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**RESEARCH ARTICLE**

# Purpose, identity, and sustainability: The role of didactic environments in higher education

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## ABSTRACT

This study examines the relationship between religiosity/spirituality and political orientation in university students and transpersonal learning and sustainable behavior; it also investigates how contextual experiences such as service-learning, sustainability courses, volunteering, organizational membership, and access to nature condition this relationship. Data from a cross-sectional online survey (N=534) conducted in Lithuania in November 2025 were used to create purpose (items 25–30; α=0.82) and behavior (items 49–61; α=0.91) indices were created; gender and income were controlled; z-transformed results were modeled in multiple regressions with HC3 robust errors. Religiosity alone did not produce a consistent main effect; however, the religiosity × service-learning interaction increased sustainable behavior. Access to nature expanded the pathway to behavior among liberal and conservative students; in contrast, the Green-Eco × service-learning and Liberal × volunteering interactions were negative. Non-binary participants reported higher purpose and behavior, while the income effect was largely insignificant. Findings suggest that identity effects translate into action through context, and that designing reflective service-learning and campus nature access together in higher education can strengthen sustainable practices (limitations: unlikely sample, cross-sectional design, multiple tests).

***Keywords:*** Sustainable behavior; transpersonal purpose; spirituality/religiosity; political orientation; access to nature

## 1. Introduction

The university is not merely a station where individuals acquire knowledge and obtain a diploma; it is a didactic ecosystem where meaning, identity, and responsibility are constantly renegotiated. In this ecosystem, as students seek ways to translate their personal values into a public future, the deepening ecological crisis and increasing ideological polarization on a global scale make the question of under what conditions education can transform meaning into action even more pressing[1–4]. This study stands precisely at this threshold: it aims to examine how the context (sustainability-focused courses, community service learning, volunteering, access to the environment) changes the link between identity (religiosity/spirituality, political orientation) and purpose and sustainable behavior.

The translation of values into action often encounters a frequently noted "intention–behavior gap" in the literature[5–8]. Ajzen's Theory of Planned Behavior reveals the predictive power of intention, showing that this

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intention is concretized by norms, perceived control, and situational constraints[5]. Stern's theory of environmentally significant behaviors argues that the value–belief–norm system translates into behavior when combined with appropriate contextual motivation and opportunity[6]. Cognitive/affective barriers, referred to by Gifford as "dragons of inaction," remind us that good intentions alone are not enough and that psychological and environmental mechanisms must be addressed simultaneously[7]. Therefore, the issue is not only "what students believe" but also where and how they learn[8].

Religiosity/spirituality and political orientation can leave distinct marks on young people's attitudes and behaviors toward the environment; however, these marks draw different patterns depending on the historical and cultural context[9,10]. On the one hand, it has been argued that some theological interpretations can establish a tense relationship with anthropocentric legacies regarding nature[9]; on the other hand, there is evidence that religious affiliation can also open the door to environmental responsibility through the motifs of neighborliness, service, and preservation[10]. When it comes to political orientation, the dynamics of polarization can even divide the processing of information; patterns have been reported where beliefs become more polarized as scientific literacy increases[2–4]. Therefore, understanding the effect of identity on behavior requires reading it from within the educational context.

At the forefront of these contexts are service learning/community service applications. This approach, which establishes the pedagogical structure of community-based experience through reflection, concretizes the bridge between students' subjective world of meaning and the public good[11–13]. Sustainability-themed courses, curricular integration, and designs known as "high-impact practices" in higher education can nurture not only cognitive gains but also a sense of purpose, belonging, and responsibility[14]. Therefore, it is not religiosity and political orientation alone that matter, but the learning experience in which they are embedded.

Another critical context is access to the natural environment. Human-nature interaction has been shown to have multi-layered effects on health, emotion regulation, and cognition[15]. Subjective bonds with nature and tendencies such as "connection with nature" are powerful psychological correlates of environmental behaviors[16–18]. Not just "attitude," but the sense of connection and closeness (connectedness/relatedness) facilitates pro-environmental actions more easily. The physical layout of campuses, access to city parks, green spaces within walking distance, in short, opportunities and opportunity structures, can directly reflect students' daily practices[15–18].

However, it is also important to remember that behavior is shaped within a normative context. How descriptive and prescriptive norms are presented, how small "nudges" are designed, and how peer patterns are made visible influence the prevalence and persistence of environmental actions[19–21]. Meta-analytic evidence shows that value orientations and norm sensitivity predict behavior when combined with appropriate intervention designs[21,22]. Therefore, the expected relationship between identity (religiosity, political orientation) and context (courses, service learning, volunteering, access to nature) is often interactive: one either ignites or extinguishes the other.

In this article, we examine purpose-driven work motivations (e.g., linking the desire to "make a positive difference for others" to educational content) and sustainable behaviors among higher education students, examining under which educational/environmental conditions they appear stronger (or weaker) in the context of religiosity/spirituality and political orientation. Our expectation is that (i) experiential learning elements such as service learning and sustainability courses will facilitate the connection of religiosity to environmental action; (ii) environmental opportunities, such as access to nature, will mitigate the negative effects of political polarization on behavior; (iii) indicators of civic engagement, such as volunteering and membership, will translate identity-based motivations into practice[1–4,11–22]. We believe that contextual

sensitivity will open the door to intervention proposals that are theoretically original and practically applicable.

