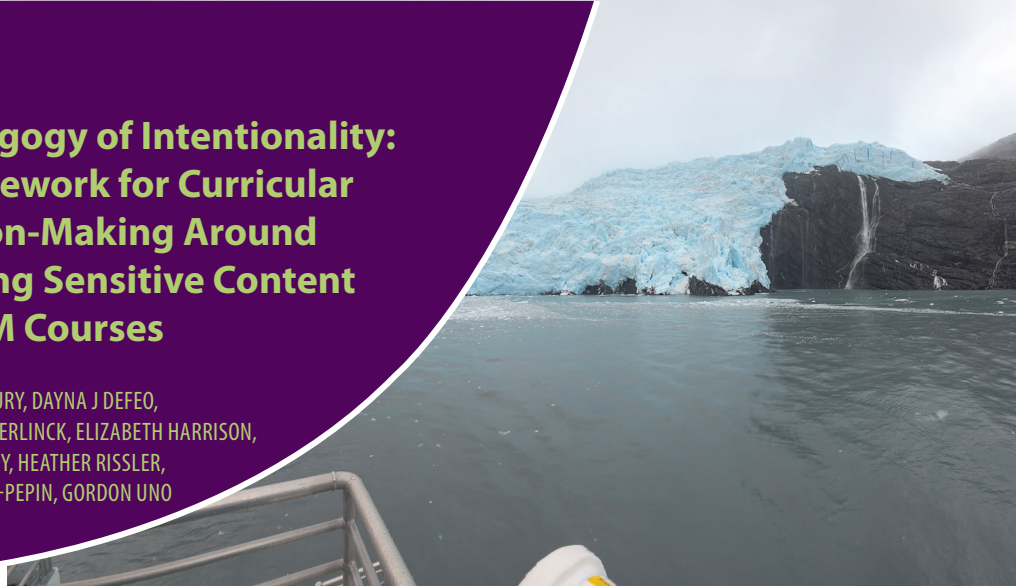


A Pedagogy of Intentionality: A Framework for Curricular Decision-Making Around Teaching Sensitive Content in STEM Courses

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ABSTRACT

With a growing interest in addressing the social context for science, this essay explores the opportunities and challenges inherent when incorporating social topics into biology classrooms. Drawing from the literature around difficult dialogues and the authors' experiences as biology faculty across a variety of institutional contexts, we present a framework for intentional pedagogy—an approach to exploring the areas of opportunity, tension, and risk when engaging students in discussion of social topics. We detail a process for developing a framework for instructor reflection, and a validation process using cognitive interviews and faculty feedback. We present a tool and framework for faculty to explore and reflect on their praxis, attending to the unique contexts that underlie dialogue around social topics.

Key Words: intentional pedagogy, difficult dialogue, social context for science teaching, risk.

Several national reports have emphasized the need for science instruction to connect scientific practice to society (Vaz, 2005). However, discussing the relationship between scientific practice, power, and the social context for those relationships often requires that instructors teaching STEM courses have some grounding in social science disciplines. Additionally, some scientific concepts such as climate change and natural selection are increasingly becoming politicized. There is good evidence that intentionally infusing conversations about the social context of scientific practice in STEM classrooms leads to increases in students cultivating civic values (Rain-Griffith et al., 2020), belonging (Binning et al., 2020), and even academic performance (Dewsbury et al., 2022). The potential discomfort that may come from engaging this content can also be a powerful component of the learning process. Scholarship emanating from critiques of critical pedagogies

has articulated how creating intentional discomfort opens the door to new learning possibilities (Greene & Boler, 2004). However, there are challenges to expanding this approach. One barrier is that, by-and-large, STEM faculty are not trained in the art and science of teaching before they enter their first classrooms (Brownell & Tanner, 2012). Even when some training is available at the graduate

school level, it rarely includes robust exposure to the social science literature, critical to understanding why this infusion matters.

