chapter 14*

Designing Stories:
A Storytelling Approach to Tutorial Videos

Julia Feerrar

Introduction

When did you last tell a story? Was it within the last hour? The last day? Maybe you shared an anecdote with a friend, read aloud to a child, used a story to explain something to someone else, or simply recalled a memory. We tell stories all the time—to those around us and to ourselves. We tell stories to connect, to convince, to share knowledge, and to make sense of our ideas and experiences.

Storytelling has framed much of my thinking around designing learning environments. I was a graduate assistant at the Undergraduate Library at UNC Chapel Hill when I taught my first library workshop. Feeling nervous and simultaneously over- and under-prepared, I clung to my supervisor's advice: "Just tell them the story of how you would approach their assignment." To do so meant imagining myself as a first-year college student, empathizing with common challenges or questions, and modeling my approach. I could do that.

Just as storytelling became my inroad to library instruction, it also served as a familiar guide when I began to incorporate instructional design into my

praxis. In the fall of 2013, a team of graduate assistants and librarians at UNC Chapel Hill's R. B. House Undergraduate Library began a project to reimagine our online tutorial videos in response to instruction program growth and curriculum changes. Storytelling framed both our video content and our instructional design process for this project. Drawing on the literature on narrative and learning, we chose to focus on a storytelling approach, building videos that use stories to explain and contextualize information literacy concepts. While I was a graduate assistant at UNC, we created two videos, the storyboard for a third, and a framework for future video development. Our first two videos addressed Developing Your Topic and Building Your Knowledge Base. This chapter will detail our process of video design, focusing particularly on our approach to analyzing and engaging with our learner audience, designing structure and content, and developing and implementing the first few videos in our series.

Problem to Be Addressed

In the fall of 2012, changes to the First-Year Writing program at UNC broadened the scope of collaboration between the Undergraduate Library (UL) and the Department of English and Comparative Literature. Previously, students with AP credit could waive or partially waive the introductory writing course sequence. But beginning in 2012, all entering first-years have been required to enroll in the newly merged English 105: English Composition and Rhetoric, which introduces students to college writing and research with a focus on writing in the disciplines.[1] Each section of English 105 is expected to engage with the library, presenting librarians at the UL with the familiar challenge of developing personalized learning environments in a model that is scalable to a growing number of class sections and students.

While English 105 research assignments share learning outcomes and general structure, instructors have flexibility in customizing their parameters and focus. Consequently, a one-shot library instruction session might focus on many different potential learning outcomes and might make sense at multiple points throughout the semester. Additionally, English 105 classes are taught by a high percentage of graduate teaching assistants, who collaborate with many of the library's graduate assistants. With many new instructors in the English 105 landscape, flexible teaching and learning support is all the more relevant.

With scalability and flexibility in mind, we assembled a small team to re-envision the UL's approach to creating tutorial videos. Our team, which initially included the User Experience Librarian, Undergraduate Experience Librarian, and two graduate assistants, sought to build a new set of learning objects that would engage students, complement classroom instruction, and apply to many

different learning environments. Our challenge was to figure out how to design videos that would be useful and engaging to a variety of audiences and to develop a design process that would account for high turnover among graduate student staff. While I would take the lead on creating our first two videos, we needed a process that future graduate assistants could continue.

Description of the Project

In line with the ADDIE model of instructional design—analyze, design, develop, implement, evaluate—the tutorial team began by analyzing the programmatic needs and goals that a new video series could address.[2] As we discussed our undergraduate audience and their instructors, two general approaches emerged. We could create specific, how-to tutorials that would be largely tools- or process-based. Alternatively, we could develop more conceptual videos that focus on *why* rather than *how*. While both are useful and can address important learning outcomes, we decided to prioritize the latter. The UL had a small collection of how-to tutorial videos already, and we worried about investing more time in screen-capturing interfaces that would soon change. We saw a need for two- to four-minute videos that would focus on explaining big-picture concepts related to research and information, a focus that we saw as addressing our need for highly flexible learning objects.

