Kelly Schrum, GEORGE MASON UNIVERSITY, kschrum@gmu.edu
Niall Majury, QUEEN'S UNIVERSITY BELFAST, n.majury@qub.ac.uk
Anne Laure Simonelli, UNIVERSITY OF BERGEN, anne.laure.simonelli@gmail.com
Sarah Bogdewiecz, GEORGE MASON UNIVERSITY, sbogdewi@masonlive.gmu.edu

Audience Matters

Multimodal Projects Across Three International Case Studies

ABSTRACT

There is growing attention to student assessments designed to reach beyond the classroom, including assessments with an immediate or future audience. The impact of audience, however, has not been examined in multimodal assessments across continents, institutions, disciplines, and teaching contexts. Using qualitative data, this article examines the impact on student learning of incorporating audience and awareness of audience in diverse settings through multimodal projects. These include a core assignment in an interdisciplinary, semester-long graduate class in the United States, a year-long capstone project for geography undergraduates in Northern Ireland, and a supplemental assignment for graduate and undergraduate biology students in Norway. This article investigates the impact of audience through multimodal assessments across these three settings and concludes that it can positively influence student learning, motivation, and skill development.

KEYWORDS

technology-enhanced assessment, multimodal inquiry, production pedagogy, non-disposable assessment, digital literacy

INTRODUCTION

Higher education students frequently submit completed assignments to their instructors who grade and return them to the students, completing a closed circuit. There is growing interest, however, in moving beyond this "traditional student-teacher dyad" (Seraphin et al. 2019, 84), also known as "cul-de-sac pedagogy" (Ryback 2013, par. 1). Alongside the rise in open pedagogy (Costello, Huijser, and Marshall 2019; Cronin 2017), there is a growing interest in "non-disposable assignments" or student projects that reach a broader audience (Fung 2017; Seraphin et al. 2019; Spronken-Smith et al. 2013). The wider communication of student work is further advocated by those who support expanding research skill development in higher education (Gyuris 2018; Willison 2018; Willison and O'Regan 2006/2018) as well as multimodal inquiry and digital knowledge production (Bedenlier et al. 2020; Literat et al. 2018; López-Meneses et al. 2020; Snelson 2018).

The role of audience is present in these discussions, but has not been examined purposefully across institutions, disciplines, and teaching contexts as a core component of multimodal projects. This article examines the impact of incorporating audience and awareness of audience on student learning. Drawing from three examples of multimodal inquiry and digital knowledge production across different levels of study, disciplines, institutional contexts, and countries, this work argues that formal inclusion of audience into assignments is key to moving beyond the traditional student-teacher dyad. The direct and intentional incorporation of audience into multimodal projects, with careful scaffolding, can lead to transformative learning experiences where students gain a better

understanding of the potential impact of academic work and secure practical insights into professional environments.

The authors met at an international scholarship of teaching and learning (SoTL) conference and discovered shared experiences, including meaningful student learning related to multimodal student assignments designed with an immediate or intended audience. The authors teach in different countries (United States, United Kingdom, Norway) and disciplines (higher education, humanities, social sciences, and sciences) and across varied teaching contexts, including graduate and undergraduate classes in formal and experiential settings. In the first case study, the digital assignment served as the core class assessment, in the second as a capstone project, and in the third as a supplemental assignment, yet the authors found similar student responses when incorporating audience into all three contexts which speaks to its value and transferability. In each case, the authors aimed to engage students in learning digital skills and disciplinary content while developing products that intentionally communicated scholarly research beyond the classroom. This article investigates the impact of audience in multimodal student assessments across all three cases and determines that it can positively influence student learning, motivation, and skill development.

LITERATURE REVIEW

Literat et al. (2018) argue that the rise in multimodal inquiry creates the opportunity to expand the nature of scholarship and "diverse participation in the production of knowledge" (574). This is reflected in recent calls for student assessments that integrate digital production (Bedenlier et al. 2020) as well as efforts to expand production pedagogy to emphasize student creation of authentic digital content (Bond et al. 2018; Littlejohn and McGill 2016; Snelson 2018). The European Framework for the Digital Competence of Educators similarly advocates assessments that "require learners to express themselves through digital means" (Redecker and Punie 2017, 23). Scholarship that emphasizes the social situatedness of digital literacy argues that engagement between the student (as producer) and the community (as audience) is critical (Avila and Pandya 2013; Luke 2014; Payton 2012; Roche 2017). These are lifelong skills for engaging in scholarly communication within digital spaces (Jordan 2020; Veletsianos and Shaw 2018).