A growing literature explores this challenge (see for example Fields & Conyers, 2025; Young, 2003), and the growth of Centers for Teaching Excellence (CTEs) at colleges and universities has increased opportunities for professional development for existing practitioners. However, STEM pedagogical culture writ large remains deeply uncomfortable discussing social topics within a traditionally labeled “science course.” Well-meaning instructors are sometimes appropriately fearful when they want to infuse discussions of social or political issues into their STEM classrooms because there is an implicit awareness that—if it goes awry—there can be negative consequences for both instructor and students (Evren-Yapicioğlu, 2018). For some, a preferred path might be to steer clear of such discussions entirely.

From a curriculum design standpoint, including learning outcomes pertaining to social issues—especially ones that may be emotionally triggering or politically fractious—requires a careful approach. For a potentially triggering discussion (for example, in biology, discussions on the relationship between race and genetics) to go well, several parameters must be in place, many of which must be established and cultivated well before the actual day the content is delivered. If an instructor wanted to compare the biological construct of race with,

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let's say, the social framing of race, a few key questions concerning preparation for that teaching experience would immediately emerge. What are the clear goals and associated learning outcomes for this content? What kind of classroom climate is necessary for respectful dialogue around race? How will the instructor engage in reflexivity throughout the process? What prior knowledge might the instructor's specific population of students have before coming to that classroom? What is the instructor's own knowledge base with respect to the non-biological content that is being brought in? Between instructors and students, what are the dynamics of power and positionality in relationship to the content? Exploring these and other pertinent questions can help instructors determine how to maximize the quality and productivity of the discussion.

In this essay, we discuss a conceptual framework called *intentional pedagogy*, which provides a mechanism for instructors to systematically identify the parameters that will guide their decisions around whether and how they will engage in potentially socially fractious topics. The approach is aimed to be less of a what-if scenario, but rather as a guided reflection around how to authentically engage in the teaching of science while connecting it to its social contexts.

Our ultimate goal is to support instructors to incorporate social topics into their STEM classrooms with approaches that support students' cognitive and affective outcomes. This framework is intended as a tool for thoughtfully introducing science concepts that may have a social and/or political context, particularly when power dynamics and diversity in the classroom means that instructors and students have different relationships to that social context (e.g., evolution, climate science, gender, vaccines, diet). However, before incorporating social topics in STEM classrooms, instructors need to set up those classrooms with very particular cultural norms. This norm setting is so fundamental to the success of the endeavor that we discuss it separately in the next section.

○ The Inclusive Classroom Environment

A key feature of inclusive classrooms is the space given for its participants to engage in meaningful, respectful, and critical dialogue (Tragoulia & Strogilos, 2013). The etymology of the word *dialogue* (finding meaning through words) suggests that its strength lies in the ways in which its participants discover new ways of looking at the world as they partake in the conversation (Schwandt, 2001). More specifically, the act of dialogue involves several elements of its participants' affective being, all of which need to be considered by those who set up the dialogue if it is going to be impactful. Bringing in discussions about the social context of science sometimes includes talking about parts of our collective history, inclusive of times where science was complicit with programs that marginalized its own citizens. There are several things to consider in discussions like these: (a) discussing politically controversial societal issues can elicit strong emotions, (b) the identities and social histories of students will likely impact the nature of their emotional reactions to the discussion, and (c) implicit biases can evoke preordained assumptions that students and faculty have about each other, regardless of the discussion's subject matter.

None of these need to be insurmountable barriers. If the dialogue is to be productive, we must acknowledge that we are first and foremost emotional beings (Haidt, 2012). Creating a classroom environment that cultivates productive dialogue means implementing activities that attend to our humanity and set the cultural norms around which the dialogue will take place. The restorative justice

and community engagement literature contains several examples of effective approaches. We next describe three that can be considered in STEM classrooms.