We were also excited about the idea of packaging our instructional content with short, engaging stories. We had been inspired by Lee LeFever's Common Craft explainer videos, which use stories to make complex concepts or processes more accessible to a broad audience. LeFever has described stories as a "human wrapper" for ideas.[3] Something about stories speak to the core of our humanity, so by "wrapping" or framing ideas with a story, we can make them more appealing and engaging.[4] Psychologists, neuroscientists, and educators agree: the human brain loves stories. Cognitive psychologist Daniel Willingham[5] asserts that our minds seem particularly tuned to understand and remember stories. Psychologists sometimes describe stories as "psychologically privileged," meaning that the brain treats them differently from other forms of information.[6] Stories may even influence brain structure. Berns et al[7] found that reading a novel may increase connectivity in the brain for multiple days after reading. As privileged forms of information with potentially long-lasting effects, stories can be a powerful way to engage learners. If we understand what makes stories effective, we can apply storytelling principals to our instructional design.

Perhaps most centrally, a good story fosters empathy and imagination.[8] Branaghan has described the empathy-inducing nature of stories as encouraging "self-reference," meaning that those listening, reading, or watching tend to look for similarities between themselves and the characters in the

story.[9] According to neuroscientist Paul Zak,[10] we connect with characters as they face conflict, recognizing that their challenges could be our own. When we make these connections, we are transported into the world of a character's experience and begin to simulate their emotions.[11] This simulation has physiological effects; Zak and his team[12] found that watching a dramatic narrative video increased the cortisol and oxytocin levels in participants' blood, changes that correlated positively with participants' empathy with characters in the video.[13] By telling a story with compelling characters that experience a conflict, we can invite learners to connect personally to the concepts at hand. As they connect with ideas through someone else's perspective, learners also get to see concepts in action. In this way, stories help to contextualize information, inviting learners to see the significance or application of the ideas involved.[14] A story can illustrate the importance of a concept—why it matters—as well as how to apply it.

The familiar structures and sequencing of stories also guide and engage learner attention.[15] In particular, the causal relationships between events in a story encourage readers or listeners to make connections and inferences, which in turn aid memory and comprehension.[16] Kim[17] found that stories are inherently interesting to the degree to which readers make inferences in order to understand them. Comprehending a story takes a degree of problem-solving that can hook learners through an appropriate level of challenge.[18] For librarians designing learning environments, stories can be a powerful way to engage learners in content and encourage deeper learning.

When approaching instructional design, especially the creation of a particular learning object, like a tutorial video or online module, stories are powerful beyond instructional content or methods. Storytelling can also be a useful tool or approach within the design process. Instructional designer Patrick Parrish has suggested that storytelling can be a "form of inquiry" or "a process of discovery for the teller."[19] Just as stories encourage learner engagement and empathy with characters, they can also help librarians imagine the perspectives and experiences of their learners. For example, Parrish drafted "design stories" to imagine the user experience of a learning object at many parts of the design process.[20] While writing a design story, the designer steps beyond her own perspective to imagine a particular learner interacting with the learning object.

Like Parrish, our video team used storytelling as a means to analyze and empathize with our audience. As a guiding framework, storytelling helped us to translate the ADDIE model to a more familiar process and vocabulary. *Analyzing* meant empathizing with our audience and then identifying a central conflict and characters that would appeal to them and address their learning needs. *Designing* involved structuring a story around that central conflict or problem and using storyboards and outlines to do so. During *development*, I selected software that would allow my team to tell our story. *Implementing*

and *evaluating* meant sharing the story and examining its impact. In these ways, stories became central to our approach to instructional design as well as to our content.

Audience Analysis and the Heart of the Story: Character, Conflict, Message

Instructional stories do not have to be complex or overtly dramatic to be effective. Within the context of a two- to four-minute video, a story need only include the most basic narrative elements: character, setting, and a plot that includes some kind of conflict or problem. This tension will hold your audience's attention and allow them to begin to empathize with your characters.[21] Depending on your needs and goals, a series of videos could follow the same characters or offer a variety. Those characters could even be the "you" of the audience. Videos could take place in the real-world setting of your college or university, or a metaphorical one.

As our team thought about the characters, setting, and central conflicts for our videos, we entered a more focused phase of analysis within the ADDIE model: analyzing our learner audience and instructional content needs for each particular video.[22] Seeking to foster empathy within our audience of undergraduate learners, we decided that each video in our series would follow Bob, a new undergraduate, as he and his friends encounter various questions and research-related conflicts in a college setting. We wanted characters and settings that would be easily relatable to our undergraduate audience and that would make sense for our conceptual content. We would draw our audience in further with second-person narration when we wanted to make explicit connections to their own experiences.

