
Cultivating a wicked problem-solving character

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Heather Keith

Faculty Development, Radford University, Radford, Virginia, USA, and

Paige Tan

Department of Political Science, Radford University, Radford, Virginia, USA

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Abstract

Purpose – The purpose of this paper is to present the activities and impacts of a character approach to solving wicked problems. We detail the activities of the university’s Center for Character and Public Impact in curricular, co-curricular and faculty development areas, especially around the focal virtues of hope, humility, care and practical wisdom. We present the impact of this work on students and faculty at the university.

Design/methodology/approach – This practitioner paper uses a case study from the university, detailing the wicked problems initiatives and the integration of character education in faculty development, the curriculum and the co-curriculum.

Findings – An external review suggested that our work on integrating character education with our existing wicked problems activities shows promising results, especially in our focal areas of hope, humility, care and practical wisdom.

Originality/value – While a growing number of institutions use community-engaged, project-based and even wicked problem-based pedagogies, we believe we are distinctive in aligning our robust wicked problems initiatives with an integrated approach to character education.

Keywords Faculty development, Humility, Hope, Character, Wicked problems

Paper type Practitioner paper

Imagine a classroom in which students hear from community members about how the regional opioid epidemic alongside rising grocery prices and local unemployment is leading to a rise in housing insecurity or where they study how a proposed data center has economic benefits but might be devastating to local ecological communities. In this classroom, students hear from community organizations about the complexities of solving difficult problems and where community need is greatest. These are not unusual topics for community-engaged and problem-based learning, and our pedagogy is of course grounded in technical problem-solving skills such as teamwork, research, design thinking and data analysis aimed at ameliorating persistent and complex problems as students pose real solutions; but in our classroom they also learn about themselves and the kinds of people they need to become to be positive change agents, including learning and practicing character traits like hope, moral courage and empathy. Students explore and cultivate their own wicked problem-solving character.

Historians and other theorists increasingly note that we are in a time of “polycrisis”—an era in which the world faces multiple, complex, intersectional crises which affect human physical and mental health as well as community and ecosystem integrity (Tooze, 2022). Bryan Alexander (2023) argues that higher education has a responsibility to study and solve global crises, such as climate change. William Throop (2024) suggests that essential to this is teaching “skillful habits” of character, such as the behaviors and skills that contribute to humility and frugality, alongside knowledge and hard technical skills.

Today’s polycrisis is made up of “wicked” problems such as climate change, political polarization, persistent inequality and war. In the terminology inspired by Rittel and Webber (1973), when we say a problem is “wicked,” rather than benign and straightforward, we hypothesize at least that there is no single definitive solution, that each problem is unique but



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connected to other wicked problems, and that the way we formulate a problem and the way we measure success in dealing with it are themselves at issue, among other attributes. Wicked problems are those that defy “silver bullet” solutions because they are complex, intersectional and intractable (Fesmire, 2024). While studying global wicked problems gives students the chance to understand large-scale intersections and the complexities of solving problems like climate change, our approach also includes local-scale wicked problems so that our students can pose and imagine (or even enact) visible change in our public university’s region. Our students learn to approach problems like the devastating effects of opioids on individuals and communities, the loss of community hospitals, whether to allow data centers to be built in our region and how energy decisions (such as coal and renewables) shape regional employment and health.

Here, we detail how a curriculum, faculty capacity and institutional infrastructure can be built to connect character to community change through a wicked problems approach as we seek to help students to develop virtues that will make them more adept at collaborating across differences and build skillful habits to solve the complex public problems of our time – to mitigate the polycrisis. Our work to develop traits such as humility, moral courage, active hope and care is designed to lead our students to purposeful careers, active citizenship and meaningful lives as they become expert problem-solvers.