Syllabus Statement

As a welcoming and culture-setting document, the syllabus is often the first point of engagement for students when they take any course (Liao, 2015; Watts, 2024). How the course is described and the tone used to convey that description can either signal to the student that the class is a welcoming place where they are free to be themselves as they grow intellectually, or simply a place that expects their full compliance. Lowenstein (2020) for example articulates the design and implementation of a deliberative dialogue syllabus as a negotiated process so that students can be part of the language construction process. In general, inclusive classrooms begin with clear and inviting language that explains the role of all classroom shareholders in maintaining the civil engagement needed for productive work to take place. Instructors should consider being explicit that the course will involve dialogue on social issues, but that an environment will be created to ensure that it is productive and noncombative.

Guideposts

"Guideposting" comes from the restorative justice literature where it is described as a mechanism to prepare communities for engaging in very difficult dialogue (Ross & Bookchin, 2020). Its use is prevalent in dialogic situations where the stakes associated with the outcomes are significantly higher than one might typically find in a college classroom. In these scenarios, the degree to which dialogue participants can enter conversation with an even emotional temperature quite accurately predicts how successful the dialogue will be. The Center for Courage & Renewal (2022) offers a list of guideposts that serve this purpose, with language that encompasses how participants attend to their own emotions and to those of their peers, while assuming that all are coming to the dialogue with the best of intentions. In one author's course for example, students read the guideposts aloud on the first day of class and discuss which of the guideposts they may struggle to abide by (Artze-Vega et al., 2023). This ensures that the guideposts are not fixed or rigid expectations and, similar to Lowenstein's (2020) negotiated syllabus, gives students agency in setting the course's cultural norms. The ownership process increases the likelihood that students will abide by those norms throughout the semester. However, these guideposts or "ground rules" need revisiting and scaffolding throughout the semester. While most people will generally agree they are a good idea, what they *really* mean in practice needs exploration, as the guideposts may "sound nice" on the surface, but often do not capture what is really needed to engage in difficult discussions that challenge deep-seated beliefs (Arao & Clemens, 2023).

Group Compacts

Compacts are agreements usually made among members of a group to determine the specifics of their semester-long interactions, such as when and where they will meet, how they will engage with each other (both in terms of modality and attitude), and what the expectations are for good collaborative work (Garmston & Zimmerman, 2013). It is slightly different from class-wide guidelines in that each group is likely to orient their compact around the specific schedules and preferences of the group's membership. Group compacts are good for two reasons. First, the compact acts as a complementary

mechanism to the guideposts by reinforcing behaviors that center respect for each other. In so doing, it enhances the goals of the tone-setting activities of the course aimed at building a respectful environment. Second, it provides a pivot point around which groups can evaluate themselves and their peers. If certain behaviors are articulated in the compact, then it is easier to peer evaluate for those behaviors at periodic times in the semester.

○ Framework Development

Rather than functioning as a discrete decision-making tool for content inclusion, the *intentional pedagogy* (IP) framework was developed as a guide to support instructors in creating and maintaining supportive learning environments where both students and faculty can effectively engage with challenging material. The framework consists of carefully structured prompts that guide instructors through critical considerations for course preparation and delivery, and was developed in seven distinct but iterative stages. The objective of the tool is to capture the complexity of pedagogical decision-making processes with respect to the instructor engaging the challenging material.

The development of the IP framework emerged from collaborative discussions among the authors regarding pedagogical best practices for managing sensitive or polarizing content in classroom settings. Our first step in developing the framework was grounded in the authors' experiences in science education and research in equity-minded teaching practices, while also accounting for the complex institutional factors that shape teaching environments, including state- and institution-level education policies, student body demographics, institutional type (e.g., public, private, community college), and regional sociocultural contexts. The framework was informed by a review of literature and other methodologies in the second step that describe systematic approaches to organizational decision-making (e.g., Mosquera et al., 2008; Ray et al., 2019). While traditional decision trees are often employed at early project stages to evaluate multiple potential pathways, our framework was specifically designed to be used iteratively and often as instructors move through and between semesters with different student groups and consider the dynamic and context-dependent opportunities and challenges of engaging with the social context for science topics (Hulett & Hillson, 2006).

