Developing A Rubric for Authentic Learning Praxis

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Introduction

This paper discusses the creation of a rubric that draws upon elements from two frameworks - Student as Producer (SaP) and Social Pedagogies - for faculty and instructional designers to develop authentic learning experiences.

Often, the learning spaces of the face to face or online classroom are self-enclosed. Faculty and students may bring content such as current events, news stories, or personal experiences within the classroom to stimulate discussions or formal assignments, but often course content is produced for and lives within the context of a course or an academic program. In addition, students’ perspectives, voices, or their student-produced work do not commonly travel in the other direction - to be shared beyond the learning space and into the larger world. The goal of this paper is to demonstrate how can we as instructional designers and faculty use existing frameworks to guide us through the process of creating authentic learning experiences.

Background

Annette’s case + reflection

I have long been interested in students creating learning “artifacts” (authentic, real-life evidence of learning) which are shared with an authentic audience. An example might be an assessment that requires students to create a marketing plan for an existing company, after which members of that company are asked to provide feedback. I am also interested in how narratives or stories fit into the educational experience, to help create an authentic meaningful context for content. So, when the following request came in to our team of academic technologists and instructional designers, I contacted this instructor fairly quickly to learn more.

I'd like guidance in ways to keep students engaged while they are off campus for several weeks during an externship in wildlife care and handling. My initial thought is a 3 minute digital story presented weekly. That could be posted to canvas. All students will be with me on campus for the first seven weeks of spring semester so we would have time to learn about and practice technology.
The words that caught my eye in this request: *keep students engaged* and *digital story*.

In our first meeting, the instructor and I talked about the project. What were the goals for the assignment; what issue was he trying to solve or improve upon? Who were the students; what was their impetus for being *engaged* in the course? How did he define *digital story*? Who would the *audience* be for the digital stories?

From that conversation, we talked about various options that included:

1. Have students create a portfolio of work that would include the digital stories, and would also be sharable to the class, but also be sharable beyond the class timeframe, and with a broader public audience.
2. Part of the curriculum would include educating students about the basics of media literacy as related to their digital stories.
3. Let students choose the topics for their digital stories, or provide them some limited choices of topic.
4. Assessment would include peer review and instructor review of the projects.
5. Technology tools could either be left open to student choice, or could be limited to minimize student confusion with the technology.

Through a collaborative process, we identified these project goals:

1. Students would create original works, authentic to their externship sites.
2. Their audience would be each other, as there was no easily identifiable external audience.
3. Projects would demonstrate appropriate media literacy practices (including locating and citing reliable sources and Creative Commons licensing).
4. Media tools would be pre-selected for students based on basic functionality and ease of use.

To meet these goals, we created a short, seven-week curriculum that included media literacy, story design/storyboarding, and media tool skills and training; peer reviews were implemented at each step along the way. Based on the project goals, we decided that sharing these projects outside of the class audience was not appropriate at this time. Presently, students are still in the field creating a series of digital stories, and so the final outcome of the project is unknown. I will continue to work with this instructor to evaluate how the project could be improved over time.

As I mentioned, I value students creating learning artifacts, authentic assessments and audiences, and integrating narratives or stories into the educational experience. This value is not universal, of course. The value I place on these elements might not be appropriate for every educational setting or every instructor. Working on this project revived my longtime questions, e.g., How do faculty and instructional designers value authenticity in assessments and audiences? Can that value be measured? If authenticity is seen to be effective for meaningful learning, how can we help move incrementally by determining an *appropriate* level of authenticity for the students, the instructors, and the subject matter and level?
Jennifer’s case + reflection
As an educator and course designer, a primary component of my teaching philosophy is to integrate student-centered learning experiences and assessments at all levels of the course. In my work as a designer, I am particularly excited to receive messages similar to the following:

*I am looking to add a component to my class this fall where students create a website.*

I was curious to find out more about what the instructor had in mind. After the instructor provided the course syllabus and related materials, I read through them prior to our initial meeting. The syllabus showed that students needed to be able to read and interpret findings from evidence-based literature based on a rubric for a lay audience. Developing web literacy skills such as creating a website, was not explicitly listed as one of the course learning outcomes. During our initial meeting we talked about this dynamic and developed a project that met both aspects.

