



# From Private to Public: Using Authentic Audiences to Support Undergraduate Students' Learning and Engagement

## ABSTRACT

The purpose of this article is to explore the use of authentic audiences in higher education to support undergraduate learning. To explore the results of integrating authentic audiences in higher education, we present a collective case study in which the use of authentic audiences was employed in separate undergraduate courses at two different higher education institutions in the Eastern and Midwestern United States (N = 75). In one case, Wikipedia was employed as an authentic audience and in the other case, experienced secondary educators as well as Twitter were embedded. The goal of implementing authentic audiences in both settings and courses was to increase student engagement and foster critical thinking. Results suggest that integrating authentic audiences through these means can enhance undergraduate students' engagement and learning and may serve to capture, but not necessarily foster, students' critical thinking. Concurrently, an instructor's pedagogy must also align with tenets associated with authentic audiences, including a commitment to a co-construction of knowledge and the purposeful selection of authentic audiences who are engaged, willing to partner, and have the necessary expertise and resources to contribute to students' learning.

## KEYWORDS

undergraduate education, authentic audience, Wikipedia, Twitter, student engagement

## INTRODUCTION

Learning is an active process of interacting with the world while making and co-constructing meaning through one's experience (Dewey 1938; Vygotsky 1978). It is also enhanced when learners see value in their learning, particularly when they perceive meaningful results from their learning (Lave and Wenger 1991). As such, educational researchers have argued that when and where possible, classroom tasks should involve authentic audiences, because such audiences give students opportunities to co-construct learning and see the meaning of their work (Nielsen 2015). An authentic audience is one that exists outside a student's classroom, in which students' work is shared publicly with a specific audience (Wiggins and McTighe 2005). At times, audience members offer responses and feedback to students on in-process or final assignments. Authentic audience members also review and/or engage with students' completed projects, offering feedback and commentary. Additionally, students' work may be shared publicly without direct audience feedback, such as public displays within a community or business, service announcements, and proposals.

However, authentic audiences are underutilized in higher education. Often, the audience for undergraduate students' completed work is their instructor. This makes sense when an assignment is meant to display students' learning and understanding of specific course content through formative assessments or when students are assessed summatively (e.g., quizzes and tests). But students engage and learn more when they know their learning will be viewed and/or used by authentic audiences within a given course (Ambrose et al. 2010; Wiggins 2009).

In this article, we present and consider two case studies in which the use of authentic audiences was intentionally employed in different undergraduate courses at separate institutions of higher education, located in the Midwestern and Eastern United States. The instructors' stated goal for implementing authentic audiences in both settings and across courses was to engage students in their learning and generate opportunities for critical thinking. As such, we ask the following research question: What impact, if any, does the integration of an authentic audience have on undergraduate students' engagement and critical thinking? In the following sections we provide an overview of relevant literature and an explanation of the study's methods, followed by findings, discussion, and recommendations. Results indicate that interactions with authentic audiences supported undergraduates' engagement but exerted less impact in fostering critical thinking. Additionally, instructors' pedagogy and dispositions matter when it comes to utilizing authentic audiences in undergraduate education.

## LITERATURE REVIEW

### **Student engagement**

One important outcome when embedding authentic audiences into higher education coursework is the potential for increased student engagement. For example, Lee et al.'s (2014) phenomenological case study analyzed eight college professors across multiple disciplines who integrated authentic audiences through project-based learning units. The case study highlights how students' learning shifted away from memorizing and regurgitating information and towards learning and using information to complete real-world tasks. Results from this study indicate that the feedback authentic audience members shared increased students' intrinsic motivation for participating in their own learning, resulting in an increase in students' overall engagement. In Narayan, Herrington, and Cochrane's (2019) study of undergraduates in a journalism course, the instructor embedded the use of social media tools (i.e., WordPress and Twitter) to engage learners with course content while also requiring them to curate and share their learning through contributions to a course blog via WordPress and Twitter. In both instances, students' work was made available to authentic audiences beyond their course, and researchers noted an increase in learners' engagement when sharing their learning with a broader audience.

Furthermore, Hitchcock et al. (2021) studied the outcomes of a podcast assignment in both undergraduate and graduate social work courses centered on practice and policy. Students created, produced, and published podcast episodes related to specific course content. These episodes were shared with peers and instructors and students were also asked to consider sharing their episodes with the public, which many did. Outcomes of this study indicate students' increased engagement with the assignment and their enhanced level of content knowledge, made clear through their podcast episodes. Moreover, learners' engagement was further supported through the invitation to share their work with the broader community, particularly those in the social work profession.

Another example of implementing authentic audiences to support student engagement in higher education is evident in Emel's (2018) creation of a "Speech Choir" in an undergraduate communications course. The focus of the course and students' learning centered on selecting,

analyzing, planning, rehearsing, and performing texts for authentic audiences. As a result, undergraduates' learning was purposely designed to be shared publicly with multiple authentic audiences. This experience increased students' engagement in their learning as well as the public performances themselves, which were initially performed in campus spaces but were later extended into the broader community, including opportunities for students to receive constructive critiques from audience members.

### **Critical thinking**

Additionally, embedding authentic audiences in undergraduate coursework supports and fosters critical thinking. Hunter and Botchwey (2017) studied an undergraduate urban planning course and its partnership with a local elementary school. In the course, undergraduates partnered with elementary students with the express goal of engaging students in a study about the health of their local neighborhoods. One aspect of the project had elementary students serving as an authentic audience for undergraduates, as they worked with these young learners to help them understand the components of urban planning and development. In doing so, undergraduates had multiple opportunities to think critically, as they considered and compared potential options and outcomes.

Another example of how critical thinking results when utilizing authentic audiences is made clear in Kill's (2011) earlier study, which examined the outcomes of Wikipedia-based assignments. These assignments empowered learners to become "generative producers and critical consumers of cultural products" which can lead to "meaningful interventions in the world and lasting connections between their humanist training and public engagement" (390). Kill also acknowledged the ways Wikipedia's open-access platform diverges from traditional academic assignments collected and evaluated by an instructor.

I suggest that this type of teaching involves our students as agents in questions of the unequal distribution of wealth and opportunity by asking them to learn by drawing on research resources available to them while they are on college campuses and sharing some of that privilege with the networked world. (n.p.)

More recently, Vetter, McDowell, and Stewart's (2019) large-scale study of Wikipedia-based writing assignments found that Wikipedia-based writing assignments, which treat online users as authentic audience members, increased learners' critical thinking skills when they evaluated, analyzed, and generated content for various Wikipedia webpages.

While the results related to this outcome demonstrated a positive correlation, we must also recognize that the particular assignment, class, and instructor will play a crucial part in helping students to achieve this particular learning goal. (60)

In McDowell and Vetter's (2022) more recent work related to using Wikipedia in undergraduate coursework, the authors note, "Wikipedia-based projects provide opportunities for public engagement with an authentic audience, which is far more motivating and engaging for students than traditional assignments" (7). They also explain that this engagement leads to more opportunities for critical thinking throughout the learning process.

## METHOD

**Study context**

This study centers on two undergraduate instructors' integration of authentic audiences across separate education courses in two types of higher education institutions (Table 1).