In the third step, we did initial pilot testing at a professional development workshop in 2023, where authors solicited participant feedback from the 32 attendees, and incorporated it into subsequent revisions. Following these refinements, our fourth step was to share the framework with a larger audience in an April 2024 online National Association of Biology Teachers (NABT) workshop with approximately 100 participating educators. Here, feedback was collected through collaborative online portals (e.g., Padlet) and anonymous surveys, and used to produce a version of the framework for fine-scale refinement.

Our fifth step was to solicit direct feedback from faculty members about the practical applications and interpretability of the framework. We used cognitive interviews, an approach typically used in survey instrument development (Beatty & Willis, 2007), in which representatives of the intended audience of the framework “talk aloud” as they respond to its content, allowing researchers to better understand their thought processes, identify potential confusion with wording, and ultimately design a tool that is clearer and more accurate for the intended end user. We purposively selected

(Patton, 1990) nine in-service biology faculty members from eight different institutions to participate in the cognitive interview process.

An author conducted individual cognitive interviews over Zoom and, using the screen-sharing feature, systematically presented the framework to the faculty interviewees, revealing sequential decision points (the prompts within the framework) while participants verbalized their thought process as they engaged with the tool. This enabled direct observation of how faculty interpreted and navigated the framework's components, while simultaneously collecting data on the experiential knowledge they drew on when responding to prompts. The progressive unveiling technique was specifically implemented to prevent participants from anticipating subsequent decision points, thereby maintaining authentic responses at each stage of the framework. Interviews lasted an average of 38 minutes (range = 21–52, median = 35). After five interviews, author [5] summarized the faculty feedback, focusing particularly on the “trouble areas” where faculty struggled with wording or asked the interviewer for clarification, and the author team used this feedback to make further revisions to the framework. Then, in an iterative process, author [5] conducted another cycle of cognitive interviews with four more biology faculty members, and again the author team modified the tool.

Our sixth step was to present the framework to biology faculty members at the 2024 annual meeting of the NABT in a full-day workshop. In small groups, the 47 attending faculty members applied the framework to their own curriculum planning, and engaged in dialogue with one another. They provided further feedback in the form of notes on the framework itself, butcher block paper drawings, and a post-workshop survey. Their feedback was synthesized and used for a final round of edits and modifications to the framework. The seventh and final round of refinements were informed by 24 faculty who attended a week-long workshop in the summer of 2025, where they used the tool to design or modify a unit for their non-majors biology courses.

○ Using the Framework

While learning is inherently affective and social, the literature documents that educators have challenges attending to the dynamics of emotions in learning (Immordino-Yang & Damasio, 2007; Immordino-Yang et al., 2018), especially in STEM disciplines, and the social context for learning is constantly in flux. Our framework is intended for all instructors with varying experience levels, and though we hope the IP tool (Figure 1) can be broadly applicable, it has been validated with in-service undergraduate biology faculty. Therefore, in its current iteration, is likely most useful when applied to resources with potentially sensitive content in STEM courses. Importantly, we note that K–12 teachers have different levels of curriculum control, administrative oversight, and academic freedom; while the questions may help teachers in other contexts practice reflexivity, as the framework was not validated with these audiences, it may not be a complete reflection of their conditions and considerations.

Curriculum development and assessment are iterative processes, so instructors are encouraged to return to the framework as needed as they implement social content into their courses. Instructors are encouraged to reflect on and update their responses in preparation for a future application of the framework. Though each guiding question that moves the user through the framework is simple in *structure*, it asks participants to *reflect* deeply. Thus, in aggregate, the questions the instructors address while moving

through the framework make this a cognitively—and potentially emotionally—demanding exercise.