By aligning our central character with our audience, we united the process of analyzing our audience with our approach to developing the core of our instructional stories. Bob and his friends became stand-ins for our undergraduate learners and their information needs. To draft the structure of each video around Bob and his friends, I worked with the Undergraduate Experience Librarian to answer a series of guiding questions related to plot and conflict:

- What will this story be about? Based on the other learning objects we have, what general topic or concept is our next priority?
- What is the conflict? What are the common misconceptions or biggest challenges associated with this concept?
- What kind of action will the plot include? What are the tasks involved in putting this concept into action? What information and skills do learners need?

Answering these questions helped us to empathize with the experiences and needs of our imagined audience, much like Parrish's approach to design stories. As we drafted a central message and conflict, we also imagined the scenarios that would lead an undergraduate student or even a new instructor to use the videos. We attempted to craft messages that would respond directly to particular needs, common misconceptions, or challenges that our undergraduate learners tend to have.

For example, in our second video, we decided to focus on the idea of building background knowledge and further developing an initial research topic. We imagined that once students like Bob and his friends have some idea of what they want to research for a class project they may want to go straight for scholarly articles, especially if the assignment asks them to find a certain number of peer-reviewed sources. Underlying this impulse is the desire to get through an assignment quickly as well as the misconception of information sources as standalone objects. Unless Bob and his friends are already very familiar with their topics, they will benefit from taking some time to develop their knowledge and build an understanding of the context within which they will be writing. They will want to get to know some of the controversies, vocabulary, and people involved in their area of interest. Some of the concepts and skills involved in background research include identifying gaps in one's knowledge, framing questions, identifying information resources like news sources and encyclopedias, and developing a content-specific vocabulary for keyword searching.

These concepts and potential plot elements could easily expand to multiple stories in many different videos. In order to focus the content for one video, I continued to ask my teammates and myself: "What is the most central message we want to convey? What is the key tension that will hook our audience?" After multiple storyboard drafts and conversations, our design team settled on the idea that building your knowledge base means starting to listen in and participate in scholarship as a conversation. The conversation is the context that Bob and his friends will need to explore in order to build their background knowledge.

Designing the Narrative: Structure and Plot

After our team worked collaboratively to craft a central message, I then took point on designing and building the story around it. Lee LeFever's *The Art of Explanation*[23] provided an essential framework for translating the central message into a full instructional narrative. In his book, LeFever describes six elements that serve to "package" the stories in his Common Craft videos.[24] His videos begin with *agreement*, a broad, recognizable statement that helps to build the audience's buy-in from the beginning of the narration. Then, the narrative provides some *context*, which involves statements that move the agree-

ment to a specific "place," letting the audience know why it applies to them.[25] With *context* established, the central *story* puts concepts into action in a way that demonstrates progression or problem-solving. Throughout the video, LeFever incorporates *connections* in the form of analogies or metaphors, as well as *descriptions*, which provide more explanation about how things work. Finally, the narrative ends with a *conclusion* that offers action items for the audience.[26]

LeFever's framework allowed me to think through the implications of our core message, why it matters for an undergraduate learner audience, and how to approach illustrating it. For example, while outlining the *Building Your Knowledge Base* video, I had imagined starting with an *agreement* statement along these lines: Every piece of information is built on a conversation. But as I continued to write, I realized that this statement was part of the core message I wanted to illustrate, not a familiar starting point that would engage my audience. After some redrafting, the opening statement revolved around the broader idea of sharing information through conversations: People love to share ideas. Think about a time when you came across a new idea. One of your first instincts was probably to share it with someone else. By the time I had drafted some *descriptions* and a *conclusion*, I had a product that was very close to a script for the video narration (see Appendix 14A).

During the entire design phase for each video, I imagined general visuals for each idea and created storyboards to test their sequence and flow (see Appendix 14B). As I adapted the story outline to a full script, I imagined specific visuals, making sure that important words and concepts would be highlighted by corresponding images. In addressing this alignment of key concepts with clear visuals, I drew on Richard E. Mayer's principles for effective instructional media,[27] which include highlighting the most essential words or graphics, presenting corresponding words and pictures simultaneously, and also deleting extraneous words, sounds, or graphics.[28]

Figure 14.1
Research Roadblock

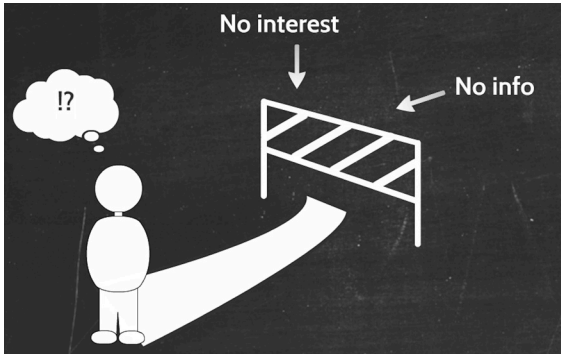


Figure 14.1 is an example image from our first video on *Developing Your Topic* that shows Bob getting stuck after he picks a topic in which he has little interest and minimal background knowledge. We used a visual metaphor—a roadblock in his research path—as well as text to emphasize the key ideas.

