Teaching Undergraduates to Develop Concise and Compelling Scholarly Communication Through Storytelling

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Table I

Outline of the Pixar Pitch, Example Text, and Corresponding Academic Paper Sections

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<th>Pixar Pitch Outline</th>
<th>Research Project Example</th>
<th>Paper Section</th>
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<tr>
<td>Once upon a time there was</td>
<td>A lot of fibers in the ocean</td>
<td>Introduction</td>
</tr>
<tr>
<td>Every day</td>
<td>Animals were dying because they were eating fiber</td>
<td>Literature Review</td>
</tr>
<tr>
<td>One day</td>
<td>An animal went on the endangered species list</td>
<td>Literature Review</td>
</tr>
<tr>
<td>Because of that</td>
<td>We decided to study the impact of fiber pollution on sea otters</td>
<td>Methods</td>
</tr>
<tr>
<td>Because of that</td>
<td>We used x Methods</td>
<td>Methods/Results</td>
</tr>
<tr>
<td>Until finally</td>
<td>We found this</td>
<td>Conclusion</td>
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Abstract

- **Purpose**: This article reviews current librarian instructional approaches for poster and oral presentation assignments and showcases a new approach using the Pixar Pitch outline.

- **Design/methodology/approach**: The authors adapted the Pixar Pitch framework to aid students in synthesizing complex information and improving their communication strategies.

- **Findings**: Librarians are frequently involved in teaching strategic searching and topic development in instruction sessions for students preparing to communicate research through posters and presentations. Students need to understand how to communicate effectively and prepare information for various audiences, skills closely linked to several threshold concepts in the ACRL Framework for Information Literacy. However, this area remains less taught by librarians. This article presents one approach for librarians to become involved in this instruction.

- **Originality**: There is currently minimal research on using the Pixar Pitch within higher education; most use appears in publications in the communications field.

Introduction

The ability to communicate complex information succinctly to varying audiences is a valuable skill for scholars and practitioners. The undergraduate curriculum often prepares
students for formal communication with other scholars through papers and presentations. However, students are less often prepared for career-based communication strategies, such as meetings with prospective funders or clients, explaining information to patients, or networking at career events and parties. Training students more generally on synthesizing information and tailoring it to specific audiences can help them prepare for most types of communication and set them up for career success.

Condensing a large amount of information, such as a research project or work report, into a short format can be exceedingly challenging. Instructors have adopted various methods to teach this skill, including the three-minute thesis (University of Queensland, n.d.) for oral communication and the #TweetYourThesis challenge for written communication. Variations of the three-minute thesis prepare students for oral communication. Alternatively, the #TweetYourThesis challenge encourages students to distill their work into 140 characters, receiving praise from some professors (DeSantis, 2012) and ire from some students (Lombrozo, 2014). A key takeaway for students is the importance of audience and purpose. Lombrozo's students felt frustrated by the inability to explain or contextualize fully. They may have asked themselves, first, what is the purpose of a tweet? Who follows this hashtag and why? Am I trying to explain my thesis or generate interest in it? How can I get people interested? Though not as compressed as a tweet, two standard features of conferences and symposiums, poster presentations and flash talks, require similar distillation and consideration of audience and purpose.

Bringing students into the scholarly conversation can be intimidating. The short format of posters and flash talks may represent a lower bar of entry for many students while challenging others apprehensive about public speaking. Turning scholarly communication into storytelling
can help students break through the initial barriers to these modes in a fun and interactive way.

This article presents a brainstorming and storytelling device called the “Pixar Pitch” to help students conceptualize and present their research in a new way. Pixar Animation Studios is known for spending years meticulously crafting stories that are enjoyable by viewers of all ages worldwide, including films such as Toy Story, Finding Nemo, and Soul (Pixar, 2022). Introduced by a former Pixar storyboard artist, the Pixar Pitch (see Table I) breaks down those stories into the six plot points that are needed to quickly engage an audience in the story and gain buy-in.