Practicing self-reflexivity contributes to educator's perceptions and enactment of inclusive teaching (Beverly, 2025). Therefore, prior to teaching potentially controversial topics, it is beneficial for educators to interrogate their own implicit biases, privilege, and power by considering their positionality and how it includes identities that may differ from or be similar to identities that their students hold. Skipping self-reflexivity may cause educators to misinterpret how topics might cause discomfort to students. For example, an instructor who has never experienced fatphobia may fail to anticipate the level of discomfort that discussions of nutrition and calories may have for students living in larger bodies (see Appendix I provided as Supplemental Material with the online version of this article).

1. Identify a Topic

The use of a topic that has the potential to generate difficult dialogue will likely be governed by several factors, including the nature of the biology learning outcomes of that semester and the instructor's potential goal of engaging the students in a deeper social lesson. In this vein, *the biology of skin color* has been a very useful topic as it connects to topics of evolution, protein chemistry, sexual selection, and others. We use this topic in the framework presented in Figure 1. We use numbers to create a connection between the text and the framework, but it is intended to be an iterative process of reflection, and though some questions logically follow after others, they may be revisited in practice.

2. Connect the Topic to a Resource or Teaching Strategy

The case study “the evolution of skin color” found under the case study repository housed by the *National Science Teachers Association* (Prud'homme-Genereux, 2011) is useful in combining all of the aforementioned biology topics into a singular narrative. The subject matter of the case study also contains opportunities for discussing race as a social topic. Effective pedagogy with this case study typically requires effectively designed groups, guidelines for respectful dialogue, and clearly identified opportunities to provide frequent and rich feedback.

3. Define Learning Outcomes

Once the instructor identifies a resource they would like to incorporate and that they adjudicate can lead to sensitive interactions in the classroom, several follow-up questions can be asked. Does incorporating this resource address a content-specific learning outcome or outcomes? Without a clear rationale for its connection to the main subject matter of the course, it would be difficult to justify its inclusion. Assuming that the connection is made, the resource may likely have learning outcomes that extend beyond biological subject matter. For example, in a discussion of the biological conception of race where a comparison was made to the social construct of race, an instructor may hope that students understand a bit more about the topic than the tradeoff between folic acid and ultraviolet rays. An instructor may also hope that students internalize a mindset that lessens the personal desire to separate groups and assign unchangeable traits to census categories, and in so doing view humanity in more connected and inclusive terms.

4. Develop an Assessment Strategy

Contemporary models of curriculum design rightly ask instructors: If a learning activity is going to be incorporated, how will its

impact be assessed? In other words, is an activity—whether it is primarily focused on biological concepts or the social context for those concepts—worth incorporating if its impacts cannot be quantified? The challenge with learning objectives around social issues is that, unlike objectives around content, the impacts of activities that evoke emotions and challenge students to think differently about the world may not be actualized within the typical timespan of a college course (see Defeo et al., 2025). However, shorter term goals are still potentially attainable, as instructors may intend for their students to cultivate values that build community and belonging, recognize the importance of civic engagement, and apply scientific thinking to solve broader social problems. Yet STEM courses in higher education are typically not set up to assess learning outcomes that attend to this human dimension (see LaCount & Jackson, 2019), so instructors may wish to connect with their local center for teaching excellence for suggestions on appropriate instruments to use for this task. For example, an instructor incorporating a discussion on race may be intending to expand students' self-perception of their ability to have conversations on race. A post-activity 1-minute paper with a well-structured prompt could invite students to reflect on their level of comfort talking about race with members of different racial and ethnic backgrounds, and how the class's conversation aided (or did not aid) their feelings of efficacy. This assessment approach can give students the opportunity to articulate how the engagement affected them. Assessing students for the quality of their reflection and their ability to situate STEM evidence into that social context—rather than a “correct” answer—provides space for students to articulate their thinking and learning, including their emotional responses.