**Table 1.** Study context

Instructor	Institution type	Location	Course	Number of students	Number of semesters
Professor 1 (P1)	Large doctoral university	Eastern United States	EDP 300 (Educational Psychology)	17	1
Professor 2 (P2)	Master's university	Midwestern United States	ED 325 (Content Area Literacy)	58	3

Course instructors did not collaborate while teaching these respective courses but were engaged separately in studies related to both courses and in the use of authentic audiences. During data analyses, the instructors were connected by a mutual colleague due to their pedagogical and research interests. As a result, their collaborations have centered on examining and implementing pedagogies and practices aimed at supporting undergraduate student learning. As part of their ongoing partnership, they came to realize that they were independently embedding authentic audiences in undergraduate courses to foster students' engagement and encourage critical thinking. Given their ongoing research, data utilized in this study are part of two separate, larger undergraduate focused studies they facilitated to examine their pedagogies and practices as well as students' learning and include data from multiple courses, institutions, and semesters.

To better understand the use of authentic audiences in undergraduate education across both contexts, this study is framed using Yin's (2009) case study research and Stake's (2006) collective case study methodology. We first treated and examined the instructors' experiences as separate, single cases, bound by time and location (Creswell 2012). We then engaged in cross-case analysis (Yin 2009), in which we compared instructors' experiences and the outcomes of implementing authentic audiences in the respective contexts and undergraduate courses. Multiple data sources were collected to study the results of integrating authentic audiences, with the express aim of increasing student engagement and fostering critical thinking in both courses, which reflect different contexts, instructors, and courses (Table 2).

**Table 2.** Data sources

Instructor course	Data collected	Description and purpose
Professor 1 (P1) EDP 300	EDP 300 students' drafts and final contributions to assigned Wikipedia article pages	Illustrate students' actual participation in the collaborative knowledge construction process, including their critical review of the existing Wikipedia pages and demonstration of further learning based on contributions to the course content-related pages.

	EDP 300 students' drafts and final contributions to assigned Wikipedia Talk pages	Capture constructive conversations with authentic audiences, specifically other Wikipedia users, and highlight students' new inquiries about the course topics they encountered in the Wikipedia writing process—including feedback from other Wikipedia users.
	EDP 300 students' end-of-semester reflections	Capture students' evaluation of the Wikipedia writing activity in terms of its effectiveness for course learning and solicit feedback regarding how engaging in the Wikipedia writing activity helped students develop particular writing and communication skills.
Professor 2 (P2) ED 325	ED 325 students' drafted and completed coursework	Provide evidence of students' thinking and learning, both during and at the end of a given learning experience/assignment, including ways they utilized authentic audience feedback in final versions.
	ED 325 students' weekly reflections (i.e., 15 collaborative group Google Documents ranging from 30–50 single-spaced pages)	Capture reflections regarding participants' 1) collaborative work with peers; 2) interactions with authentic audience members; and 3) learning experiences, including engagement in activities and learning.
	Twitter posts tagged with the course hashtag generated by P2 and participating students (n=952 Tweets across two semesters)	Highlight ongoing visual and text-based evidence of participant-generated learning, experiences, and reflections connected to experiences associated with authentic audiences.
	Authentic audience members' feedback	Provide insight regarding authentic audience members' observations, experiences, and perspectives when working with ED 325 students and reviewing their drafted and completed work.

These data sources centered on students' completed coursework, as these were designed to capture evidence of student learning and experience(s) with the authentic audience(s) embedded in their course. Data analysis included open coding (Miles, Huberman, and Saldaña 2019) related to first identifying the use of authentic audiences in both contexts. Aligned with when, where, how, and why authentic audiences were employed in these contexts, we then completed independent thematic analyses of the collected data, specifically looking for evidence of student engagement and critical thinking within each case's data set. After, we engaged in two additional rounds of thematic analysis, both times examining the identified evidence related to student engagement and critical thinking within and then across each case (Merriam 2009; Miles, Huberman, and Saldaña 2019). The first round was completed independently. During the second and third rounds we met and engaged in inter-rater

reliability and member-checking processes (Miles, Huberman, and Saldaña 2019) and collectively engaged in a cross-case analysis (Yin 2009).

Committed to a “pedagogy of investigation” (Ball and Cohen 1999), we utilized this study’s research question to frame findings and discussion, evidenced in the accompanying sections. First, we describe the separate cases. Then, in the following section, we identify results related to integrating authentic audiences in higher education courses, particularly as a means of increasing student engagement and fostering critical thinking.

CASE STUDIES

**Wikipedia in an undergraduate psychology course (EDP 300):**

**Case study #1**

For two semesters, Professor 1 (P1) taught a three-credit, fully online asynchronous undergraduate educational psychology course (EDP 300) at a large, doctoral university in the Eastern United States. EDP 300 is a required course for preservice teachers, but students from other disciplines also take the course as an elective. One curricular component of this course entailed examining and demonstrating an understanding of selected learning theories and theorists. When P1 first taught this course, they wanted their students to not only consume but also create content connected to this curricular learning outcome of the course. As a result, P1 made revisions each semester they taught the course (Table 3).

**Table 3.** P1’s revisions to learning theories assignment in EDP 300

Before	First semester	Second semester (includes first semester components)
Students watched an hour-long lecture-based video explaining various learning theories and then completed a quiz via the course learning management system (LMS)	<p>P1 replaced the lecture- and quiz-based learning activity with a research-based writing task in which students worked collaboratively to locate, review, and convey their knowledge of an assigned theory and theorist(s). P1 assigned students a class writing activity within the course LMS.</p> <p>Once they compiled their research and information, students first worked in small groups to organize and share their learning, including research citations, with their EDP 300 classmates via private pages within the course LMS.</p>	<p>P1 noted that students appeared to solely access their group’s LMS page to complete the assignment but did not review other groups’ content to extend their learning, despite being encouraged to do so.</p> <p>To encourage more student engagement across course content, specifically learning theories and theorists, the following semester P1 added a public writing component to this EDP 300 assignment using authentic audiences. Specifically, EDP 300 students were expected to collaboratively make contributions to existing Wikipedia pages associated with assigned learning theories and theorists. In the first part of the Wikipedia writing activity, P1 instructed groups to complete class pages within their course LMS, like the previous semester.</p>
<b>Authentic audience component</b>	<b>Authentic audience component</b>	<b>Authentic audience component</b>
None	None	To provide students’ work with more visibility and to give them an opportunity to share their