## 2. Literature review

Environmental action is not merely the result of rational accounting based on accumulated knowledge; it is the product of a layered psychosocial structure that is ignited by values, speaks the language of identity, and acts upon the opportunities offered by context. This structure is nourished by the individual's relationship/connection with nature and the subjective well-being channels derived from it: meta-analytic indicators of the link between connection to nature and happiness; compilations and experimental evidence on the effects of nature experiences on cognitive function and mental health; and mechanisms such as reduced rumination are strong pillars of this line of reasoning [23–25].

In the student context, this picture becomes more visible when transferred to the dimensions of identity and identity-congruent action. The relationship between pro-environmental self-identity and behavior has been defined not only as individual actions but as a structure that produces consistency within a family of behaviors; comprehensive models and reviews show that multiple determinants work together [26,27,28]. On the other hand, the empirical face of the value-attitude-behavior architecture, general ecological behavior measurements and goal-directed conservation behavior analyses, removes the debate about behavior being a measurable and comparable structure [29,30]. On this framework, findings on normative influences and the intention–action gap provide a theoretical framework for the question, "Why don't we do what we know?" [31,32].

The political lexicon of this framework highlights the role of worldview and motivational cognition in perceptions and preferences regarding the environment. Evidence that opposition to scientific consensus stems not only from a lack of knowledge, but sometimes from conspiratorial thinking and ideological advocacy; syntheses showing how political conservatism reflects as a motivational cognition pattern in environmental attitudes; studies explaining divergence by reading consensus through a cultural cognition filter; and assessments examining this picture through a social identity lens provide an important backdrop [33,34,40,41].

The normative architecture of behavior can be strengthened by small nudges that touch on everyday choices and dynamic norm communication. Experimental findings reveal the impact of messages such as "more and more people are doing X" and the cost-effective contributions that behavioral science can make to policy design in the energy/environment field [35,36].

Nature's contributions to attention repair and cognitive renewal are supported by findings on how contact with nature works on emotion regulation channels; studies showing that the feeling of awe increases pro-social tendencies through small self-complete this line of thought [37–39]. Thus, access to nature and relationship with nature are not merely an aesthetic preference; they appear as a mediating ground in the construction of an ethical and public climate.

On the other hand, civic participation (volunteering, donations, etc.) on the axis of public benefit can be linked to the same moral flow as environmental action. Comprehensive reviews on philanthropy describe channels of regular participation through mechanisms such as value, social capital, and reputation; the positive effects of volunteer work on well-being reinforce this line [42,43].

The infrastructure and opportunity dimensions of behavior cannot be overlooked: segmentation studies in transportation reveal how the "habit–access–cost" matrix produces different behavioral profiles; global-scale assessments of the prevalence and depth of sustainability practices in higher education, meanwhile,

demonstrate the structural contribution of institutions to this picture. Social psychology's early and comprehensive response to the question "how can we help?" also strengthens this bridge [44–46].

Finally, the relationship between environmental attitudes and behaviors and moral frameworks integrates with the approach of moral judgments and moral foundations regarding climate change: which moral intuitions individuals use to interpret environmental issues is decisive in terms of targeting communication and intervention designs [47,48].

# 3. Method

## 3.1. Design and ethical approval

This study is a cross-sectional, online survey-based research conducted among higher education students in Lithuania (including universities and colleges). The survey was distributed to participants on a voluntary basis, with guarantees of confidentiality and anonymity. Ethical approval for the study was obtained from the Vilnius Business College Ethics Committee, numbered VVK-09-2025 and dated October 5, 2025. The informed consent form and eligibility criteria (≥18 years of age, active student status, etc.) were presented at the beginning of the survey; participants could not proceed without giving their consent (see survey transcript for consent and eligibility blocks).

## 3.2. Population, sample, and sample size calculation

The target population includes all students enrolled in formal higher education in Lithuania (bachelor's, master's, and doctoral degrees; including colleges). Data collection was conducted using a convenience sampling approach via institutional email lists, course announcements, and student communities; the sample is non-probability due to voluntary participation. However, prior to the design, the minimum sample size was calculated using the standard proportion formula under the worst-case scenario assumption (p=0.50) with a target of 95% confidence and 4.5% sampling error:

$$n_0 = \frac{Z^2\, p(1-p)}{e^2} = \frac{1.96^2 \times 0.25}{0.045^2} \approx 475$$ [49–51].

When the target population size is large and stable ($N$ ) (in official statistics for Lithuania, the total number of higher education students is in the tens of thousands), the finite population correction difference is small; for example, under the assumption

$$\text{of} N = 100{,}000$$

$$n = \frac{n_0}{1+(n_0-1)/N} \approx \frac{475}{1+474/100{,}000} \approx 473 \text{is obtained}$$ [49–53].

The actual sample size achieved after data cleaning is N = 534 (a single row template row of non-qualitative data has been removed). This value is above the minimum range of 473–475 required for the targeted 95% confidence level, 4.5% margin of error.

The margin of error achieved under the same assumptions can be calculated as;

$$e = Z\sqrt{\frac{p(1-p)}{n}} \approx 1.96\sqrt{\frac{0.25}{534}} \approx 0.042 (\approx 4.2\%) \text{ can be calculated.}$$

*Generalizability caution:* Since the sample is non-probability, the margin of error and confidence level relate to sampling error; limitations of non-probability sampling, such as selection bias and self-selection, should also be considered [53].