Digital production of scholarly work requires students to integrate academic research skills and digital skills (Snelson 2018; Wu and Chen 2020) to create multimodal content with the goal of communicating scholarship beyond the classroom (Schrum et al. 2021). Awareness of audience is essential at all stages of the process (Fung 2017; Grant and Bolin 2016; Jhangiani 2017; Ryback 2013) and this, along with other factors, clearly places it within the framework of "non-disposable assignments" in contrast to "disposable assignments" whereby individual students turn in assignments that are assessed by instructors and returned to individual students (Seraphin et al. 2019, 84).

Multimodal production in academic settings can cultivate authentic learning experiences (Bozalek et al. 2013; Grant and Bolin 2016; Herrington, Reeves, and Oliver 2005; Snelson 2018) by providing meaningful opportunities for students to engage in the construction of knowledge with an ongoing focus on audience in terms of design and implementation (Burdick et al. 2012; Fletcher and Cambre 2009; Martin 2008; Yang and Wu 2012). The outcomes are "meaningful products" that "can be shared and published to contribute to knowledge" (Herrington 2015, 65; Manarin 2016). By combining traditional research skills with digital skills through hands-on production of digital content for an intended audience, students increase their understanding and application of both technology and disciplinary knowledge (Hinrichsen and Coombs 2013; Manderino and Castek

2016) to construct new knowledge and communicate that knowledge to others (López-Meneses et al. 2020; Martin 2008; Spante et al. 2018).

The digital nature of the projects in these three case studies allows for shareability beyond traditional print assignments, such as written essays (Alexander, Adams Becker, and Cummins 2016; Weller 2011). Assessment of digital projects should include attention to the ways in which intended audiences engage, or might engage, with the content and the ways in which that informs and validates student work (Burdick et al. 2012; Kearney 2013; Sleeter et al. 2019). Even within the classroom, seeing classmates as a potential audience during the development of digital projects has been found to increase student motivation and critical analysis skills, strengthen student voice, and enhance the learning process (Kearney and Schuck 2006; Koponen 2020; Shuldman and Tajik 2010; Walters and von Gillern 2018). Having a real or intended audience encourages students to critically reflect on their own scholarly work and how others may interpret it. This leads students to a deeper consideration of the relationship between intention and results (Bowen 2017; Fletcher and Cambre 2009; Harvey 2001; Pelger and Sigrell 2016).

The ability to identify and understand an audience is an important starting point. The next step in creating a scholarly multimodal product is to think critically about how best to communicate with that audience. In these three case studies, students grappled with questions such as: How do multimodal products capture and maintain audience attention? What background knowledge does the audience have? How can I present scholarly content in a way that promotes comprehension and understanding? These complex skills are not intuitive but can be taught through scaffolding and practice (Beetham, McGill, and Littlejohn 2009; Bozalek et al. 2013; Seraphin et al. 2019). The skills are then transferable to professional and work contexts outside of the classroom (Gyuris 2018; Jordan 2020; Judge and Tuite 2017; van Laar et al. 2017; Ventimiglia and Pullman 2016; Willison 2018).

METHODS

This research explored the impact of audience on student learning as a key component of multimodal production. The authors found clear connections among their experiences across disciplinary, geographic, and teaching contexts in investigating impact broadly and demonstrating potential future use in a range of settings. Data for these case studies was collected between 2016 and 2020. Qualitative research methodologies were employed, including semi-structured interviews, open-ended survey instruments, focus groups, and analysis of coursework. The data collected was transcribed, coded, and analysed using thematic analysis by three authors and then compared by all four authors, including a doctoral research assistant. Ethical standards were met at all three institutions and consent was secured from all participants. All names are pseudonyms.