5. Anticipate Discomfort in Context

Simultaneously, an instructor considering a lesson around the biology of race will have to consider the potential discomfort discussing the topic may cause. It is worth considering here that discomfort itself is not being characterized as negative or something to avoid. In fact, one key feature of IP is to recognize and be explicit about the affective component of the educational experience. Intentional discomfort in a well-structured environment also creates new emotional and intellectual opportunities (Arthur, 2025). Acknowledging the humanity of our students and ourselves in this way improves psychological belonging, and also positions us to more freely access our reasoning resources for problem-solving activities. For some students, even a biological discussion of race in the context of skin color may be challenging. Bringing in the trickier discussion of race's social origins may be orders of magnitude more difficult. More specific questions pertaining to discomfort can be asked here. Would students specifically experience emotions of embarrassment, nervousness, or even anger during a discussion on race? Would they necessarily feel any strong emotions? The answers to these questions likely depend on the student's social history, including their internalized views on the subject matter, and instructors will need to anticipate these tensions as they prepare and in situ as understanding sources of tension or discomfort is a key step to navigating them productively.

6. Develop Strategies to Make Discomfort Productive

Knowing the sources of discomfort in a particular context can help to guide the structure of the discussion. For example, without context, a discussion on the social construct on race that focuses on the most problematic actors can be construed by some students as an attack on their identity. Even the discussion of a disease that