		<p>learning beyond the course, P1 instructed each group to review associated Wikipedia pages and identify areas and text where research from their EDP 300 class LMS page writing could contribute to the further development of the associated Wikipedia page. Once they did so, P1 instructed EDP 300 students to go through Wikipedia's online process of submitting content and suggesting edits to the relevant pages. Drawing on the research they conducted, each group submitted additional content, including text and academic references, to Wikipedia for review and publication consideration on the crowd-sourced reference pages.</p> <p>During the second part of the Wikipedia writing activity, P1 engaged EDP 300 students in a collaborative writing process in which they communicated with members of the Wikipedia community and exchanged ideas in the content development and editing process. Specifically, P1 taught EDP 300 students how to use the Wikipedia Talk page, including how to comment on their own and others' recent Wikipedia page edits as well as post questions and suggestions for potential editing and content submission activities through additional research. The Wikipedia Talk page is a built-in writing repository for each Wikipedia article that allows all Wikipedia users to exchange thoughts and ideas about how to improve articles.</p> <p>Following P1's instruction, EDP 300 students learned how to engage in written communication on the Wikipedia Talk page and then used the Talk page as they sought to further contribute to the existing Wikipedia articles. EDP 300 students first created their Wikipedia user pages and monitored both their selected Wikipedia learning theory page and the associated Talk page to participate in online discussions regarding their suggested changes. These discussions took place between group members and the public who accessed the pages.</p>
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Assessment and outcomes	Assessment and outcomes	Assessment and outcomes
Students' quizzes were assessed automatically via the LMS, and the quiz grade served as evidence of their learning and understanding.	<p>Once groups' private pages were completed, P1 reviewed and commented on students' work. This review process included posing questions and noting areas where additional clarification, information, and/or content would be helpful.</p> <p>P1 also offered feedback regarding the content, organization, and presentation of students' information. Using this feedback, groups finalized their class pages.</p>	<p>P1 engaged in ongoing, formative assessment of students' learning and contributions to Wikipedia pages throughout the drafting and revision processes. P1 also monitored the activity on the Wikipedia Talk pages as Wikipedia pages.</p> <p>At the end of the semester, EDP 300 students wrote individual reflections on this collaborative Wikipedia writing experience, as experienced through edits on the Wikipedia article page and conversations on the article's Talk pages.</p>

Through this revised research-based assignment, P1 sought to increase EDP 300 students' motivation for learning about relevant theories and theorists as well as augment the quality of their completed work. P1 also monitored the number of times students accessed and contributed to their Talk pages. There is not comparison data between semesters because the Wikipedia writing assignment was an addition in the second semester. But the number of times as well as the span of time (i.e., weeks) students engaged with their Talk pages was much more, in contrast to the ways in which previous students accessed their LMS pages (i.e., contributing fewer times in a much shorter span of time, such as days). Based on feedback shared in the second-semester students' end-of-semester responses, as well as comparing these responses to the previous semester's student reflections, knowing that their writing on the Wikipedia pages would be shared with and reviewed by a public audience who also provided feedback on the students' writing activity appeared to boost EDP 300 students' motivation to further develop their knowledge about learning theories and refine their writing to accurately and clearly express understanding of content.

### **Community partners and social media in an undergraduate education course (ED 325): Case study #2**

Over the three semesters, Professor 2 (P2) taught ED 325, a fully face-to-face three-credit, upper-level undergraduate content area literacy education course at a Master's university located in the Midwestern United States (N = 58). ED 325 is a required course for preservice teachers pursuing secondary teaching certification and is taken the semester before they student teach. One component of this course included learning about the connections between adolescent literacy development and project-based learning (PBL), a pedagogical approach that includes using authentic audiences to support and extend students' learning. To support their learning about PBL and adolescent literacy, P2 created an assignment in which ED 325 preservice teachers were required to create and design their own two-four-week PBL unit, working with another ED 325 peer to identify potential cross-curricular connections and learning between units (e.g., math and biology; music and history; health and English language arts). Based on student feedback and a commitment to engaging undergraduate students in authentic learning opportunities, the second and third semester P2 augmented the PBL unit assignment to include interactions with local secondary teachers and administrators who had experience using PBL in their classrooms, workplaces, and schools. P2 also



integrated the use of Twitter to grow and support undergraduate students' professional learning networks (PLNs), aimed at empowering them to share their understanding of PBL and adolescent literacy (Table 4).

**Table 4.** P2's revisions to PBL unit assignment in ED 325

First semester	Second semester (includes first semester components)	Third semester (includes first and second semester components)
<p>P2 introduced PBL unit assignment. Students created PBL units, engaging in a formative peer review during one class session and informal, voluntary reviews and feedback sessions outside of class.</p>	<p>P2 augmented the PBL unit assignment to include interactions with local secondary teachers and administrators who had experience using PBL in their classrooms, workplaces, and schools.</p> <p>P2 also integrated the use of Twitter to grow and support students' professional learning networks (PLNs), including their understanding of PBL and adolescent literacy.</p>	<p>When introducing this assignment in the third semester, P2 explained that ED 325 students would be expected to share their units with local, experienced PBL educators during the drafting and final draft stages.</p>
<p><b>Authentic audience component</b></p>	<p><b>Authentic audience component</b></p>	<p><b>Authentic audience component</b> (includes second semester components)</p>
<p>None</p>	<p>Throughout the PBL unit, students generated and posted tweets (tagging with the class hashtag). Tweets were shared with their followers (including P2), connected to what they learned about PBL and adolescent literacy.</p> <p>P2 designed a roundtable experience in which area professional educators attended part of an ED 325 class session after students completed their PBL units. During this part of the class, ED 325 students met in pairs with one to three professionals where they verbally "pitched" their finalized PBL units, shared copies of their unit drafts, and explained the components of their units, including how they designed and planned the units to support secondary students' learning and engagement, including cross-curricular connections.</p> <p>Experienced PBL roundtable educators offered verbal feedback in the form of</p>	<p>P2 shifted the roundtable experience so that educators engaged with educators in the middle of the PBL unit, during the drafting and revision stages.</p> <p>Students met with area educators and shared working drafts of their PBL units, receiving formative feedback from educators.</p> <p>ED 325 students were expected to take educators' feedback and further revise their PBL units.</p> <p>ED 325 students shared their final PBL drafts via shared Google Docs with educators for summative feedback. Educators provided summative feedback within each ED 325 student's PBL unit Google Doc.</p>

	suggestions, recommended resources, and potential revisions. ED 325 students were encouraged to take notes and use educators' responses for future work (students were not required to revise their PBL units).	
<b>Assessment and outcomes</b>	<b>Assessment and outcomes</b> (includes first semester components)	<b>Assessment and outcomes</b> (includes second semester components)
Students completed a self-evaluation and reflection, responding to prompts related to the quality and applicability of their final unit draft, and the professor reviewed students' self-reflections.  Using a rubric, P2 evaluated and assessed ED 325 students' PBL units and provided summative feedback and a letter grade.	P2 revised self-evaluation and reflection to include questions about working with and receiving feedback from area educators on final drafts of PBL unit.	Area educators provided summative feedback via each student's completed PBL unit Google Doc.  P2 reviewed educators' feedback and added replies (when applicable) and posted additional comments as well as summative feedback.

Through this revised PBL unit assignment, P2 sought to increase ED 325 students' understanding of and motivation for using PBL to support and augment adolescents' literacy development. P2 intentionally embedded multiple opportunities to receive and give formative feedback through peer-to-peer and experienced-educator-to-undergraduate collaborations. Moreover, the integration of Twitter to develop participants' professional learning networks (PLNs) was intended to further develop students' communication skills as well as provide a platform through which they could share their learning with an authentic audience (i.e., followers on Twitter). In end-of-unit and semester reflections, ED 325 students overwhelmingly expressed positive feedback regarding their experiences sharing their PBL units with "real" teachers and administrators in the field. Third semester students noted that they appreciated having professionals' feedback during the drafting process so they could use the feedback to revise and finalize their units, with many expressing that they were able to directly incorporate educators' feedback into their working drafts and that they were further motivated by the fact that they knew these professionals would be seeing and commenting on their final PBL unit drafts.

## RESULTS

In this section, we share results from P1 and P2's experiences integrating authentic audiences in their respective undergraduate courses (N = 75) as a means of increasing student engagement and fostering critical thinking. The use of authentic audiences in both contexts shifted undergraduate students' completed coursework from private (i.e., peer and instructor review) to public (i.e., Wikipedia employees and readers as well as educational professionals in the field and Twitter followers). In both courses, the results of integrating authentic audiences demonstrate an impact on students' acquisition of content knowledge while also increasing engagement in the learning process.