Schrum [United States] interviewed 32 students who completed her scholarly digital storytelling course, all of whom were graduate students from humanities and social science disciplines at the master's and doctoral level. In addition to the semi-structured interviews conducted after the end of the course, participant coursework was reviewed, including blog posts, project updates, and final reflections. Majury [United Kingdom] collected data from undergraduate students majoring in geography who completed a civic engagement capstone project that required the development of an open access digital story map. Anonymized open-ended surveys were conducted at the beginning, middle, and end of the course, focus groups held, and reflective assessments analysed. The surveys captured the experiences of three cohorts who took the course (48 students in total), 42% of whom took part in focus groups. Finally, Simonelli [Norway] collected data from both undergraduate and graduate students who created Peer Video Tutorials (PVT) for two biological science courses. Evenly

split among undergraduate and graduate students, the 12 participants represented 67% of the undergraduates and 38% of the graduates who engaged in the PVT project.

CASE STUDIES

Case study 1: Scholarly digital storytelling with graduate students at a large research university in the United States

Schrum teaches an interdisciplinary, graduate course on scholarly digital storytelling at a large research university in the United States. During a 15-week semester, each student produces a 10-minute digital story based on their academic work. This is the major course assessment and involves research, narrative, digital skills, and a clearly defined audience beyond the classroom. The final projects reflect scholarly practice as defined by the student's discipline. Higher education students, for example, address a central problem or question grounded in theory and practice, such as the challenges and successes of first-generation college students or digital literacy among international students. History students integrate primary and secondary sources to present an original argument about a historical topic, such as the controversy surrounding a historic home renovation or the legacy of the Civil Rights Movement. Final projects must incorporate rigorous scholarship and a compelling narrative while meeting established technical criteria.

Audience is a core component of this assessment. Two key objectives for the class, as stated in the syllabus, are to "identify an audience and craft a scholarly digital story that is appropriate for that audience" and to "communicate your scholarly work to an audience beyond the classroom." From the initial project pitch to the final submission, students are required to define and refine projects with the needs, background, and interests of that audience in mind. This comprises 10 percent of the project grade. At key points during the course, students formally reflect on, and receive feedback specific to, their intended audience.

Some students identify an immediate audience, such as current teaching or work settings, including institutions, museums, and historical sites. Others select an intended audience, such as a future employer or an upcoming scholarly or professional conference. The goal is to help students develop an awareness of audience and to use that understanding to shape decisions throughout the process. Gillian, a fourth-grade teacher in the history master's program, wrote in her final reflection that she wanted her project to "be purposeful to my classroom." She shared during an interview that this audience provided motivation to work hard because, "I knew I was showing it to someone other than you and outside of those four walls." This demonstrates the effectiveness of embedding audience into the course structure and assessment — Gillian embraced this goal, and it influenced her work on the project.

Throughout the process, awareness of audience shaped both content and narrative, including student presentation of research. Jessica, a doctoral student in higher education, explained in an interview how digital storytelling "opened me up" to this concept:

> *A lot of times, I just assumed, I definitely made the assumption, that people knew what I was talking about. And so I just talked about it. I lost a lot of people . . .. [Digital storytelling] did get me to keep thinking about my audience in terms of what I am sharing and who it's going to and when I'm overexplaining and when I need to flesh it out.*

Chelsea, a higher education doctoral student, shared a similar experience in an interview:

> *So I think the decisions to cut things out were also audience-based in a way of "what are the*

> *most essential takeaways that I would want someone to watch this and leave with?" And whether that's someone who is very familiar with the topic and it's more affirming that they hear another set of narratives that match what they're used to hearing or if it's someone that's brand new.*

This is a new concept for many students. Throughout their formal education, students have learned to produce work for each individual instructor as defined by that instructor. Sonia, a history doctoral student, stated in an interview that, "Most of those papers never get read beyond the professor themselves, even by people in the class. And it just remains kind of a blind alley." Brooke, a history master's student, similarly noted in an interview that in most classes, "you turn in your paper and that is that." In contrast, Brooke recalled that while creating her scholarly digital story, she regularly asked herself, "Is this important? Will my audience understand or even will my audience care?" For these students, awareness of audience shaped the ways in which they told their stories and critically evaluated their own work.