The elements of the project included:

1. In groups, students would select a topic. From a pre-existing list of evidence-based articles, they would choose one article.
2. They would read the article and complete a module to understand how to develop an appropriate summary.
3. Students would write the summary and group members would review it.
4. After revising their summaries, students would enter details about it in an electronic form.
5. The information gathered from the form would be used to populate the public-facing website.

Due to the compressed frame of the course, the instructor elected to handle this component.

After the semester concluded, the instructor finished posting the final summaries to the public website (view it at gardenofwellbeing.umn.edu). Working with this instructor on this project and observing her desire for students to create authentic resources for an external audience prompted me to begin searching for frameworks and models that could serve as a roadmap for future projects.
Review of Frameworks

Student as Producer

Why is it important that student work, and evidence of their learning process, extend beyond the formal learning space? Students need concrete ways to demonstrate knowledge and skills gained throughout their undergraduate education through authentic learning activities. Such activities have relevance to real world problems that are ill-defined, complex, and provide opportunities for students to examine and address the task from multiple perspectives, collaborate, reflect on their learning, and integrate their knowledge in a variety of ways (Oliver, Herrington, Herrington, & Reeves, 2007).

The working definition of the student as producer model is “a fundamental principle of curriculum design whereby students learn primarily by engagement in real research projects, or projects which replicate the process of research in their discipline. Engagement is created through active collaboration amongst and between students and academics” (Neary, Saunders, Hagyard, & Derricott, 2010, p. 8). As such, learners are not simply consuming information and knowledge but rather are taking part, and contributing to, the production of information and knowledge. As Neary et al state, the focus broadens from learning outcomes to learning outputs; “learning outputs build on learning outcomes by recognising the importance of creativity and originality in student work. Learning outputs encourage students to develop their own critical insights and understandings through interactions with teachers” (Neary, 2010, p. 15).

To create these outputs, we may also need to revise the learning goals and processes. We may need to incorporate new learning standards into our learning experiences, and faculty may be concerned by losing time for “content” as these new standards are incorporated. We may need to broaden our definition of content as we consider using the most authentic content possible, which sometimes necessitates a move away from self-produced lecture content and toward re-using existing or open content. Learning activities may shift as well, as we move toward students playing a more active role in producing their own learning through synthesizing, problem solving, and creating their own meaningful outputs.

For the purposes of this paper, the eight components and descriptions from the work of Neary, Saunders, Hagyard, & Derricott (2010) will be used, as presented in Table 1.
Table 1: Students as Producers framework

<table>
<thead>
<tr>
<th>Students as Producers Component</th>
<th>Description</th>
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</table>
| **1. Discovery**                | New programs or modules should be presented in a *discovery* mode, which in higher education is usually characterized as one of the following three approaches to learning:  
1. Problem based  
2. Inquiry based  
3. Research based |
| **2. Technology in Teaching**   | Research-engaged teaching implies a change in the relationship between tutor and student. This changing relationship and the emergence of the concept of digital scholarship can be facilitated by *online technologies*. |
| **3. Space and Spatiality**     | Learning *spaces* in higher education may be on-campus, off-campus, online, including for diversity and accessibility. |
| **4. Assessment**               | *Assessments* reflect the discovery mode of teaching and learning. Research-engaged teaching is inherently practice-based and should demonstrate the ways in which research is incorporated into their assessment criteria. |
| **5. Student Voice**            | A *community* of learners and teachers is developed, which is respectful of diversity and difference, allows for the space of disensus and disagreement, and is driven by engaged and participatory pedagogies. |
| **6. Research and Evaluation**  | The scholarship of teaching and learning is addressed in evaluations of teaching practices that include student feedback, and the pedagogical *research* of students/faculty into their own learning and teaching experiences. |
| **7. Research-based Learning**  | Students can make intellectual and practical connections between the content and skills that characterize their programs, and the *research* approaches and frontiers of the underlying disciplines. |
| **8. Creating the Future**      | A clear focus is placed on the experience of students when they leave the university. Student as Producer supports the career preparation and aspirations of students, in the form of a traditional route into graduate jobs and the professions, creating a new business, finding employment, or pursuing further study. |