Since 2021, Radford, a public regional university in Southwest Virginia, has developed an expanding program in wicked problems, including a biannual student research showcase, an academic minor, new courses and a student club. Many issues facing our university’s region, such as problems in healthcare access, climate change, persistent poverty, gross inequality, addiction and food insecurity can be characterized as wicked problems. Giving students an experience of authority and sustained interest in solving a problem is a benefit to their learning (Hanstedt, 2018; Hmelo-Silver, 2004; Larmer, Mergendoller, & Boss, 2015) and to a just and sustainable future for us all. It also deepens students’ ability to empathize with diverse stakeholders and collaborate across social and political differences – habits that will serve them in careers as well as communities.

In this article, we discuss the connection between character and wicked problem-solving, our initiatives, the specific skillful habits that we hope will help students to impact their communities positively, and how we are working with both faculty and students to create opportunities to respond to the polycrisis. Buoyed by grant-funded activities to integrate character into our wicked problems initiatives, our work focuses primarily on faculty and student development for incorporating character into coursework and the wider campus conversation, with the explicit aim of enhancing our ability to impact communities and ecosystems positively through envisioning and acting toward a better future in collaboration with others.

Creating wicked problem-solvers

In engaging with wicked problems in our region and world, Radford University has developed both curricular and co-curricular activities. Rather than a central effort, many initiatives were built from the ground up, largely based on a variety of faculty development opportunities, including reading groups on Paul Hanstedt’s *Creating Wicked Students: Designing Courses for a Complex World* (2018), Bryan Alexander’s *Universities on Fire: Higher Education in the Climate Crisis* (2023), and William Throop’s *Flourishing in the Age of Climate Change* (2025). We have applied this grassroots approach to structuring our broader curriculum, faculty development opportunities and co-curricular activities – aligning our work in character and public impact with the interests and talents of our colleagues (Berkowitz & Bier, 2005) and our University’s strategic plan to facilitate a culture of care on campus and in the community. Our curricular “wicked” initiatives include an interdisciplinary collaborative course called Wicked Problems, several disciplinary courses bundled into a wicked problems minor, a biannual Wicked Fest that showcases students’ research across the disciplines and an upper-level interdisciplinary course that not only allows students to study a local wicked problem, like food insecurity, but gives them the skills (and budget) to pose and enact a solution. In these

curricular opportunities, students consider campus and the local community to be the laboratory and class meetings are often held in various locations around campus that fit the course theme, such as the campus greenhouse, dining hall, campus sustainability sites and the adjacent riverway. In this work, we strive to give students more than foundational disciplinary knowledge and career competencies. In keeping with Hanstedt's conception of "authority," we aim to help students develop a sense of "authorship," ownership, agency and responsibility for applying their learning to the problems of the world (Hanstedt, 2018, p. 5). For Hanstedt, authority is not simply expertise bestowed by an instructor; rather, it is students' developing confidence to enter public life as people capable of authoring change. Hanstedt argues that authority develops gradually through practice "in ways at first small, then increasingly large" (2018, p. 6). Students cultivate authority not by waiting until they have perfectly mastered content but by repeatedly being placed in situations that require them to use what they know to address the problems before them. Our curricular and co-curricular initiatives therefore seek to create opportunities for students to exercise their authorship through high-impact practices, community-engaged learning and wicked problem-solving experiences. By presenting students with complex public problems and asking them to propose solutions, we encourage them to see themselves not merely as recipients of knowledge but as emerging contributors to their communities.

This developmental experience of authority is particularly important because wicked problems cannot be solved through the rote application of retreaded solutions. If straightforward technical solutions were sufficient to solve wicked problems, they would already be solved. Wicked problems instead require students to apply knowledge while recognizing that such knowledge is necessarily incomplete (Hanstedt, 2018, p. 9). Students must therefore learn to act thoughtfully and intentionally in the absence of certainty – to collaborate with others and remain open to new understandings while still taking responsibility for action. In their qualitative feedback, students remark that their wicked problems experiences challenge them to develop their teamwork, problem-solving and communication skills. Faculty observe that through their wicked projects students increase their confidence, persistence and capacity for civic engagement (Lake, Cirelli, & Kanowitz, 2025). In gaining confidence in their own sense of authority, students are developing a wicked problem-solving character.

