

Enhancing Learning Through Undisguised Teaching Case Studies: Both Instructor-Facilitated and Student-Written

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Bridging the gap between theory and practice has been a major educational campaign (Fossey & Glover, 2006; Rieks et al., 2011; Ruhanen, 2005). While this is not a new development, the increasing concern over adaptive challenges in agriculture has made demystifying the theory-practice nexus crucial. This nexus explains skills gaps and whether a graduate will be fit for the contemporary workforce (Nuthall, 2004). Because skill gaps are largely a result of disconnects between the educational system and the evolving economy (Business Roundtable, n.d.), industry leaders are increasingly concerned that students may not be learning skills suitable for workforce preparedness (Jackson et al., 2016; Jaschik, 2015). The challenge lies within the seemingly ‘mysterious’ divide between technical skill acquisition and the applicability of knowledge in a fluid, real-world situation. Indicators of this learning deficiency are observed in the lack of higher-order, transferable skills, such as critical analysis, decision-making, adaptability, and leadership (Cappelli, 2015; Jackson et al., 2016).

This challenge demands preparing college students beyond technical, job-specific skills to carefully design teaching methods that enhance applied skills development (Rateau, et al., 2015). Work readiness, therefore, should be an integral and imperative pursuit of formal agricultural education (Rateau et al., 2015). While successes have been reported with experiential learning outside of the classroom (Austin & Rust, 2015; Lee, 2008), addressing learning/skills gaps requires multifaceted efforts (Business Roundtable, n.d.). Hence, combining hands-on learning inside and outside of the classroom presents a more holistic approach to enhancing learning and making college students labor market ready. This is especially important as learning is not just a function of experience but engaging with and reflecting on experience (Dewey, 1944).

The increasing complexities of agriculture and life sciences mean that teaching must be designed “to engage students in thinking about theoretical, applied and deeper conceptual understanding” (Herreid, 2006, p. 30). Through the stimulation of critical and analytical thinking and reflection, teaching cases allow students to connect abstract concepts to concrete realities (Herreid, 2006; Patil et al., 2020). Moreover, an undisguised and open case seizes the opportunity to maximize experiential learning for students as it rouses interest, provokes conflict, forces decision-making, and stirs the need to learn (Fossey & Glover, 2006; Herreid et al., 2016). Through repeated classroom exposure to such opportunities, Fossey and Glover (2006) reckon that students develop skills to address difficult challenges before they are confronted with them in the professional workplace.

Purpose and Objectives

This work seeks to demystify the theory-practice nexus and enhance college students' learning through teaching strategies that address the higher-order, adaptive skills deficiency and prepares graduates for the ever-dynamic agricultural workforce. Objectively, it aims to: foster instructors and learners' ability to analyze and synthesize multiple concepts of leadership for transdisciplinary engagements in agriculture; offer learner experience in applying shared leadership in a (small) group setting; promote instructor-student (akin to employee-supervisor) partnership in co-learning and collective problem-solving; and give students the learning opportunity to craft their own cases, thereby translating critical thinking and learning to actual doing.

Theoretical/conceptual framework/perspective

This project builds on the need to establish the connection between the classroom and the real world of agricultural and life science organizations through instructor-student interaction, thereby shifting the didactic pedagogical classroom approach (Minnit et al., 2017). This paradigm shift is critical to mending the broken education-workforce pipeline in the United States (AIR, 2021). The nature of teacher-student interaction, considered the core of pedagogy (Battro et al., 2013), is significant to unraveling how this gap might be bridged. It is necessary that teachers/instructors pay attention to their teaching methods as the engagement with students "is strongly influenced by the teaching perspective embraced by the teacher" (Myers, 2008, p. 1). The rhetorical perspective and relational perspective represent two important concepts highlighted in instructional communication (Aspelin, 2021; Myers, 2008). We focus on the relational perspective, which provides a grounding for the needed paradigm shift from teacher-centered communication and passive student role in the classroom. Contemporary agricultural organizations, many of which are battling adaptive challenges, are unlikely to profit significantly from graduates who are products of merely a rhetorical perspective, where teachers rely on knowledge transfer or inculcation by clear, assertive, and persuasive communication. Instead, a co-generative classroom leading to knowledge creation through instructor-student interaction and engagement is a more useful paradigm, particularly when learning is expected to produce knowledge for solving difficult, real-world organizational problems (Poulsen & Buland, 2020; Rahmawati et al., 2015). This argument adds to the body of literature toning down 'teaching' and spotlighting 'learning' (Aspelin, 2021; Biesta, 2009, 2017).

