

Case-based Teaching: Using Stories for Engagement and Inclusion

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Abstract: Case-based learning provides opportunities to increase engagement and foster inclusion for diverse communities of learners. Teaching with cases leverages the strengths of storytelling to help students internalize abstract concepts. Stories are the way we make sense of the world and translate abstract concepts into understanding. Through storytelling, we define culture, construct meaning, enter the realms of others, and build empathy and compassion. Case-based teaching has a long history in many fields, including Law, Business, Education, Humanities, and Public Administration. This paper discusses the research in storytelling and case-based teaching with a focus on engagement and inclusion, spanning traditional educational settings, online learning, and one-to-one virtual coaching models. Findings of research studies that assess case-based learning outcomes are provided, along with suggestions for incorporating new material into existing curricula to help learners construct new understandings and build inclusive behavior skills.

Keywords: Storytelling, Diversity, Pedagogy, Constructivism

Introduction

Case-based teaching offers opportunities to support diverse communities of learners, engage students, and improve the persistence of educational attainment. A case-based lesson engages students with stories that enlive concepts, pose open-ended questions with human consequences, or present problems with societal stakes. A case challenges learners to map theories to situations and behaviors. The task of the educator goes beyond translating textbooks, explaining abstractions, and unpacking theories. Educators seek ways to bring abstractions to life and make theories coherent, memorable, and meaningful. Cases can meet this challenge, provide ways to widen the conversation, prompt new questions, invite quiet voices to speak up, and enrich the educational experience for all.

Storytelling has always been fundamental to learning. Jonassen & Hernandez-Serrano (2002) developed an approach to case studies based on their assessment of the importance of stories to learning. As the researchers point out in their paper, storytelling is the oldest form of human sense-making. Through stories, we construct the meaning of the world around us, define culture and connection. Stories take people beyond present-day reality, enable individuals to enter other realms. A story invites us to see the world through different points of view. The researchers observed the way that case studies helped instructional design students get better at solving problems, describing, and storing memories. Accumulated case experiences provided a basis for solving design problems. Stories can also go beyond engagement and knowledge attainment can open minds to diversity.

Engagement and Inclusion

The teacher offers slices of the world, new perspectives to students. Stories and case studies are one form of worldview slice, describing a context, a problem, a phenomenon that enables students to act and assess, to reframe or reconsider worldview, perhaps build new paradigms. In a paper on inclusive learning experiences, Bisol, Valentini, and Braun (2015) connect the value of information to a constructivism pedagogical framework. The information which spurs action is an essential component of learning. Educators can make use of this relationship to maximize engagement and inclusion. To engage and educate, the authors present an electronic resource called Incluir, and a pedagogical framework to support inclusive education in Brazil. The researchers conducted a qualitative study of teachers using the electronic resource. They found that the majority of the respondents determined that it helped to increase their effectiveness at supporting learners with physical disabilities. Knowledge is built as learners interact with the world and encounter new or alternative systems of meaning. Similar to a case study, an electronic resource of information presents scenarios that teachers learn to apply in context.

Heron and Reason (1997) state that “paradigms may be viewed as sets of basic beliefs about the nature of reality and how it may be known” in their paper on the educational opportunity of participatory inquiry. For the authors, these beliefs are thrown into relief by three fundamental and interrelated questions about the nature and knowability of reality, the relationship between the knowledge-seeker and knowledge, and the process of the knowledge-seeker. A case study provides a foundation for a teacher to engage students in a discussion about these questions, by prompting learners to hypothesize about a specific set of actors, a situation, assumptions, and possible solutions.

Online curricula and programs have become more prevalent. Educators continue to research their effect on learning. Bagon, Gačnik, & Starcic (2018) investigated information and communications technology (ICT) tools to support personalized learning and inclusion for mixed groups of children, including those with special needs, in Slovenia. They found various degrees of acceptance among the students, who were more accustomed to using technology for leisure at home. Students with special needs expressed more resistance to computer use than other students.