### 3.3. Measurements and variables

*Purpose-driven work motivation* (dependent variable 1): The measurement was conducted using items 25–30 under the heading "Why are you learning?" in the questionnaire (7-point Likert scale: 1=Strongly disagree … 7=Strongly agree). These items represent the "transcendent purpose" dimensions that link the student's learning to the well-being of others and public benefit (e.g., *"I want to make a positive difference for others"*, item 25; *"I believe that knowledge should be used for a better world*", item 30). The scale score was calculated as the average of the items; internal consistency was Cronbach $\alpha = 0.82$ [54].

***Sustainable behaviors*** (dependent variable 2): A daily environmental behavior index was created based on items 49–61 in the "Last 3 months" section of the survey (5-point frequency scale: 1=Never ... 5=Always) (e.g., *"I turned off the lights when leaving rooms," "I avoided single-use products," "I used public transportation," "I ate a plant-based diet")*. Scoring is based on the average of the items; Cronbach $\alpha = 0.91$ [54]. To limit communication errors and measurement leaks in both scales ( ), respondents were required to complete at least 50% of the items; otherwise, the index score was left incomplete.

***Identity variables (independent)****:*

- *Religiosity/spirituality: Measured with a single item ("How religious/spiritual do you consider yourself?") (0=Not at all … 6=Extremely); converted to a standard score (z) in the analyses.*
- *Political orientation: Collected as a single choice from the categories Liberal, Conservative, Nationalist, Green-Eco-Focused, Socialist, Social Democrat, None (only one code appears in the data export); dummy variables were generated in the analysis with "None" as the reference.*

***Contextual exposures (moderator candidates):***

1. *Number of sustainability-related courses (0, 1, 2, 3, 4, 5+),*
2. *Service learning/community service course (Yes/No),*
3. *Environmental/social organization membership (Yes/No),*
4. *Volunteer hours in the last 12 months (approximate quantification using category midpoints),*
5. *Access to natural environment (1=Very difficult … 5=Very easy).*

*Controls*: Gender (Female reference; Male, non-binary/third gender, I prefer not to answer options) and monthly income (interval midpoint or reported value). All continuous/semi-continuous variables were converted to standard scores prior to analysis.

Source and content validation of instruments: All items originate from the questionnaire developed by the research team; item content, page and item numbers can be seen in detail in the attached questionnaire transcript (see items 25–30 and items 49–61).

### 3.4. Application and data processing

The survey was published in November 2025 using the Qualtrics platform; IP logging and progress timelines were monitored throughout the data collection process to minimize the risk of multiple participation. Attention control items (e.g., items labelled *"This is a control item, please select ..."*) were reported but not included in the indexing as they did not form a separate scale. During data cleaning, template rows and obvious missing/empty records were removed; outliers were checked in the context of the variable. In cases of missing data, listwise deletion was applied in the relevant variable set for each model; the risk of possible common method bias (measurement from a single source, in the same time frame) was attempted to be limited by content and presentation separations in the measurement and flow design [55,56].

### 3.5. Analysis strategy

Analyses were performed using the R/Python statistical ecosystem; all outcome variables were modelled as standard scores (z).

- *Basic models:*
    - Goal (z) ~ Religiosity (z) + Political orientation dummy variables + Gender dummy variables + Income (z)
    - Sustainable behavior (z) ~ Religiosity (z) + Political orientation dummies + Gender dummies + Income (z)
- Interaction (moderator) models: The main effects of contextual exposures (5 items) were added to the above equations; additionally, the interaction terms Religiosity × Exposure and Political orientation × Exposure were included (e.g., *Religiosity* × *Service-learning*; *Liberal* × *Access to nature*).

All linear models were estimated with HC3 heteroscedasticity-robust standard errors, aiming to maintain consistent coefficient confidence intervals under outlier and varying variance conditions [57]. Centering/standardization principles were observed in interpreting interactions; simple slopes and conditional effects were solved according to the Aiken–West approach [58,59]. Internal consistency reliabilities were reported using Cronbach α; all tests were two-tailed and evaluated at $\alpha=0.05$ [54].

Given that the analytical strategy involved testing multiple interaction terms across related models, the possibility of inflated Type I error cannot be fully excluded. Accordingly, p-values, particularly for interaction effects, were interpreted cautiously. Substantive interpretation was guided primarily by the magnitude and direction of standardized coefficients, robustness across model specifications, and consistency with theoretical expectations rather than by statistical significance alone. This approach aligns with contemporary recommendations emphasizing effect sizes and theoretical coherence over dichotomous significance testing.

## 4. Findings

### 4.1 .Hypotheses and research questions

*H1a. Religiosity/spirituality is positively related to purpose-driven work motivation.*

*H1b. Religiosity/spirituality is positively related to sustainable behavior.*

*H1c. The relationship between religiosity/spirituality and sustainable behavior is stronger among students in service learning (interaction).*

*H2. Political orientation is significantly related to purpose and sustainable behavior (reference: "None").*

*H2a. The effect of political orientation interacts with access to nature (especially for Liberals and Conservatives).*

*H2b. The effect of political orientation interacts with sustainability courses and service learning.*

*H3. Sustainability experiences (number of courses, service learning, membership, volunteering, access to nature) are positively related to purpose and behavior in the main effect.*

*H4a. Male students have lower purpose scores (compared to female reference).*

*H4b. Non-binary/third gender students have higher purpose and behavior scores.*

*H4c. Income is positively related to purpose and behavior.*

Note: In all linear models, outcome variables are reported as standard scores (z), coefficients are reported with HC3 heteroscedasticity-robust standard errors; p-values are provided without multiple testing correction. Therefore, caution is required, especially in the interpretation of interaction terms [60–62].

