

Scenario-based assessment: For an emancipatory and democratic society

Valutazione scenario-based: per una società emancipativa e democratica

Christopher H. Tienken^a, Emanuele Golino^{b,1}

^a Seton Hall University, christopher.tienken@shu.edu

^b Università di Catania, emanuele.golino@phd.unict.it

Abstract

In a society marked by the rise of ethnic radicalism and sovereigntist nationalism, schools risk becoming trapped in standardized assessment practices that fail to value individual differences. This paper, with reference to the Manifesto of Secular Pedagogy, advocates formative assessment as a tool for emancipation, equity, and empowerment, while highlighting the limitations of standardized assessment in promoting citizens capable of navigating contemporary complexity. Within this framework, the Blue Curriculum, grounded in the Ocean Literacy paradigm, is introduced as a tool for promoting democratic citizenship. In this context, scenario-based assessment is proposed as an authentic practice, capable of activating cross-cutting competencies, which can be assessed through emancipatory and non-standardized approaches to foster the development of active citizenship capable of transforming knowledge into responsible action.

Keywords: scenario-based assessment; democracy; Secular Pedagogy; Blue Curriculum.

Sintesi

In una società segnata da radicalismi etnici e nazionalismi sovranisti, la scuola rischia di restare intrappolata in pratiche valutative standardizzate incapaci di valorizzare le differenze individuali. In riferimento al Manifesto della Pedagogia Laica, il contributo propone una valutazione formativa come dispositivo di emancipazione, equità ed empowerment, che evidenzia i limiti dell'uniformità valutativa nella promozione dello sviluppo di cittadini capaci di orientarsi nella complessità contemporanea. In questo quadro, si introduce il Curricolo Blu, fondato sul paradigma dell'*Ocean Literacy*, quale dispositivo per la promozione della cittadinanza democratica. La valutazione *scenario-based* si propone come pratica autentica, capace di attivare competenze trasversali, valutabili con approcci emancipativi e non standardizzati, al fine di acquisire una cittadinanza attiva capace di trasformare la conoscenza in azione responsabile.

Parole chiave: valutazione scenario-based; democrazia; Pedagogia Laica; Curricolo Blu.

¹ Sections 1, 4, and 7 are the result of a joint reflection; sections 2 and 5 derive from the scientific insights of C. H. Tienken, while sections 3 and 6 present the research and scholarly contributions of E. Golino. We want to thank the Daniel Tanner Foundation for supporting the development of this article.

1. Introduction

The global society is marked by deep-seated tensions and a resurgence of phenomena that threaten the very foundations of democratic coexistence: religious and ideological fundamentalism, ethnic radicalism, sovereigntist nationalism, and, insidious totalitarian impulses (Movement for a Secularly Inspired Pedagogy, 2026). A toxic mixture of anti-intellectualism, elitism, relativism, and demagoguery, fueled in part by confirmation bias (Wason, 1960) and identity-protective cognition (Kahan et al., 2007), are hurtling societies into a new era of the dark ages in which pseudoscientific claims, recurring myths, and scriptural inerrancy quickly gain traction in the echo-chamber of the political orthodoxy. What was once considered empirical blasphemy, has become normalized into social policy making and used as a tool by wannabe autocrats to subvert elections, foster religious nationalism, dismantle democratic institutions and public spaces, and install the neoliberal apparatus necessary for an economic plutocracy and intellectual domination of the population. Processes such as the restriction of access to knowledge, the marginalization of research, and the manipulation of information may significantly limit individuals' capacity for critical understanding and informed participation.

Faced with myriad existential crises that fragment the social fabric into closed and opposing identity-based visions, civic and scientific urgency have converged to revive pedagogy inspired by secularism, capable of reopening spaces for dialogue, pluralism, and critical rationality. The global climate crisis is an example of an issue that requires ongoing collaborative dialogue and immediate action. Tribal politics and standardized thinking will not solve the world's climate problems. Thoughtful and creative actions are required and education must play a vital role.

As highlighted in the preface to the Manifesto, secularism cannot be reduced to a merely defensive or oppositional stance, but must be understood as an affirmation of the principle of mutual autonomy among the various spheres of human activity. From this perspective, secularism is first and foremost a guarantee of freedom of thought: a freedom from dogmatic constraints and ideological impositions that opens spaces for criticism and inquiry in the fields of research and public deliberation, as well as in educational contexts.

Public schools, as incubators of democracy, have the constitutional duty to remove the social and cultural obstacles that impede the full development of the individual, grounding their teaching in the primacy of scientific knowledge and intercultural pluralism. This responsibility requires translating the general principles of the Manifesto into coherent pedagogical and assessment choices, directing reflection toward Thesis 13, which identifies formative assessment as a crucial tool for the emancipation and empowerment of students. An assessment is authentically secular when it is fair, that is, when it is grounded in an ethical responsibility toward diversity and takes the form of a dynamic process of continuous regulation of learning and teaching.