In a coherent analysis of Buber's relational theory of teaching, Aspelin, 2021 exemplifies the importance of developing a 'whole' student capable of going beyond the banking system of education to (re)generating knowledge in a community of practice (hooks, 1994). Even more critical is the metaphorical concept of teaching indicated as positioned against an 'old' and a 'new' concept, where the old (the traditional) sees the teacher's role as using "a funnel to pour knowledge into the students' brains" and the new (the modern) understands the teacher's role as

“using a pump to bring individual [student’s] latent creative forces to the surface” (Aspelin, 2021, p. 590). This metaphor is not only typical of the rhetorical and relational perspectives of teaching but also alludes to the intent of our teaching case method to transcend encouraging students to bring forward their lived experiences to reviewing and renewing them in the face of current realities as their latent creative forces are stimulated. Stimulating forces of creativity, however, comes with the challenging requirement to change old assumptions, beliefs, and behaviors, which is a domain of leadership-as-practice development (Raelin, 2016) and creates potential for a “productive zone of disequilibrium” that requires sustained commitment in adaptive work (Heifetz et al., 2009).

Therefore, the teaching case classroom is built on a hybridized leadership philosophy of adaptive leadership (Heifetz et al., 2009) and leadership-as-practice (Raelin, 2016). Summarized by Northouse (2022), “Adaptive leadership focuses on the *adaptations* required of people in response to changing environments” (p. 285). The changing environment coupled with the need for new learning creates tensions that must be managed, nurtured, and supported productively in a holding environment (Northouse). However, managing these tensions could be more productive within the framework and understanding of collective and relational leadership engagement as students transit through the state of reviewing and renewing held assumptions, forming new thinking, and acquiring applied skills for resolving difficult organizational problems (Raelin).

Methods

The teaching case has two components – the case narrative and the teaching notes. The case narrative has the major elements of introduction, overview/analysis, status report, case problems, and appendices carefully crafted to engage and trigger the readers’ interest in learning and problem-solving. And the teaching notes, which provides instructive but non-exhaustive guidance for teaching the case, contains the case synopsis, educational objectives, discussion outlines/questions, and tips for addressing the case (International Records Management Trust, 1999). Our approach in the use of the undisguised teaching case method transcends encouraging students to bring their existing beliefs and knowledge to new challenges (Lee & Caffarella, 1994) to educating them to review and renew them for surfacing processes and practices suitable for working in complex adaptive situations (Denyer & Turnbull-James, 2016). This approach is embedded in Leadership-as-Practice Development (LaPD) for resolving complex, rather than tame or complicated, or technical problems. Students are also put into collaborative leadership learning groups (CLLGs) which are “anchored in practice, bringing together learners who can identify and work together on the challenges they face collectively” (Denyer & Turnbull James, 2016, p. 269). Moreover, “rather than delivering theory to simplify practice, case-based instruction expands the complexities ... wherein students are encouraged to ‘think like a teacher’ (Feiman-Nesmer, 1990) ... construct their own knowledge and practice reasoning and decision

making skills in complicated, ambiguous situations” (Merseth & Lacey, 1993, p. 289) and are encouraged “to be active protagonists in the learning process” (Minniti et al., 2017, p. 377).

Students in an undergraduate agricultural leadership course were introduced to a teaching case on the Oldsmar water treatment plant cyberattack. The incident is an undisguised and open case, a learning opportunity, and a scary incident telling of the potential danger of cyberattacks on agricultural and biological systems to humans, plants, animals, and the environment. This makes the Oldsmar water case qualify for what characterizes a good case (Herreid et al., 2016). The initial reactions, collected and documented, of students to the case provided a glimpse into the students’ differential dispositions to the teaching case and the incident. And helps the teacher to understand how the classroom should be organized.

The teacher and students are co-learners and producers of knowledge working together in the classroom. The role of the teacher is typically that of a facilitator, guiding learning to stimulate criticality and curiosity among students. Kohn’s (1996) ideal classroom provides a suitable setting for this teaching strategy. And, as demonstrated in the delivery of the Oldsmar teaching case, an ideal classroom is one that promotes deep understanding, excitement about learning, and social and intellectual growth wherein students are active decision-makers and teachers work with students. The interests and questions of the learners (in context, the facilitator and students) are the drivers of the learning setting and content. Carefully geared toward unraveling an intriguing case, this teaching method stimulates the creative potential of the learners to seek systematic solutions. While the original case serves as an instrument of learning, students demonstrate their learning and transfer applied skills learned to crafting their own undisguised cases (including the narratives and teaching notes) of interest to address critical agricultural organizations’ leadership concerns. Switching point of view from a student to a teacher and vice versa, in the course of grappling with real-world incidents, potentially stimulates the students’ latent creativity for adaptive learning and problem-solving.

