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RELIGIOUS EDUCATION AND CLIMATE ACTION: COMPARING UNIVERSITY TEACHERS' PERSPECTIVES IN SPAIN, POLAND, AND ITALY

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ABSTRACT

Current global challenges related to climate change and social inequality highlight the need for educational approaches that integrate ethical, cultural, and spiritual dimensions. In this context, sustainability education, environmental psychology, virtue ethics, and eco-theology, particularly the Catholic concept of integral ecology presented in *Laudato si'*, offer a valuable framework for addressing the persistent value-action gap in climate education through value-based learning. This study explores the potential of Catholic religious education in higher education as a context for promoting sustainability and climate action. It examines how university teachers in Spain, Italy, and Poland conceptualise and implement educational approaches that connect faith, ethics, and ecological responsibility. An exploratory mixed-methods design was employed, using a collaboratively developed questionnaire administered to 62 higher education teachers from 36 universities across the three countries. The instrument assessed seven areas: knowledge, competencies, teaching resources, methodologies, difficulties, challenges, and educational values. Quantitative data were analysed descriptively and qualitative responses through inductive thematic analysis. Results indicate strong consensus on the anthropogenic causes of climate change and their ethical implications, as well as a shared understanding of *Laudato si'*. Ethical engagement and critical thinking emerged as the most valued competencies, while entrepreneurship and leadership were rated lower. Teachers mainly rely on the Bible and *Laudato si'* and favour active methodologies such as case studies, cooperative learning, and service learning. The study concludes that Catholic religious education offers a promising framework for integrating sustainability and climate action through transformative, value-based pedagogical approaches in higher education.

KEYWORDS: Religious education; climate action; sustainability education; integral ecology; higher education

1. INTRODUCTION

In response to escalating social inequalities and the accelerating degradation of planetary ecosystems, the United Nations adopted the 2030 Agenda for Sustainable Development in 2015, establishing 17 Sustainable Development Goals (SDGs) designed to eradicate poverty, protect the environment, and promote inclusive prosperity for all (UN, 2015). SDG 12 (responsible consumption and production) and SDG 13 (climate action) stress the urgent need to transform educational, cultural, and ethical systems to promote more sustainable patterns of living. Education is increasingly recognised as a central driver of behavioural change and civic engagement, particularly in the context of climate mitigation and adaptation. The UNESCO COP28 declaration on the common agenda for education and climate change (UNESCO, 2023) confirmed that educational systems should become climate-ready providing learners with the necessary competencies, values, and ethical frameworks to act meaningfully when faced with ecological crises.

Despite widespread awareness, a persistent value-action gap remains. The Eurobarometer survey on climate change states that, while 85% of Europeans perceive climate change as a serious problem and 81% support climate neutrality by 2050, only 59% have taken specific actions to address it (European Commission, 2017). This discrepancy reflects a persistent challenge documented in environmental psychology: knowledge alone is insufficient to produce sustainable behaviour (Kollmuss & Agyeman, 2002). Recent research emphasises the mediating role of values, virtues, and emotional engagement in transforming environmental concern into action. Kalaycı Alas and Korutürk (2024), for example, show that moral education fostering virtues such as humility and responsibility significantly enhances pro-environmental behaviour amongst youth. Similarly, Chen et al. (2025) highlight the importance of ecological empathy and self-efficacy in promoting climate engagement in educational settings. These studies suggest that educational approaches integrating ethical reflection, moral reasoning, and emotional connection are more effective in sustaining long-term behavioural change than information-based teaching alone.

2. LITERATURE REVIEW

2.1. *Religious Traditions and Educational Implications in the Development of Ecological Responsibility*

Religious traditions represent a largely untapped yet powerful resource for developing

ethical perspectives on sustainability. The field of eco-theology explores how spiritual and theological frameworks contribute to environmental ethics and ecological consciousness (Deane-Drummond, 2018). Religious worldviews often stress interconnectedness, care for Creation, and intergenerational justice-values closely aligned with the aims of sustainability education. Interfaith initiatives such as the World Council of Churches' statement on climate justice and the Religions for Peace Declaration (2014) underline the moral imperative for collective action. Furthermore, some theoretical contributions (Berry, 2014; Tucker & Grim, 2001) indicate that spiritual worldviews can catalyse transformative ecological awareness, cultivating hope and resilience in the face of ecological uncertainty and climate anxiety.

Within this wider interreligious landscape, Catholicism has assumed a central role. Pope Francis' encyclical *Laudato si'* (2015) presents a holistic view of "integral ecology," linking social, economic, cultural, and spiritual dimensions of the environmental crisis. This encyclical has profoundly influenced Catholic educational institutions worldwide, promoting pedagogical models that integrate ecological responsibility, moral discernment, and community engagement. Recent studies (Sánchez-Camacho & Villegas, 2024) show that Catholic universities and teacher-training programmes increasingly adopt ecological education models based on stewardship, ethical reflection, and spirituality. Such approaches provide fertile ground for innovative intersections.