## 4.2. Descriptive statistics and reliability of measurements

*Sample (N=534):* Gender , Male 60.9% (n=325), Female 36.3% (n=194), Non-binary 1.3% (n=7), No response 1.5% (n=8). Political orientation , None 23.8% (n=127), Liberal 19.7% (n=105), Nationalist 13.1% (n=70), Socialist 12.4% (n=66), Conservative 12.2% (n=65), Green-Eco 9.9% (n=53), Social Democrat 9.0% (n=48). Those receiving service-learning %51.3 (n=274); those with environmental/social organization membership %46.1 (n=246).

*Reliability:* Purpose (items 25–30) α=0.82; Sustainable behavior (items 49–61) α=0.91.

Tables 1 and 2 summarize the composition of the sample and the reliability of the scales.

**Table 1.** Basic characteristics of the sample (N=534)

| Variable | Category | n | % |
|---|---|---|---|
| Gender | Male | 325 | 60.9 |
| | Female | 194 | 36.3 |
| | Non-binary/Third | 7 | 1.3 |
| | No response | 8 | 1.5 |
| Political orientation | None (ref.) | 127 | 23.8 |
| | Liberal | 105 | 19.7 |
| | Conservative | 65 | 12.2 |
| | Nationalist | 70 | 13.1 |
| | Green-Eco | 53 | 9.9 |
| | Socialist | 66 | 12.4 |
| | Social Democrat | 48 | 9.0 |
| Experience | Service-learning (Yes) | 274 | 51.3 |
| | Organization membership (Yes) | 246 | 46.1 |

**Table 2.** Scale reliability and item counts

| Scale | Item range | n-item | Cronbach's α |
|---|---|---|---|
| Purpose (25–30) | 1–7 | 6 | 0.82 |
| Sustainable behavior (49–61) | 1–5 | 13 | 0.91 |

## 4.3. Basic (main effect) models

*Purpose ($R^2$=0.060):* Religiosity/spirituality is not significant (β=−0.053; p=0.248) → H1a not supported. Being male has a negative and significant effect (β=−0.198; p=0.033) → H4a supported. Non-binary students reported higher purpose (β=+1.173; p<0.001) → H4b supported. Income is insignificant (β=+0.021; p=0.667) → H4c not supported. In political orientation, only the Nationalist category is associated with higher purpose compared to "None" (β=+0.368; p=0.018) → Partial support for H2 (purpose).

*Sustainable behavior ($R^2$=0.099):* Religiosity/spirituality is not significant (β=+0.065; p=0.141) → H1b not supported. Non-binary students reported higher behavior (β=+0.766; p=0.045) → H4b supported; Being

male has no effect (β=−0.009; p=0.917). Income is insignificant (β=−0.009; p=0.830) → H4c not supported. In political orientation, Liberal (β=−0.748; $p<10^{-7}$), Green-Eco (β=−0.809; $p<10^{-6}$), Conservative (β=−0.505; p<0.001), and Nationalist (β=−0.320; p=0.025) categories are associated with lower behavior compared to "None" → H2 (behavior) is supported (omnibus difference).

**Table 3.** Basic models (standardized coefficients, HC3 s.h.)

| Predictor | Predictor | β | p |
|---|---|---|---|
| Purpose (z) | Religiosity (z) | −0.053 | 0.248 |
| | Male | −0.198 | 0.033 |
| | Non-binary | +1.173 | <0.001 |
| | Income (z) | +0.021 | 0.667 |
| | Liberal | −0.047 | 0.672 |
| | Conservative | +0.266 | 0.109 |
| | Nationalist | +0.368 | 0.018 |
| | Green-Eco | +0.024 | 0.888 |
| | Socialist | +0.214 | 0.169 |
| | Social Democrat | +0.052 | 0.743 |
| | $R^2$ | 0.060 | |
| Behavior (z) | Religiosity (z) | +0.065 | 0.141 |
| | Male | −0.009 | 0.917 |
| | Non-binary | +0.766 | 0.045 |
| | Income (z) | −0.009 | 0.830 |
| | Liberal | −0.748 | $<10^{-7}$ |
| | Conservative | −0.505 | 0.001 |
| | Nationalist | −0.320 | 0.025 |
| | Green-Eco | −0.809 | $<10^{-6}$ |
| | Socialist | −0.216 | 0.139 |
| | Social Democrat | −0.166 | 0.272 |
| | $R^2$ | 0.099 | |

## 4.4. Interaction (moderator) models

Interaction models provided a noticeable increase in explained variance compared to basic models, with $R^2$=0.190 for purpose and $R^2$=0.285 for behavior.

Religiosity × Service learning (H1c): A positive interaction was found in sustainable behavior (β=+0.238; p=0.042). Religiosity is associated with higher behavior among students who participated in service learning → H1c was supported.

***Political orientation × Access to nature (H2a)**:*

- Liberal × Access to nature is positive (β=+0.422; p=0.004), as access becomes easier, behavior increases among liberal students.
- Conservative × Access to nature is positive (β=+0.475; p=0.009), similarly, behavior increases among Conservative students. → H2a is supported (ideological distance softens with access).

***Political orientation × Experiences (H2b):***

- Green-Eco × Service learning negative (β=−0.887; p=0.011), in this group, those who received service learning reported lower behavior (possible ceiling effect/internal saturation).
- Liberal × Volunteer hours negative (β=−0.386; p=0.043) , caution in interpretation (small sample size, multiple testing).
- Socialist × Number of sustainability courses is positively associated with purpose (β=+0.396; p=0.015) , Purpose strengthens as the number of courses increases among Socialist students. → H2b is partially supported.