Moreover, the integration of authentic audiences afforded opportunities for critical thinking, particularly when students shared their learning beyond peers and instructors.

## **Authentic audiences and student engagement**

### *EDP 300: Case study #1*

P1's writing activity in the first semester using the course LMS pages was aimed at developing undergraduate students' deeper and broader understanding of the assigned learning theories by first engaging them in research activity and then having them share their research outcomes with peers and the instructor in a meaningful and collaborative manner. While facilitating this project, P1 initially expected that because of their group participation in the research and writing processes associated with this assignment, EDP 300 students' contributions—as captured in the LMS pages—would reflect students' increased knowledge of the learning theories. However, in the process of supervising, evaluating, and giving feedback on students' written contributions via the course LMS, P1 realized that when students reviewed and read their peers' posted content within the course LMS, students' learning showed little to no further improvement of their overall knowledge of these learning theories.

According to P1's analysis of the LMS user records, the time when the EDP 300 students accessed peers' content in the LMS and engaged in peer review writing activities was concentrated within a day or two before the activity deadline. As a result of the students' limited activity engagement, which appeared aimed at getting a good grade by completing the assignment on time, the class LMS pages ended up exhibiting a summary of the learning theories using the instructor-provided sources rather than further, meaningful information about them.

For this reason, the following semester P1 augmented the learning theory assignment by adding another research and writing opportunity that involved an authentic audience. P1's goal for their EDP 300 students' participation in the Wikipedia writing activity was to enhance the content of Wikipedia articles which people across the world use to get information about learning theories and theorists. P1 still used the course LMS where students posted information about a learning theory which also allowed for instructor assistance and feedback. Utilizing the LMS in this way provided students with a safe and supported learning opportunity to practice wiki writing. Utilized as a scaffolded learning experience, the LMS page writing was followed by the Wikipedia writing activity where EDP 300 students thoroughly examined one of the already existing Wikipedia learning theory article pages and identified and filled in where there existed gaps of information, using their already completed research posted in the course LMS pages (Table 5).

**Table 5.** Example EDP 300 student contributions and engagement

<b>Learning theory/theorist: operant conditioning</b>	
Wikipedia content <i>before</i> EDP 300 contribution(s)	B.F. Skinner (1904–1990) is often referred to as the father of operant conditioning, and his work is frequently cited in connection with this topic. His book <i>The Behavior of Organisms</i> , published in 1938, initiated his lifelong study of operant conditioning and its application to human and animal behavior. Following the ideas of Ernst Mach, Skinner rejected Thorndike's reference to unobservable mental states such as satisfaction, building his analysis on observable behavior and its equally observable consequences.
Wikipedia content <i>after</i> EDP 300 student contribution(s)*	B.F. Skinner (1904–1990) is often referred to as the father of operant conditioning, and his work is frequently cited in connection with this topic. His book "The Behavior of Organisms," published in 1938, initiated his lifelong study of operant conditioning and its application to

<p>*additions in <b>bolded</b> text</p>	<p>human and animal behavior. Following the ideas of Ernst Mach, Skinner rejected Thorndike's reference to unobservable mental states such as satisfaction, building his analysis on observable behavior and its equally observable consequences. <b>Skinner believed that classical conditioning was too simplistic to be used to describe something as complex as human behavior. Operant conditioning, in his opinion, better described human behavior since it examined the causes and effects of intentional behavior.</b></p>
<p><b>Learning theory/theorist: Vygotsky</b></p>	
<p>Wikipedia content <i>before</i> EDP 300 contribution(s)</p>	<p>"Zone of proximal development" (ZPD) is Vygotsky's term for the range of tasks that a child is in the process of learning to complete . . . In this sense, the ZPD provides a prospective view of cognitive development, as opposed to a retrospective view that characterizes development in terms of a child's independent capabilities.</p>
<p>Wikipedia content <i>after</i>EDP 300 student contribution(s)*  *additions in <b>bolded</b> text</p>	<p>"Zone of Proximal Development" (ZPD) is a <b>term Vygotsky used to describe the level of development one has the ability to reach, under current conditions. The zone is boarded by the learner's current ability and the ability they can achieve with the aid of an instructor of some capacity</b> . . . In this sense, the ZPD provides a prospective view of cognitive development, as opposed to a retrospective view that characterizes development in terms of a child's independent capabilities. <b>The advancement through and attainment of the upper limit of the ZPD is limited by the instructional and scaffolding related capabilities of the more knowledgeable other (MKO). The MKO is typically assumed to be an older, more experienced teacher or parent, but often can be a learner's peer or someone their junior. The MKO need not even be a person, it can be a machine or book, or other source of visual and/or audio input.</b></p>

One important purpose of integrating the Wikipedia writing activity was to have the students experience sharing and curating their learning with an authentic audience (i.e., various Wikipedia readers and writers). Based on Wikipedia user contributions records, EDP 300 students more frequently accessed their Wikipedia articles and spent more time engaging in the research and writing activities as compared to their peers in the previous semester when only the LMS was utilized. Based on students' end-of-semester reflections, this increase in frequency was impacted by the fact that students remained keenly aware that their research and writing would be accessed and assessed by other public Wikipedia users. EDP 300 students' participation in the Wikipedia writing assignment resulted in a total of 73 editing activities on the five assigned Wikipedia learning theory articles, evidenced by the EDP 300 students' ongoing contribution history on their user pages. One group even voluntarily created a shared Google Document to compile various sources of information about their assigned learning theory from their extensive research activity and used this document to articulate and discuss their plan to edit their Wikipedia article. In contrast, not a single student or group of students from the previous EDP 300 semester, when students were required to post on the LMS site only, engaged in any additional collaboration.

Most students' Wikipedia writing activities were aimed at improving the existing content of the articles. Therefore, instead of simply summarizing course learning materials and adding those summaries to the existing Wikipedia pages, students critically thought about and used what they learned from the research they conducted to update parts of current Wikipedia pages, adding more details and clarity. Through these contributions, EDP 300 students' edits reveal efforts to help the

public better understand already-existing conceptual explanations present on the selected Wikipedia pages. For example, some students added specific examples and explanations to the already-existing theoretical explanations, resulting in additional clarity and cohesion of the Wikipedia articles.

Moreover, the EDP 300 students frequently visited their Wikipedia pages to post edits to their Wikipedia articles while discussing their edits with other Wikipedia users. Based on end-of-semester reflections and students' feedback after the conclusion of this assignment, many EDP 300 students also reported that they spent concerted time and effort researching and writing associated with proposed changes and edits to their assigned Wikipedia pages, responding to the authentic audiences' feedback as well as inquiries. As the EDP 300 students became more conscious of the purpose of the Wikipedia writing activity, which was to contribute to the clarity and expansion of articles used by Wikipedia readers and viewers whom they could also interact with on the Wikipedia Talk pages, the students dove deeper into the concepts and content the Wikipedia articles provided. They also spent time thinking about the already existing knowledge on their assigned pages, intending to add more ideas and content beneficial to Wikipedia readers.

