

Introducing Outside Experts into the Classroom: The Mediating Impact of Instructor Beliefs on the Learner Experience

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Abstract: We explore the impact instructor perspectives have on the implementation of a virtual work-based learning intervention in community college classrooms. Drawing upon three years of design-based research, we present case studies that illuminate two divergent educator perspectives. Findings suggest that the ways educators take up and incorporate the intervention into their classroom differentially affects the learners' experience and realized impacts.

Introduction

This paper reports on preliminary insights from a study of the adoption of a technology-mediated “virtual internship” in community college classrooms. Here we examine the experience of two educators who characterize different belief systems and how these beliefs in turn influence the roles, relationships, and outcomes for learners in their classrooms. We explore how an educator’s perspective, manifested by their implementation of an educational intervention, impacts the learner experience and can exercise agency within the learning environment.

Starting in 2017, we implemented a virtual internship intervention with the goal of increasing access to industry engaged, work-based learning (WBL) to students, particularly those from low-income, first-generation, and underrepresented (URM) populations in STEM. Using a design-based research methodology (Wang & Hannafin, 2005), we endeavored to get the intervention into the classroom, iterate the design, and then work to scale and spread it throughout institutions. However, the 'getting in' proved more challenging than anticipated, with many implementations withering and dying before they had the opportunity to spread (Cole, 2009). Our research sought to examine potential determinants of success or failure as that intervention is taken up (or not). Educators’ beliefs appears to be one of the most determining factors in this process.

To conduct this analysis, we draw on data from 16 colleges implementing virtual internships in their curriculum. All of these schools serve URM and non-traditional students. The researchers served as participant-observers, providing professional development and technical support to instructors both before and during the implementation process. Data collected include: (1) email, and video conference communications between the research team and stakeholders within the implementing institutions; (2) observations and video recordings of educator and industry partner training sessions; and (3) observations from coaching sessions with educators on the use of the data analytics dashboard supporting the virtual internship. Here we focus on an analysis of two educators whose beliefs characterize two perspectives we see emerging from the overall data corpus.

Two emergent perspectives

We illustrate the impact of educator belief or perspective appears to have on the intervention taking root through the lens of two educators’ stories, who we will call Ari and Jamie (and use the pronouns they/their for both).

1) Ari is a faculty member at a suburban community college in Massachusetts. The college serves 10,000 students; 67% are students of color. Ari saw value in the virtual internship, particularly the introduction of an industry coding project with “no right answer,” a phrase used by Ari when presenting the virtual internship to their students. The value of welcoming the industry partner project into the learning environment is evident in Ari's approach in the planning phase of implementation. When engaging with a new industry partner to plan the logistics, Ari said, “Once I see the project, I will align the course outcomes,” showing a willingness to let the project and industry partner influence the intended learning within the classroom.

Ari's articulated value of an industry partner's project having “no right answer” was also signaled by where Ari situated it within the curriculum. The project begins before students have the technical skills to complete the project. This positions the project as a place where knowledge and skills are developed and refined, not simply assessed. Furthermore, Ari articulated in the project kick-off meeting with students that Ari did not know the answers either, positioning themselves as a knowledgeable guide within the project environment in contrast to a holder of the knowledge and solution. When asked how the students work on their virtual internship project is graded, Ari’s response was “it’s complicated... trying to get away from grading the actual project,” an approach that they explain aligns to Feldman’s (2019) Grading for Equity that holds accuracy, bias-resistance and intrinsic motivation as its pillars. Instead of grading the project artifacts directly, Ari evaluated each student based on a reflection essay and their ability to explain the code another student contributed to the project.

2) **Jamie** is a professor at a community college in North Carolina. The college serves 20,000 students with a Black enrollment of 39%. Jamie already had a team project in their course and perceived the virtual internship as a mechanism to bring industry feedback into the classroom. During the planning phase, Jaime made several changes to the intervention design. Two changes most relevant to the present analysis included a) having the students define their own project instead of engaging with a project supplied by industry partners and b) announcing that project artifacts would be graded. These changes repositioned the industry partners from the role of ‘project sponsor,’ i.e., someone who has a vested interest in the work being produced, to ‘industry mentor,’ i.e., someone who is using their industry knowledge to suggest possible improvements to the students’ project. These moves by Jaime modified the virtual internship model and the industry partner’s role to fit within their classroom as opposed to adjusting the learning environment to the design affordances offered by the virtual internship. In a preparatory call between Jamie and the industry partners, Jaime explained the graded artifacts in detail and what asked the industry partners to align their feedback with the grading criteria.

Jaime’s decisions during the implementation resulted in moves with lower integrity to the goals of the intervention. When one team had missed a deliverable deadline, platform data indicated that two industry partners had not provided students with feedback on a project artifact. Jaime declined to query or prompt the industry partners about their lack of feedback and instead decided to follow up only with the student team who had missed the deadline. Ideally, a timely intervention by the educator or feedback from the industry partner can inject insight, provide new knowledge or trigger learners’ reflective process. Students thus missed out on external input that could have help them construct new knowledge. A discussion between Jaime and the researchers unearthed a hesitancy to intervene in the project process beyond checking on a missed deliverable that would impact a grade.

This positionality of the virtual internship as an assessment tool is reinforced in the way grading was implemented. Student project artifacts were graded against a rubric. Industry partners provided feedback on draft versions of artifacts before being submitted to Jamie for grading. This seemed to position the industry partner’s feedback as an optional extra that could add value to the students grade instead of an essential component of the learning. In contrast, Ari did not grade student artifacts, they graded each learner’s ability to explain their team members contribution to the project and a reflection essay.

Implications for student learning

The different ways Ari and Jamie took up and implemented virtual internships in their classrooms illustrate how their perspective and instructional moves impact student learning. We are still examining how these and other implementations across a range of settings and populations impact student learning, motivation, career, and attitudinal outcomes. Our findings suggest that the learner's degree of agency while participating in a virtual internship is significantly impacted by their teachers’ perspective and subsequent moves in taking up this innovation. Jamie's decision to grade the artifacts reduces the student agency over the experience and precludes the opportunity to learn from failure. Conversely, in Ari's class, where they used Feldman's grading for equity, a learner can fail to deliver a viable project and still passing the class, provided they can appropriately reflect upon and extract sufficient insight from the “failed” project. Our preliminary findings suggest that the different ways that educators incorporate a third-party industry expert into their classroom can dramatically impact the learners’ experience and serve to reinforce or undermine the intended benefits of the virtual internship. These findings point to important conversations that should be part of teacher professional development accompanying WBL and similar experiences that engage learners and educators with workplace experiences and outside experts.

References

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