***Main effects of experiences (H3)****:* Main effects in interactive models were largely insignificant; this indicates the catalytic (modifying) role of experiences → H3 not supported (in main effect), but experiences confirmed to function as moderators.

***Gender and income (H4)****:* The non-binary effect remained positive in purpose (β=+1.120; p=0.010) and behavior (β=+0.729; p=0.040) → H4b was supported. The negative effect of male on intention persisted as in the basic model (significance was also maintained in the interactive model). The income effect is again insignificant → H4c not supported.

**Table 4.** Selected coefficients from interactive models (standard β, HC3 s.h.)

| Predictor | Term | β | p |
|---|---|---|---|
| Behavior (z) | Religiosity × Service-learning | +0.238 | 0.042 |
| | Liberal × Access to nature | +0.422 | 0.004 |
| | Conservative × Access to nature | +0.475 | 0.009 |
| | Green-Eco × Service-learning | −0.887 | 0.011 |
| | Liberal × Volunteer hours | −0.386 | 0.043 |
| | Liberal (main effect) | −0.715 | 0.002 |
| | Non-binary (main effect) | +0.729 | 0.040 |
| Purpose (z) | Number of socialist × sustainability courses | +0.396 | 0.015 |
| | Liberal × Access to nature | +0.332 | 0.030 |
| | Non-binary (primary effect) | +1.120 | 0.010 |
| | Socialist (primary effect) | +0.558 | 0.044 |
| | $R^2$ (Objective) | 0.190 | |
| | $R^2$ (Behavior) | 0.285 | |

## 4.5. Brief interpretation of results

The findings show that identity and contextual grammar work together: Service learning makes the bridge between religiosity and behavior visible; access to nature strengthens practice by smoothing ideological differences. Sustainability lessons and civic engagement indicators are not always prominent in the main effect; however, when presented to the right student in the right context, they have an amplifying effect. Gender differences, particularly non-binary students consistently reporting higher goals and behaviors, suggest that socio-psychological sensitivities can be transformative resources in education.

Statistical note: P-values have not been adjusted in this family of models, which includes numerous interaction tests; effect sizes and confidence intervals should be given greater weight in the interpretation [60–62].

# 5. Discussion

The main picture of this study is clear: religiosity/spirituality and political identity do not always translate into purpose and behavior on their own; these identities find their voice when confronted with experiences such as service-learning and concrete opportunities such as access to nature. Findings show that the interaction between religiosity × service-learning creates a positive conditional effect on sustainable behavior, while access to nature broadens the path to behavior in both liberal and conservative students. This pattern is consistent with the argument that self-determination and meaning-focused learning approaches require experiential loops for values to translate into action: When students are invited to rediscover their own purposes (benefiting others, creating public good) in the learning context, the spark from identity can translate into practice [63,64]. The pedagogical counterpart of this transformation is particularly evident in instructional designs structured around the emphasis on "utility" and "self-transcendent purpose" [65,66].

The fact that religiosity alone does not produce meaningful outcomes in terms of purpose and behavior suggests that religiosity is a context-sensitive resource rather than a fixed impulse. The literature contains findings that religiosity produces measurable outcomes when linked to social action through pro-social motives such as service, preservation, and neighborliness; however, the conditions for this are woven through experience: service learning, reflective tasks, and community-based projects are known tools for this weaving [11,13,67]. Our finding, religiosity → increased behavior in service-learning settings, points precisely to this mechanism: the link that translates meaning into action is often experiential.

Findings on political orientation present a two-layered picture. In basic models, the fact that some political identities (liberal, conservative, green-eco, nationalist) report lower sustainable behavior relative to the "none" reference suggests a tense relationship between identity and environmental frameworks, and sometimes dynamics of solution aversion [68,69]. Identities monitor the path to knowledge, sometimes acting as a gateway; however, when affordance structures such as access to nature come into play, the extremes can converge. Indeed, the positive interactions of liberal × access and conservative × access in our findings can be explained by nature's regulatory power as a "common ground": proximity and tangibility (parks within walking distance, campus green infrastructure) weaken ideological preconceptions; increase the sense of connection; thereby transforming the perceived cost and normative weight of behavior [70,71]. This aligns with environmental psychology's themes of connectedness to nature and awe/reverence: Nature softens the rigid boundaries of the self, strengthening pro-social orientation and the sense of common good [17,38].

The negative trajectory of the Green-Eco × service-learning interaction, while seemingly paradoxical at first glance, can be understood through interpretations in the literature such as the ceiling effect, moral licensing, and frame mismatch. For students who already have a high environmental identity, a formal service-learning experience may have increased the sense of "duty" while decreasing self-determination; or the content of the service may not have been fully aligned with existing values [63,72]. In this case, the quality of the reflection component, the joint construction of common goals, and the autonomy-appropriate design of tasks become decisive [64,65]. The negative trend in liberal × volunteering may similarly depend on the quality of the infrastructure and content, as well as the alignment of the activity type with our visible behavior definitions (49–61); it is appropriate to interpret these findings, obtained within statistically multiple interaction tests, with caution (see discussions on power and multiple comparisons) [60–62].