Developing, Implementing, and Evaluating the Videos

When thinking about the execution of the visuals of the videos themselves, our team had several important parameters in mind. Again, drawing on Mayer's principles, we wanted the visuals to support the narrative of each video without distracting from it. We wanted a clean, simple aesthetic. We also wanted to ensure that the look of the videos would be consistent, especially when new graduate students took on the project after I graduated and left the UL. We decided to use Prezi, the free presentation software, to build the visual elements of the videos. Prezi offers the benefits of built-in transitions, themes, stock images, and the flexibility to upload additional images. As a free, online tool, it would also allow us to collaborate fairly easily. We hoped that Prezi would jump-start our video development and provide easy mechanisms for visual consistency.

When we decided to use Prezi, we knew we would need software to capture and edit the visuals separately. We used QuickTime to capture the Prezis and then recorded the narration and edited the video in iMovie. Other software, such as Camtasia, may have offered more editing options, but the accessibility of this Mac-centered combination allowed us to easily create a consistent and reproducible set of videos. Videos on *Developing Your Topic*, *Building Your Knowledge Base*, *Recognizing the Potential in Your Search Results*, and *Starting Your Search in the Right Place* are available on the UNC Libraries website and YouTube Chanel.[29]

We took an informal approach to evaluating the videos, seeking feedback from librarians and course instructors, as well as beginning to incorporate them into our teaching. Though we developed the videos with first-year students in mind, liaison librarians at UNC were enthusiastic about sharing them with upper-level students as well. One liaison shared that he appreciated the simplicity, logic, and visual appeal of the videos and would be linking to them on his LibGuides. I have incorporated these videos into my own teaching in a few different ways. While still a graduate assistant at UNC, I used the *Developing Your Topic* video during a few one-shot workshops with English 105. In one section, students were preparing to write memos on infectious diseases, as if they were employees of the CDC. During class with me, they would use reference sources to build background knowledge on one or more diseases and identify a few potential focus areas for their projects. I showed the *Developing Your Topic* video at the beginning of class to introduce the series of decisions they would make as they explored information and refined their topics. As a very new instructor, the beginning of class was often hardest for me and the video helped me to set a more relaxed, engaging tone. The students seemed to understand and connect with the video, even chuckling aloud at some points.

The video also gave us a shared language from which to work during the rest of class. I drew on the metaphors included (paths and decision-making) in my explanations and activities. To reinforce the message of the video, I created a worksheet that asked students to identify several directions for their research and to record them on a drawing of a forked path.[30] This activity encouraged students to explore and consider multiple options before jumping into more in-depth research on the diseases they chose, and to generate more varied vocabulary for searching.

The conceptual, narrative qualities of the videos have indeed made them flexible to different environments. Since leaving UNC, I have used these videos (and those created at other institutions) to introduce concepts before a library instruction session in a flipped classroom model. In combination with an activity or quiz, watching a video before class in the library gives students a chance to process and contextualize before delving further.

Lessons Learned

One of the most challenging and interesting parts of the design process was defining the core learning goals for each video, which we framed as message, conflict, and main plot points. With only a few minutes per video, we knew we needed to be intentional about the central message and the language we used to illustrate it. We reflected deeply on the concepts we wanted to convey, finding that we needed to draft and redraft each story several times. We thought especially carefully about the implications of the metaphors we chose. For example, while working on the first video, we were careful to explain the idea of *developing* a topic rather than *picking* one. We did not want to illustrate topic development as a single selection of a pre-existing item, like shopping for the perfect pair of shoes or picking an apple from a tree. We wanted to emphasize the continuous choices that students need to make as they define and refine the scope of their projects, so we described that process as choosing paths toward a goal. I was surprised by how much time and thought went into the initial drafts of our scripts, but I valued the chance to reflect on my own approaches to information literacy and research.