In sum, Neary (2010) suggest that institutions ask themselves “how do their programs enable students to see themselves as subjects rather than objects of history and to recognize themselves in a world of their own design.” Based on this, we characterize the SaP framework with the term “agency”, which the Merriam-Webster dictionary defines as *the capacity, condition, or state of acting or of exerting power*. 
Social Pedagogies
Social pedagogies are design approaches for teaching and learning that connect students with an authentic audience (other than the course instructor) to share their knowledge constructed in the course (Bass & Elmendorf, 2011). By connecting with the authentic audience, students increase their understanding of course content. This framework places strong emphasis on the social dimensions of learning and seeks to make visible the specific learning traits that emerge from authentic learning situations, such as the ability of learners to use knowledge in fluid and shifting contexts, transfer knowledge to new situations, and function in environments with uncertainty. These learning traits are often not clearly represented in the course design and assessment: to make them apparent, conscious choices by faculty or course designers need to be made. The social pedagogies framework is an effort to help these groups think about the design elements and goals of the course to make authentic learning experience more visible.

For the purposes of this paper, the five components and descriptions from Bass & Elmendorf (2011), and Bass’ later work (2014) will be used, as presented in Table 2.

Table 2: Social Pedagogies framework

<table>
<thead>
<tr>
<th>Social pedagogies Component</th>
<th>Description</th>
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<tbody>
<tr>
<td>Engage with authenticity and difficulty</td>
<td>Learning tasks combine iterative cycles of engagement with the most difficult course material and practical application of thinking, practicing, and communicating within the field of study.</td>
</tr>
<tr>
<td>Value process and product of learning</td>
<td>Learning process that develops students’ adaptive expertise, including the ability to work with uncertainty, adapt to ambiguity or even failure, and to feel increasingly comfortable working at the edges of their competence and knowledge. Throughout the learning process, students participate in communication-intensive activities to continuously develop and refine their knowledge with the most difficult course material.</td>
</tr>
<tr>
<td>Represent knowledge for an authentic audience</td>
<td>Social core that combines constructing and communicating understanding for authentic audiences (primarily defined as audiences other than the instructor). Authentic audiences can take four forms: faculty and peer feedback, collaborative work, external audiences, and knowledge communities.</td>
</tr>
<tr>
<td>Participate in an intellectual community</td>
<td>Learning assessments that connect students with community within and outside of the classroom through meaningful reflection and constant communication of content, knowledge, application, and synthesis throughout the course.</td>
</tr>
<tr>
<td>Connect the affective</td>
<td>Learning integration of students’ stages of knowledge acquisition and</td>
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</table>
and cognitive students’ feelings about knowledge acquisition. This combines metacognition and professional identity development to enable students to understand how to translate their ideas for others, negotiate with peers around meaning, and internalize standards for quality and excellence.

Bass & Elmendorf (2011) repeatedly return to the concept of authenticity in each of the components of their framework: engaging with authenticity, authentic audiences, authentic learning, authentic tasks, and authentic learning activities. Based on the importance they place on it, we characterize the Social Pedagogies framework with the term authenticity. They do not explicitly define the term at a high level in their work, however, Greenfield, Finch, Margarita Johnson (2017) in their application of the social pedagogies framework in language learners, define it as “...learning objects that are produced, curated, and consumed by students” and learning resources that “...represent a student’s authentic communication to an authentic audience” (p. 169).