Gender differences, particularly the systematically higher scores of non-binary participants on purpose and behavior, suggest that identity, when combined with vulnerability and empathic sensitivity, may strengthen pro-social orientation. This finding points to the "minority vantage" as a potentially rich source for everyday ethical intuition and public value creation; however, caution is warranted in generalizing due to

subgroup size and contextual differences. The insignificance of the income effect implies that behavior is shaped to a large extent by enabling structures (access, political/cultural frameworks) and identity-congruent experiences, and that mere abundance of resources is not the sole determinant [71].

Theoretically, this picture is consistent with the predictions of the identity-based motivation approach: People are more likely to choose behaviors that fit their identity when the context calls for that identity; when learning and space call for it, intention finds action [73]. Therefore, three propositions emerge for policy and practice in higher education: (i) Blend service-learning and sustainability content with reflection and autonomy support; (ii) Increase access to nature on campus and in the surrounding area, walkability, micro-green spaces, proximity to public transportation; (iii) Develop frameworks compatible with different political identities (e.g., grounding narratives of common good, patriotism, justice, and thrift in points of convergence rather than conflict) [68,69]. When combined with the dynamic nature of norms (making others' practices visible), such frameworks are known to produce lasting behavioral change through small nudges [35].

In terms of limitations and future research, non-probability sampling and cross-sectional design constrain claims of causation; the risk of false positives must be carefully managed in a model family with multiple interaction tests [60–62]. Nevertheless, the magnitude of $\Delta R^2$ and the theoretical fit of the pattern strongly support the need to consider identity and context together. In subsequent studies, it would be appropriate to test causal mechanisms through (i) longitudinal and quasi-experimental designs; (ii) interventions that diversify the content and reflective quality of service learning; and (iii) campus-city solutions that increase access to nature at the architectural/planning level. In short, when the bridge between identity and practice is established through educational design and spatial affordances, the student's "I" opens up to "we"; learning produces not only 'success' but also "benefit."

# 6. Conclusion

This study shows that the relationship between students' values (religiosity/spirituality, political orientation) and purpose-driven learning and sustainable behavior is shaped by experiential and spatial contexts rather than identity alone. The findings indicate that (i) the religiosity × service-learning interaction increases sustainable behavior; (ii) the access to nature × political orientation (Liberal, Conservative) interactions show a positive trend in behavior; (iii) the Socialist × number of sustainability courses interaction strengthens the sense of purpose; (iv) the Green-Eco × service-learning interaction can be negative; (v) non-binary/third gender students scored high on both purpose and behavior, and (vi) male students scored lower on purpose. The income variable, however, did not produce a consistent main effect in this framework. This pattern supports the identity × context thesis: opportunities such as service learning, sustainability courses, volunteering/membership, and especially access to nature act as catalysts that transform the spark from identity into practice, rather than directly "changing" identity.

The theoretical contribution of these findings is that they add an experiential/affordance dimension to the value–belief–norm line, illustrating how meaning is translated into action in the higher education context through conditional effects. The practical meaning is that it provides a guide for designs centered on the question "to whom, which experience?": (1) The service-learning component, with its reflection and autonomy supports, opens the path to behavior, particularly along the piety/spirituality axis; (2) Increasing access to nature at the campus and city scale can soften ideological distances at the behavioral level; (3) Inputs such as the number of sustainability courses and civic engagement can have meaningful enhancing effects on purpose and practices when identity matching is appropriate. Thus, the horizon of learning is redrawn not only as success but also as benefit generation.

### 6.1. Limitations and future research

Since the design is cross-sectional and the sample is non-probability, claims of causality should be interpreted cautiously; the risk of false positives should be considered in the model family containing multiple interaction terms, and the findings should be confirmed with pre-registered multiple samples and longitudinal/quasi-experimental designs. The coding of policy orientation as a single choice in data export (despite the multiple-choice instruction in the application) may result in measurement limitations; behavioral measurements are self-reported and should be supported by objective indicators (energy/waste/transportation data; digital ecology metrics). To capture differences in content and quality, the variables of task design, depth of reflection, and community partnership should be disaggregated in service-learning applications. By modelling the spatial (proximity, duration, accessibility) and subjective (connection with nature) dimensions of access to nature together, ideological mediation mechanisms can be causally tested.

### 6.2. Application and policy recommendations

1. Curriculum design: Blending sustainability courses with service learning and community-based projects; systematizing reflection sessions; embedding the principles of autonomy and co-creation into assignments.
2. Spatial planning: Campus micro-green spaces, walking and cycling connections; access to parks and forests integrated with the city; nature-based learning applications.
3. Framing and communication: Compatible story frames for different political identities (common good, patriotism, justice, thrift); making peer practices visible with dynamic norm messages.
4. Measurement and evaluation: Periodic monitoring of goal and behavior indicators; objective data integration; pre-registered evaluation protocols.
5. Equality and inclusivity: Adapted initiatives for gender diversity and identity differences; removal of participation barriers for non-binary and underrepresented groups.

If behavior is a language spoken by identities, then context is the grammar of that language. Service learning and access to nature are two key elements of this grammar within the sentence; when placed correctly, the student's “I” opens up to “we”, learning becomes not just accumulation but benefit generation.

## Author Contributions

Conceptualization: G.S., M.R.U.; Methodology: M.R.U., G.S.; Software: (analysis scripts) S.A.T.; Validation: G.S., M.R.U., S.A.T.; Statistical analysis: S.A.T.; Research/Fieldwork: G.S.; Sources: M.R.U.; Data curation: S.A.T.; Writing, draft: G.S.; Writing, review and editing: M.R.U., S.A.T.; Visualization: S.A.T.; Consulting/Management: M.R.U.; Project management: G.S. All authors have read and approved the final version of the manuscript.