This awareness did not happen automatically. While a few individuals, such as Gillian, started the semester with a clear audience in mind, it emerged more slowly for others. Belinda, a doctoral student in higher education, recalled in an interview the many changes she made based on her growing understanding of audience, "when I think about my storyboard, I had buzzwords in it. And I even wrote down 'buzzwords' because I thought they could pop up or something." She was immersed in academic research on first-generation college students, but after conducting interviews with students, she "wanted their stories to come very naturally so that people could understand it." She revised her approach mid-semester:

> *I wanted to make something that was accessible to a large group of people . . . That the students who I interviewed felt like they were being empowered by telling their stories. That other students who are first gen students and are coming to [the institution], that they can understand a little bit better.*

Belinda's statements reflect her intellectual growth during the semester as she received feedback from classmates and the instructor encouraging her to define her audience and to think carefully about how they would receive her work.

Students in this study shared their scholarly digital stories widely with professional and academic workplaces, K-12 and higher education classrooms, professional and academic conferences, community groups, family, and friends in part because a digital format enables scholarly communication in new ways. Lena, a doctoral student in higher education, noted in her interview that her research on active learning classrooms:

> *now had more of an impact . . . I've been saying that forever and it wasn't until I showed the story that it actually came across . . . seeing the video was really, really helpful because I think that the impact of seeing what a classroom could look like and what it does look like was really helpful.*

Other students similarly discovered their ability to explain complex ideas to broader audiences. Tracy, a history master's student, showed her project about a historic home to the organization's executive committee and one member commented that the digital story "gave him a

whole new perspective and a way of thinking." She received a prestigious award from a local history commission for this work.

For Mark, a higher education doctoral student, the project opened up new opportunities to share his scholarship. He described in an interview that the "ability to create something this way then suddenly put me in a place where I could present on my research early." Similarly, Jennifer, a history master's student received "a lot of positive feedback" especially from "non-historians" who watched her story. One friend shared that "if this is what history class had been like, I would have paid attention." For Jennifer, that was "the moment. That's what we all want. Someone to pay attention to our research and get something out of it. So that was really awesome, and I tried to share [the digital story] as much as possible." These moments solidified for Jennifer the potential for her multimodal product to influence audiences beyond the classroom and perhaps to inspire a rethinking of the value of history.

These experiences with multimodal inquiry and production allowed students to see the potential impact of their work and the value in reaching a broader audience. These skills — awareness of audience and ability to communicate with that intended audience — are challenging to teach and require planning, scaffolding, ongoing feedback, and iterative design. Imagining audience in a purposeful way, however, can spark commitment to multimodal production. Morgan, a history master's student, summarized this shift during an interview:

> *this class really helped, not only so much in the video development, but just recognizing audiences, recognizing how to communicate scholarly work to different audiences. . . I think this is something that I would take with me to a lot of different areas. . . taking research and trying to make it consumable to the public.*

Student experiences indicate an emerging awareness and appreciation for audience as well as for creating digital content that is sharable and has impact beyond the classroom walls. This shaped students' scholarly work and final projects during the semester and beyond.

Case study 2: Immersive digital story maps created as undergraduate civic engagement research projects

Majury teaches an undergraduate capstone course for students majoring in geography at a large public research university in the United Kingdom. The course centers on civic engagement research projects undertaken by teams of students for a local government agency (e.g. Belfast City Council) or charitable organization (e.g. Habitat for Humanity, Belfast Hills Partnership). The projects explore issues identified by the civic partner. Students collaborate with an academic mentor and the partner organization to refine the topic into a multimodal project, with agreed methodology, timeline for reporting, and outputs. Project findings are presented as an interactive digital story map that collates, organizes, geo-references, and visualizes evidence in an accessible, immersive online medium for the civic organisation. Digital story maps are structured around a series of narratives and tied to place and scale which enables evidence and argument to be assembled and placed in both a local and wider context. For the students, digital story maps offer an opportunity to illustrate and demonstrate how disciplinary research skills and knowledge, as geographers, can help inform understanding of public policy issues. For the civic partners, the maps provide a layered, immersive evidence base that will help inform decision-making.