**Creation of the Rubrics and Praxis Graph**

From our combined experience as higher education professionals, we acknowledge that change in higher education is often incremental and iterative. While the ideas that underpin the Students as Producers and Social Pedagogies frameworks are well-established in the literature on teaching and learning (Freire, 1970; Jenkins et al, 2009; Vygotsky, 1986), they present tensions with the instructional practices of faculty in higher education. Traditional instructional practices were teacher-centered, however as the literature around teaching and learning shifted towards learner-centered approaches, instructional practices do not often follow at the same pace (Bransford, Brown, Cocking, 2000). In addition, the system of rewards in higher education does not place equal value on the teaching outputs of faculty as compared to their research outputs (Boyer Commission, 1998). “Higher education places a high premium on originality, whereas adapting or improving another’s educational materials is rarely understood to be a creative, valuable contribution” (Iiyoshi & Kumar, 2008, p. 432).

As instructional designers and faculty, we often need to break down dense, complex change paradigms into manageable, concrete steps toward improving our own perceptions and practice. The Students as Producers and Social Pedagogies frameworks both offer benefits to student learning through authentic learning and assessment. They also offer challenges - common barriers that need to be addressed to reap their benefits (Bhika, Francis, & Miller, 2013; Greenfield, Finch, Margarita Johnson, 2017; Hubbard et al, 2017; Warner & Richardson, 2017). The practical question that we seek to address is how the frameworks can be implemented in faculty development, curriculum planning, and course design.

To do so, we have developed two rubrics that use the components from each framework and examples from related research projects. The rubrics will allow instructors to self-diagnose their teaching and learning approaches. Alternatively, instructional designers could walk through the rubrics with a faculty member during a consultation to gain an understanding of the instructor’s approach to teaching and learning.
Agency rubric.
Based on the eight components and specific examples in Student as Producer: research-engaged teaching, an institutional strategy (Neary, Saunders, Hagyard, & Derricott, 2010), we developed a rubric (see Appendix A) to evaluate the level of agency of an instructor’s teaching and learning practices.

After completing the rubric, instructors will receive a score from 0 to 50. A score with values ranging from 5-15 may indicate that their teaching and learning practices are instructor-centered, and score with values ranging from 35-45 may indicate that their teaching and learning practices are student-centered. The rubric is not intended to serve as a definitive measure of the sum of an instructor’s teaching and learning practices, rather, it is intended to serve as a self-diagnostic guide for instructors and instructional designers to better understand their practices and inform future course design choices.

Authenticity rubric.
Based on the five components and specific examples in Bass & Elmendorf, 2011; Bass, 2014; Greenfield, Finch, Margarita Johnson, 2017; & Warner & Richardson, 2017, we developed a rubric (see Appendix B) to gauge the level of authenticity of an instructor’s teaching and learning practices.

After completing the rubric, instructors will receive a score from 0 to 50. A score with values ranging from 5-15 may indicate that the course design does not have a strong level of authenticity, and a score with values ranging from 35-45 may indicate that the course design has a strong level of authenticity throughout it. Like the agency rubric, this is not intended to serve as a definitive measure of the sum of an instructor’s teaching and learning practices, rather, it is intended to serve as a self-diagnostic guide for instructors and instructional designers to better understand their practices and inform future course design choices.

Praxis graph
When both an authenticity and an agency score have been determined, the combined scores will be used to place instructors in one of four quadrants of the praxis graph (see Appendix C for draft version). Instructors will then be presented with examples of practices that they could adopt to move along each axis. The examples could further be used by instructors to make action plans for their own goals and aspirations if they chose to do so.

We realize that individuals will fall into a particular quadrant for a variety of reasons, and we strive to make no judgement on this variation. Rather we will try to determine the cause of the variation based on individual instructors. We anticipate that individual differences may be due to awareness of the Social Pedagogies and Student as Producer frameworks, teaching philosophy, content matter, level of students (undergraduate, graduate, professional), and disciplinary teaching approaches.