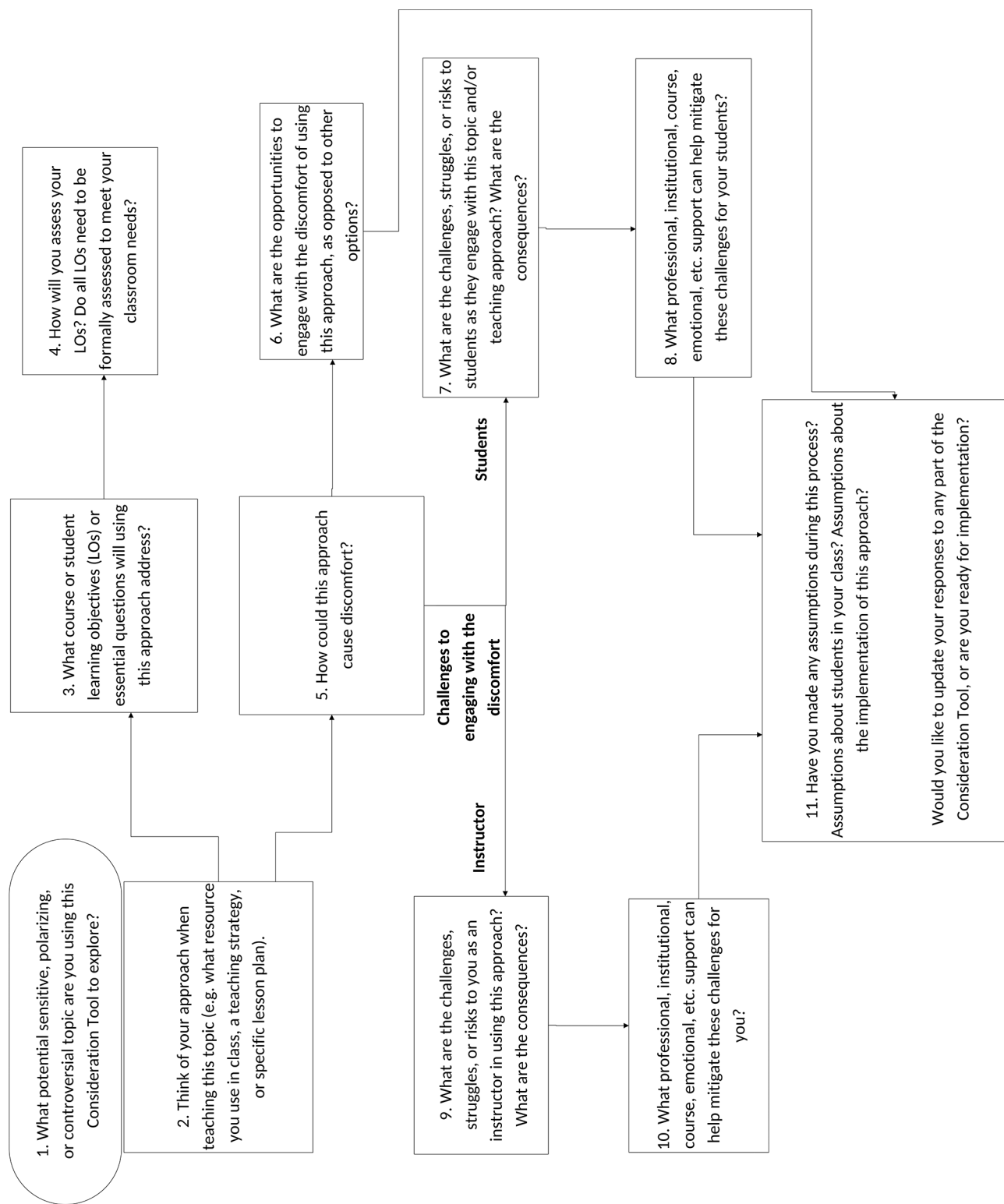


Figure 1. The Intentional Pedagogy Framework. The intentional pedagogy framework is intended to guide instructors through a process of consideration and reflection around dialogue in their STEM courses. Though the framework is numbered, it is meant to be used iteratively and revisited as instructors consider the questions in tandem.

disproportionately affects a population that is underrepresented in the classroom can create tension. Being aware of these scenarios means that instructors must take great care in cultivating a classroom environment that will allow for those conversations productively. Discussions of this nature between students can be risky, since students may be less attentive and less equipped to engage these topics with nuance. Thus, to do this work effectively, instructors would need to seek out resources and strategies appropriate to their context.

7. Anticipate Student Challenges & Safety in Context

Students may find it difficult to engage with emotions that surface during the learning process, and given the traditional format and focus of science classes, they may not anticipate that challenge (see Verduzco-Baker, 2018). For students new to this type of engagement—particularly on a topic such as *the biology of skin color*—instructors must consider how to respectfully create an environment that prohibits those challenges from torpedoing the learning opportunity. While work in the social justice realm cautions against “watering down” topics to make them more palatable and comfortable only reinforces privilege (Arao & Clemens, 2023), we also note that learning is inhibited by threat (Caine et al., 2009), and must be scaffolded. That is, students who are developing social awareness may have limited control over their “emotional elephant” (Haidt, 2012) and might need guidance to acknowledge themselves as emotional beings with tools to fully engage in reason. The research is mixed on the impact of trigger warnings on measurements of learning (Boysen et al., 2021), but there is some evidence that well designed safe-space notifications allow students to feel more psychologically secure when engaging discomforting topics (Pratt et al., 2025). While it is important to plan thoughtfully, it is important to remember that we cannot guarantee students’ emotional safety—there is no way to wholly remove risk, and learning that challenges the privilege of students’ agent identities or underscores the oppression of their target identities (Harro, 2000a; 2000b) can evoke feelings of discomfort, which they interpret as a threat (Arao & Clemens, 2023). Emerging literatures in social justice advance a more apropos concept of “brave spaces,” positing that genuinely engaging in difficult dialogue is challenging and requires effort (Campbell & Eizadirad, 2022). Early guideposting is an important preparatory step.

8. Identify Resources for Students

Discussions about *the biology of skin color* explicitly invites students to trouble their a priori conceptions of the term *race*. We situate our example in a biology course, which does not generally allocate time for a comprehensive historical or sociological treatment of the topic. However, to consider students’ interests and need for more *information* about the topic, it would be helpful for the instructor to be familiar with the sociological discussion (see 10) while also pointing students to relevant resources they can scour to deepen their understanding of the topic. From an *emotional* standpoint, it would also be useful to provide options for students who may need to navigate feelings associated with the discussion. The feelings may range in type and severity, but, if there is a culture of open dialogue and trust, students can find the support structures necessary to process any emotions that may arise.