We view the learner not as passive recipient of standardized knowledge imparted by the dominant culture, but a human being with agency who actively participates in the definition, interpretation, implementation, and revision of their own educational path and toward personal emancipation. However, this emancipatory vision is threatened by an opposing and pervasive trend: the rigid standardization of educational processes, anchored by a regime of standardized testing.

School systems appear increasingly trapped in what Tanner and Tanner (2007) termed the "cult of specificity" and the "theory of performativity," which prioritize measurable

efficiency, the comparability of results, and cognitive conformity, at the expense of creativity, complexity, and the ability to tackle novel problems (Tanner & Tanner, 2007). This steady progression toward mass standardization manifests itself in knowledge-based and reductionist assessment practices that treat students in an essentialist manner, reducing students to collectors of disconnected facts and figures transmitted from a teacher working as an automaton for a prescribed curriculum. Students are only ever allowed to see the trees, and never the forest.

In an effort to chart a more emancipated course for education, we propose the implementation of a scenario-based Blue Curriculum as a transdisciplinary educational endeavor that integrates Ocean Literacy principles into the formal education system within authentic problems, projects, and scenarios. Such a curricular structure fosters student-centered learning in which students acquire the knowledge, skills, and attitudes necessary to act for ocean sustainability, democratic ideals, and global climate stability. Grounded in John Dewey's progressivist-experientialist philosophy and the Tanner and Tanner (2007) Curriculum Paradigm, the Blue Curriculum seeks to overcome disciplinary fragmentation through a holistic and systemic experience-centered approach. Its structure is based on the Theory of Change formalized in the Unesco toolkit, organized into four interconnected macro-areas: Knowledge & Awareness, Nature-Connectedness, Values & Attitudes, and Competencies (Santoro et al., 2022).

The Blue Curriculum is designed to be flexible and situated in active learning, starting from the specific cognitive, socio-emotional, and moral needs of students while engaging them with local and global challenges, such as those of the Italian peninsula within the Mediterranean basin. By employing active methodologies like the Integrated Problem-Focused Core and the Activity Curriculum (Tanner & Tanner, 2007), students are encouraged to translate scientific knowledge into concrete and conscious action, developing non-standardized dispositions (such as critical thinking, empathy, and ethical responsibility) essential for actively participating in democratic ocean life. Only through assessment practices that value critical thinking, ethical and social sensitivity, and the ability to provide students the agency to translate knowledge into competent action can educators fulfill their democratic function.

Educating citizens who are aware, responsible, and capable of navigating the complexity of the problems faced in the contemporary world is not merely an educational goal, but an indispensable necessity for the very sustainability of democratic societies. Thesis 4 of the Manifesto aligns with this direction, emphasizing the cultivation of a critical dimension capable of engaging all those involved in the teaching-learning process (Movement for a Secularly Inspired Pedagogy, 2026). This implies a profound redefinition of teaching and assessment practices, so that they become tools for interpreting reality and not merely mechanisms for reproducing knowledge.

The urgency for an educational transformation is further accentuated by a global crisis that is taking on the characteristics of a genuine existential emergency, marked by climate instability, loss of biodiversity, and ecosystem degradation. In contexts where autocratic and anti-intellectual forces attempt to delegitimize or suppress scientific research, education emerges as a form of cultural and political response.

2. The cult of specificity and the crisis of standardization

Public education is not immune to the crises inflicted upon society by ideologues, autocrats,

and plutocrats. Educational systems around the globe are becoming increasingly ensnared by political and social policies aimed at standardizing learning, teaching, and student evaluation. Standardization of education is part of a larger ecosystem of authoritarian control of information and thinking. Rigid standardization of knowledge and conformity of thought are highly prized in the current political landscape. Convergent thinking, based upon a standardized system of curriculum and evaluation derived from ideology and pseudoscience is slowly bludgeoning the creativity and innovation required to solve the complex global problems facing societies.

The concept of standardization is alluring, offering simple solutions to complex problems. But all that glitters is not gold. Underneath the grandiloquent rhetoric and linguistic relativism used by proponents of standardization to mislead the public, reside the dogmatic education philosophies of modern perennialism (Adler, 1982; Hutchins, 1956) and essentialism (Bestor, 1953; Hirsch, 1987). The calls by proponents of standardization for increased rigor and academic excellence based on a shallow pool of centuries-old static knowledge, derived from the dominant western culture, and mastering a set of core knowledge, mandated by a small group cultural and economic elites, have roots in perennialism and essentialism.

In general, perennialists espouse an educational program based on principles of traditional western culture. They point to roots within some of the works of such figures as Plato (2003) and Thomas Aquinas to create the appearance of intellectual and moral authority. An overarching goal of perennialist education programs is to prepare students for the way the world used to be. Perennialists espouse a return to a mythical nostalgic greatness of the past.

A main goal of essentialism is to prepare students to maintain the status quo, whether that be power relationships, economic systems, values, morals, and knowledge, via the use of a static curricular program, without care for knowledge discovery, knowledge evolution, knowledge innovation, or overall societal progress. There is not a focus on the skills and dispositions necessary to cope with and thrive in an uncertain future.