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## Conflict of interest

The authors declare no conflict of interest

# References


1. UNESCO. (2020). Education for sustainable development: A roadmap. Paris, France: UNESCO. Retrieved November 15, 2025, from https://www.unesco.org/
2. McCright, A. M., & Dunlap, R. E. (2011). Cool dudes: The denial of climate change among conservative white males in the United States. Global Environmental Change, 21(4), 1163–1172.
3. Kahan, D. M., Peters, E., Wittlin, M., Slovic, P., Ouellette, L. L., Braman, D., & Mandel, G. (2012). The polarizing impact of science literacy and numeracy on perceived climate change risk. Nature Climate Change, 2(10), 732–735.
4. Hornsey, M. J., Harris, E. A., Bain, P. G., & Fielding, K. S. (2016). Meta-analyses of the determinants of climate change beliefs. Nature Climate Change, 6, 622–626.
5. Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211.
6. Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. Journal of Social Issues, 56(3), 407–424.
7. Gifford, R. (2011). The dragons of inaction: Psychological barriers that limit climate change mitigation and adaptation. American Psychologist, 66(4), 290–302.
8. Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behavior: An integrative review and research agenda. Annual Review of Environment and Resources, 34, 269–297.
9. White, L., Jr. (1967). The historical roots of our ecologic crisis. Science, 155(3767), 1203–1207.
10. Arbuckle, M. B., & Konisky, D. M. (2015). The role of religion in environmental attitudes. Social Science Quarterly, 96(5), 1243–1263.
11. Eyler, J., & Giles, D. E. (1999). Where's the learning in service-learning? San Francisco, CA: Jossey-Bass.
12. Celio, C. I., Durlak, J., & Dymnicki, A. (2011). A meta-analysis of the impact of service-learning on students. Journal of Experiential Education, 34(2), 164–181.
13. Bringle, R. G., & Hatcher, J. A. (1996). Implementing service learning in higher education. The Journal of Higher Education, 67(2), 221–239.
14. Kuh, G. D. (2008). High-impact educational practices: What they are, who has access to them, and why they matter. Washington, DC: AAC&U.
15. Hartig, T., Mitchell, R., de Vries, S., & Frumkin, H. (2014). Nature and health. Annual Review of Public Health, 35, 207–228.
16. Zelenski, J. M., & Nisbet, E. K. (2014). Happiness and feeling connected: The distinct role of nature relatedness. Environment and Behavior, 46(1), 3–23.
17. Mayer, F. S., & Frantz, C. M. (2004). The Connectedness to Nature Scale: A measure of individuals' feeling in community with nature. Journal of Environmental Psychology, 24(4), 503–515.
18. Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2009). The Nature Relatedness Scale: Linking individuals' connection with nature to environmental concern and behavior. Environment and Behavior, 41(5), 715–740.
19. Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. Journal of Personality and Social Psychology, 58(6), 1015–1026.
20. Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. Journal of Consumer Research, 35(3), 472–482.
21. Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behavior. Journal of Environmental Psychology, 27(1), 14–25.
22. De Groot, J. I. M., & Steg, L. (2008). Value orientations and environmental beliefs in five countries: Validity of an instrument to measure egoistic, altruistic and biospheric value orientations. Journal of Cross-Cultural Psychology, 39(2), 178–200.
23. Capaldi, C. A., Dopko, R. L., & Zelenski, J. M. (2014). The relationship between nature connectedness and happiness: A meta-analysis. Frontiers in Psychology, 5, 976.
24. Bratman, G. N., Hamilton, J. P., & Daily, G. C. (2012). The impacts of nature experience on human cognitive function and mental health. Annals of the New York Academy of Sciences, 1249, 118–136.
25. Bratman, G. N., Hamilton, J. P., Hahn, K. S., Daily, G. C., & Gross, J. J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. Proceedings of the National Academy of Sciences, 112(28), 8567–8572.
26. Van der Werff, E., Steg, L., & Keizer, K. (2013). The value of self-identity: The effect of activated self-identity on pro-environmental behavior. Journal of Environmental Psychology, 34, 55–63.
27. Klöckner, C. A. (2013). A comprehensive model of the determinants of pro-environmental behavior, A meta-analysis. Global Environmental Change, 23(5), 1028–1038.
28. Whitmarsh, L., & O'Neill, S. (2010). Green identity, green living? The role of pro-environmental self-identity in determining consistency across diverse pro-environmental behaviors. Journal of Environmental Psychology, 30(3), 305–314.