Another learning curve we experienced involved incorporating feedback effectively and knowing when to stop revising. For the majority of our first videos, we came up with the overall vision and approach as a team and then I worked closely with the Undergraduate Experience Librarian on the majority of the design and development. I brought drafts and storyboards to the team for feedback, and we worked to incorporate feedback from outside the team as well. Although we could have continued to redraft each video and incorporate new ideas, eventually we had to commit to our designs and finish each

video. There are so many ways to tell a story. We probably finished each video with more potential ideas in mind than when we had started.

Adapting or Customizing this Idea

Good stories grab our attention, keep it by building tension and conflict, and then transport us from our current environment as we emotionally connect with characters.[31] As our team designed videos, these qualities framed both our process and our content. We worked to hook our audience and foster their empathy through recognizable scenarios and characters. To do so, we focused on our own capacities for empathy. To begin to adopt a storytelling approach to your own work, first think about storytelling as a model and process for design. When designing a video, module, or other learning object, begin with the most essential story elements in mind: plot, character, and setting. What are the key ideas that you want to illustrate? What is the central conflict related to those ideas? Reflect on the common misconceptions or biggest challenges involved in the concepts you want to convey. Analyze and empathize with your audience within the context of your institution, imagining them as characters that need to overcome the conflict you have identified. What information and skills will your audience need in order to be successful? Your answers to these questions will help you to develop a central message and learning goals.

With a message in mind, draw on Lee LeFever's framework to structure that content into a full instructional narrative.[32] Consider beginning with a broad statement to promote audience buy-in or *agreement.* Think about the *context* of that statement—why does it matter? Consider addressing your audience directly or perhaps developing characters and setting that will connect to their experiences. Incorporate *connections* and *descriptions* to illustrate the action of the *story.* Conclude in a way that encourages your audience to take action.[33] As you draft these elements, use storyboards to develop visuals that will support your message. You may find it easier to work on the sequence of the visual elements before getting into the specifics of the script, or you might choose to move back and forth between the two. Seek feedback and continue to reflect: What is the core message? Are the words and images contributing to that message?

There are also many applications of storytelling for teaching and instructional design that go beyond designing online learning objects. Perhaps you share a personal anecdote to illustrate a concept, use a storyboard to structure a lesson, or ask learners to engage in creating and sharing their own narratives. Stories can be essential when pitching an idea or structuring a conference presentation. Whether designing a short video or planning a longer face-to-face interaction, thinking through the characters, plot, and conflicts

relevant to your content can help you to engage your audience in more meaningful ways.

Conclusion

The first few times I encountered the idea of instructional design, I was intimidated. I felt overwhelmed by the reading and thinking I assumed I would need to do before I could engage with instructional design theories and practices. However, as I jumped into this video project, I found that I already had pieces of applicable approaches and tools. Even in my earliest attempts to tell good stories about research and information, I was keeping my audience of learners in mind and intentionally drafting learning goals in the form of message and conflict. For me, one of the most important parts of creating these videos was taking the time to reflect deeply on the concepts I hoped students would learn and why those concepts might matter to them.

Across learning environments, one of the major strengths that a storytelling approach offers is a focus on empathy. Through story, we can imagine the needs and experiences of our learners and to attempt to engage with them. In turn, a story gives our learners something with which to empathize and connect. Stories provide us with a shared language and shared context from which to explore further.

Appendix 14A: Building Your Knowledge Base Outline

Agreement: [broad statement, develops buy-in] People love to share ideas. Think about a time when you came across a new idea. One of your first instincts was probably to share it with someone else. Conversation is built on the exchange of ideas. It allows us to relate what we know, how we know it, and why it might matter to someone else. All kinds of people participate in conversations about particular ideas and they all take on different roles.

Context: [moves agreement to a specific place, lets the audience know why it matters to them] When you're looking for information, learning about something, or trying to answer a research question, what you really want to do is explore the conversations surrounding the relevant ideas.