Curriculum and assessment practices situated within perennialist and essentialist education philosophies include common components: (1) a culturally curated set of standardized core knowledge that reflects the values of classical western culture of the ruling class; (2) a focus on moral wisdom; (3) teacher-centered, transmission-mode teaching in which the student is viewed as a passive receptacle, without agency or self-determination, and (4) standardization of learning. Dewey (1902) described this type of education as traditional and Freire (1970) termed it “the banking model” of education (pp. 71-72).

The perennialist and essentialist education philosophies are decidedly regressive and anti-student in their implementation. The student is viewed as an obstacle to be overcome on the way to adulthood. Self-determination and agency are sacrificed at the altar of standardization, control, and conformity. An emphasis on a predetermined collection of knowledge ignores the need to question the current state of societal affairs or think critically about one’s place in the world. Complex, creative, or innovative thinking is not valued because it does not fit within the predetermined content and expected answers found in the works of the past. There is only the need for regressive thinking, conformity, and efficient regurgitation of knowledge via standardized assessments.

Proponents of standardization believe that teachers, students, and parents will conform to a static view of education that mandates specific forms of teaching and assessment, enforced with rewards and punishments. The top-down view of education is derived from

Stimulus-Response psychology. Bredo (2002) described Stimulus-Response psychology as the “science for controlling others” (p. 25). Dewey (1938) described the situation of top-down imposition and control of education when he explained the differences between traditional and progressive education:

The traditional scheme imposes adult standards, subject-matter, and methods upon those who are only growing slowly toward maturity. The gap is so great that the required subject-matter, and methods of learning and behaving, are foreign to the existing capacities of the young. They are beyond the reach of the experiences the young learner already possesses. Consequently, they must be imposed; even though good teachers will use devices of art to cover up the imposition so as to relieve it of obviously brutal features (p. 19).

Policy initiatives that seek to standardize knowledge and assessment often perpetuate the Cult of Specificity (Tanner & Tanner, 2007). Rigid, one-size-fits-all curriculum standards and assessments specify the expected competencies, student outputs, and the exact format of those outputs, broken down in detail, piece by piece, as if educators are to assemble an inanimate object, rather than help nurture a self-determined individual. In turn, the expected competencies, objectives, outputs, and their accepted forms of demonstration dictate overtly and the methods of instruction that are to be used (Tanner & Tanner, 2007).

Although he did not use the terminology, Dewey (1902) previewed the concept of the cult of specificity when he wrote:

Ignore and minimize the child’s individual peculiarities, whims, and experiences. They are what we need to get away from. [...] Sub-divide each topic into studies; each study into lessons; each lesson into specific facts and formulae. Let the child proceed step-by-step to master each one of these separate parts [...] Subject-matter furnishes the end, and it determines the method. The child is simply the immature being who is to be matured; he is the superficial being who is to be deepened [...] It is his to receive, to accept. His part is fulfilled when he is ductile and docile (p. 8).

As Dewey (1929) noted, teaching and assessment methods become mechanistic and based on over-analyzing individual pieces of information, without context or connecting the purpose and function of those pieces to a meaningful whole. Teaching and assessment become fixated on minutia, not substance. Giles, McCutchen and Zechiel (1942) described similar characteristics noted in the early 1900s that are unfortunately similar to standardization practices embedded in the education policies of many countries today, and describes the situation in Italy quite accurately.

At one time it was a question to be answered only by national commissions made up of research scholars known for their mastery of specific content fields. Then, state courses of study were formulated in the same pious hope that uniformity would produce excellence. The classroom teachers, barred from such profound considerations, meekly took the textbook handed them and marked off the doses by which the text was to be sequentially absorbed.

Professional educators are reduced to the role of a factory assembler, attempting to place each piece of mandated information into the student at the correct time as dictated by a pacing guide. The program outcomes are predetermined and all students receive more or less the same program aimed at the same outcomes. The highly standardized and specified programs of the early 1900s in the United States failed miserably in terms of educating large percentages of the population. Consider that less than approximately 10 percent of students in the United States attended college in 1918 and high school graduation rate was about 18% (National Education Association, Commission on the Reorganization of

Secondary Education, 1918). The Cult of Specificity that overtook American education in the late 1800s and early 1900s has resurged more than 100 years later and has failed to produce the promised results of a more educated citizenry.

Students are made to fit the standardized system instead of having the system adjust to the needs of the student to develop fully emancipated individuals able to critique and offer potential solutions to the challenging, non-standardized problems that face humanity. In Greek mythology, the allegory of Procrustes provides ample warning to the eventual harm to students who are put through a standardized education. Procrustes was a craftsman and bandit who lived on the road between Athens and Eleusis. He offered hospitality to passing travelers, inviting them to spend the night in his special iron bed. An alluring proposal for a tired traveler. However, Procrustes mandated that the guest must fit the bed exactly. If the guest was too tall, Procrustes cut off their feet, if they were too short, he stretched them on a rack, damning both tall and short to discomfort and failure to sleep. Only a very small percentage of the travelers ever passed the test, fitting the bed exactly, and received a passing grade; a good night's sleep. Procrustes process of standardization was a trap to almost all travelers who came upon it.