Wilson et al. (2019) considered the impact of online teaching environments while conducting a two-day group training activity. The researchers considered the potential impact of effects associated with a virtual communications environment. The disinhibition effect is defined by Suler (2014) as the willingness to excessively share personal information or behave aggressively as a result of the dissociative anonymity of online environments. Other effects of the mediation of communications online included power shifts which disrupt the traditional authority relationship between faculty and student, negative reactions to the exposure afforded by on-screen video meetings, or positive responses to alternative interaction modes afforded by them. While some researchers have promoted the use of tools that favor inclusion and break down the barriers of disabled students, others have cautioned that students with mobility problems, such as limited motor control or visual impairment, may encounter obstacles with keyboard or mouse interfaces.

Case-Based Learning

History

Teaching based on cases or problems can be traced back to Christopher Columbus Langdell, who prepared the first casebook for students in the Harvard Law School in the 1870s. This method was adapted to business education by Edwin Gay, the first dean of the Harvard Business School, in 1908 (Lima & Fabiani, 2014). Since then, the method has spread into curricula in many fields, including professional business education, teacher training, veterinary sciences, health professions, engineering, public administration, and academic research (Lee, 2009; Richman, 2015; Andrews, 2002; Marcus, Taylor, & Ellis, 2004; Thistlewaite, 2012; Angelides & Pouloupoulos, 2000; Alford & Brock, 2014; Salmons, 2014).

Applications

To study the application of case-based teaching in online business programs, Lee et al. (2009) conducted a program-level study in a US-based MBA program. The researchers gathered perceptions of students and instructors on instructional design, facilitation, and tech support. This online course replicated the traditional application of cases with text-based documents and discussions. Through surveys and interviews with students and faculty, the researchers found that faculty adopted coach or mentor roles. Faculty became facilitators of online conversations, finding new techniques to manage online conflict.

In teacher training, Richman (2015) studied the effectiveness of online case studies in undergraduate and graduate courses to improve teacher preparation in special education. In education for pre-service teachers, Andrews (2002) applied web-enhanced case-based instruction to prepare student teachers to learn inclusive teaching skills for elementary students with disabilities and limited English language proficiency. In veterinary science, Marcus, Taylor, and Ellis (2004) studied a form of case-based teaching, which they called “problem-based learning” (PBL). The faculty selected case materials to stimulate the discussion of a real-life veterinary situation or problem. Discussions about the problem in groups, or with experts, built skills in critical thinking.

The application of the case method to health professional education often takes the form of medical situations. Thistlethwaite et al. (2012) analyzed 173 research papers published on case-based teaching in health professional education fields from 1965 to 2010. Angelides and Pouloupoulos (2000) studied the impact of

applying a multi-media case study in a civil engineering course. The case described a complex project, the design of a concrete twin pipeline, integrating several engineering disciplines such as hydraulics, structures, geotechnical, environmental, marine, and project management. The case-based approach focused on increasing student knowledge, building cooperation skills, and capacity for critical thinking.

Alford and Brock (2014) describe cases as a prominent example of an interactive “teaching object”, which the researchers advocate for their effectiveness in public administration and public policy education. The authors observe that a case, or story placed at the center of a discussion, links engagement to four aspects of interaction, *self-efficacy*, *mutuality*, *variety*, and *concept-significance*. With *self-efficacy*, students perceive more control over the process of the analysis and the discussion, including the ability to raise issues of personal interest. *Mutuality* underscores the shift in power as lecturer control evolves to a more reciprocal teacher-learner exchange. This reciprocal exchange introduces the possibility of *variety*, new or unexpected avenues of discussion. And as students take stands on ideas they have been debating, abstractions gain *concept-significance*. These changes in the nature of classroom interaction stimulate engagement and, ultimately, turn engagement into learning.