**Literature Review**

*Communicating Research in Oral Presentations*

In a 2016 survey of academic librarian instruction practices, Hsieh *et al.* (2021) found that Scholarship as Conversation and Information Creation as Process were two of the three least taught frames from the *Framework for Information Literacy for Higher Education* (henceforth, the *Framework*) (ACRL, 2016). An earlier survey of 1,201 community college librarians found that the two frames were considered somewhat less important than the other four (Wengler and Wolff-Eisenberg, 2020). Scull (2019) suggested that the Information Creation as a Process frame received less attention because it is assumed that librarians already understand the frame and how to apply it. The author further notes that when librarians teach the Information Creation as a Process frame, they often focus on the creative process involved in writing articles for peer review, while most students are much more likely to create posters and presentations in their professional careers. By learning how to create formats outside of research papers effectively, students will be able to engage in the learning experience more authentically. However, these communication skills are often neglected within the undergraduate curriculum by disciplinary
faculty and librarians, despite reports by many disciplines that better communication skills are needed within the workforce and are critical for career success (Pedwell et al., 2017; Cavanagh et al., 2019; Kelp and Hubbard, 2021).

Searching repositories of information literacy lesson plans like ProjectCora.org and Sandbox.ACRL.org uncovered a few examples of librarians teaching students how to create and convey information in posters or oral presentations. Included in the ACRL Sandbox was one lesson where students created information in various formats of their choice (i.e., Tweets or posters) and another where students shared their research through an abstract and an elevator speech. Surprisingly, while few lessons existed where students participated in more traditional scholarly communication, more lessons were available on newer communication tools, such as online timelines, Zines, infographics, and Wikipedia entries. One explanation for the lack of oral and poster lesson plan might be that librarians believe this type of instruction is in the realm of disciplinary faculty rather than librarians. Foster's (2020) survey of 122 disciplinary faculty at California State University, Fresno supports this hypothesis. Faculty overwhelmingly believed that teaching the synthesis of information for projects such as posters was their sole responsibility, along with how to produce different information resources (e.g., Tweets or posters) to share information. Huddleston et al. (2020) similarly found that synthesizing information was the skill that faculty felt the greatest responsibility for teaching.

A review of LIS literature produced little more on the subject. Fong (2019) describes a six-part graduate student boot camp that included a session on "Presenting Dense Information in Public Forum," but unfortunately, it does not detail the lesson (p. 380). A column from The Reference Librarian presents the author's method for improving the presentation skills of MLIS students (Roy, 2016). Students choose from a list of presentation skills they would like to learn,
such as relying less on notes, finding the proper voice volume, avoiding crutch words such as um or like, and then helping each other improve through peer evaluation and coaching. This approach likely helped students increase their confidence and levels of engagement while presenting but does not focus on the presentation's content or how to craft a compelling narrative for audiences beyond the classroom.

**Poster Presentations**

After assessing posters created by fourth-year education students, instructors at Deakin University found that students could create a successful poster when they understood how to use images and summarize information effectively (Wallace et al., 2016). While many students used images effectively to convey critical information, others used images in a way that distracted readers or made the text difficult to read. The authors acknowledge that it is well known within the literature that students often struggle to pare down information to its simplest form and suggest that opportunities for peer feedback could help them overcome this issue. While information synthesis and how the presentation of information affects its reception rests within competencies librarians may teach as a part of the Framework (ACRL, 2016), relatively little literature exists regarding librarians' involvement in teaching such competencies.

When librarians become involved or embedded in courses preparing for talks or presentations, their involvement is frequently situated around finding and selecting appropriate sources (Hall, 2008; Dinkelman et al., 2010; Mabrey et al., 2018; Gosselin and Goodsett, 2019). However, very few appear to focus on teaching how to present that information. One example comes from the University of Toronto. Gosselin and Goodsett (2019) partnered with disciplinary faculty to provide embedded instruction for students completing project-based learning
assignments and poster presentations. The authors' lesson included searching and topic
development, while a library staff member led poster design best practices.