2.2. *Sustainability Education and Transformative Learning*

The theoretical framework for this research brings together studies from sustainability education, environmental psychology, virtue ethics, and ecotheology, with particular emphasis on the Catholic concept of integral ecology. This body of literature suggests that effective climate education must transcend cognitive knowledge to encompass ethical, spiritual, and socio-emotional dimensions of learning. Sustainability education increasingly emphasises transformative learning, which seeks to develop holistic competencies including critical thinking, systems thinking, moral discernment, and long-term ecological responsibility (UNESCO, 2023). Learners are not mere recipients of information, but agents of social and environmental change.

Environmental psychology identifies a persistent gap between environmental concern and action (Kollmuss & Agyeman, 2002). Recent research points to several mediating factors: ecological empathy, moral and civic responsibility,

perceived self-efficacy, emotional engagement, and ecological identity. The study by Chen et al. (2025), as well as other studies, show that educators should foster these dimensions to support meaningful climate engagement. Virtue ethics offers a key framework for environmental education. Research shows that cultivating virtues such as humility, responsibility, compassion, and care can significantly enhance pro-environmental behaviour (Kalaycı Alas & Korutürk, 2024). Value-based and virtue-based pedagogies help bridge the value-action gap by shaping moral principles and sustainable habits.

2.3 Ecotheology and Religious Worldviews

Ecotheology offers theological and spiritual frameworks that support ecological consciousness. Scholars argue that religious narratives can help individuals interpret ecological crises, develop resilience, and ethical responsibility (Deane-Drummond, 2018). Interfaith perspectives highlight the universal moral obligation to care for Creation and promote environmental justice (Religions for Peace, 2021). These contributions underline the importance of religious education for sustainability. Catholic teaching, particularly through *Laudato si'*, connects ecological responsibility with an integrated view combining social justice, spirituality, and care for Creation. Integral ecology emphasises the interdependence of all life and the moral duty to protect the environment.

Studies of Catholic universities show that integral ecology is increasingly incorporated into courses, teacher training, and campus initiatives (Sánchez-Camacho & Villegas, 2024). Catholic higher education is hence a potentially rich and distinctive context for sustainability education. The educational systems in the three European countries analysed in this study differ considerably in their historical, cultural, and ecclesial contexts. These differences shape how teachers interpret Catholic environmental education and how they integrate sustainability into curricular and teaching practices. The three countries' trajectories differ with regard to implementing sustainability education. In Spain, Catholic universities have aligned their educational frameworks with both *Laudato si'* and the 2030 Agenda, integrating environmental ethics into teacher training and theology curricula. In Poland, where Catholic identity continues to shape educational discourse, sustainability initiatives are emerging, but they are often defined through moral or civic responsibility rather than through ecological spirituality (Kaczmarek & Szyjewski, 2024). In Italy, Catholic universities, many of which are influenced by the network of green schools of the Italian Episcopal

Conference run pioneering projects combining environmental science, pastoral care, and civic ecology. Examining these national contexts provides insights into how Catholic university teachers interpret and apply the relationship between faith, ethics, and ecological action.

Against this theoretical and contextual backdrop, this exploratory study analyses how Catholic religious education (henceforth CRE) in higher education can serve as a framework for embedding sustainability principles and climate action. It explores how university teachers in Spain, Poland, and Italy conceptualise and implement educational strategies that link Catholic Church teachings with ecological responsibility. The study aims to shed light on how religious and moral frameworks can support transformative, value-based approaches to sustainability in higher education.

3. METHODOLOGY

This paper presents the initial exploratory phase of a broader research initiative funded under Key Action 2 (KA2) of the Erasmus+ programme within the framework of Cooperation Partnerships. The project consortium brought together three higher education institutions: Universitat Internacional de Catalunya (Spain), LUMSA University (Italy), and Jesuit University Ignatianum (Poland). At each university, a local research group was created comprising four to five experts in religious education, theology, pedagogy, and related fields. These groups were supervised by national coordinators who held monthly inter-university meetings to ensure methodological coherence, project alignment, and collaborative decision-making (Creswell & Creswell, 2018).

Given the exploratory nature of the study and its aim to capture the perspectives of university teachers across three countries, a mixed-methods design was adopted. This approach enables combining quantitative insights with qualitative depth, allowing for a more comprehensive understanding of emerging educational practices (Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2009).