9. Anticipate Instructor Challenges & Safety in Context

When teaching about the social context for science, instructors will also likely navigate an emotional maze. Depending on the

instructor’s identity, experience in having these conversations, and knowledge base around the subject matter pertaining to the social topic brought in, instructors will have varying levels of comfort with their own engagement (see Verduzco-Baker, 2018). Put slightly differently, the instructor’s emotions matter here as well. Two separate hurdles would need to be navigated here. The first is curricular: How might one incorporate a social topic into a biology classroom discussion without the background that the student would get from, say, a sociology course? In other words, can a topic be treated in such a way that the social context is adequately and accurately addressed? Or is a superficial treatment of the context doing a disservice to its importance? The second hurdle is the facilitation and handling of the emotional environment of the discussion. What kinds of strategies should an instructor deploy to ensure that meaningful respectful dialogue takes place? When should those strategies be used? How might an instructor respond if engagement goes awry? Is there any professional risk associated with explicitly having these conversations in the classroom? Importantly, as teaching is not only becoming more politicized and also—in some places—being regulated by state, local, or institutional policies driven by ideology rather than science, faculty who choose to engage in difficult dialogues may face professional pressures and/or consequences. Changing social and political contexts for teaching and learning have real implications for faculty, and instructors must weigh these circumstances, in context, considering their own needs and safety alongside their pedagogical objectives for students.

10. Identify Instructor Resources

Both instructor hurdles require support—ideally from within the institution—on best practices for implementation. CTEs are typically equipped to support instructors in navigating these types of pedagogies. An instructor considering implementing *the biology of skin color* for example would benefit from reading and discussing with instructional designers the book *The Righteous Mind* (Haidt, 2012). In this book Haidt uses an elephant and a rider metaphor to explain how sometimes humans have trouble engaging in reasonable discussions about emotionally tricky issues. A subsequent book called *Switch* (Heath & Heath, 2011) leverages this metaphor and the argument to provide suggestions on how to help humans, regardless of age, consider changing their minds on deep-rooted issues.

11. Reflect & Assess

In the forensic stage of the process, there are several things that the intentional instructor should reflect on. Like any other classroom process, there are likely improvements that could be made at any stage of the implementation. Given the relative stakes of engaging social context, the implementation around those specific lesson plans are especially crucial. In addition to the affective domain assessments mentioned earlier, instructors would do well to pay attention to students’ nonverbal cues, and the instructor’s internal adjudication of comfort to determine what went well and what could be improved so that the social context incorporation is even more impactful in the next implementation.

○ Conclusion

Because of tremendous variations in geography, politics, and time, we sought a tool that is “elastic and explicit” (Carriera, 2004)—one that is broadly applicable across contexts yet refined enough

to remain meaningful to the realities of teaching and learning. Teaching and improving our practice is a work in progress. As the education literature reminds us, teaching praxis should always be reflective (Zeichner & Liston, 2013), and we hope that the IP tool's questions can be revisited across time and content to spark reflection and consideration, and ultimately to support good, meaningful, and productive dialogue.

During our validation processes of cognitive interviews and workshops, the diversity of topics that our colleagues identified as sensitive or politically charged (e.g., vaccines, climate change, evolution, caloric counts and nutrition, and using animals in dissection) was broad. Instructors working in different institutional contexts (i.e., institution policies, state laws and priorities, administrative and departmental priorities) responded quite differently to the prompts in the tool, as they considered their unique circumstances. Responses also changed over time, sometimes dramatically, as states and institutions have responded to political pressure and national mandates. Teaching is always reflective and contextualized, and tools that support reflection are always needed. In this sense, our cognitive interviews surfaced both the need for reflection in pedagogical practice and the broad array of situational factors that may work in concert to impact how dialogue takes place in the classroom.

Our ultimate goal is not only to support instructors in their efforts to create a classroom where dialogue is not merely possible, but generative. We also want to re-engage the paradigm that college classrooms prepare students for both technical participation in the economy and civic participation in the sustenance of a thriving, peaceful democracy.

Go on, have good discussions.

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