Cultivating a wicked problem-solving character

This sense of authority and confidence in approaching complexity translates into other traits, like hope, persistence and moral courage. However, these capacities must be explicitly attended to. As faculty members improved their repertoire in teaching the technical skills of wicked problem-solving, such as research and analysis, we discovered that while course outcomes and activities improving knowledge and skills were important, dispositional skills and values are essential to real change, both for our communities and for our students themselves. How can you teach a student to solve a problem if they are not disposed to care about it? How can you encourage them to find and enact solutions to broadscale problems like climate change or locally charged intractable concerns like the unhoused population if they don't have hope that the problem can be mitigated and the moral courage necessary to collaborate across differences?

To enable wicked problem-solving, faculty and students are required to analyze the systems and structures which create and exacerbate the problems. To ameliorate them requires that students rise to the challenge, rather than ignoring the problems or refusing to acknowledge that they even exist. The hard work of posing and enacting solutions to wicked problems requires a problem-solving *character* – a collection of practiced skills and deeper-seated values, or skillful habits, as Throop (2024) suggests, such as a disposition to act based on hope and care, the practical wisdom of a leader and humility and moral courage as we navigate problems within local communities of diverse beliefs, needs and experiences. In this, we see a

natural fit between the study of wicked problems and character education. Our wicked problems approach is consistent with [Lamb, Brooks, and Brant's \(2022\)](#) seven strategies for cultivating character, such as open-ended inquiry and dialectical engagement, understanding of context and contingency (“situational variables”), reflection, moral deliberation and engagement with virtuous exemplars. We aim to create an educational context in which our students become, as Eddie Glaude, Jr. says “the kind of people that a democracy requires” (in [Fesmire, 2024](#)).

As [Throop \(2024\)](#) counsels, students need technical skills to be successful change agents, but they also need to develop their character for solving problems. And because character traits are stable patterns of thoughts seen as part of one’s identity, Throop suggests that we need to think on the level of “skillful habits” that will serve us in adapting to rapidly changing contexts: “Virtues as classically understood are not just dispositions to think and act in various ways; they involve many skills, including subtle judgments about what a virtue requires in a situation and how that is affected by other relevant virtues” (4). In cultivating skillful habits “we are really looking to develop skills that become a part of who we are—cognitive skills, emotional skills, and behavioral competence” (4), which together become character. With a focus on skillful habits, such as the learned behaviors of active listening and questioning one’s own biases, for example, students are better equipped to collaborate with colleagues and stakeholders as they enact humility.

Building on campus momentum for wicked problems pedagogy and with the help of two Educating Character Initiative grants (from Wake Forest University, funded by Lilly Endowment, Inc.), we developed the Highlander Center for Character and Public Impact (HCCPI) to support the connection between change agency and character. Serving both students and faculty, this center aligns, focuses and expands our curricular, co-curricular and faculty development initiatives around creating a wicked problem-solving character. The HCCPI’s work is underscored by an intentional gathering of activities under the umbrella of our focal virtues: *active hope, humility, care and practical wisdom*. Our focus on wicked problems dovetails with our four focal virtues and our treatment of character-building more generally as our students practice skillful habits that enable further development and ethically sound *employment* of behavioral, cognitive and emotional skills toward an inclusive moral community.

In our conceptual approach to wicked problem-solving, character education is not the top-down application of moral rules in the sense arguably assumed by many normative ethical theorists in deontological and utilitarian discussions. A top-down approach could occlude the realities of existing practices and power relationships when we describe problematic situations and consider paths to their mitigation ([Fesmire, 2024](#)). In our wicked problems work, we are sensitive to the need to empathize with stakeholders, to understand context and to avoid imposing solutions that are not suited to the problems at hand. The guidance provided for the aspiring good nurse, counselor or teacher is aided by discussion of cross-cultural virtues such as caring, but it is also informed by bottom-up familiarity with problems of actual practice in different fields, and it is underscored by the study and discussion of exemplars of virtue.