The course engages students in an iterative collaborative process, regularly briefing the civic partner and academic mentor on direction and progress, soliciting feedback and suggestions, and

cross-checking the validity of their approach and pitch with their "client." This draws students, long accustomed to the traditional student-teacher cycle, into an unfamiliar learning environment. The problems they are researching are, by nature, relatively ill-defined. The audience they are engaging with is plural and novel. The multimodal story map they are producing will be shared widely with individuals and institutions that are invested in the issue and associated decision-making processes. This fosters a greater awareness of audience within students as they reflect on how others may interpret and use their work. For example, students often distinguished presenting to their academic mentor and peers from presenting to the civic partner. Whereas presenting to their class was familiar and taken for granted, the civic partner was often framed in scare quotes as "a professional audience."

This distinction in the minds of students between audiences within and beyond the classroom was for most a source of anxiety. Aoife, for example, reflected:

> *I was quite apprehensive about talking within a professional work environment. I imagined meeting very stern and serious professionals that would be hypercritical of our project. I feared they wouldn't see the point of it and be reluctant to help us.*

For Aoife and others, they perceived that their credibility was on the line, anticipating that a professional audience would judge them by more applied standards forged through the accumulation of expertise and experience. Something more seemed to be at risk in "making mistakes" or "saying the wrong thing." Fixed in the minds of most students was the notion of "getting it right" for a "professional audience," even within the formative setting of unassessed multimodal presentations.

Structured opportunities to rehearse the presentation of digital story maps for civic partners helped channel these common anxieties towards productive ends, resulting in heightened levels of student engagement and reflexive practice. Aoife reflected "prior to this course, I did not have any experience in working with or liaising with professionals and I am now more aware of etiquette and how to present my ideas across clearly to those in senior positions." While students felt they understood why civic organizations had partnered with the university in the delivery of the course (i.e., "to get help"), they struggled at first to fully grasp and apprehend what the civic partners were offering, which was an invitation to join a wider learning community. Typical of students' initial experience was Roisin who recalled to her surprise:

> *I experienced a welcoming response … [so] I felt comfortable and confident in leading discussions and expressing my group's ideas. The people that we met with were approachable and more than willing to help and "brainstorm" with us. All of the feedback was constructive and useful in our project's development. This gave us the confidence and tools to motivate us.*

The value and commitment civic partners placed on the development of students' multimodal story maps helped students begin to reconceptualize their place within a wider community of learners. Bridget recalled "having people take notes and ask insightful questions such as 'why do you think there is a need for this element?' cemented [in my mind] that our project was worthwhile."

Through iterative engagement with civic partners, students soon discovered that "a professional audience" need not necessarily be either "hypercritical," intent on pointing out how they might be "doing it wrong," nor "homogenous." Most students reported gaining a stronger appreciation of stakeholders' personal and professional investment in the issues they researched. This necessitated, according to Saoirse, "communicating frequently with a range of external stakeholders,

running materials by them, and learning how to take constructive criticism." Regular, informal "check ins" with civic partners, floating ideas on story map development, testing out ways of communicating these ideas, impressed upon students:

> *the importance of choice of language and ways of communicating ideas. This was different to anything I had done before, and so it required me to adjust my way of thinking, that is, to make sure the story map was pitched appropriately to the audience (Kathleen).*

The nature of the projects typically touched upon politically charged realms of public life (e.g., urban regeneration, community development, environmental initiatives). The framing of issues, choice of language, and mode of communication were subject to wider scrutiny than students had typically experienced by this point in their academic careers. This prompted a deeper intentional consideration of audience than had been typically exercised in other courses. Through iterative engagement with civic partners and other stakeholders, students gained a critical understanding of how others might interpret their work, problematizing the relationship between means and ends, intentions and outcomes. Students typically commented on the relatively informal, animated ways civic partners behaved during workshops on the development of their story maps, "interrupting," "interjecting," "raising tangential issues," "qualifying what we said," and sharing a passion for particular issues, case studies, and subject positions as "strong-minded community members." Lana commented:

> *between each meeting to review and discuss our story map with city planners, we learned more and more about what our audience wanted from us and we could adjust our approach and presentation each time . . . and because we had tweaked our story map to suit them, taking onboard their feedback and concerns, I felt confident in delivering the final presentation to a wider audience.*

For Kathleen, this process helped hone her listening skills ("I showed each party respect and some understanding"), instill a commitment to approaching issues in a scholarly fashion, and refine her use of language ("I had to ensure that I communicated in a clear, deliberate, and assertive manner").