There are several excellent examples of librarians teaching more about the creation
process of posters and how to design them with the audience in mind, embedded in courses
(Cook et al., 2015; Widanski et al., 2016; Widanski et al., 2020) or in partnership with research
offices on campus (Vong and Lu, 2022; Ferer et al., 2022). At Drexel University, librarians
prepared a series of four workshops in partnership with the University's Office of Undergraduate
Research for a group of undergraduate students who needed to complete a poster at the end of a
ten-week summer research program (Ferer et al., 2022). During the final workshop, the librarians
helped students think about how information is perceived based on the design of infographics
and peer-to-peer feedback. Vong and Lu, along with Ferer et al., describe this type of instruction
as aligned with the Scholarship as Conversation Framework frame and relevant to students
academically and professionally.

Widanski et al. (2020) described a chemistry faculty member and librarian partnership
in a for-credit course, where 27 students volunteered for an intervention group and 35 for a
control group. The intervention group received four additional workshops centered on improving
oral presentation skills, including one where the librarian co-taught a session focused on
designing posters and citing sources. The authors found that overall, students who completed the
four workshops displayed better oral communication skills and argued that such improvements
required specific guidance. Cook et al. (2015) described a partnership between librarians and a
physics instructor to develop a 3-session workshop on visual literacy for creating posters. The
sessions highlighted many aspects of working with images, from technical specifications to the
thoughtful use of the work of others and recognizing copyright and intellectual property. While
the session included a presentation to the class, no details on the presentation were available. The article noted that the librarians told students they would need to explain the posters in close interaction with viewers, leading to a "brief discussion of presentation and public speaking skills" (p. 71).

**Short-form Oral Presentations**

Undergraduate and graduate programs have increasingly adopted three-minute thesis (3MT) or three-minute research presentations (3MRP), two-minute talks, and elevator pitches as a way for students to share their research and practice oral communication (Werner et al., 2017; Hu and Liu, 2018; Kelp and Hubbard, 2021). The creators of 3MT, the University of Queensland (n.d.) in Australia, encouraged students to avoid jargon and speak as though speaking to a friend, telling a story with a "beginning, middle, and end," and using metaphors to explain the research. An investigation by Hu and Liu into the content of 142 3MTs across 70 universities uncovered primary components (orientation, rationale, purpose, methods, implications, and termination) and optional secondary components (framework, results). These components look very similar to the components of a research article, including the abstract, introduction, literature review, methods, results, discussion, and acknowledgments.

Similar to the poster presentations, few examples of librarian involvement in preparing oral presentations exist. One example comes from Purdue University, where librarians taught an eight-week 1-credit course culminating in a 3MT project (Sharkey, 2006). Throughout the course, students were taught about different information sources and how to find and evaluate them, but it is unclear how much they learned about synthesizing information. In reflection, the author acknowledged that more time was needed to teach students how to synthesize and present
information. In an undergraduate course at Wright University, the teaching team (chemistry faculty member and librarian) spent more time teaching the importance of audience (Jones and Seybold, 2016). Ahead of a final oral presentation, students participated in increasingly challenging types of oral presentations, a workshop led by a separate library staff member, who emphasized the centrality of the audience with the students. Finally, during the presentation, students submitted questions regarding the other students' talks, which the authors believe helped to improve student presentations.

**Bringing Research to Life with the Pixar Pitch**

**Institutional Setting**

California State University, Los Angeles (Cal State LA) is a mid-sized masters-granting public university. The University serves a highly diverse student population of over 94% Black, indigenous, and people of color (BIPOC) students (Cal Faculty Association, 2021). As part of the Honors College Program at Cal State LA, students across a variety of disciplines (e.g., arts, sciences, humanities) must complete a thesis based on an "advanced research or creative project." (California State University, Los Angeles, n.d.) One of the students' required courses during their final year is the Honors College Thesis Senior Forum, a class focused on helping students complete their thesis and present their work. Near the end of the semester, students must present a two-minute lightning talk and a poster session for the University's Annual Student Research Symposium. In Spring 2019, the Honors College invited the library to teach a 75-minute class for ten students as a part of the Thesis Seniors Forum.
What is the Pixar Pitch?

