also provide possible responses):

- How do we choose the nectworks in which to participate? –Through interests and preferences
- How do we participate within these nectworks? –By connecting and communicating with others within our nectworks, sharing our thoughts and ideas
- What rules do we have to follow in our nectworks? –We follow the parameters set within that community through tradition, we constantly push against and slowly change the rules
- How do these nectworks relate to one another? –They relate to one another through us and our interests, desires, goals, and motivations
- What do we gain or learn from by interacting within these nectworks? –We gain multiple perspectives and views within a community and learn how to negotiate and collaborate with others who share our ideas and values

Beginner writers are required to write a reader response about the discussion above, including the questions and answers. This will be completed during class time and we will be having a discussion on the reading responses. The reading responses must display beginner writers' reflections on the discussion, questions, and answers presented above.

Creating nectwork/patchways for research

Nectworks create research pathways and opportunities. Depending on what we are researching, nectworks can be valuable in locating information for research purposes. How do we establish nectwork pathways for research purposes? There is three ways to create these nectwork pathways. The primary pathways involve using physical and technological nectworks that we are familiar with in are personal lives, these nectworks are our "go-to" places that we are conformable with accessing. The secondary pathways involve creating new physical and

technological nectworks to access information for research purposes, these nectworks develop out of our primary nectworks. The tertiary pathways involve the physical and technological nectworks we learn to use for educational and professional research purposes. To understand better why we use the nectworks we do to research, we need to ask ourselves these questions:

- What are our nectwork "go-to" places to start research?
- How do we start our research process using these "go-to" nectworks?
- How do we use other nectworks when researching?

Beginner writers are required to answer the three questions above. In answering the questions, they may provide their own personal examples and practices as researchers. Answers must display beginner writers' reflections on the reading above as well as their own thoughts on using nectworks to conduct research.

Using nectwork pathways effectively

Below is a sequence of possible heuristics, a technique for problem solving, to consider when using nectworks to conduct research. *Beginner writers are required to reflect on the heuristics listed below and write a reader response as to how they believe they will work when conducting research.*

1. *Notion* (general knowledge or understanding – the seemingly "great idea")
2. *Assumption* (questionable knowledge – the humbling of the "great idea")
3. *Generalization* (biased knowledge – the revealing of the "substantial idea" beneath the "great idea")
4. *Conceptualization* (focused knowledge –the narrowing of the "substantial idea")
5. *Reflection* (critical knowledge –the analyzing of the "substantial idea")
6. *Legitimization* (evidential knowledge –the constructing of the "invested idea" by interpreting and re-interpreting the knowledge surrounding the "substantial idea")
7. *Operationalization* (usable knowledge –the refining of the "substantial idea" into the "invested idea")

These heuristics borrow from Pike's tagmemics, especially in the notions of eticity and emicity, or insider-outsider movement.

Rhizomatic heuristics I: In the composition classroom

Sondra Perl (1991) claims that there is a "forward-moving" aspect when a writer makes "backward movements" (Perl, p. 116). In many ways, the "recursive movements" writers make as Perl describes them does not strictly follow a vertical, or "arboreal," pattern. Instead, recursive movements in writing and researching can lead down new and unexpected pathways. In order to create a sequence of possible steps that writer-researchers could sue, I will use Kenneth L. Pike's tagmemic framework and concepts of eticity and emicity. Pike's tagmemic approach to writing heuristics suggests moving from a general, or surface, understanding of text to a more complex understanding of it or vice versa (from Dr. Bruce Edward's website, *Tagmemic Discourse Theory*). Tagmemics emphasizes the use of "eticity," outsider objectivity, and "emicity," insider subjectivity. Pike's heuristics seek to create an expert on a topic or within a discipline.