According to the students who took part in this study, audience clearly mattered in the delivery of the course's learning outcomes. Even though it was a source of anxiety ("scary"), it was also a reason for taking the course ("doing something worthwhile"). It presented a novel challenge (i.e., communicating with "a professional audience"), yet offered a valued opportunity for professional development (i.e., "it helped me better understand my identity as a geographer"). The learning experience was often frustrating ("it tested our patience and resilience"). However, with careful scaffolding, the good will of civic partners, and scope to provide flexible, tailored academic support, much was to be gained from engaging with an authentic audience. As Nora commented:

> *the whole experience and the evolution of [our multimodal story map] made me realize it isn't straightforward, the professionals I met operate under a range of pressures, and there is a degree of professionalism required when communicating ideas to a wider audience.*

The learning experience encouraged Nora and her peers to look beyond the course, gaining a "confidence that the work we are doing is worthwhile and can map onto something bigger than a course and a grade."

Case study 3: Peer video tutorials with undergraduate and graduate students at a large research university in Norway and at an affiliated research center

Simonelli implemented an activity within laboratory and field classes for undergraduates and graduates at a large public university in Norway and an affiliated research center. Students were invited to create multimodal peer video tutorials (PVTs) as an additional assessment for two selected practical courses. Video production was organized as a collaboration between students, educators, and the two-person PVT team. Simonelli was responsible for education and communication and the other team member for technical aspects of video production. PVTs created by students were used as instructional video tutorials for future students to prepare for biology laboratory experiments and practical lessons in the field. PVTs were developed under a student active learning project, Centre of Excellence in Biology Education (bioCEED), initiated and run by Simonelli.

Together, the biology instructor and Simonelli developed questions related to the lecture portion of each class. Each group of students involved in the PVT activity received a question. The process included four steps: script writing (10 days), filming (one day), editing (three days), and reflection (two- to three-hour session). The PVT-team guided students during the production process and students received only two explicit requirements: 1) the PVT was limited to four minutes; and 2) the PVT had to communicate their message related to course content.

For undergraduate students in spring 2016, PVT was an optional activity within a mandatory course on organismal biology which provided an overview of the origin, systematics, and evolution of living organisms on earth. The instructor presented general morphological traits in central phyla through lectures and lab sessions and students participated in classical dissection and microscopy techniques to learn the morphological structures and bio-systematical details of selected plants and animals. Nine students, divided into four groups, volunteered to participate.

For graduate students in fall 2016, PVT was a mandatory component for a field course on Arctic ecology and population biology. The course explored the ways in which the Arctic environment shapes ecological processes and evolutionary adaptations, including behavioral ecology, life history adaptations, population dynamics and species interactions. Four groups of four students participated in the PVT activity alongside their field work.

Students received feedback throughout the PVT process. During the script writing phase, drafts typically included complex words and explanations that were difficult to follow. Initial feedback included reminders to think about audience as the PVTs would teach future students. Knowing their classmates would watch these videos, students felt responsible for the content and quality. Åse, an undergraduate, highlighted that:

> *A lot of students hopefully will be looking at [my PVT] and if there is something wrong about it with that information, I'm responsible for providing information to a bunch of students that isn't correct. And I feel like that's probably the worst thing you could do.*

In this case, identifying the audience offered a lens through which students could critically reflect on the content and messaging within their digital projects, adding to the project's authenticity and students' growing understanding of the subject matter.