Corsini (2023) provides a modern example of the Procrustean allegory when he argued that standardized assessment practices are nothing more than “gymnastics of obedience” rather than an authentic tool for growth. Just as Procrustes’ bed was a fixed, unyielding measurement, standardized tests often use a one-size-fits-all metric that ignores the talents and potential of the individual student. Just as the bed is more important than the guest in the Procrustean allegory, Corsini argues that in a standardized education environment, the grade or evaluation of the student is more important than the student.

3. The Blue Curriculum as a paradigm of resistance and democracy

The proposal for a Blue Curriculum goes beyond simply introducing standardized marine biology content into school disciplines; rather, it represents a multifaceted response, ecological, ethical, and democratic in nature, to a planetary existential crisis within an educational ecosystem of authentic scenarios. In an era in which the marine environment constitutes the foundation sustaining life on the planet, ocean education takes on the value of a moral imperative. However, this urgency clashes with contexts not always characterized by equitable access to resources and often marked by nationalism, radicalism, and totalitarian impulses. In this context, education emerges as genuine forms of resistance and rebirth: a political act aimed at combating ignorance through a solid, scientifically grounded, and democratically oriented curriculum to empower students.

Recalling the sixth thesis of the manifesto “Citizenship is the conscious exercise of democracy. Through critical and decolonial education, it shapes free and supportive individuals, capable of acting for the common good on a global scale” (Movement for a Secularly Inspired Pedagogy, 2026), the need to move beyond any prescriptive approach and rethink curriculum design along anti-dogmatic and democratic lines is revealed as urgent. Moreover, Dewey (1902), who defined the curriculum as “the course of study met in the school” (p. 5), later stated, “Democracy has to be born anew every generation, and education is its midwife” (Dewey, 1916, p. 139), emphasizing the intrinsic link between education and social renewal. Dewey’s argument clearly calls for the design of school curricula that start with the characteristics of the students, their needs, and the contexts in which they live.

Placing the learner at the center of the education process becomes a necessity, along with attention to the territorial context of knowledge, skills, and competencies needed for living in a world that is terrestrial and marine. The complexity of this scenario is evident, but “this does not mean a search for a ‘final solution’ to the curriculum problem through a ‘one best’ curriculum, but rather the need to seek ways of building a sense of unity through diversity in meeting the function of general education for a democracy” (Tanner, 1989, p. 11).

Thus, curriculum design requires considering three fundamental sources for defining objectives: the students, the context, and the scientific content (Tyler, 1949). Only by integrating these dimensions is it possible to move toward an authentically democratic design. Linked to this is the need to refer to the three types of curriculum identified by Laster Ward and reworked by Dewey; vocational, avocational, and socio-civic (Tanner, 2019, pp. 131-134), with the aim of converging toward a curricular framework grounded in “the needs of adolescents, and (that) seeks to preserve and extend democracy as a way of life” (Giles et al., 1942, p. 5) and prepare students for an uncertain future.

It follows that “a comprehensive curriculum for a democratic public school system does not have the luxury of focusing only on a narrow band of routine academic skills and knowledge aimed at developing low-level workers and maintaining the social status quo. It must focus on cognitive, social, and emotional progress” (Tienken, 2017, p. 112). It must educate students for action.

This progressive-experimentalist approach to curriculum and assessment implies educational planning capable of engaging with the pantheon of societal uncertainties. Democratic education must promote a critical perspective on such issues, encouraging students to interpret and address them by rejecting dogmatism and valuing doubt as a tool for rethinking a constantly changing future (Movement for a Secularly Inspired Pedagogy, 2026).

Adopting this perspective means moving away from an approach focused exclusively on “what to learn” toward what Tienken defines as the logic of “So What” and “Now What” in line with complex, higher-order thinking that transcends standardization, since “Standardized, What-to-learn curricula can only ever be one leg of the three-legged curricular stool, with creative and complex thinking forming a solid base for learning” (Tienken, 2017, p. 106). The Blue Curriculum, oriented toward Ocean Literacy, cannot be reduced to the transmission of knowledge about marine systems, but must be conceived as a dynamic set of educational experiences capable of activating ‘So What’ and ‘Now What’ thinking. “So What” curricula encourage students to connect the knowledge they have acquired, for example, on marine biodiversity, ecological cycles, pollution, or marine management policies, with broader perspectives, linking it to themes such as sustainability and environmental responsibility, as well as to their own personal experiences. This enables students to grasp not only “the conceptual forest through the trees” (Tienken, 2017, p. 106), but also the complexity of the ocean and its still-unexplored dimensions. In this way, students are led to critically question what they have learned and to answer the question: What does all this mean for me, for the community, and for the planet?

At the same time, the “Now What” approach enables the translation of knowledge into action. Through practical and project-based activities, students can apply what they learn in real-world contexts: from managing aquatic ecosystems to participating in environmental monitoring initiatives, to developing proposals to reduce human impact on the oceans. In this way, theoretical learning connects to concrete and socially meaningful actions, fostering innovation, problem-solving, and responsible participation in decision-making processes.