In many ways, these research and writing movements that Pike suggests are hierarchal, linear, and not necessarily dialogical because they operate to some degree on the assumption of binaries or opposites. Although there are certain instances when it might be possible for other perspectives to develop, the heuristics themselves do not emphasize them. From a rhizomatic perspective, however, individuals can use the heuristics as a "re-tracing" of a dialogue or discussion, where new perspectives are developed but are open for new lines of dialogue or for new perspectives to develop. The heuristics below create a horizontal movement in the construction of knowledge. While the heuristics are presented in a sequence of steps, the metalogic behind it is constructed through metadiscourse, the combining of ideas, information, and knowledge from various individuals and nectworks:

- *Action (one)* – What is the idea, issue, problem, topic, or research question?
    - *Action (two)* – The writer-researcher could also start with an "artifact," a human created object, such as book, movie, song, piece of artwork, etc.

        - The writer-researcher would locate an artifact and find a message(s) in it, or make a connection to an larger issue, problem, or topic
        - The writer-researcher would then analyze the artifact and develop a research question(s)

- *Interaction* – Who has been or is participating in the discussion on this idea, issue, problem, topic, or research question? What have they said about it?
    - If we need to: Pause, Reread, and Re-trace back to the beginning idea, topic, or question

- *Introspection* – What do we personally think or feel about an issue, problem, or topic? How should we enter into an ongoing discussion? How do we make "a relationship to relationships" with what is being said?

- *Examination* – When should new ideas or new perspectives on existing knowledge be discussed?
    - If we need to: Pause, Reread, and Re-trace back to introspection to *determine* how the ongoing discussion will best serve the new perspectives or new knowledge and which individuals in the discussion would be effectively aligned with these new perspectives and new knowledge

- *Reflection* – Why should new ideas and new perspectives on existing knowledge be discussed? How do these new ideas and new perspectives on existing knowledge create new knowledge?
    - If we need to: Pause, Reread, and Re-trace back to examination to analyze the previous perspectives and existing knowledge to determine what level of participation we should play in this discussion, and how can we use our nectworks as places of knowledge for research purposes

- *Anticipation* – Where should these new ideas and new perspectives on existing knowledge lead us in order to create new knowledge?
    - If we need to: Pause, Reread, and Re-trace any of the previous steps to figure out if the sequence that we are producing addresses what we feel it should be addressing or that it is following the direction we want it to

- *Narration and Remonstration* – How should these new ideas, new perspectives on existing knowledge, and new knowledge be written for an audience?
    - If we need to: Pause, Reread, and Re-trace any of the previous steps to figure out if the sequence that we are producing addresses what we feel it should be addressing or that it is following the direction we planned

In the next section, I will continue to explain each stage of the heuristics. In doing so, I will explain how concepts from Kenneth Burke's dramatistic pentad, Bakhtin's theory of dialogue

and utterances, bell hooks' concepts of language-discourse, and Arabella Lyon's discussion on the use of remonstration within the ancient Chinese culture apply within a rhizomatic method.

The rhizomatic method

In this section, I will discuss a sequence of eight steps that writer-researchers could use when engaging in research and writing activities. Although framing rhizomatic heuristics as a sequence of logistical research and writing strategies suggests a kind of linear movement, there are also the in-between "pausing, rereading, and re-tracing" activities that allows the writer-researcher to jump back and forth as well as create new pathways to follow during the researching and writing processes. This non-linear sense of movement(s) in the acts of researching and writing allow the writer to experience the complexities of these activities in a more structured way.

Action

This stage involves asking questions about an issue, a problem, or topic and then initial research to see if those questions have been addressed. The action stage involves or borrows from Kenneth Burke's concept of "act" (Burke, 1945, p. xv). However, rather than just focusing on what took place in a certain situation, in a rhizomatic sequence, action also involves the participants and what they have said within or about that situation. This stage also employs Burke's notion of a "terministic screens" in order to sift through the information and knowledge about an issue, problem, or topic (Burke, 1963-1964, p. 511). During this stage, the writer-researcher first starts to explore the nectworks, information-storming and clustering, that they have access to and communicate within on a regular basis.