### *ED 325: Case study #2*

When P2 introduced the PBL unit assignment in the first semester, many ED 325 students were unsure how they would plan a PBL unit, having little to no understanding of PBL prior to the course and having minimal or no experience with it in their own K–12 education. Although P2 created opportunities for peer feedback during class, such as when students engaged in the planning and design of their PBL units in the first semester, relevancy and direct connections to the field were limited. To support their learning, ED 325 students read and learned about PBL and watched videos of its implementation in various secondary school contexts. Additionally, P2 provided formative feedback, answered questions, and offered additional resources throughout the project, supporting ED 325 students' learning. However, students' motivation for learning and completing the project centered more on earning a "good" grade and less on the actual learning related to PBL, particularly as it connected to adolescent literacy. At the end of the first semester, it became clear to P2, based on student feedback and the overall quality of the PBL units students had generated, that the assignment remained something almost exclusively completed for a grade and that students' engagement in their learning was centered on meeting the requirements of the assignment.

Recognizing the limitations of keeping this "real-world" PBL unit assignment private, P2 realized that one way to further support and extend ED 325 students' learning and engagement with course content would be to connect students to an authentic audience beyond their class. As a result, P2 invited experienced PBL area educators to consult with ED 325 students on their PBL unit assignment. Engaging with these educators, ED 325 students gained access to secondary teachers in the field who were using PBL in their respective contexts. Moreover, by incorporating an authentic audience of experienced educators, ED 325 students received feedback and shared their learning and work, which directly engaged them with an experienced educator and with their own learning (Table 6).

**Table 6.** ED 325 authentic audience feedback examples

PBL unit subject area	PBL unit driving question	Selected authentic audience feedback (provided via comments in ED 325 students' final PBL Unit Google Doc drafts)
Statistics	"What's 'stat' have to do with sports?"	<p>Responding to a student's proposed PBL unit audience:</p> <p><i>I love this so much, but I really feel like this is a place you can offer Voice and Choice and allow the students to choose a different sport or at least incorporate women's softball.</i></p>
Music (band)	"How can we work together to make music?"	<p>Connecting a student's concern about not having enough time to incorporate their PBL in a "real" music class:</p> <p><i>Yes, with music, you are already doing a lot of the PBL stuff. Other subject areas sometimes struggle to bring an authentic audience, but you have them built in. Once you are at a school full-time, you may be able to do some things if you were to have an elective. As an ELA and History teacher, I would love to partner with my music teacher more, but it is difficult due to his demanding schedule. Thank you for sharing your work.</i></p>
Social studies	"How can we influence public policy?"	<p>Offering feedback connected to a student's proposed entry event and embedded mini-lessons:</p> <p><i>How will the project be presented to students? Would it be possible to incorporate your authentic audience into introducing the driving question? (That may help with student buy-in.)</i></p> <p>AND</p> <p><i>For this mini-lesson, could you include sample proposal formats for students to see what the end product might look like?</i></p>
English Language Arts (ELA)	"To what extent, if at all, does the past affect our future?"	<p>Suggestions aligned with a student's goal of incorporating group work in their PBL unit:</p> <p><i>I wonder if you've considered including activities such as: empathy maps? the NUF test? \$100 test and Pains/Gains chart?</i></p>

Connecting ED 325 students with experienced educators who had PBL experience and expertise resulted in real-world feedback, connections, and relevancy for ED 325 students' learning.

Moreover, when P2 introduced this PBL unit assignment in the second and third semesters and explained that ED 325 students would be sharing their PBL units with area educators who had PBL expertise, there was a clear increase in student engagement. Students asked more questions, including who they would be interacting with. In both semesters, when learning about the authentic audience members they would share their PBL units with, students made comments such as, "Oh,

now I really have to do a good job!” and “You mean real teachers are going to see these? I’m [sic] definitely need to make sure my unit is good!”

As noted earlier, the second semester when P2 integrated an authentic audience of professional educators was after ED 325 students completed their final PBL units, so authentic audience members provided feedback on students’ completed work. While this collaborative experience was positively received and feedback helpful, drawing on student and roundtable participants’ feedback, it became clear to P2 that the power of the authentic audience to increase students’ engagement could be further harnessed in two ways. First, getting formative feedback when ED 325 students were drafting their units and second, receiving summative feedback after they finalized their PBL units. With this model, they knew that they would be expected to take authentic audience members’ feedback they received and further revise their work, sharing their final draft with these same professionals for their summative feedback via shared Google Docs. As a result, during the third semester, the roundtable events took place in the middle of the semester with additional feedback taking place via students’ PBL unit drafts (shared Google Docs) after the in-person roundtable.

When working with ED 325 students, authentic audience members expressed positive feedback regarding their experiences interacting with and directly engaging these future teachers when providing feedback on their PBL unit drafts. After the roundtable during the third semester when formative feedback was offered first, an area music teacher shared with P2 via email:

Glad to help, especially when your students came so prepared. Much easier to give them some tweaks than to give some big changes. One thing that I would suggest for you to watch for with the music education students in the future would be to encourage them to do something other than a benefit concert. A couple did that [in the previous semester], and they made a nice project out of it, but I encouraged them to dig a little deeper into tying in social justice themes in music with that. . . . The three composition projects [I reviewed during the formative feedback session] that the students came up with were all very nice. Very creative and I even gleaned some ideas from them. Also I liked the marching band drill idea. Thanks, again, for having me!<sup>1</sup>

This feedback was echoed by other authentic audience members, who also noted that they walked away with ideas after engaging with students during and after the PBL unit assignment. As a result, P2’s students’ knowledge and engagement increased regarding PBL. An additional outcome was that authentic audience members also had opportunities to learn more, too.

## **Authentic audiences and critical thinking**

### *EDP 300: Case study #1*

One component P1 emphasized when introducing the Wikipedia writing activity to EDP 300 students was sharing the purpose of the research-based writing assignment with students. Previously, the purpose of the course LMS writing activity was to achieve a deeper and wider understanding of the assigned learning theories through research activities and subsequent sharing outcomes with other classmates, intended to be made visible via the course LMS pages. Expanding on these outcomes in the subsequent semester, the purpose of the Wikipedia writing activity was for students to think deeply and critically, while also sharing the processes and products of their learning with an authentic audience (i.e., Wikipedia readers). Noted above, P1 explained to students that Wikipedia users who read Wikipedia articles were the intended audience for students’ final drafts, with the aim that EDP

300 students would utilize critical thinking skills to effectively share their learning and contribute to selected Wikipedia pages. The goal was for EDP 300 students to engage in critical thinking when learning about specific course content, which led to sharing their learning through collaboration with peers and community members, while simultaneously contributing to the development of credible and useful Wikipedia articles.

P1 noted that EDP 300 students engaged in the Wikipedia writing activity using authentic audiences in a more purposeful and creative manner because they not only learned information but also evaluated existing content related to what they learned. For example, they critically evaluated multiple Wikipedia article content and located, reviewed, and provided new information that enhanced the Wikipedia article’s level of knowledge. In their end-of-semester reflection, one EDP 300 student wrote:

The benefit of this Wikipedia activity is that it requires critical thinking and helps you better understand the material through the writing process. In order to make changes, you need to think about what other Wikipedia users have written and determine if the information is accurate or not. You also must critically think about what you are going to add/edit to the page. Writing is a good tool for learning because you must have sufficient knowledge on the topic in order to put it in your own words. This Wikipedia writing was beneficial.