Such an approach is oriented toward developing unstandardized skills (Tienken, 2017), which are essential for navigating the uncertainty of the future. In the context of designing ocean-focused curricula, essential competencies can be grouped into several broad categories:

- critical thinking and problem-solving (e.g., holistic thinking, critical thinking, critical evaluation of information, potential problems analysis, problem identification and solving, divergent thinking, imagination, curiosity, creativity, innovation, entrepreneurial thinking);
- interpersonal skills and collaboration (e.g., openness, collaboration, cosmopolitanism, compromise, consensus-building, communication, active listening, leadership, networking);
- ethical responsibility and human values (e.g., environmental stewardship, conscientiousness, ethics, integrity, dignity, fairness, empathy, compassion, love, kindness, courage, perseverance, resilience, cognitive flexibility, vision-building);
- personal development and self-efficacy (e.g., self-efficacy, confidence, motivation, pride, reflection, cultural literacy, goal setting, taking action).

These intangible dimensions distinguish human beings from the ‘imitative automatons’ generated by standardized educational systems. In line with the Manifesto’s theses regarding “(unbounded) subjectivity”, understood as an ongoing process and as an expression of ethical responsibility toward the web of life (Movement for a Secularly Inspired Pedagogy, 2026), the Blue Curriculum conceives the subject as the bearer of a language capable of exerting political agency on reality. Education thus takes shape as a continuous process of discovery and as a practice of situated democratic action, aimed at safeguarding both the health of the oceans and the stability of contemporary democracies.

4. The Curriculum Paradigm

The Blue Curriculum proposal rests upon bedrock principles of education embedded in the Curriculum Paradigm, elucidated by Tanner and Tanner (2007). Rather than following a rigid, one-size-fits-all blueprint, educators require a directional tool to steer their choices toward cultivating independent, non-standardized thought. The Curriculum Paradigm (Tanner & Tanner, 2007) serves as this essential guide. Drawing from over a century of research and experiences by progressive trailblazers, the framework integrates four overlapping elements designed to spark creative inquiry, foster human agency, and facilitate critical thinking and problem solving:

1. **Nature of the Learner.** Demands that the student be the protagonist of the educational journey, viewed as a dynamic architect of knowledge who arrives with a wealth of personal experience that can be leveraged to connect the content the student. Education must move away from treating students as empty vessels to be filled, instead requiring their physical and mental immersion in the process;
2. **Nature of Knowledge.** Addresses how academic content is structured in relation to the individual. Knowledge should not be siloed into abstract categories; instead, formal disciplines like mathematics, science, or Italian must be blended with the student’s own lived reality and contexts. By utilizing project-based or scenario-driven tasks and assessments, the material becomes personally relevant, inviting the student to take an active, rather than reactive, role in the classroom;

3. **Human Development.** Growth is acknowledged as a non-linear, individualized process. Because students mature at varying speeds across social, ethical, and intellectual dimensions, the system must offer diverse learning tracks and varied methods for proving mastery. Educators can bridge the gap between abstract concepts and a student's life by choosing themes that resonate with their specific developmental milestones;
4. **Social Forces.** Examine the broader world and the immediate community of the student. By using current societal issues and the real-world challenges students face as a foundation for the curriculum, teachers can design authentic, problem-based activities that align with the interests and daily lives of their pupils.

The paradigm views education as an engine for democratic and personal growth. It echoes Dewey's belief that learning is a constant reorganization of experience that enriches the meaning of life and empowers the individual to shape their future. The student and the curriculum exist in a recursive relationship: the child's unique needs and voice should mold the lessons just as much as the lessons mold the child. The student influences the curriculum as much as the curriculum influences the student.

Ultimately, the Curriculum Paradigm acts as a guide and reflective lens for educators instead of a rigid, standardized recipe. When the path forward is unclear, the Curriculum Paradigm provides a steady orientation, ensuring that curriculum, instruction, and assessment remain grounded in evidence-informed, child-centered practices.

5. Beyond notionism: social sensitivity and authentic assessment

Standardized assessment is the cement used to entrench standardized policies into education systems. Educators can begin to inject pedagogical principles inspired by secularism, into standardized systems by evolving and transforming traditional assessment practices. The process of unstandardizing assessment is rooted in a pivotal transition away from content-centric testing to what is recognized as authentic assessment (Popham, 2005). Historically, the landmark Eight-Year Study (Aiken, 1942) conducted in the United States, sought to move beyond the narrow measurement of static and disconnected academic information to evaluate the full range of educational objectives, targeting critical thinking, student dispositions, and social values through authentic assessment structures include problem-based, scenario-based, and project-based tasks.

A significant hurdle in this evolution was the problem of intangibles, the inherent difficulty in quantifying attitudes and social beliefs compared to the straightforward measurement of rote knowledge. While factual recall is easily audited, the evaluation committee of the Eight-Year Study found that diverse behaviors such as social attitudes often lacked clarity in definition and classification, making them difficult to appraise. But it is exactly these types of difficult-to-measure social behaviors and attitudes that are important to nurture so as to reopen and reclaim spaces for dialogue, pluralism, and critical rationality.