Action through an artifact

The writer-researcher locates artifact, a human created object, such as a book, movie,

song, etc. and then starts to look for a message(s) in it. The reason for starting with an artifact rather than just a random issue, problem, or topic is to give the writer-researcher some context. Essentially, by starting with an artifact that the writer-researcher can almost instantly identify with helps to contextualize a certain message(s) that is in the artifact. However, this does suggest that there must be a message(s) in the artifact that the writer-researcher has to identify. While one of the dangers in this approach might be in enforcing certain stereotypes within an artifact, the writer-researcher would need to address this assumptions or stereotypes by asking questions, seeking ore perspectives, or conducting research on the message(s). Once again, this stage employs Burke's idea of terministic screens. This stage also borrows from Burke and Bakhtin's concepts of how the reader interacts with a text. However, the "text" implies more than just a written document, but also includes visual and audio creations. Here is a possible sequence to follow in this approach:

- *Step 1: Locate an Artifact* – (i.e. song's lyrics, clip from a movie, part of a book, a piece of art, etc.) *Analyze, summarize, and interpret the artifact*:
    - What is the artifact? When was it created? Who created it?
    - Is there any social or historical significance to the artifact? Explain.
    - What is the song's lyrics, movie clip, part of a book, piece of art, etc. about?

- *Step 2: Locate and Describe the Message(s) in the Artifact*
    - What are the message(s) in the artifact?
    - How are the message(s) significant or important?
    - How is this message(s) viewed within society? Explain
    - Is there an argument in your messages(s)?

- *Step 3: Start Formulating a Research Questions(s) about the Message(s) from the Artifact*:
    - If you pose a question in the beginning of the analysis, then you will be expected to answer it in the analysis
    - You may pose rhetorical questions toward the end of the analysis, leaving them for the readers to answer or research for themselves
    - You may also pose an argument based on the message(s) you located in your artifact

- *Step 4: Research and Analyze the Research Question(s)*

    - Yes, you will need to locate and use secondary sources (i.e. websites, journal articles, newspaper articles, books, etc.) and use information (i.e. direct quotes, paraphrases) in your analysis
    - Don't forget the artifact! Remember, you can use scenes, quotes, etc. from your artifact as examples throughout your analysis
    - Please remember to cite your sources

- *Step 5: Conclusions*
    - You may state an argument if your analysis
    - You may also restate what it is that you said in the analysis

Interaction

This stage involves locating or identifying certain individuals who are discussing the issue or problem, as well as discussing it with other individuals within a community. While this stage seems as if it is a continuation of the action stage, there is more focus on locating *who* has said what about an issue, problem, or topic. However, this stage includes more than just "reading around," but also suggests or encourages asking individuals within a community about the issue, problem, or topic, borrowing from Bakhtin's concept of "dialogue," where verbal interaction is important in the development of new ideas, knowledge, or word meanings (Voloshinov, p. 1973, 95). In many instances, the creation of new nectworks occurs during this stage.

Introspection

In many ways, this might be the most difficult stage. Introspection in this case means that the writer-researcher has to identify and understand how they personally feel or what they personally think about the issue, problem, or situation. Adolfo Perinat discusses the importance of humans making "a *relationship of relationships*: the relationship between the symbols which, on another level, are relationships between symbol and symbolized" (Perinat, 2007, 160). This stage's linguistic significance considers important factors such as race, ethnicity, gender, age, and culture. These multiple lenses influence how, why, and what someone chooses to research and write about, as well as how the writer-researcher perceives an issue, problem, or topic. While

there is no clear demarcation between each one of these stages, the sequence helps the writer-researcher "move around" effectively in the discourse.

Examination

This is the first stage of interpretation on the information and discussion on the issue, problem, or topic. Burke's concept of screening plays an important role in this stage, allowing writer-researchers to scan and filter the information they are acquiring from their multiple nectworks. The interpretation will involve introducing new ideas, new perspectives on existing knowledge, and new knowledge about the issue, problem, or topic. At this point in the sequence, the writer-researcher can start pausing, rereading, and re-tracing any of their steps or nectworks. The writer-researcher is to examine thoroughly the discourse produced on an issue, problem, or topic. The writer-researcher not only examines the information and knowledge portrayed in various sources, but also how the discourse of those sources relate to other sources that discuss the issue, problem, or topic from a similar angle or perspective.

Reflection

The second stage of interpretation involves reflecting on the new perspectives on knowledge, and how new knowledge that has been introduced to the issue, problem, or topic. During this stage, the writer-researcher could question or analyze the terministic screens in which they have employed in their writing and research strategies. Pausing, rereading, and re-tracing is important during this stage because it involves the writer-researcher to reflect not only on the information or knowledge, but also on the nectworks they used and the discourse used within those nectworks.