To suggest further improvements to strengthen existing content on these pages, students created a Wikipedia account and a user page to introduce themselves to other Wikipedia users. In Wikipedia, the user page is an important venue where users share their identity as they briefly introduce their background and reveal their working history and interests related to various content. Not only was each user’s work recorded on the Wikipedia user page as part of their contribution history, but they could also monitor all updated information by adding articles of interest in their Wikipedia watchlist. P1 intended for EDP 300 students’ engagement with other users to require an additional level of critical thinking and analysis. P1 intended for this critical thinking to be captured in students’ text-based interactions via the Wikipedia Talk pages. As explained earlier, P1 taught students how to use the Wikipedia Talk page and encouraged students to communicate and cooperate with authentic audiences as they added content and suggestions to existing Wikipedia pages associated with course-related theories and theorists (see Table 7).

**Table 7.** Evidence of EDP 300 students’ interactions with public users via “self-efficacy” Wikipedia Talk page

A discussion about self-efficacy and correlation
<p><b>Public user #1:</b> In the ‘subclassifications’ section it is stated that: “Both groups of researchers suggest that social self-efficacy is strongly correlated with shyness and social anxiety.” Presumably, this is a negative correlation – i.e., low social self-efficacy correlates with high shyness and social anxiety. Could somebody clarify this point in the article?</p> <p>=&gt;<b>Public user #2:</b> Almost a year later it just says, “Researchers suggest that social self-efficacy is strongly correlated with shyness and social anxiety,” but that doesn’t help much, because it still seems like it is almost certainly a negative correlation! Perhaps a citation would help to resolve confusion?</p> <p>=&gt;=&gt;<b>EDP 300 Student #10:</b> I would also say that it is a negative correlation. As self-efficacy increases, a person will feel more confident in their ability to perform a certain task. A person who is more confident in their ability to succeed in a specific social setting is going to experience less shyness and anxiety than a person who lacks the confidence to succeed at</p>



that same task. If you consider public speaking, a person with high self-efficacy for giving a speech is likely to be less shy and anxious than a person with low self-efficacy for giving a public speech.

#### A following discussion about how self-efficacy impacts learning

**EDP 300 Student #2:**=== Adding a section on how self-efficacy impacts learning ===

**=>EDP 300 Student #2:** I believe that there should be an addition to the Wikipedia page. Self-efficacy is crucial to a student’s success. The paragraph should include ways to promote self-efficacy in the classroom. We should also include why this is important to learning.

**=>=>EDP 300 Student #S10:** I agree that this section should be added. In the section on “How it affects human function,” there is one part regarding academic productivity. It might be beneficial to elaborate on this portion and add in another paragraph since many of the other applications of self-efficacy go a lot more in depth. Another option could be to elaborate on this topic in the part of the page “Applications” in which “Academic contexts” are discussed.

**=>=>=>Public user #2:** Okay S#10. I agree that adding the section in the application section under academic contexts may work best. So far, this is information I have taken from the project you and I did together as well as my inclusion of another paragraph. I edited the original paragraph slightly.

As an instructor, P1 noted that EDP 300 students’ contributions to the Wikipedia Talk pages demonstrated critical thinking, to varying degrees. Many of the students’ contributions, but not all, were added and preserved in the updated Wikipedia pages. In fact, an unintended consequence of using Wikipedia was that P1 continued to review and monitor these pages to confirm if EDP 300 students’ contributions remained over a longer duration of time. After the course, some of their edits were removed, while others remained. Moreover, they also noted, that it was unclear how much, if at all, the use of Wikipedia served to foster students’ critical thinking. Throughout data analyses, it became clear that it may have been that P1 and/or the assignment and learning itself served to foster students’ critical thinking while Wikipedia served as the mechanism to capture it.

EDP 300 students first thoroughly read and reviewed their assigned Wikipedia article and located areas for potential improvements. One challenge students commonly experienced was that many existing, course-related Wikipedia pages were already well-organized and exhibited a lot of knowledge and references. Even when engaged in critical thinking around this task, many EDP 300 students found it difficult to decide which part(s) of the article they could add to and where they could update content. As one EDP 300 student observed, the Wikipedia Talk page, which enabled exchanges of opinions with other Wikipedia users in advance of accepted page edits, became an important resource with this assignment and prompted additional opportunities for critical thinking.

I think the interaction definitely enhances the Wikipedia writing experience. People who come from different cultures have different cultural backgrounds and perspectives. It will support collaborative writing. I could stay in touch with whomever the person that I set up the Talk page at. I can keep track of if anyone has the same idea as I do so that we can probably set up a new section together.

Meanwhile, the text EDP 300 students left on the Talk pages demonstrated evidence of critical thinking. It showcased their unique contributions to knowledge development and shared the process of “student” members working within the broader Wikipedia community (see Table 5). Drawing on their research related to their assigned theory/theorist, evidence in their posts on the Wikipedia Talk

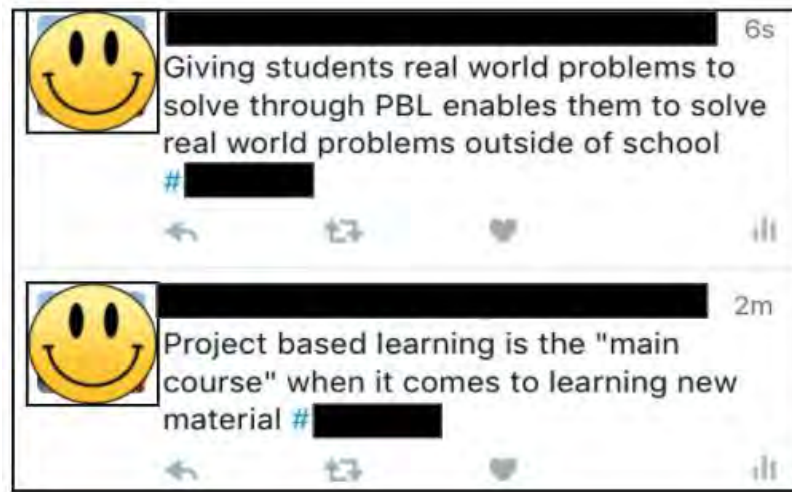
pages makes clear that students discussed various editing possibilities and content ideas with other Wikipedia users. As a result, EDP 300 students often helped other users by sharing their newly acquired knowledge, based on their research and learning in EDP 300, while also benefiting from the guidance and support of P1.