A growing body of literature demonstrates that when students learn the art of storytelling through frameworks, they grow to become successful communicators (Steinberg, 2022). When students can tell a successful story, the audience will understand why the research is important, what it is about, and become engaged in the narrative. While it is unclear when the Pixar Pitch storytelling framework became known to the public, former Pixar storyboard artist Emma Coats mentioned the technique on Twitter in early 2011. In a series of tweets outlining what Pixar describes as "The 22 Rules of storytelling," "story basics #4" (Coats, 2011) laid out this simple outline for telling a story:

1. Once upon a time there was...
2. Every day...
3. One day...
4. Because of that...
5. Because of that...
6. Until finally...

The framework includes familiar plot beats with a beginning, middle, and end that draw audiences in, keep them interested, and leave them satisfied. *Once upon a time* is the exposition that introduces the characters. *Everyday* gives us the backstory. *One day* is the catalyst or inciting incident that upsets the balance of the ‘everyday’ and sets the characters on their path to accomplish a goal. *Because of that,* and *because of that* are turning points in the action. Not unlike the discussion section of a research paper, turning points may include a crisis or a climax.
when the story is at its highest or most intense point. *Until Finally*, is the resolution where storylines are closed and questions are answered. (Kroon, 2014)

In the decade since Emma’s Tweet, several books (Pink, 2013), websites, blogs (Connor, 2013), and research articles have highlighted different ways to use the pitch to communicate a story. One of the authors first learned of the Pixar Pitch during Propster and Palermo's presentation at the 2019 annual American Association for the Advancement of Science conference, which focused on storytelling at NASA's Jet Propulsion Lab. A subsequent article outlined how researchers can use the Pixar Pitch to develop a "core science story" narrative as part of a mission proposal (Wessen et al., 2022). Notably, the Pixar Pitch technique is absent from current undergraduate education and academic librarianship literature. This paper presents one model for using the Pixar Pitch in undergraduate education and several suggestions for adapting it.

**Methods / Workshop Outline**

Since this was the first time librarians had been invited to teach in the Honors 4960 course, the authors met with the instructor to clarify desired learning outcomes and get feedback on lesson plan and activity ideas. After the meeting, learning outcomes and a lesson plan were developed for a 75-minute workshop using the Information Creation as Process and Scholarship as Conversation Framework frames, the course syllabus, and the Pixar Pitch.

**Learning Outcomes**

1. Students will be able to identify barriers to entering the scholarly conversation (poster sessions and 2-minute talks) and identify ways to overcome those barriers
2. Students will be able to describe how information may be understood differently depending on its presentation

3. Students will be able to break down a complex research proposal and identify the essential, exciting, and muddy parts

**Students Develop a Pixar Pitch**

The workshop began with student participation in a think pair-share-activity to address presentation and communication worries. The librarians were able to answer most questions, but it was helpful to have the course instructor available to field any assignment-specific questions. Next, the librarians introduced the Pixar Pitch as a way to prepare and alleviate some of the students' concerns. First, a volunteer student read an example outline based on a well-known Pixar film. Then the librarians read an outline of a fictional research project to help orient students further to the storytelling framework (see Table 1). Science and social science students benefited greatly from the example, while arts students may have been more comfortable with this narrative format from the beginning but struggle with identifying their conclusion or "so what" statement. Hu and Liu (2018) suggest one possible reason is that applied disciplines, like art, less commonly need to interpret information. Once students were familiar with the concept, they wrote outlines based on their research.

**Table I. Outline of the Pixar Pitch**

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Once students had an outline, the librarians introduced the concept of communicating research to people outside the students’ disciplines. The students then underlined the parts of their pitch that others might find the most interesting and circled the part disciplinary outsiders would be least likely to understand. The authors shared that the average person can clearly speak...
150 words per minute (Barnard, 2018). Equipped with this knowledge, students reflected on their Pixar Pitches and added additional information they felt might be appropriate.

The workshop culminated when students shared their pitches with the class and received feedback from instructors and peers. Many students struggled to recognize when someone from outside their discipline might have difficulties understanding specific concepts or how to best overcome them. Sharing provided an excellent opportunity for workshop leaders, as well as other students, to suggest analogies and simplified language. Instructor feedback significantly increases students' oral presentation performance and should not be skipped (van Ginkel et al., 2017). In preparing to adopt this model, instructors might also consider providing earlier training on peer and self-assessment of posters, which has been shown to improve first-year writing quality, selection of sources, and increased focus on poster design (Navarro et al., 2022).