Results/Findings to date

This undisguised teaching case is currently being used for the first time in an undergraduate agricultural leadership course and has not been evaluated. According to the International Records Management Trust (1999), a teaching case should be evaluated for stability after being used at least once. Evaluation outcomes will thus be used for relevant amendments and annotations. The final products, the case narrative and teaching notes, will be published as open educational resources (OER). In past years, students have written their own teaching case studies, and several of those have been shared for other educators to use. For example, some student-written case studies have been published in the Association of Leadership Educators’ teaching case study database.

Requests for Input/Guidance/Mentorship/Questions

To further encourage discussions on teaching cases, copies of the case narratives and teaching notes will be shared at the conference, and feedback will be highly appreciated from participants. The hope is to simulate what an ideal classroom for an undisguised teaching case would look like under a hybridized leadership philosophy of adaptive leadership and leaders-as-practice development for addressing complex real-world agricultural challenges.

References

American Institutes for Research (2021, April 27). *Building the U.S. workforce of the future: Key challenges and opportunities*.

<https://www.air.org/resource/field/building-us-workforce-future-key-challenges-and-opportunities>

Aspelin, J. (2021). Teaching as a way of bonding: A contribution to the relational theory of teaching. *Educational Philosophy and Theory*, 53(6), 588–596.

<https://doi.org/10.1080/00131857.2020.1798758>

Austin, M. J., & Rust, D. Z. (2015). Developing an experiential learning program: Milestones and challenges. *International Journal of Teaching and Learning in Higher Education*, 27(1), 143-153.

Battro, A. M., Calero, C. I., Goldin, A. P., Holper, L., Pezzatti, L., Shalóm, D. E., & Sigman, M. (2013). The cognitive neuroscience of the teacher-student interaction: cognitive neuroscience of the teacher-student interaction. *Mind, Brain, and Education*, 7(3), 177–181.

<https://doi.org/10.1111/mbe.12025>

Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability*, 21(1), 33–46. <https://doi.org/10.1007/s11092-008-9064-9>

Biesta, G. (2017). *The rediscovery of teaching*. Routledge.

<https://doi.org/10.4324/9781315617497>

Business Roundtable. (n.d.). *Education and workforce: The skills gap, explained*.

<https://www.businessroundtable.org/policy-perspectives/building-americas-tomorrow-ready-workforce/closing-the-skills-gap/the-skills-gap-explained>

Cappelli, P. H. (2015). Skill gaps, skill shortages, and skill mismatches: Evidence and arguments for the United States. *ILR Review*, 68(2), 251–290. <https://doi.org/10.1177/0019793914564961>

Denyer, D., & Turnbull James, K. (2016). Doing leadership-as-practice development. In J. A. Raelin (Ed.), *Leadership-as-practice: Theory and application* (pp. 262-283). Routledge.

<http://doi.org/10.4324/9781315684123-13>

Dewey, J. (1944). *Democracy and education: An introduction to the philosophy of education*. The Free Press.

Fossey, R., & Glover, S. (2006). Writing the undisguised case. *Journal of Cases in Educational Leadership*, 9(1), 1–11. <https://doi.org/10.1177/1555458905284835>