### *ED 325: Case study #2*

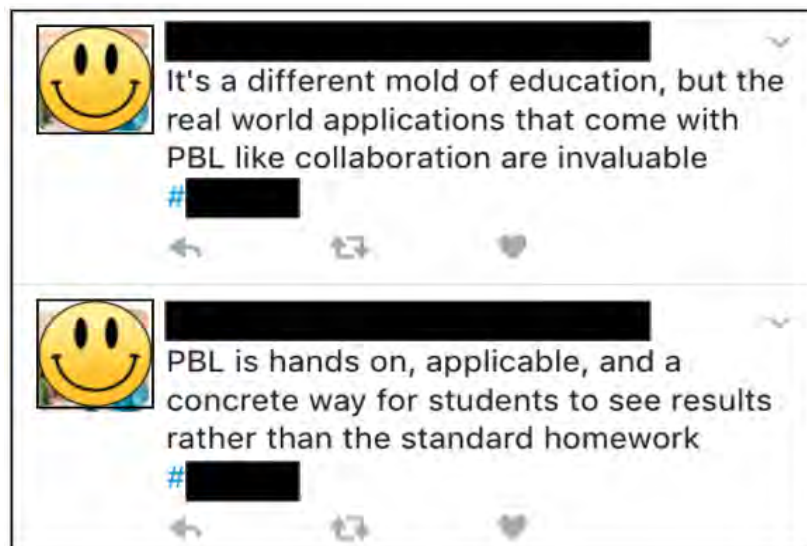
When P2 considered the goals of the course and the PBL unit assignment, it became clear that one way to increase students' critical thinking would be to incorporate authentic audiences in which ED 325 students could share their learning and work. Although the educational professionals were the "experts" throughout the roundtable and virtual consultation experiences, it became clear that through this collaboration, ED 325 students also critically thought about and contributed to these educational professionals' learning. In each of the semesters, the feedback from the educational professionals who interacted with ED 325 students was overwhelmingly positive. In some instances, educators asked ED 325 students if they could draw on and use some of their ideas and PBL unit content in their own classroom contexts.

Moreover, in the second and third semesters, P2 also introduced students to Twitter. Some ED 325 students already had Twitter accounts, but most did not; for many, they perceived Twitter to be another form of engaging with others socially, rather than professionally or for educational purposes. However, P2 explained that although many users utilized Twitter for personal and social reasons, many users also used the site to cultivate and curate professional learning networks (PLNs), where they identified and followed professionals and organizations in their field to critically think about and support their professional learning and growth. After initially finding and following at least 10 Twitter accounts recommended by P2 at the start of each semester, students were required to find and follow at least two new-to-them professionals and/or organizations. Encouraged and required throughout the semester to find and follow course-related experts (e.g., K-12 teachers and administrators, educational researchers, and non-profit educational organizations), students also found the number of their own followers increasing. They were also expected to compose and generate at least two tweets highlighting their thinking and learning each week. Students utilized Twitter for 14 of the 16 weeks each semester, resulting in 952 separate Tweets generated and posted by ED 325 students, which included the course hashtag (i.e., #ED325) across the second and third semesters.

By the time the PBL unit was introduced, the average number of followers for ED 325 students was approximately 30. Aligned with the PBL unit assignment, P2 utilized Twitter as a way for ED 325 students to demonstrate critical thinking about what they were learning, connect with other professionals, and share their learning about project based learning (Figures 1 and 2).

**Figure 1.** ED 325 student PBL related Tweets

Using Twitter throughout the semester, ED 325 students routinely contributed their thinking and learning, including those connected to PBL and the PBL unit assignment. As a result, not only did students interact with local professionals through this assignment, but students' critical thinking and learning were also shared publicly through their social media posts. As such, they were engaged and communicating with an authentic audience (i.e., followers) through these social media posts.

**Figure 2.** ED 325 student PBL-related Tweets

When ED 325 students shared tweets connected to their learning in ED 325 (including tagging tweets with the course hashtag), their thinking and learning became more evident and extended beyond the classroom, with the opportunity for followers to read and respond, when applicable, to the ideas and content they shared. Throughout this process, students were expected to take in course content, engage in critical thinking about what they learned, and then share that learning through ongoing tweets throughout the semester. Based on data analyses of participating students' tweets and

the Twitter accounts they used when enrolled in ED 325 as well as P2's observations and reflections, students' tweets about their learning further engaged them in their learning, afforded opportunities to produce and share their learning, and prompted students to think actively and critically about what they learned and its application to the broader profession. Like P1 and their students' posts on Wikipedia pages, it was not clear if Twitter itself prompted critical thinking or, perhaps more likely, served to capture students' critical thinking.

## DISCUSSION

The choice to integrate authentic audiences is directly influenced by the instructor, particularly by their pedagogical stances and dispositions (Vette, McDowell, and Stewart 2019). Moreover, embedding authentic audiences in undergraduate coursework supports Lave and Wenger's (1991) claim that learning is enhanced when learners perceive a value in their learning, including meaningful outcomes that extend beyond learning for learning's sake. Based on this study's findings, the integration of authentic audiences in these respective undergraduate courses 1) resulted in clarity about two important characteristics of authentic audiences; 2) demonstrated that undergraduate students' interactions with authentic audiences support student engagement; 3) presented challenges related to its role in fostering critical thinking; and 4) illuminated considerations about the role of instructors' pedagogy and dispositions.

### **Two important characteristics of an authentic audience**

In both courses, members of the authentic audience possessed degrees of expertise and they were willing to participate in and contribute to undergraduate students' learning. As a result, this study finds that it is important for authentic audience members to have some degree of expertise related to a given course's content. Moreover, authentic audience members must have a willingness to support undergraduate students' learning. These characteristics directly impacted undergraduate students' learning and engagement. For an authentic audience to impact students' learning, some level of expertise related to intended learning outcomes and/or course content must exist. As was made clear in the findings, this expertise provides validity and value for students and their learning. Moreover, authentic audience members' willingness to engage with learners and share their expertise also matters. Through the intentionally designed and collaborative experiences with authentic audience members in both courses, learners critically engaged with experienced members of respective communities who functioned as more knowledgeable others (Vygotsky 1978). For example, EDP 300 students were new members of the Wikipedia community who learned from experienced Wikipedia page contributors, just as ED 325 students had opportunities to engage with and learn from experienced K–12 teachers. As a result of considering feedback from an authentic audience who possessed a degree of expertise students did not yet have, EDP 300 students spent more time engaging in the Wikipedia writing activity and the collaborative writing processes, guided by peers, P1, and Wikipedia users through the Talk page. Similarly, ED 325 students' learning and their understanding of PBL—including its connections to adolescent literacy—were extended as they interacted with and received feedback from experienced PBL educators.

### **Interacting with authentic audiences supports undergraduate student engagement**

Authentic audiences are an important part of creating authentic, engagement-oriented learning opportunities for students which include real-life application and dissemination of students'

knowledge (Godfrey, Illes, and Berry 2005; Jopp 2019). Based on this study’s findings as well as extant literature, authentic audiences can and do support student learning and increase students’ engagement (Wiggins and McTighe 2005). For example, P1 provided a research-based writing assignment in which EDP 300 students collaboratively participated in group-based research and writing with the expectation that they share their constructions of knowledge with peers as well as Wikipedia users and readers. In the second part of the Wikipedia writing activity, EDP 300 students’ engagement is evident as they worked more often and more closely with peers and interacted with Wikipedia users, reflecting engagement and the quality of their contributions. Likewise, the PBL unit assignment P2 implemented directly engaged ED 325 students in their learning, specifically the planning and design of PBL units. In the first semester, they shared their work and received and incorporated feedback from their peers and instructor. However, when area PBL teachers and Twitter were integrated in the following two semesters as additional authentic audiences for ED 325 students’ learning and work, students’ motivation, evidence of critical thinking, and the quality of their work expanded as they simultaneously shared their learning beyond the university classroom.