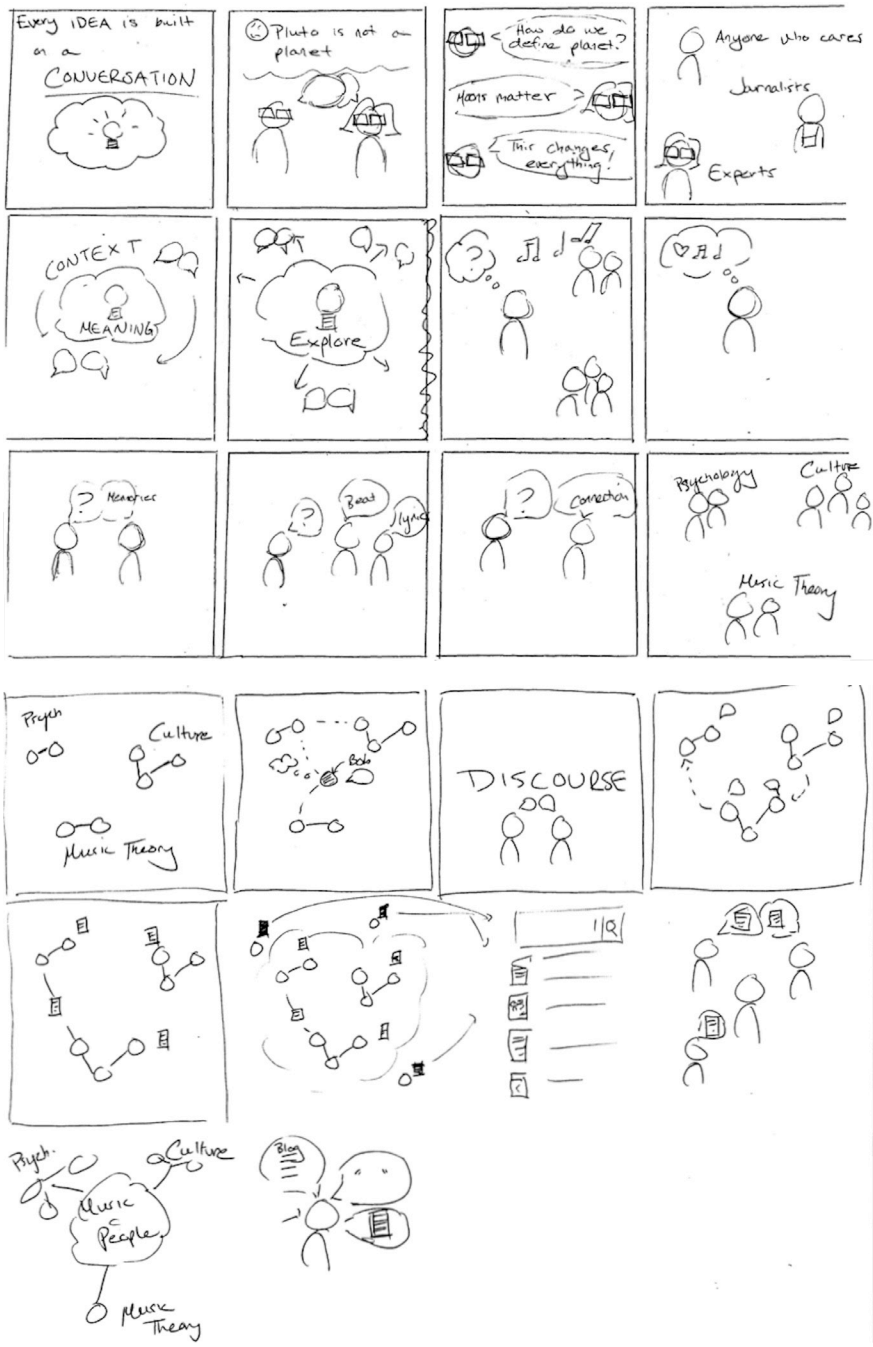
Story: [applies big ideas to a narrative] Bob is at a party. He notices everyone around him enjoying the music and he wonders: *Why* do *people love music?* Personally, Bob feels an emotional response to music, but beyond that he's not sure. He decides to ask what people around him think…[friends give different reasons]… As Bob asks more and more people for their opinions, he realizes there isn't one clear answer to his question. He also realizes that he can group his friends' answers together by different interests or emphases.

Connections: [analogies or metaphors] Bob's party is a good model for the conversation or exchange of information that goes on about any topic. We can think about the conversations relating to a broad topic as happening at a large party where people converse in groups and move around to form new discussions. Scholars, journalists, bloggers, and many others contribute to these conversations in different ways.

Descriptions: [focused more on how rather than why] When an assignment asks you to participate in a conversation—for example, to analyze and make an argument—you may not want to jump directly in. Instead, try looking for information that reports and summarizes to help you to build up your understanding.

Conclusion: [wrap-up and next steps] Taking the time to build up your background knowledge helps you to understand the conversation around your idea or topic. Like Bob, you'll be able to explore several points of view on a particular idea…and then figure out how you want to join in the conversation yourself.

Appendix 14B: Storyboard Draft



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