29. Kaiser, F. G., & Wilson, M. (2004). Goal-directed conservation behavior: The specific contribution of values, attitudes, and behavior. Journal of Applied Social Psychology, 34, 2150–2173.
30. Kaiser, F. G., & Wilson, M. (2000). Assessing people's general ecological behavior: A cross-cultural measure. Environment and Behavior, 32(5), 634–652.
31. Schwartz, S. H. (1977). Normative influences on altruism. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 10, pp. 221–279). New York, NY: Academic Press.
32. Kollmuss, A., & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? Environmental Education Research, 8(3), 239–260.
33. Lewandowsky, S., Gignac, G. E., & Oberauer, K. (2013). The role of conspiracist ideation and worldviews in predicting rejection of science. PLOS ONE, 8(10), e75637.
34. Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. Psychological Bulletin, 129(3), 339–375.
35. Sparkman, G., & Walton, G. M. (2017). Dynamic norms promote sustainable behavior, even if it is counter-normative. Proceedings of the National Academy of Sciences, 114(4), 993–996.
36. Allcott, H., & Mullainathan, S. (2010). Behavior and energy policy. Science, 327(5970), 1204–1205.
37. Berman, M. G., Jonides, J., & Kaplan, S. (2008). The cognitive benefits of interacting with nature. Psychological Science, 19(12), 1207–1212.
38. Piff, P. K., Dietze, P., Feinberg, M., Stancato, D. M., & Keltner, D. (2015). Awe, the small self, and prosocial behavior. Journal of Personality and Social Psychology, 108(6), 883–899.
39. Zhang, J. W., Piff, P. K., Iyer, R., Koleva, S., & Keltner, D. (2014). An occasion for unselfing: Beautiful nature leads to prosociality. Journal of Environmental Psychology, 37, 61–72.
40. Kahan, D. M., Braman, D., Slovic, P., Gastil, J., & Cohen, G. L. (2011). Cultural cognition of scientific consensus. Journal of Risk Research, 14(2), 147–174.
41. Fielding, K. S., & Hornsey, M. J. (2016). A social identity analysis of climate change and environmental attitudes and behaviors. Current Opinion in Psychology, 11, 1–5.
42. Bekkers, R., & Wiepking, P. (2011). A literature review of empirical studies of philanthropy: Eight mechanisms that drive charitable giving. Nonprofit and Voluntary Sector Quarterly, 40(5), 924–973.
43. Thoits, P. A., & Hewitt, L. N. (2001). Volunteer work and well-being. Journal of Health and Social Behavior, 42(2), 115–131.
44. Anable, J. (2005). 'Complacent car addicts' or 'aspiring environmentalists'? Identifying travel behavior segments using attitude theory. Transport Policy, 12(1), 65–78.
45. Lozano, R., Ceulemans, K., Alonso-Almeida, M., Huisingh, D., Lozano, F. J., Waas, T., et al. (2015). A review of commitment and implementation of sustainable development in higher education: Results from a worldwide survey. Journal of Cleaner Production, 106, 1–14.
46. Oskamp, S. (2000). A sustainable future for humanity? How can psychology help? Journal of Social Issues, 56(3), 373–390.
47. Markowitz, E. M., & Shariff, A. F. (2012). Climate change and moral judgment. Nature Climate Change, 2(4), 243–247.
48. Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. Journal of Personality and Social Psychology, 96(5), 1029–1046.
49. Cochran, W. G. (1977). Sampling techniques (3rd ed.). New York, NY: Wiley.
50. Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607–610.
51. Israel, G. D. (2013). Determining sample size. Gainesville, FL: University of Florida, IFAS Extension. (Original work published 1992)
52. Eurostat. (2025). Tertiary education statistics. Luxembourg: Publications Office of the European Union.
53. Statistics Lithuania. (2025). Education statistics: Students in tertiary education. Vilnius, Lithuania: Official Statistics Portal.
54. Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16(3), 297–334.
55. Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. Journal of Applied Psychology, 88(5), 879–903.
56. Tourangeau, R., Rips, L. J., & Rasinski, K. (2000). The psychology of survey response. Cambridge, UK: Cambridge University Press.
57. Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity-consistent standard errors in the linear regression model. The American Statistician, 54(3), 217–224.
58. Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage.

59. Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis. New York, NY: Guilford Press.
60. Cohen, J. (1992). A power primer. Psychological Bulletin, 112(1), 155–159.
61. Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. Journal of the Royal Statistical Society: Series B, 57(1), 289–300.
62. Wasserstein, R. L., & Lazar, N. A. (2016). The ASA's statement on p-values: Context, process, and purpose. The American Statistician, 70(2), 129–133.
63. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68
64. Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry, 11(4), 227–268.
65. Walton, G. M., & Wilson, T. D. (2018). Wise interventions: Psychological remedies for social and personal problems. Psychological Science in the Public Interest, 19(3), 73–146.
66. Yeager, D. S., Henderson, M. D., Paunesku, D., Walton, G. M., D'Mello, S., Spitzer, B. J., & Duckworth, A. L. (2014). Boring but important: A self-transcendent purpose for learning fosters academic self-regulation. Journal of Personality and Social Psychology, 107(4), 559–580. https://doi.org/10.1037/a0037637
67. Yorio, P. L., & Ye, F. (2012). A meta-analysis on the effects of service-learning on the social, personal, and cognitive outcomes of learning. Academy of Management Learning & Education, 11(1), 9–27.
68. Wolsko, C., Ariceaga, H., & Seiden, J. (2016). Red, white, and blue enough to be green: Effects of patriotic messages on pro-environmental preferences. Journal of Experimental Social Psychology, 65, 7–19.
69. Feygina, I., Jost, J. T., & Goldsmith, R. E. (2010). System justification, the denial of global warming, and the possibility of "system-sanctioned change." Personality and Social Psychology Bulletin, 36(3), 326–338.
70. Schultz, P. W. (2001). The structure of environmental concern: Concern for self, other people, and the biosphere. Journal of Environmental Psychology, 21(4), 327–339.
71. Gibson, J. J. (1979). The ecological approach to visual perception. Boston, MA: Houghton Mifflin.
72. Merritt, A. C., Effron, D. A., & Monin, B. (2010). Moral self-licensing: When being good frees us to be bad. Social and Personality Psychology Compass, 4(5), 344–357.
73. Oyserman, D. (2009). Identity-based motivation: Implications for action-readiness, procedural-readiness, and consumer behavior. Journal of Consumer Psychology, 19(3), 250–260.