Next steps
In July 2018, we will present the background details about the creation of the rubric and the rubric to a group of instructional designers. After the presentation, we will invite participants to take part in one of two focus group interviews. The focus group method is well suited to this project as it is geared toward practitioners: instructional designers working directly with faculty on course design. Our sampling process for the participant selection process would seek to include instructional designers with a range of professional experience (0-2 years, 3-5, and 5+ years) and disciplinary backgrounds (work with faculty in liberal arts, medicine, engineering, etc.). This is in keeping with the sampling process for focus groups, as it “typically involves bringing together people of similar backgrounds and experiences to participate in a group interview about major issues that affect them” (Patton, 2002, p. 385).

The questions for the focus group participants will be designed to solicit feedback about the rubric and provide information for revisions. The focus group will have two sessions: one in late July and the second in early August. The two focus group interviews will be led by the authors of this paper. During each session, one of us will facilitate and the other will take notes and observe. The sessions will be recorded and transcribed by the authors. After each focus group session, we will separately write memos to capture our reflections about the interview process. Our coding process will follow two stages - first cycle and second cycle coding. For the first cycle, we will separately generate descriptive and In Vivo codes. After the first cycle, we will write analytical memos, discuss the codes we created, and discuss our coding process before moving on to the second cycle of generating pattern codes and themes (Miles, Huberman, & Saldaña, J. (2014). Further details about the data collection and analysis processes will be included in subsequent versions of this paper.

We anticipate using the results from the focus group interviews to make changes to the rubric, and will also include details about the changes in subsequent versions of this paper. Our eventual goal is to use the rubric and praxis graph as a self-diagnostic guide with faculty during instructional design consultations to guide them through the process of creating authentic learning experiences.
References


Appendix A: Agency rubric

<table>
<thead>
<tr>
<th>Student as Producer Component</th>
<th>Criteria (1)</th>
<th>Criteria (3)</th>
<th>Criteria (5)</th>
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<tbody>
<tr>
<td>1. Discovery Problem based learning</td>
<td>Students are presented with open ended problems to solve in my course assignments.</td>
<td>Students work in small collaborative groups.</td>
<td>Students are presented with an open ended problem to solve, and encouraged to take responsibility for their group to organize and direct the learning process with support from a tutor or instructor.</td>
</tr>
<tr>
<td>Inquiry based learning</td>
<td>I try to incorporate at least one “scenario” to provide context for learning, for example to introduce a module.</td>
<td>Students examine the resources they need to research a “scenario” or topic that I assign them.</td>
<td>Starting with a “scenario” and with the guidance of a facilitator, students identify their own issues and questions</td>
</tr>
<tr>
<td>Research-based learning</td>
<td>Generally, my course content does not require students to engage with research problems.</td>
<td>I use authentic research problems to provide context for class content and assignments.</td>
<td>The design of learning activities is based on authentic research problems in the public domain that involve engagement with the wider community.</td>
</tr>
<tr>
<td>2. Technology in Teaching</td>
<td>Students use a learning management system (such as Moodle or Canvas) as required by the course activities.</td>
<td>Students are encouraged to complete educational tasks with basic tools such as Google Drive and the learning management system (such as Moodle or Canvas).</td>
<td>Students are introduced to and choose from a wide range of technology tools (blog, wiki, personal website, etc) appropriately in order to manage their educational tasks.</td>
</tr>
<tr>
<td>3. Space and Spatiality</td>
<td>Students primarily work independently on activities and assessments.</td>
<td>Students engage with others in the class.</td>
<td>Students engage with the community outside of the campus.</td>
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<tr>
<td><strong>4. Assessment</strong></td>
<td>I am primarily responsible for assessing student work in my class.</td>
<td>Students are involved in grading through peer assessment, group assessment and self-assessment, and giving feedback.</td>
<td>Students are involved in the process of grading AND of designing assessments.</td>
</tr>
<tr>
<td><strong>5. Student voice</strong></td>
<td>Students can choose from options in some content and activity topics.</td>
<td>Students have opportunity to support the learning of other students.</td>
<td>Students are given responsibility for the management and delivery of their own learning.</td>
</tr>
<tr>
<td><strong>6. Research and evaluation</strong></td>
<td>I periodically reflect on the effectiveness of my teaching and learning methodologies.</td>
<td>My teaching is regularly informed by pedagogical research into the effectiveness of my teaching and learning methodologies.</td>
<td>I share my teaching-related research with colleagues, including ways in which this work could be used to apply for external funding.</td>
</tr>
<tr>
<td><strong>7. Research-based Learning</strong></td>
<td>My class does not require student research.</td>
<td>I direct students to library resources to review resources on information literacy and research skills.</td>
<td>I invite university library staff to provide students with training on effective information literacy and research skills.</td>
</tr>
<tr>
<td><strong>8. Creating the Future</strong></td>
<td>Students work primarily on independent projects.</td>
<td>Students work on projects in collaborative groups.</td>
<td>Students network and collaborate within AND outside of the class group.</td>
</tr>
<tr>
<td><strong>Score</strong></td>
<td></td>
<td></td>
<td>(50 possible points total)</td>
</tr>
</tbody>
</table>
### Appendix B: Authenticity rubric