Some graduate students identified a broader audience beyond the classroom. As Lise explained:

> *I have been talking about [PVT topic] with my family and my friends and I know the process of doing every step because I have been reading into it and making a movie about it. So that's very nice to be able to understand all the aspects of the experiment and to explain it to people not at all in the field. That's what I liked most about the activity: I had the opportunity to show others the things I had learned.*

Lise clearly expressed "how proud and happy" she was to finally be able to talk about what she was doing during her studies to those who "otherwise just look at [her] like an alien saying complicating stuffs from [the] scientific world." She felt "good about sharing knowledge with them who are maybe more in practical works, working in a pub or in law and far away from biology and my studies." These students defined their own intended audience outside the parameters of the assignment and the classroom. This became a more authentic learning experience because it encouraged students to actively reflect on how the digital project could connect to their daily lives and personal experiences. In both examples, the intended audience directly shaped student thinking throughout the creation process, causing them to critically evaluate their choices.

During the process, students initially focused on the story they wanted to create. After a reminder about audience, many students went back to the script drafts, reorganized their stories, and removed parts that seemed less essential. Åse said:

> *I think that's the problem we came up with quite a lot of times was that we thought we understood something, but then when we were communicating it, it wasn't easy for someone else to understand… So we had to really look into the ways of communicating as well as doing extra research in finding out what is relevant. Whether that is what we want to communicate.*

For graduate and undergraduate students, reflecting on what they wanted to communicate and how to best communicate that knowledge led them to simplify their language and approach. Åse realized through the script phase that the explanations had to be simplified:

> *You can't just think "OK, I want to please those who know things." You have to please everyone. So you have to have something everyone understands, but you also have to have something a little higher up in the level so others, the ones who know things beforehand, actually find your teaching engaging also. It's about to find a balance between knowing what to say to those who know a lot and those who doesn't know as much. So you have to make it engaging for both parts and that can be quite tricky.*

During interviews, students frequently highlighted the importance of creativity in reaching a larger audience. Åse said:

> *I think it's very important in finding alternative ways to teach different people.... How you can reach out [to] more people. Creativity can help deconstructing something that seems so hard and unapproachable to something quite easy to learn. If you're going to forward a scientific message, I think it is important to be creative and engage a larger audience. Because if you just stand there and talk about scientific themes, you just stand there and have a dry speech. But if you do it in a creative way, like we have done… more people will*

> *be engaged and think: "Wow, it is actually more exciting than I thought it would be." I think creativity has to have a big part in scientific work.*

One strategy students developed was to imagine themselves as the audience. For example, John, a graduate student said:

> *A good tip that I used a lot was that the people watching [the PVT] are like me. And it's easy because I find a lot of the theory difficult... So it's easy for me to see how it is from that perspective.*

Awareness of audience also pushed students to engage more deeply with disciplinary concepts and to learn more than would have been required for a test or written assignment. They felt motivated to create something accurate, meaningful, and useable, thus breaking the "traditional student-teacher dyad" when sharing their PVT with their intended audience (Seraphin et al. 2019, 84). For example, Morten, an undergraduate, said:

> *I think when there is that sense of responsibility, you are more point to take it seriously, to put more time and effort into it, to stand by the work a little bit more than if someone else is sort of given the responsibility to teach you something. I had to dig down in the theoretical part and there is a lot of it that is not in the video, and I had to simplify it. So I had to learn most of it to do the simplifying to say in a simpler way. You can't do that if you don't understand it, because then it is hard to make easy understandable metaphors.*

LIMITATIONS

These three case studies represent different disciplines, countries, and teaching contexts, illustrating the breadth of settings in which the focus on audience through multimodal production can be implemented. There are, however, limitations with this approach. Each author chose to integrate multimodal projects, demonstrating an interest in this approach and a willingness to take the risks inherent in introducing new forms of student assessment. Multimodal production without motivated faculty would be more challenging to implement. The ill-defined nature of these assignments requires careful course design, faculty mentoring, facilitated content, and technical support. All three researchers acknowledge the time and effort involved in planning and facilitating these projects. A faculty member interested in experimenting with audience through multimodal production might try a small version or offer it as an optional form of assessment before committing to a major course restructuring.

DISCUSSION

Understanding audience is a core digital literacy skill (Sparks, Katz and Biele 2016) that shapes disciplinary learning (Fletcher and Cambre 2009; Oppermann 2008), motivates students to create quality projects (Gachago, Barnes and Ivala 2015), and is applicable in future academic and professional settings (Seraphin et al. 2019). In each case presented here, a clearly defined audience was central to the multimodal assessment, whether students identified their own audience, as in the first case study, produced a product for an external audience, as in the second case study, or created content for peers and future students, as in the third case study. The findings indicate the potential value of incorporating audience across disciplines through non-disposable multimodal assignments.