Consequently, it is through authentic assessment in social sensitivity, specifically through the use of scenario-based techniques, that educators can bring about the affirmation of the principle of mutual autonomy among the various spheres of human activity.

By allowing students to navigate complex, real-world issues like the environment, democracy, and domestic policy, educators can move beyond assessing what a student simply knows to understanding how they apply their internal values and beliefs to the unstandardized challenges of a democratic society.

Our proposal is not naive. It is anchored in the empirical evidence from over 150 years of experimental studies. Educators from various time periods in history have confronted the critical need to establish empirical validity for the pedagogical shifts necessary to transcend the limitations of conventional testing by developing sophisticated instruments capable of diagnosing student growth in areas historically considered intangible. But it is these intangible areas that provide the unstandardized skills and dispositions necessary for students to confront an uncertain future (Tienken, 2017). Creativity, collaboration, communication, ethical reasoning, problem finding, problem solving, empathy, leadership, networking, persistence, civic participation, humility, and adaptability are just a few of the skills necessary to address not only current challenges, but those that will arise in the future (Tienken, 2017, p. 121).

Central to this effort is a nuanced taxonomy of social sensitivity, which is identified by three core characteristics of attitudes (Smith et al., 1942):

- feelingtone: involves a visceral sense of acceptance or rejection toward people, ideas, or modes of behavior;
- intellectual position: entails a conscious recognition that one has taken a stance toward an institution or value, such as democratic processes or government control;
- latent tendency to act: represents a underlying disposition to behave in a specific manner, such as defending minority rights, regardless of whether current social conditions permit overt expression.

Furthermore, consistency of beliefs is a vital diagnostic metric because it can predict the actions one will take in the future to address a problem. Understanding how students maintain coherent philosophical frameworks across disparate social domains, such as race relations, economic inequity, and democracy ideations (Smith et al., 1942).

To implement authentic appraisal effectively, educators must move beyond the observation of overt behavior and measuring the acquisition and storage of minutia, which are prized achievements in a standardized system (Corsini, 2023). Students often lack the opportunity and agency for social action because it is not practical to assess directly. Practitioners can utilize verbal expression as a proxy, selected response, and open-ended prompts, if created, properly, to assess the proclivity, attitudes toward, and the application of knowledge, skills, and dispositions for taking action. This requires the development of practical assessments that systematically sample reactions across the domains of interest (Sabatini et al., 2020; Walker & Leary, 2009).

A crucial, yet often overlooked, responsibility of the educator in this framework is the deliberate use of emotionally charged words and phrases. Because social issues are inherently abstract, educators must select terminology that triggers the student's beliefs to ensure the appraisal captures an authentic reaction rather than a sterile, intellectualized interpretation. For example, in the area of democratic ideals, questions should be designed to measure specific positions on things such as egalitarianism, equity, and the importance of the public space to the underlying consistency, or inconsistency of the student's democratic values.

Authentic assessment requires students to move beyond logical analysis (Popham, 2005). While a student may successfully dismantle the logic of an argument, he or she may still lack the capacity to judge the practical effectiveness of a policy in achieving a specific social objective. To address this, authentic assessments can be structured with several layers of thinking embedded in multi-part questions. For example, assessments can include a part based on logical evaluation to gather evidence on how students analyze whether

specific statements about a social issue, like the value of Social Security, logically support or contradict a conclusion. Factual application can be evaluated by having students distinguish between established facts and common misconceptions, such as the actual advantages of funding Social Security versus moving people's accounts into the stock market. Practical judgement can be assessed by tasking students with selecting which specific proposals, such as ending Social Security or increasing the actual tax paid by billionaires to the same high levels as the middle class would most effectively achieve the objective of improving the program for all income levels.

6. Scenario-based assessment of skills for a blue democratic world

Within democratically oriented curriculum design, such as the Blue Curriculum, assessment represents a crucial issue at the theoretical and methodological levels. It concerns a multifaceted construct that cannot be reduced solely to the acquisition of disciplinary content. Educators can learn to construct assessment scenarios that present a reasonable threshold to gather evidence about student social sensitivity, beliefs, attitudes, and application of knowledge, skills, and dispositions. A scenario must be phrased with enough intensity to elicit a clear stance, avoiding neutral language that results in unanimous agreement or disagreement. The objective of a scenario-based assessment is to diagnose the extent to which students are able and willing to take a definite stand on issues or problems, rather than merely identifying their ability to parrot socially acceptable answers.

Ocean Literacy, defined as “an understanding of the ocean’s influence on you and your influence on the ocean” (Schoedinger et al., 2005, p. 1), forms the foundation of the Blue Curriculum and encompasses an integrated set of knowledge, skills, attitudes, values, and responsible behaviors toward marine ecosystems. For this reason, it requires assessment tools capable of capturing cognitive, affective, ethical, and socio-behavioral dimensions. The complexity of this task stems from the very nature of the construct, which includes elements that are difficult to observe directly, such as awareness, active engagement, and emotional connections (McKinley et al., 2023).