The application of cases for research methods teaching was described by Salmons (2014). The preparation of an annotated bibliography can be seen as a form of case-based learning, where emerging researchers build practical skills by analyzing scholarly papers in terms of the problem, purpose, research design, findings, strengths, and weaknesses. Repeated analyses, met with faculty feedback, builds critical thinking and analysis skills.

Characteristics

Case-based teaching is based on the effective combination of pedagogical elements, including *material*, *context*, *concepts*, and *method*. This first of these is the *material* that describes a case or situation. This can be a written document, such as a business case, a newspaper article, a descriptive essay, a medical file, or a legal case. The material could be a video or audio which presents the scenario in addition to or instead of a text document. The material might include diagrammatic or quantitative elements that describe physical, scientific, or economic parameters. Faculty might curate this material. Students might be presented with a selection of cases and given the option to select one based on personal interest. Or students might be charged with bringing a case or story representing the topic to the group. The material must clarify whether the situation it describes is real-life or hypothetical.

The *context*, a proscribed interaction, is structured by faculty to connect the case to the curriculum. In online environments, this might take the form of discussion questions to which students respond asynchronously. A formal assignment might specify the requirements for a deliverable, such as a scholarly paper, a slide presentation, a video, a proposal, or a design, which integrates course topics and readings into a response to the case. This enables students to connect their personal experiences and perspectives to the submission.

The connection between the case and relevant *concepts* should be clarified, including a reiteration of key theories or frameworks to assist students in making the connections between abstract concepts and real-life situations described in the case (Brooke, 2006). The *method* of interaction, whether discussion or assignment, synchronous or asynchronous, online or on-ground, provides open-endedness. It enables students to experience *variety*, *engagement* and *concept-significance*. Austin, Heskett, and Bartlett (2015) suggest that faculty prepare discussion plans and formal questions which enable the students to consider alternatives and complications, seek out relevant data in exhibits, achieve rigor, thoroughness and clarity in their assessments and solutions, and develop persistent learnings or “take-aways”.

Impacts

Researchers who studied the outcomes of case-based teaching in online and on-ground formats encountered both positive and negative responses. In business education, students sometimes struggled to articulate their ideas in writing, and faculty juggled tradeoffs in timing for students receiving and providing peer comments and feedback. In addition, faculty were challenged to manage the flow of asynchronous discussion tools, when students had to post their own comments before reading those of their colleagues (Lee et al., 2009). In some studies, students expressed concern about workload, which might or might not have been associated with case-based approaches or the software used to deliver online materials, facilitate discussions, or test study participants (Thistlewaite et al., 2012). Nicklen et al. (2016) found the outcomes of online case-based learning to

be comparable to face to face (F2F) cases in an undergraduate physiotherapy course, although some participants expressed dissatisfaction with the technology of case delivery.

The positive outcomes included greater understanding, increased application knowledge, and positive engagement with the case delivery platform, such as in the case of teacher training. In addition, interaction and feedback exchanged in groups were linked to increased confidence in diverse classrooms (Richman, 2015). Researchers found that the real-life aspects of case situations increased the stakes and engaged veterinary science students, resulting in increased understanding as opposed to knowledge acquisition (Marcus, Taylor & Ellis, 2004). Students and teachers in professional healthcare education applied CBL and enjoyed the increased engagement, motivation, and enhanced learning outcomes (Thistlewaite et al., 2012).

Some studies measured effectiveness through the cognitive domain of Bloom's taxonomy, a hierarchical framework with *knowledge acquisition, understanding, application of knowledge, analysis, synthesis*, and ultimately, *evaluation or creation* (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). In research on case teaching with information systems students, Tan (2018) measured how three types of cases--a storytelling case, a design and problem-solving cases, and a create-design-implement case--resulted in higher levels of cognition. Tan found that students who applied the storytelling case demonstrated the ability to *apply knowledge*. Engaging with the design and problem-solving cases helped students reach the *analysis* level. And after completing the create-design-implement case, students demonstrated the highest Bloom taxonomy competency of *creating*. In all three groups, students gave positive assessments to the effectiveness of the cases.