Radford’s wicked problems initiative is institutionally framed primarily in terms of durable character traits grown from skillful habits, albeit from a theoretical perspective that includes a critical appreciation of the American pragmatist tradition, such as John Dewey and Jane Addams. Pragmatist ethics, no less than Aristotelian, focuses on patterns of motivation and behavior in an individual that harmonize to become stable over time across situations. Dewey, for example, in agreement with Aristotle, defines the “integrity of character” as the “interpenetration of habits” (1922, 1932). He also advocates for the “full use of intelligence in the formation of habit” and thinks that education, formal as well as informal, should be more intentional in activating character formation and civic virtues (1916). Jane Addams’ social ethics is uniquely suited to wicked problems work with her marriage of theory and practice in developing a mindset in education toward serving communities and democracy ([Addams, 2002](#); [Lake, 2014](#)). The seven Aristotelian strategies for character education as described by [Lamb et al. \(2022\)](#) are also in various ways reflected in pragmatist work on education.

While we are dedicated to enhancing character and flourishing in our students more generally, we believe our focal virtues are best suited to equipping them with the pragmatic skillful habits and sense of authority they will need to be positive change agents in their communities and careers. Perhaps most relevant to today's polycrisis is active hope, a process in which specific skillful habits contribute to a hopeful character. According to [Macy and Johnstone \(2022\)](#), it is a series of behaviors such as expressing both grief and gratitude and committing oneself to specific actions which moves us beyond paralysis about wicked entanglements to practical steps we can take to deal with them by imagining possible futures based on a deep sense of the present. In a cultural environment in which increasing numbers of students are experiencing paralyzing anxiety, including about wicked problems such as climate change ([Tamez-Robledo, 2023](#)), we recognize the need to cultivate active hope so that students are activated as leaders and effective collaborators to express their care about human and ecological communities while persisting, building resilience and crafting solutions. We understand active hope as the mean between Pollyanna optimism and fatalistic resignation, such as despair or indifference. As Brooks, Lamb and Brant note, "hope and resiliency" are needed "to lean into difficulty and work toward a good outcome" (2022). Melioristic hope, rather than assuming that things always turn out for the best, is a resilient and courageous disposition central to dealing with wicked problems by promoting actions associated with justice and pro-social aims. When active hope of this sort is cultivated, it makes cooperative relationships and mutual trust more likely. As [Throop \(2024\)](#) notes, "The skillful habit of hope involves finding new challenges stimulating and redoubling efforts when reaching a goal looks less probable" (43).

Humility is central to collaborating with and serving a democratic community ([Porter & Schumann, 2018](#)), as is the moral courage needed to engage across differences. We need moral clarity and conviction, but we also need to counter the arrogance of acting only on our preconceived ideas of the good as though our ideals are shared by all stakeholders. As [Throop \(2024\)](#) observes, convictions have a tendency to harden prematurely which can thwart genuine engagement with others and the collaborative skillful habits needed for collective problem-solving. For this reason, cultivating intellectual humility is a central focus of our collaboration-focused wicked problems curriculum. Grounded in skills such as listening, critical thinking and empathy, intellectual humility enables people to meet the needs of others in creative, thoughtful, intentional and careful ways. When integrated with active hope, we conceive humility as building trust and enabling pro-social and cooperative behaviors – promoting the collaborative character essential to community-based work. The connection between humility and active hope is supported by a growing body of research on teaching and learning which prioritizes giving students the opportunity to explore self-transcendent goals ([Yeager et al., 2024](#)). Working with students on service-oriented leadership in solving wicked problems contributes to other-directed dispositions to make positive change.