- Heifetz, R. A., Grashow, A., & Linsky, M. (2009). *The theory behind the practice: A brief introduction to the adaptive leadership framework*. Harvard Business Press.
- Hendrix, R., & Morrison, C. (2018). Student perceptions of workforce readiness in agriculture. *Journal of Agricultural Education*, 59(3), 213–228. <https://doi.org/10.5032/jae.2018.03213>
- Herreid, C. F. (2006). The case study method in the stem classroom. *Metropolitan Universities*, 17(4), 30-40. <https://journals.iupui.edu/index.php/muj/article/view/20286>
- Herreid, C. F., Prud'homme-Généreux, A., Schiller, N.A., Herreid, K. F., & Wright, C. (2016). What makes a good case, revisited: The Survey Monkey tells all. *Journal of College Science Teaching*, 46(1), 60-65. <https://www.jstor.org/stable/24892413>.
- Hooks, B. (1994). *Teaching To Transgress*. Routledge.
- International Records Management Trust. (1999). *Writing case studies: A manual*.
- Jackson, K., Lower, C. L., & Rudman, W. J. (2016). The crossroads between workforce and education. *Perspectives in Health Information Management*, 13.
- Jaschik, S. (2015, January 20). *Well-prepared in their own eyes*. Inside Higher Ed. <https://www.insidehighered.com/news/2015/01/20/study-finds-big-gaps-between-student-and-employer-perceptions>
- Kohn, A. (1996). What to look for in a classroom. *Educational Leadership*, 54(1), 54-55.
- Lee, P., & Caffarella, R. S. (1994). Methods and techniques for engaging learners in experiential learning activities. *New Directions for Adult and Continuing Education*, 1994(62), 43–54. <https://doi.org/10.1002/ace.36719946206>
- Lee, S. A. (2008). Increasing student learning: A comparison of students' perceptions of learning in the classroom environment and their industry-based experiential learning assignments. *Journal of Teaching in Travel & Tourism*, 7(4), 37–54. <https://doi.org/10.1080/15313220802033310>
- Merseth, K. K., & Lacey, C. A. (1993). Weaving stronger fabric: The pedagogical promise of hypermedia and case methods in teacher education. *Teaching and Teacher Education*, 9(3), 283–299. [https://doi.org/10.1016/0742-051X\(93\)90044-H](https://doi.org/10.1016/0742-051X(93)90044-H)
- Minniti, L. F. S., Melo, J. S. M., Oliveira, R. D., & Salles, J. A. A. (2017). The use of case studies as a teaching method in Brazil. *Procedia - Social and Behavioral Sciences*, 237, 373–377. <https://doi.org/10.1016/j.sbspro.2017.02.024>

- Myers, S. A. (2008). Classroom student-teacher interaction. In W. Donsbach (Ed.), *The International Encyclopedia of Communication* (p. wbiecc035). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781405186407.wbiecc035>
- Northouse, P. G. (2022). *Leadership: Theory and practice* (9th ed.). Sage.
- Nuthall, G. (2004). Relating classroom teaching to student learning: A critical analysis of why research has failed to bridge the theory-practice gap. *Harvard Educational Review*, 74(3), 273–306. <https://doi.org/10.17763/haer.74.3.e08k1276713824u5>
- Patil, T., Hunt, M., Cooper, K., & Townsend, R. (2020). Developing a case-based experiential learning model at a program level in a regional university: Reflections on the developmental process. *Australian Journal of Adult Learning*, 60(2), 225-244.
- Poulsen, B. K., & Buland, T. (2020). Come together: Professional development of career guidance practitioners through co-generative learning. In E. H. Haug, T. Hooley, J. Kettunen, and R. Thomsen (Eds.), *Career and Career Guidance in the Nordic Countries* (pp. 219–234). BRILL. https://doi.org/10.1163/9789004428096_015
- Raelin, J. A. (2016). Introduction to leadership-as-practice: Theory and application. In J. A. Raelin (Ed.), *Leadership-as-practice: Theory and application* (pp. 1-17). Routledge. <https://doi.org/10.4324/9781315684123-1>
- Rahmawati, Y., Koul, R., & Fisher, D. (2015). Teacher–student dialogue: Transforming teacher interpersonal behaviour and pedagogical praxis through co-teaching and co-generative dialogue. *Learning Environments Research*, 18(3), 393–408. <https://doi.org/10.1007/s10984-015-9191-4>
- Rateau, R. J., Kaufman, E. K., & Cletzer, D. A. (2015). Innovative classroom strategies that prepare college graduates for workplace success. *Journal of Agricultural Education*, 56(3), 52-68. <https://doi.org/10.5032/jae.2015.03052>
- Rieks, A. R., Greene, D. T., Costa, M. R., Flaherty, M. G., & Solinger, C. (2011). Bridging theory and practice: Connecting coursework to internships in LIS programs. *Proceedings of the 2011 IConference*, 763–764. <https://doi.org/10.1145/1940761.1940897>
- Ruhanen, L. (2006). Bridging the divide between theory and practice: Experiential learning approaches for tourism and hospitality management education. *Journal of Teaching in Travel & Tourism*, 5(4), 33-51. https://doi.org/10.1300/J172v05n04_03