Anticipation

The third stage of interpretation involves deciding where the new perspectives on existing

knowledge, and new knowledge should lead. Once, again, this stage involves pausing, rereading, and re-tracing over the information and knowledge gathered on an issue, problem, or topic. During this stage, the writer-researcher also considers anticipating questions or other perspectives.

Narration and remonstration

This stage involves deciding how the new ideas, new perspectives on existing knowledge, and new knowledge should be written. The concept of narration borrows from Bakhtin's heteroglossia and hybrid utterance (Voloshinov, p. 90-95). In essence, narration means bringing together the various perspectives, multiple voices, discourses, knowledges together for the writer-researcher's purposes. In doing so, the writer-researcher can start shape the discourse, knowledge, and perspectives for their own purposes. As for the remonstration part of this stage, Arabella Lyon (2009) describes it as the act of showing "something" and then "[t]hose who see it are free to interpret it, heed it, repeats it, or ignore it" (Lyon, p. 140). The audience decides on the level of importance or usefulness of the information, knowledge, or perspectives in addressing a certain issue, problem or topic. Essentially, once the information, knowledge, or perspectives are presented in the narration, the audience is left to make up their own minds on what action should be taken. The writer-researcher does not engage in narration and remonstration separately but simultaneously.

Using rhizomatics heuristics in the composition classroom

In this section, I will explain a general application of rhizomatic writing heuristics in the composition classroom. A possible scenario or sequence in applying the heuristics could go as follows:

Action one

Sara starts with an idea, topic, or a research question and then starts pre-researching it, using the Internet, books, journals, etc. or even discussing it with her neighbors, classmates, teachers, writing down information as she goes (i.e. "reading around," asking questions).

Action two

Sara starts with an artifact, locates a message(s) in it, and starts to analyze and interpret this message(s). She will also start to develop a research question(s) based on that message(s).

Interaction

Sara starts to locate individuals in her pre-researching, creating nectworks on what these individuals have said about her idea, topic, or research question, possibly creating categories on who has said what about it or by what perspectives they have on it.

Introspection

After Sara has a feel for what is being or has been said about her idea, topic, or research question, she can start to decide where to enter her own ideas, thoughts, and perspectives on it in the discussion.

Examination

Once Sara starts to develop further her own perspectives on her idea, topic, or research question, she starts to interpret the existing knowledge on it, possibly synthesizing certain individuals' perspectives together, noting their similarities and differences.

Reflection

While Sara is synthesizing various individuals' perspectives together on her idea, topic, or research question, she might start to analyze them, by what they have said or the concepts they present.

Anticipation

After Sara finishes analyzing various individuals' perspectives, she can continue to formulate her own perspective, by adding on to other perspectives, presenting a new perspective, creating a new framework in which to view other possible perspectives, etc.

Narration and Remonstration

Sara then has to decide how she will write out her new perspective; she will have to select a genre or format and possibly the medium in which to create it. Sara has to decide how she will engage with her audience once she presents her new perspective; how will she go about creating a persuasive dialogue where her audience can receive her new perspective and then be allowed to decide how to respond to it.

Rhizomatics II: In the composition classroom

The writing and research heuristic sequence described above is designed for the composition classroom. While the heuristics are descriptive, I feel that they are limited to the composition classroom. With the assistance of Dr. Helen Foster from the Rhetoric and Writing Studies Program at the University of Texas at El Paso, we developed the writing and researching heuristic sequence below. This sequence of heuristics listed below is designed for a possible methodology for beginner writers in the composition classroom:

- *Invention* – Ideas stemming from curiosity or imagination about something, such as a question, topic, practice, theory, or a specific aspect, such as variable. These are the initial questions of inquiry. dissonance (felt and/or intellectual)

- *Question of Inquiry* - So what? How will an answer to this question contribute to your community's thinking/practice?