The biggest challenge in cultivating character for public impact is perhaps how to cultivate care. Care about stakeholders is a character trait closely associated with empathy, our cognitive and emotional capacity to take on the attitudes of others. In this sense, pairing care with humility may be effective as we help students learn to deeply listen to diverse stakeholders. To care is to be stirred beyond numbness or disinterest, which is why we couple it with active hope and the capacity to act toward a public good with trust that one can make a difference. Further, the very understanding of wicked problems gives students something to care about – a self-transcendent goal that gives purpose to their education. The more we deeply understand the suffering of others, the degradation of the climate and ecosystems and the breakdown of community and social relationships, the more perhaps we care about finding solutions ([Kang, Mesquiti, Baik, & Falk, 2025](#)). The more practice we give students in wrestling with challenges and seeing their way to solutions, the better able and quicker they will be to put their collective shoulders to the wheel to make positive change.

Finally, practical wisdom, which is often the translation given to the central Aristotelean virtue of *phronesis*, is a disposition that integrates character virtues with wisdom in the sense of a critical and contextually-sensitive understanding of one's situation that includes, especially

relevant to wicked problem-solving, the foresight of consequences (Aristotle, 1999). Phronesis brings the deliberative tools necessary for students to perceive and respond to the salient particulars of complex situations. For our wicked problems initiatives, an emphasis on Aristotelian practical wisdom connects closely with mobilizing knowledge and adaptive discernment alongside care, helping to ground decision-making in complex contexts and the skillful habits that promote systems thinking and grow into a sense of authority and expertise. As Nussbaum explains, Aristotelian education “begins with the confident belief that each member of the heterogeneous citizenry is a potential person of practical wisdom, with the basic (that is, as yet undeveloped) ability to cultivate practical perception and to use it on behalf of the entire group. It aims at bringing these basic abilities to full actuality” (1990, p. 103).

Cultivating the skillful habits that lead to durable character traits for solving wicked problems doesn’t just supply students with a skill set; it changes who they are and what they can do. As Hanstedt observed as our distinguished speaker at one of the Wicked Fests: “It is so impressive. . . I’ve never seen anything like it. . . The way these students have engaged their ideas is truly an educational experience. The light in their eyes changes. They’re not just learning about themselves; they’re learning about what they are capable of accomplishing” (in Osborne, 2022).

Faculty development for wicked problems and public impact

To facilitate our curricular and co-curricular initiatives in character and wicked problem solving, the cornerstone of our work is faculty development. We host an annual three-day summer pedagogy institute on character and public impact in which faculty members work on integrating character and community-engaged learning from course outcomes to activities and assessments, with the help of guest speakers, faculty roundtables and even student-led workshops. We invite community partners to participate, allowing faculty members to explore how their courses might be able to serve the community in solving locally-scaled wicked problems. We also offer reading groups and workshops on integrating character into courses, with recent faculty groups discussing moral courage, humility and community resilience. We offer workshops on writing and assessing learning outcomes for character, and tailor workshops on traits such as humility and hope for non-teaching staff as well as faculty.

Our Wicked Fest drives faculty development opportunities, as well. The festival director’s weekly newsletters include wicked problems pedagogy tips and ideas, such as how to move students from researching problems to ideating and analyzing potential solutions. We believe, like Lamb’s *et al.* (2022) claim that friendship is a key way to cultivate character, that the colleagueship we foster around wicked problems pedagogy serves the same purpose in inspiring faculty to be the best versions of themselves in their work with students and the community. Teaching wicked problems cultivates passion in faculty that can alleviate tension between traditional academic identities and teaching (McCune *et al.*, 2024). It also encourages “boundary-crossing” as faculty work together on problems rather than in disciplinary siloes (McCune *et al.*, 2024). As one of our faculty members remarked, she “found her people” through the wicked problems initiatives (Lake *et al.*, 2025; Wenger-Trayner & Wenger-Trayner, 2015).