In this context, traditional school-based assessment practices, based primarily on written exams, oral examinations, and content-based tests, inevitably appear partial and limited. While these methods allow for the assessment of knowledge regarding fundamental principles related to the ocean, ecosystem balances, and anthropogenic interactions, they do not provide a comprehensive view of the level of competence developed by students, who are now called upon to address complex issues typical of the contemporary world. Within this framework, the use of scenario-based assessments emerges as an essential element for a democratic, equitable, and emancipatory assessment (Movement for a Secularly Inspired Pedagogy, 2026).

This approach, already proven successful within the Eight-Year Study and other large-scale studies, stems from the need to develop tools capable of assessing students' engagement in the analysis of concrete problems and socially relevant situations. As research suggests, such assessments should offer students the opportunity to “take positions or make decisions about significant social issues and to support these decisions by using value principles” (Smith et al., 1942, p. 176), creating contexts in which to observe how they develop arguments, take positions, and mobilize knowledge to guide action. Tyler himself emphasized the need to design assessments that would allow students to demonstrate what they can do through what they know.

For this reason, some instruments developed during the study included a problem situation related to a relevant topic, accompanied by “three courses of action representing three different positions toward the issue” (Smith et al., 1942, p. 176), from which students were asked to choose the options they deemed most appropriate. This selection was followed by a request to justify the choice through reasoning grounded in value principles, thereby making explicit the interpretive processes and the ways in which knowledge and ethical criteria are mobilized. Such an assessment method is particularly consistent with the requirements of the Blue Curriculum, as it allows for the analysis of behaviors, values, attitudes, and dispositions toward action, fostered by the proposed activities. These dimensions would be difficult to assess using standardized instruments.

The value of scenario-based assessments therefore lies in their ability to bring different dimensions into play, intertwining cognitive, emotional, and value-based aspects. Students’ responses can be analyzed using criteria such as “comprehensiveness, consistency, relevance, tenability, and pattern of values” (Smith et al., 1942, p. 179), that allow for grasping the depth of understanding, quality of ideas expressed, and internal consistency of the choices made.

Following this approach, the construction of realistic and socially meaningful scenarios becomes an indispensable tool for assessing not only the content of students’ thinking but also the processes through which they interpret problems and guide their actions (Saiyad et al., 2021). When applied to Ocean Literacy, this type of assessment enables an authentic assessment of students’ ability to address complex situations related to the marine world, to connect and integrate information, formulate ethical judgments, take informed positions, and translate knowledge into action.

Just as in the Eight-Year Study students were called upon to grapple with ethically relevant issues, in the Blue Curriculum assessment can also reveal dispositions, beliefs, values, and competencies of ocean citizenship, demonstrating how they integrate rational analysis, social sensitivity, and decision-making skills in addressing interconnected environmental, terrestrial, and marine challenges together.

A significant example of this approach, situated within the epistemological framework of the Blue Curriculum, is the scenario regarding coastal erosion management, in which students are asked to integrate geomorphological knowledge with ethical and civic responsibilities. In this case, the problem situation is not limited to describing the phenomenon of coastal retreat but requires taking a stance on a real conflict between anthropogenic pressures and ecosystem resilience. Referring to the “Values and Attitudes” assessment area, linked to the activity of identifying the responsibilities of various social actors, the scenario positions the student as a consultant for a local community.

Faced with the proposal to remove the dunes to promote the development of coastal tourism development, the student is called upon to distinguish between options that reflect different levels of critical thinking maturity: from indifference to complete delegation to authorities, to the development of solutions based on shared, sustainable management. In this context, the highest level of competence does not consist in identifying a single “correct” answer, but in the ability to articulate a justification that integrates scientific and value-based dimensions.

The student who opts for the active protection of psammophilous vegetation (dune pioneer plants) and recognizes it as a common good demonstrates that they have internalized the principle of Ocean Literacy not only as knowledge, but has an orientation toward action. Scenario-based assessment thus allows for the analysis of the internal consistency and

tenability of reasoning: when the student links the function of roots to the protection of human infrastructure, they mobilize systemic thinking that integrates biology, geography, and civic education. This type of evidence signals the shift from inert knowledge to transformative competence, in which the analysis of patterns of values reveals the student's ability to act as a conscious agent within the complexity of the blue ecosystem.

7. Conclusions

Promoting authentic assessment means reaffirming the primacy of a secular pedagogy capable of vigorously opposing the cult of specificity and the theory of performativity that threaten to reduce students to mere passive recipients of standardized and fragmented knowledge. As outlined by Thesis 13 of the Manifesto, assessment must evolve into a pedagogical device (Massa, 1975) for authentic emancipation and empowerment, transforming from a bureaucratic control mechanism into a dynamic and participatory process of knowledge regulation where the learner is recognized as an active and conscious subject of their own growth path.

Within this horizon, the integration of scenario-based practices into the Blue Curriculum represents not just a methodological innovation, but a profound political choice aimed at valuing the intangible dimensions of the human being, such as ethics, empathy, and social sensitivity. Evaluating learning through complex and authentic scenarios helps overcome the rigidity of compartmentalized knowledge, inviting students to mobilize their scientific understanding of the ocean and translate it into responsible, situated, self-determined actions capable of nurturing the resilience of democracy itself in the face of an uncertain future.