Findings in all three cases indicate that students engaged deeply with disciplinary learning in relation to audience. For Schrum, intentional consideration of audience shaped students' awareness and understanding of both content and narrative, with attention to working out "what are the most essential takeaways" (Chelsea) to help an audience grasp the potential impact of their academic work. For Majury, the iterative, collaborative process of producing digital story maps helped students understand the demarcations of difference within "the audience" and the work required to hone effective, inclusive textual and visual narratives in a professional context. For Simonelli, the consideration of audience helped students engage with subject materials, cross-checking the validity of their understanding against that of peers, friends, family, and future students. In each case, the assessed outcomes were what Herrington has referred to as "meaningful products" (2015, 65), projects that promote deeper learning, student engagement, and the attainment of a range of tangible skills and marketable experiences that students can use after graduation.

Defining audience can also influence student effort (Gachago, Barnes, and Ivala 2014; Kearney 2013). Presenting a multimodal product publicly allows students to disseminate scholarly work, engage with multiple communities, and see the value of their work beyond the classroom (Gallou and Abrahams 2018). Students in the first case study discussed critically evaluating their own work and engaged in extensive iterative development to create quality content in response to audience impact. Similarly, students in the second case study described their projects as "worthwhile" and remembered choosing each word carefully to represent multiple stakeholder perspectives accurately. Students in the third case study felt a strong responsibility to their classmates and future students and to communicating accurate content in an engaging way. In all three examples, the knowledge that people outside the "four walls" of the classroom would view, learn from, and use the final product inspired a level of care, nuance, and attention to accuracy that is often missing from classroom assignments submitted solely for a grade.

In this research, "audience" served as more than a learning or assessment tool. Rather, it provided a portal through which students begin to reposition themselves as professionals in the making (Jopp 2019). Through multimodal production, students were offered the opportunity to engage with external audiences, recasting themselves as researchers with expertise and stories to tell. This reshaped the scope, design, and delivery of student projects in important ways and recast students' self-understanding of their own emerging expertise. As the case studies evidence, when appropriately scaffolded, this type of learning experience can be transformative: eroding the cognitive distance between students' studies and life beyond the classroom; developing an appreciation of the value of crafting a project to reach intended audiences; gaining a better understanding of the potential impact of academic work; and securing practical insights into professional environments.

Students in the first case study discussed their growing ability to communicate scholarly content and to inspire others to care about that content. Students in the second case study reflected on awareness of their emerging work skills and growing confidence in their ability to communicate professionally. Students in the third case study commented on the skills they could use in the future, including learning how to explain difficult content and to reach wider audiences. In all three examples, audience mattered, rerouting student learning experience from a tour of "cul-de-sacs" (Ryback 2013, para 1) towards open communication beyond academia.

IMPLICATIONS

These case studies represent different disciplines, assessment structures, and teaching contexts, but they share a key element: non-disposable assignments centred around multimodal

content production for a core audience. Participating students reflected on the challenges and benefits of identifying an audience outside of the classroom and the ways in which that awareness shaped their decisions regarding what content to communicate and how, including expanding their research and reframing focus and presentation. These assignments model ways in which audience can be woven into courses in the lab sciences, social sciences, and the humanities, leaving open the possibilities for many other disciplinary and teaching contexts.

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Kelly Schrum is an associate professor of higher education at George Mason University (US).

Niall Majury is director of education and senior lecturer at the School of Natural and Built Environment at Queens University (UK).

Anne Laure Simonelli was a post doc researcher at University of Bergen (Norway) during the study. She is today the pedagogical engineer of the Digital Systems for Humans (DS4H) Graduate School at Université Côte d'Azur (France).

Sarah Bogdewiecz is a doctoral student in higher education at George Mason University (US).

ETHICS

Research for the US case study was deemed exempt from the university's ethics review board and research undertaken in Norway and the UK was approved through the relevant institutions' ethical review processes. All names are pseudonyms.

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