The librarians wound down the workshop by providing students tips on how to convert their outline into a formal 2-minute talk or less formal ‘elevator pitch’ set of talking points for poster presentations. Students viewed a video of a good short speech, along with sample posters and a demonstration of the impact images can have through emoji use. Finally, students chose one step of their Pixar Pitch to draw a simple image that could help clarify complex topics or highlight important findings.

**Assessment**

In addition to formative assessment that was gathered during students’ practice oral presentations during class, a reflection half-sheet was gathered at the end of the Spring 2019 library workshop. Students rated how comfortable they felt giving their speech and preparing a poster before and after coming to class, shared two questions or concerns they still had along
with one aspect of class they enjoyed. Most students' remaining concerns centered around timing for presentations and explaining jargon from their field. Students' self-confidence on average increased by 1.7 points, from 2.6 to 4.3. Future studies that replicate this type of workshop should consider asking students to rate their confidence around the poster and oral presentations separately to gather a more nuanced understanding of the impact of the Pixar Pitch lesson.

Although the workshop has been taught several times since Spring 2019, the time constraints of online instruction between Spring 2020 and Spring 2022 made formative assessment more practical than summative assessment. As such, the instructors relied on formative assessment for the virtual iterations of the workshop. While the authors do not currently have the data to test for academic improvement, it would be advantageous for future investigators to undertake such research. Doing so would add to what Cavanagh et al. described as a minimal body of interventions that attend to the low self-confidence first-generation and underrepresented students experience. True summative assessment is often difficult to carry out because librarians often lack access to the final product. Librarians might partner with the instructor-of-record to assess students' poster and oral presentations.

**Adaptation and Implications for Practice**

The lesson plan was adapted for courses where students completed only two-minute speeches and for online instruction; both worked exceptionally well. For the online class, students completed their Pixar Pitch using a Google Form, which emailed them a copy of their pitch to refer to later. The online teaching tool Padlet can be used by students in online courses to sketch poster images and receive feedback from peers. When teaching online, instructors should anticipate that the instruction may be somewhat longer than in-person classes and adjust
accordingly. One possible way to ameliorate virtual classes running longer is to use break-out rooms and have students share their pitches with a smaller group and one instructor.

This lesson may also be useful for students creating e-posters or virtual presentations, which existed before the COVID-19 pandemic, but are even more common now (Naseem et al., 2021). In such a modified lesson, instructors should consider discussing with students how the virtual format will change the way they convey information on a poster and engage with an audience, along with best practices for using hyperlinks, video, and audio. Even in the physical classroom, e-posters are a viable option and can reduce the cost for students who may not be able to afford poster printing (Naseem et al., 2021). Classes with 15 to 30 students would likely benefit from having students present in small groups with each other, ensuring the groups have students from several disciplines. Larger lectures might have students record their pitches on their phones and then upload them to their learning management systems, where students can comment and provide feedback using a discussion board.

The Pixar Pitch can be adopted and adapted for almost any scenario where instructors teach students how to communicate effectively. As Cavanagh et al. (2019) noted, self-efficacy plays a critical role in academic success, particularly for first-generation and minority students who often have lower self-efficacy in higher education. When librarians participate in this type of learning, they situate themselves as catalysts for students’ academic success and career success. A more active role in students’ communication education may give librarians greater opportunities to collaborate with other centers on campus, like the career center. Librarians do not often get to see students’ final work. Higher involvement in teaching students how to convey information may allow librarians to complete more meaningful assessments.
Conclusion

Communication skills are vitally needed for all undergraduates to be successful in higher
education and their careers. Several examples exist of librarians collaborating with disciplinary
faculty to teach students how to synthesize and communicate information through posters and
oral presentations. However, the librarian's role often does not include linking communication
skills and understandings closely tied to the Information Creation as a Process and Scholarship as
Conversation Framework frames. Librarians can help foster students' communication skills and
bolster their confidence in entering new areas of discourse by taking a more active instructor
role. While the ideal instruction scenario would be embedded, multi-class instruction, the Pixar
Pitch can effectively increase students' confidence in their oral and written communication skills
during one-shot library instruction.

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