Only a school that renounces the educationally bankrupt claims of standardization can truly cultivate citizens ready to navigate the existential crises of the contemporary world, ensuring that education remains, in a Deweyan sense, the true midwife of a free, equitable, and plural society.

Reference list

- Adler, M. J. (1982). *The Paideia proposal: An educational manifesto*. Simon & Schuster.
- Aiken, W. M. (1942). *The story of the eight-year study*. Harper.
- Bestor, A. (1953). *Educational Wastelands: The retreat from learning in our public schools*. University of Illinois Press.
- Bredo, E. (2002). The Darwinian center to the vision of William James. In J. Garrison, P. Podeschi, & E. Bredo (Eds.), *William James and education* (pp. 1-26). Teachers College Press.
- Corsini, C. (2023). *La valutazione che educa: Liberare insegnamento e apprendimento dalla tirrania del voto*. Franco Angeli.
- Dewey, J. (1902). *The child and the curriculum*. University Chicago Press.
- Dewey, J. (1916). The need of an industrial education in an industrial democracy. In J. A. Boydston (Ed.) (1980). John Dewey. *The Middle Works, 1899–1924 (Vol. 10, 1916 1917)*. Southern Illinois University Press.

- Dewey, J. (1929). *Sources of science in education*. Liveright. Dewey, J. (1938). *Experience and education*. Touchstone.
- Freire, P. (1970). *Pedagogy of the oppressed*. Herder and Herder.
- Giles, H. H., McCutchen, S. P., & Zechiel, A. N. (1942). *Adventures in American education volume II. Exploring the curriculum*. Harper and Brothers.
- Hirsch, E. D. Jr. (1987). *Cultural literacy: What every American needs to know*. Houghton Mifflin.
- Hutchins, R. M. (1956). *Some observations on American education*. Cambridge University Press.
- Kahan, D. M., Braman, D., Gastil, J., Slovic, P., & Mertz, C. K. (2007). Culture and identity-protective cognition: Explaining the white-male effect in risk perception. *Journal of Empirical Legal Studies*, 4(3), 465–505.
- Massa, R. (1975). *La scienza pedagogica: Epistemologia e metodo educativo*. La Nuova Italia.
- McKinley, E., Burdon, D., & Shellock, R. J. (2023). The evolution of ocean literacy: A new framework for the United Nations Ocean Decade and beyond. *Marine Pollution Bulletin*, 186, 114467, 1–9.
- Movement for a Secularly Inspired Pedagogy (2026). *Manifesto for a Secularly Inspired Pedagogy*.
- National Education Association, Commission on the Reorganization of Secondary Education. (1918). *Cardinal principles of secondary education: A report of the Commission on the Reorganization of Secondary Education* (Bulletin 1918, No. 35). U.S. Department of the Interior, Bureau of Education. Government Printing.
- Plato (2003). *Republic*. Trans. Kamtekar, R. Penguin Books.
- Popham, J. W. (2005). *Classroom assessment: What teachers need to know*. Pearson.
- Sabatini, J., O'Reilly, T., Weeks, J., & Wang, Z. (2020). Engineering a twenty-first century reading comprehension assessment system utilizing scenario-based assessment techniques. *International Journal of Testing*, 20(1), 1–23.
- Saiyad, S., Bhagat, P., Virk, A., Mahajan, R., Singh, T. (2021). Changing assessment scenarios: Lessons for changing practice. *International Journal of Applied and Basic Medical Research*, 11(4), 206–213.
- Santoro, F., de Magalhães, A. V. T., Middleton, F., & Buchanan-Dunlop, J. (2022). *A new Blue Curriculum. A toolkit for policy-makers*. Unesco Publishing.
- Schoedinger, S., Cava, F., Strang, C., & Tuddenham, P. (2005). Ocean literacy through science standards. *Oceans*, 1, 3.
- Smith, E. R., Tyler, R. W., & Evaluation Staff (1942). *Appraising and recording student progress*. Harper & Brothers.
- Tanner, D. (1989). A brief historical perspective of the struggle for an integrative curriculum. *Educational Horizons*, 68(1), 6–11.
- Tanner, D., & Tanner, L. (2007). *Curriculum development: Theory into practice*. Pearson.
- Tanner, D. (2019). From Lester Frank Ward to John Dewey: The three universal

- curriculums. *The Educational Forum*, 83(2), 124–139.
- Tienken, C. H. (2017). *Defying standardization. Creating curriculum for an uncertain future*. Rowman & Littlefield.
- Tyler, R. W. (1949). *Basic principles of curriculum and instruction*. The University of Chicago Press.
- Walker, A., & Leary, H. (2009). A problem-based learning meta-analysis: Differences across problem types, implementation types, disciplines, and assessment levels. *Interdisciplinary Journal of Problem-Based Learning*, 3(1).
- Wason, P. C. (1960) On the failure to eliminate hypotheses in a conceptual task. *Quarterly Journal of Experimental Psychology*, 12, 129–140.