<table>
<thead>
<tr>
<th>Social pedagogies Component</th>
<th>Criteria (4)</th>
<th>Criteria (7)</th>
<th>Criteria (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage with authenticity and difficulty</td>
<td>Students typically submit assignments directly to the instructor that are designed to increase understanding about course content.</td>
<td>Students typically receive peer feedback on authentic learning assignments that are designed for them to apply and analyze course content.</td>
<td>Students typically complete authentic learning assignments assignments with peers that are designed for them to evaluate and create new understanding about course content.</td>
</tr>
<tr>
<td>Value process and product of learning</td>
<td>Students typically do not refine ideas and knowledge throughout the course. They may feel uneasiness when asked to explain a concept or an idea which does not immediately make sense to them, or when presented with a question that does not have a clear black and white answer.</td>
<td>Students typically refine ideas and knowledge occasionally throughout the course through the use of peer feedback and discussion. They may engage in activities designed to stretch their discomfort when presented with unclear information and develop solutions to problems/issues without having complete information.</td>
<td>Students typically refine ideas and knowledge consistently throughout the course in order to communicate their newly gained knowledge and ideas for an external audience. They may feel more at ease in situations where information is ambiguous or they may not immediately have all of the answers to a problem/question/idea.</td>
</tr>
<tr>
<td>Represent knowledge for an authentic audience</td>
<td>Students typically do not have defined audiences for their assignments, or the perceived audience is the instructor.</td>
<td>Students typically have faculty and peers as the audience for their work. Students receive consistent peer feedback on their work during the course.</td>
<td>Students typically work with peers to create a collaborative project or create an individual project that will be reviewed by an external audience.</td>
</tr>
<tr>
<td>Participate in an intellectual community</td>
<td>Students typically do not/minimally engage in interactions designed to communicate knowledge about the course content.</td>
<td>Students typically simulate future professional interactions with peers to gain experience. Faculty provide guidance and model interactions within the classroom.</td>
<td>Students typically communicate with external audiences to discuss topics of personal/professional interest or topics pertaining to the course content.</td>
</tr>
<tr>
<td>Connect the affective and cognitive</td>
<td>Students typically do not/minimally engage in reflection activities during the course.</td>
<td>Students typically engage in occasional reflection activities during the course, designed to increase their understanding and application of course content.</td>
<td>Students typically engage in reflection activities on a consistent basis during the course. Reflection activities are designed to increase both their understanding and application of course content &amp; their thinking and communication efforts over the duration of the course.</td>
</tr>
<tr>
<td>Score</td>
<td></td>
<td></td>
<td>(50 possible points total)</td>
</tr>
</tbody>
</table>
Appendix C: Praxis graph

Authenticity

Agency