In addition to student engagement and motivation for learning (Ditta et al. 2020), the integration of authentic audiences in these instructors’ courses also served to promote students’ academic achievement, particularly as audiences for these assignments were viewed as authentic. The quality of students’ contributions to the Wikipedia pages as well as students’ final PBL units were of higher quality and greater depth than in iterations of the course that didn’t employ authentic audiences. Both instructors taught EDP 300 and ED 325 prior to when they intentionally and purposefully embedded opportunities for students to engage with and learn from authentic audiences. When authentic audiences were embedded, students in both courses demonstrated active and prolonged engagement with the assignments and authentic audience members. According to Herrington, Reeves, and Oliver (2009), having students meet and learn from authentic audiences affords an “authentic learning context that reflects the way the knowledge will be used in real life” (17). Moreover, when embedding authentic audiences in both courses, students’ engagement in the Wikipedia and PBL writing assignments provided students with “access to expert performances and the modeling of processes” (22) as they took on various perspectives and roles throughout the learning processes.

### **Authentic audiences do not necessarily foster critical thinking**

Connected to prompting critical thinking in both courses, it is not clear if the use of Wikipedia, external experts, and Twitter—including interactions with respective authentic audience members fostered critical thinking. During data analyses when critical thinking was explored, the use of Wikipedia and Twitter appeared beneficial as an authentic audience and effectively displayed students’ critical thinking and engagement with others outside the courses. Based on data analyses, even though these websites captured and displayed EDP 300 and ED 325 students’ critical thinking, it is not clear if the use of one or both sites played any role in fostering critical thinking. In EDP 300, students’ revisions to the Wikipedia pages, informed by their research and learning in the course, reflected evidence of critical thinking, particularly when examining the updates, they made as well as their end-of-semester reflections. Even with this evidence, it is not definitive that the use of Wikipedia in EDP 300 directly fostered critical thinking. Moreover, while ED 325 students’ Tweets displayed students’ learning and reflected evidence of critical thinking not previously available to P2, there is not clear evidence that the use of Twitter definitively increased students’ critical thinking.

Thus, findings lead us to conclude that Wikipedia and Twitter served to capture evidence of undergraduate students’ learning and thinking as they engaged with an authentic audience (i.e., users

and one's followers). However, while many students' tweets reflected and demonstrated critical thinking, it may not have been the social media site which fostered the critical thinking but, rather, the PBL assignment and/or other learning opportunities embedded in ED 325. Thus, when embedding the use of a social media site, such as Twitter, to be employed as an authentic audience in an undergraduate course, its use supports learner engagement. Both sites may be effective tools for collecting, rather than fostering, students' critical thinking. Moreover, is it possible that the assignments and/or pedagogical choices made by one or both instructors did more to impact and facilitate students' critical thinking, which was then made evident through students' contributions to and interactions with these public mediums.

### **When using authentic audiences, instructors' pedagogy and dispositions matter**

In both courses, interactions between students and between students and their instructor were intended to augment and facilitate co-construction of knowledge (Vygotsky 1978). Although not directly aligned with this study's research question, the issue of pedagogy was evident across both cases. This is likely due to P1's and P2's pedagogical commitment and disposition toward constructivist-based teaching and learning, which is one reason P1 and P2 were initially connected by a colleague before engaging in this work.

Extending Vette, McDowell, and Stewart's (2019) findings, an important take-away from this study is the importance of the role of the instructor. Demonstrating reflective practice (Schön 1987), when examining student outcomes from previous semesters in which authentic audiences were not embedded, P1 and P2 recognized that their undergraduates' learning showed minimal improvement in their engagement, critical thinking, and overall knowledge of related course content. Both instructors hypothesized this was due, in part, to students' limited engagement in and perceived value of the assignments. When EDP 300 and ED 325 students completed the assigned work without sharing it beyond their respective class, their motivation, critical thinking, and overall work quality were not as high despite the varied materials, resources, and feedback provided by P1 and P2. This observation supports the importance of an authentic learning context which provides learners with the purpose and motivation for learning (Herrington 2005). Thus, during the first semester in both courses, the assigned projects most likely reflected "an enculturation into the practices of classrooms rather than the real-world transfer" (Herrington, Reeves, and Oliver 2009, 21).

As such, the integration of authentic audiences (Wiggins and McTighe 2005) was explicitly employed to increase undergraduate students' learning engagement. It provided opportunities for students to think critically while simultaneously allowing students to share their work and learning with relevant stakeholders and community members beyond their university classrooms (Schwieter 2010). Both instructors explicitly sought to integrate real-world communities in both courses, separate from one another, they redesigned their respective assignments so that students and associated authentic audience members, with course-related expertise, could engage as social partners within their learning contexts. These choices and revisions are the direct result of the instructors' commitment to constructivist-centered pedagogies and practices, reflecting a belief that learning is achieved through learners' interactions with the world as they also derive meaning from these interactions and their experiences (Dewey 1938; Vygotsky 1978).

Not all instructors would have made these changes or explicitly embedded authentic audiences in their undergraduate courses. Thus, the integration of authentic audiences is dependent, in part, on instructors' commitments to actively engaging students in the co-construction of their learning while also curating opportunities for students to share their learning beyond a given course.

For instructors who align themselves with similar pedagogical values and beliefs, when and where possible, integrating authentic audiences holds much promise to enhance and extend undergraduate students' learning and knowledge development. Moreover, it's also important to note that not every product a student generates for a course assignment needs an authentic audience. Thus, it is important for instructors to be purposeful and selective about the assignments and learning opportunities they design alongside the products students generate. In doing so, instructors should thoughtfully identify and discern which assignments and products warrant an authentic audience.

## LIMITATIONS AND FUTURE RESEARCH

This is a quantitative, case-based study and, as such, its findings are not generalizable. However, it is clear in both contexts and across these courses that opportunities exist to support undergraduate students' learning and engagement with the use of authentic audiences, specifically those who possess relevant expertise and a willingness to support students' learning and development. Future research could explore the impact of authentic audiences within additional disciplines. Moreover, there may be benefits in examining how social media and websites, such as Twitter and Wikipedia, may be employed to not only capture but also foster undergraduates' critical thinking when such sites are used as authentic audiences.

## CONCLUSION

When using authentic audiences in undergraduate education, students' learning is made public and accessible beyond the college or university classroom, including to relevant external stakeholders and community members (Greenfield, Finch, and Margarita Johnson 2017; McNamara and Englund 2020). Yet, in higher education settings with their inherent professor-student power differential and grade-based evaluation systems and structures, classroom learning environments often involve many pseudo-transactional activities and assignments that serve no purpose for an external audience (Gere 2019). In contrast, authentic, applicable learning opportunities, including the use of authentic audiences, encourage students to use critical thinking and problem-solving strategies (Jopp 2019; Villarroel et al. 2020). Authentic audiences are an important part of creating purposeful, constructivist learning opportunities for students, as this approach increases student engagement, integrates real-life applications, and disseminates students' knowledge beyond the classroom (Godfrey, Illes, and Berry 2005; Jopp 2019).

Thus, there exists a value of purposefully implementing authentic tasks that are embedded in meaningful contexts like real-world settings (Guo et al. 2020), which can be achieved, at least in part, when utilizing experienced and knowledgeable authentic audiences within undergraduate courses. Moreover, authentic audiences need to willingly be engaged, committed to the partnership, and have the necessary expertise and resources to effectively contribute to students' learning. As this study's findings demonstrate, when and where possible, authentic audiences can serve as an important component of undergraduate students' academic learning and engagement while also enhancing instructors' pedagogy and practice.

## AUTHOR BIOGRAPHIES

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## NOTES

1. Email to P2 from a music teacher, October 27, 2017.

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