- *Location and use of theory(ies)* – When doing research we need to look at the different ways in which the theories are defined or used in previous studies or in the application of a practice(s); we also need to address our assumptions of these theories and the assumptions that have been addressed in those theories; we also need to address how these theories speak to the practices they influence. Questions we could consider:

  - What are the variables these theories examining or addressing?
    What kinds of definitions or descriptions are used to define key terms or variables?
  - How will we organize these theories for the way in which we want to frame them for our purposes?
  - How critical should we be of these theories?
    How can we articulate these theories in our research to make them effective for our purposes?
  - How have other communities, outside of the ones you know, have used or described these theories?
  - How does/should the researcher's situatedness (space/time/context) impact, affect, or influence methodology design?

- *Asking of more questions* – Question(s) that address our assumptions and challenge the theories. Questions we could consider:
  - Have these questions been asked before?
  - How have they been asked?
  - What theories have been used to address these questions?
  - What methodologies have been used to answer/address these questions?
  - What kinds of variables are being addressed or examined?
  - What is the researcher's theory regarding reality? discourse? subjectivity/agency? epistemology? Is the researcher's theory (assumptions) consonant with that of the methodology?
  - If not, can the methodology be re-articulated and still elicit pertinent answers to the questions of inquiry?

- *Development and use of a methodology(ies)* – These methodologies help us to answer or address our questions and assumptions of practices and theories. Questions we could consider:
  - What kinds of methodologies can we incorporate in helping us answer or address a question(s)?
  - Should we develop our own methodology(ies)?
  - If we combine different methodologies, how can we make sure that the methodologies we use address the same set of assumptions we are questioning?
  - What kinds of variables are we addressing or examining in our methodology(ies)?
  - If conducting experiments, what kinds of instruments can we use of previous studies to measure phenomena?
  - Should we create our own instrument(s)?
  - If we combine methodologies, how can we ensure that the resulting methodology is based on a coherent set of assumptions (see above 2 categories), rather than competing ones?
  - Should we be obliged to argue for the efficacy of our given/created methodology?
  - Is there a "fundamental" frame that any methodology ought to factor, given our situatedness within a community? difference? power?

- *Interpretation and analysis of the data* – The interpretation and analysis of the material or data we collect should help to create a new perspective(s) or give rise to new theories. Questions we could consider:
    - How are these perspectives or new theories different than previous ones?
    - What are the assumptions that are still not addressed in these new perspectives or theories?
    - Do these new perspectives or theories give rise to new assumptions?
    - Do these new perspectives or theories give rise to new questions?
    - What limitations affected this research process?

- *Conclusions* – Based on the theories, methodologies used, data/material collected and analyzed, and what new perspectives or theories that come out of that … so what? Why and how is this research endeavor important to your field of study or other fields? Upon what should future inquiry about this now focus?

While the sequence of heuristics listed above seem to contain complex questions and terminology, instructors could use some of the workshop-discussion time to explicitly teach and have discussions with beginner writers about them.

Discussion

Writing studies needs a rhizomatic approach to writing and researching heuristics. One of the reasons why writing studies need a rhizomatic approach to teaching writing and researching strategies to beginner writers is because of the increasing use and accessibility many of them have to various kinds of technologies. Rhizomatic heuristics focus on elements such as how to use strategically reflection and negotiation during writing and researching, as well as the relationships between the discourses and perspectives on a particular issue, problem, or topic. While the first set of rhizomatic heuristics is designed for the composition classroom, the second set of rhizomatic heuristics involves a different sequence of steps and strategies for the writer-researcher. The second set of rhizomatic heuristics involves complex overlapping steps that help the writer-researcher consider the multi-perspectives within contexts, discourses, and research methods.

Another important aspect in rhizomatic heuristics is the notion of nectworks. The nectworks include not only those beginner writers are introduced to in the classroom, but also those that they interact and bring with them as well. These nectworks provide the discourse that the writer-researchers, as well as how that discourse helps to shape the knowledge and the perspectives of certain issue, problems, and topics. The sequence of steps presented here is designed to provide beginner writers with writing and research strategies. The pausing, rereading, and re-tracing element in the rhizomatic method emphasizes the recursive nature of writing and research. This recursive strategy allows the beginner writers to re-shape existing knowledge, perspectives, and discourse to fit their own purposes.

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