Ertmer and Russell (1995) observed the cognitive benefits of case methods with students in instructional design, including the way that cases drove students to connect practice to theory, to build analytical skills through practice, to help students synthesize design concepts and enact action plans. In addition to performance improvements, case-based teaching demonstrated affective impacts in terms of increased engagement and perceptions of competency on the part of students. Bonney (2015) found that case study teaching was significantly more effective in increasing test outcomes and positive perceptions of learning attainment for students in biology courses. Students felt that the method enhanced learning, satisfaction, and increased perceptions of competency (Richman, 2015; Tan, 2018; Thistlethwaite et al., 2012)

Success Factors

Austin, Heskett, and Bartlett (2015) surveyed their colleagues at the Harvard Business School and determined eight characteristics of excellent cases:

1. Focus - important issue(s), requiring a plan or action
2. Completeness – sufficient narrative and data to answer the questions
3. Clarity and Succinctness – targeted and organized detail
4. Engagement – enable identification with stakeholders
5. Controversy – richness of conflict and issues
6. Complexity – layered dilemmas lacking obvious solutions
7. Robustness – requiring analysis, rigor, supported assumptions
8. Intellectual Richness – opportunity for insights and discovery

Herrington and Oliver (2000) proposed a framework for authentic learning, helpful when considering opportunities to apply online case-based learning. The researchers focused on the concept of *situated learning*, defined by Collins (1998) as the acquisition of information and skills “in contexts that reflect the way the knowledge will be useful in real life”. The framework recommends the following elements: *authentic environments, authentic activities, access to expert performances and process models, multiple roles and perspectives, support for collaborative knowledge construction, opportunities to make tacit knowledge explicit through articulation, teacher coaching, and facilitation, and integrated assessment and feedback*.

The framework element of *multiple roles and perspectives* echoes the earlier-mentioned concept of *variety* or wide and unconstrained responses to the case. Sudzina (1997), in a study of the early application of the case study as a constructivist pedagogy in teacher education, pointed out that with case study teaching, learners construct meaning. This method could enhance moral reasoning skills as the power of the case study or story has the ability to affect the consideration of moral or ethical conflicts (Allen, 1995). By asking students to consider alternative perspectives in a complex situation, they have the opportunity to develop empathy and to gain skills in inclusive behaviors. The Yale Poorvu center advocates a number of inclusive teaching strategies, including case studies, to introduce diverse perspectives and materials (Yale, n. d.).

Conclusion

Case-based teaching methods achieve positive learning outcomes in a wide range of fields. The methods are effective in on-ground and online settings, with one-to-one and group models. Cases can help students grasp concepts, develop skills, become more engaged, and satisfied in the learning process. In addition, cases can help faculty develop more inclusive learning environments. In keeping with the Kolb (1999) framework for experiential learning, a case or a story can provide an experience that engages students to reflect, to build a revised understanding of the world by applying new concepts, and to test this understanding in new situations. While navigating this cycle, faculty have the opportunity to introduce concepts of diversity and inclusion.

In a management course, questions about the tradeoffs or assumptions can help students gain the perspective of new stakeholders. A breaking news story turned into a case assignment in a public administration course provides an opportunity to consider the needs of underrepresented populations. Feedback could prompt students to develop examples and stories in their own papers to increase awareness and skills in storytelling. By expanding the notion of cases and storytelling, faculty can employ these techniques to do more than engage students and bring academic concepts to life. By entering a discussion with a wider range of voices and perspectives, students will deepen their understanding and awareness of their diverse community of learners, which will serve them as they progress into society.

Acknowledgments

The author thanks the committed students, faculty, and administrators of Northcentral University, which supported the development of this paper.

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