In our grassroots approach, we underscore that faculty should incorporate character outcomes in ways that fit into their course or disciplinary identity, and that often these can be small interventions. For example, one of the authors, a faculty member in a Political Science course called “Changing the World,” found that her students had difficulty with caring enough about problems with which they were not personally struggling to take actions necessary to solve them. She found that incorporating small discussions of hope was transformative. Interventions such as readings on how prominent changemakers (such as Martin Luther King, Jr.) stayed hopeful through dark times until they prevailed and having students personally reflect on the fact that hope is a habitualized skillset that can be cultivated and nurtured allowed them to see the value of hope in themselves. The impact of these interventions showed up dramatically in students’ end-of-the-semester final exam reflections on how to make change. Hope was booming and, with it, motivation to remain involved as changemakers.

Co-curricular character and public impact work

Alongside faculty development and a curricular focus on character and public impact, HCCPI partners with Student Affairs and student organizations to promote activities that create social connections in character work. The center's democracy and civic virtue initiatives include the work of the Highlanders Vote student organization's non-partisan activities to expand civic engagement and voting at the University and in the local community. In addition, an active Wicked Festival faculty member developed a student club known as the Wicked Society devoted to the solution of wicked problems, largely with an international focus. Over the last several years, the students have explored a variety of initiatives including online teaching toolkits for faculty related to fighting poverty and have presented their research in Jönköping, Sweden; Lisbon, Portugal; Berlin, Germany and Belgrade, Serbia. Student staff members of HCCPI have also developed a podcast called "Hope Happenings" aimed at highlighting campus character and public impact exemplars.

Some of our initiatives transcend the curricular/co-curricular divide, both in partnerships between academic units and Student Affairs and in activities that operate alongside the curriculum. For example, toward teaching students to be strong collaborators in making positive public impact, we focus on habits of moral courage, humility and empathy for work with stakeholders across differences. These initiatives have included faculty development for course design and class activities around these virtues, partnering with the Constructive Dialogue Institute and working with the university's Civil Discourse Working Group to offer activities such as monthly "Common Grounds" discussions, and an annual keynote speaker on mitigating the problem of polarized political discourse. By focusing on these virtues both in and out of the classroom, we are starting to see a change in our students' perceptions of their habits and skills, and we are beginning to assess how these habits might be translated into real community change. Even faculty communities are positively impacted by these initiatives. For example, one academic department partnered with the HCCPI to work through the Constructive Dialogue Institute's programming together to become a more cohesive, creative and collegial unit.

The impact of character and wicked problems pedagogy

While it may sometimes seem easy to assess the success of community-engaged or wicked problems pedagogies by observing positive change in the world, whether students themselves are positively affected by character work is more difficult. To help us gauge our work, we partnered with Elon University's Center for Design Thinking ([Lake et al., 2025](#)) to conduct an external review of our curriculum and programming. This whitepaper (a mixed methods approach using focus groups, surveys and a review of syllabi and other materials) suggests that our focal virtues are gaining traction with our students. By being exposed to wicked problems and practicing the skills and virtues needed to mitigate them, students report that they are more likely to tackle such problems in the future as they have greater creative confidence and sense of authority in their ability to meet the challenges of wicked problems, as well as greater persistence and resilience in grappling with problems over time (including after their classroom project was concluded). They also reported enhanced skillful habits in working across differences to collaborate on shared concerns, such as a greater tolerance for entertaining others' ideas, more practiced active listening skills and the ability to persist in and even enjoy group work.

As a result of our character-driven wicked problems work, our students seem to be becoming more hopeful, persistent, collaborative and caring. As Hanstedt said, our students "[are] not just learning about themselves; they're learning about what they are capable of accomplishing" (in [Osborne, 2022](#)). What we see are students and faculty developing shared interests and commitments across disciplines in cultivating character and taking on the responsibility to mitigate the polycrisis and contribute to a just and sustainable world [1].

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Note

1. To protect human subjects we surveyed, Radford University entered into an IAA agreement with Elon University's approved IRB for this work.

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Corresponding author

Heather Keith can be contacted at: hkeith1@radford.edu