3.1. Study Sample

The final sample consisted of 62 higher education teachers (HETs) from 36 universities and affiliated institutions (Table 1). In Spain, 38 HETs from 27 universities participated, in Poland 16 HETs from 5 universities, and in Italy 8 HETs from 4 universities. The sample included public, private, and ecclesiastical institutions, which increased the diversity and representativeness of the findings (Miles et al., 2020)

Table 1. Spanish, Italian, and Polish institutions and the number of HETs participating in the study

Spanish universities or affiliated university schools	HETs
1. Universitat Internacional de Catalunya	38
2. Universidad CEU Cardenal Herrera de Valencia	
3. Universidad CEU Cardenal Herrera de Murcia	
4. Universidad Católica de Ávila	
5. Universidad Católica San Antonio de Murcia	
6. Universidad Católica de Valencia	
7. Universidad de Deusto	
8. Universidad de Navarra	
9. Universidad Francisco de Vitoria de Madrid	
10. Universidad Pontificia de Comillas de Salamanca	
11. Universidad San Jorge de Zaragoza	
12. Universidad San Pablo CEU Andalucía	
13. Universidad Villanueva de Madrid	
14. Centro de Magisterio "María Inmaculada" de Antequera, Universidad de Málaga	
15. Centro de Magisterio La Inmaculada, Universidad de Granada	
16. Centro de Magisterio Sagrado Corazón, Universidad de Córdoba.	
17. Centro de Magisterio Virgen de Europa, Universidad de Sevilla	
18. Centro Universitario Sagrada Familia (SAFA) de Úbeda, Universidad de Jaén	
19. Centro de Enseñanza Superior Cardenal Cisneros, Universidad Complutense de Madrid.	
20. Centro de Enseñanza Superior Don Bosco, Universidad Complutense de Madrid	
21. Centro Universitario de Magisterio ESCUNI, Universidad Complutense de Madrid	
22. Centro Universitario La Salle, Universidad Autónoma de Madrid	
23. Escuela Universitaria de Magisterio Fray Luis de León, Universidad Católica de Ávila	
24. Escuela Universitaria de Magisterio CEU de Vigo, Universidad de Vigo,	
25. Escuela Universitaria de Magisterio Begoñako Andra Mari, Universidad del País Vasco	
26. Centro de Enseñanza Superior Alberta Giménez, Universidad Pontificia de Comillas	
27. Centro Universitario Padre Ossó, Universidad de Oviedo	
Italian Universities	
28. Pontificia Università Angelicum	8
29. Pontificia Università Teologica Teresianum	
30. Pontificia Università Lateranense	
31. Università Lumsa	
Polish Universities	
32. Uniwersytet Ignatianum w Krakowie	16
33. Uniwersytet Opolski	
34. Uniwersytet Papieski Jana Pawła II w Krakowie	
35. Akademia Katolicka w Warszawie – Collegium Bobolanum	
36. Wyższe Seminarium Duchowne	
Final sample	62

3.2 Instrument

A mixed-methods questionnaire was developed especially for the study. The local research groups first identified key thematic areas. Subsequent meetings with the national coordinators facilitated cross-national consensus. The final instrument was structured around seven key aspects necessary to integrate ecological perspectives into CRE: (1) knowledge; (2) competencies; (3) teaching resources; (4) teaching methodologies; (5) difficulties; (6) challenges; and (7) educational values.

The initial draft, drawn up by the Spanish team at Anonymized, was revised by the Italian and Polish teams. Thirteen researchers contributed to the instrument, ensuring conceptual coherence and cultural relevance in line with best practices for cross-cultural instrument adaptation (Beaton et al., 2000; van de Vijver & Leung, 1997). The final

questionnaire included 26 items, originally written in English and then translated into Spanish, Italian, and Polish using a collaborative translation-review process designed to maintain semantic equivalence (Hambleton et al., 2005). The instrument comprised multiple-choice questions, Likert-scale items, and open-ended prompts.

3.3. Data Collection and Analysis

Google Forms was used to distribute the questionnaire online to educators teaching CRE courses in the three participating countries. As mentioned earlier, a mixed-methods questionnaire was designed specifically for the study. The procedure for data collection followed a structured, multi-stage collaborative process consistent with best practices in questionnaire design (Dillman et al., 2014).

Qualitative responses were examined using inductive thematic coding (Braun & Clarke, 2006), whereby researchers identified key concepts that were then grouped into emergent categories aligned with the seven thematic areas of the study. To support coding consistency and facilitate the organisation of qualitative data, the research teams made use of artificial intelligence tools: ChatGPT Enterprise and Claude 3.5 Sonnet, strictly as analytical assistants (Díaz-Herrera, 2018). Quantitative data were analysed using descriptive statistical procedures (Field, 2018).

3. RESULTS

3.1. Climate Change Knowledge and CRE

With respect to the first key aspect, knowledge (questions 1-3; Figure 1), it is observed that 100% of the Italian, 83.4% of the Spanish and 63% of the Polish teachers believe there is evidence that human activity is accelerating climate change, and that this causes social injustice and inequality. It is therefore essential for teachers to address it as an ethical imperative. In fact, 100% of the Spanish and Italian teachers surveyed, and 81% of the Polish teachers agree with Pope Francis' *Laudato si'* stating that pollution and waste are closely linked to a throwaway culture that affects the excluded just as it quickly reduces things to rubbish.

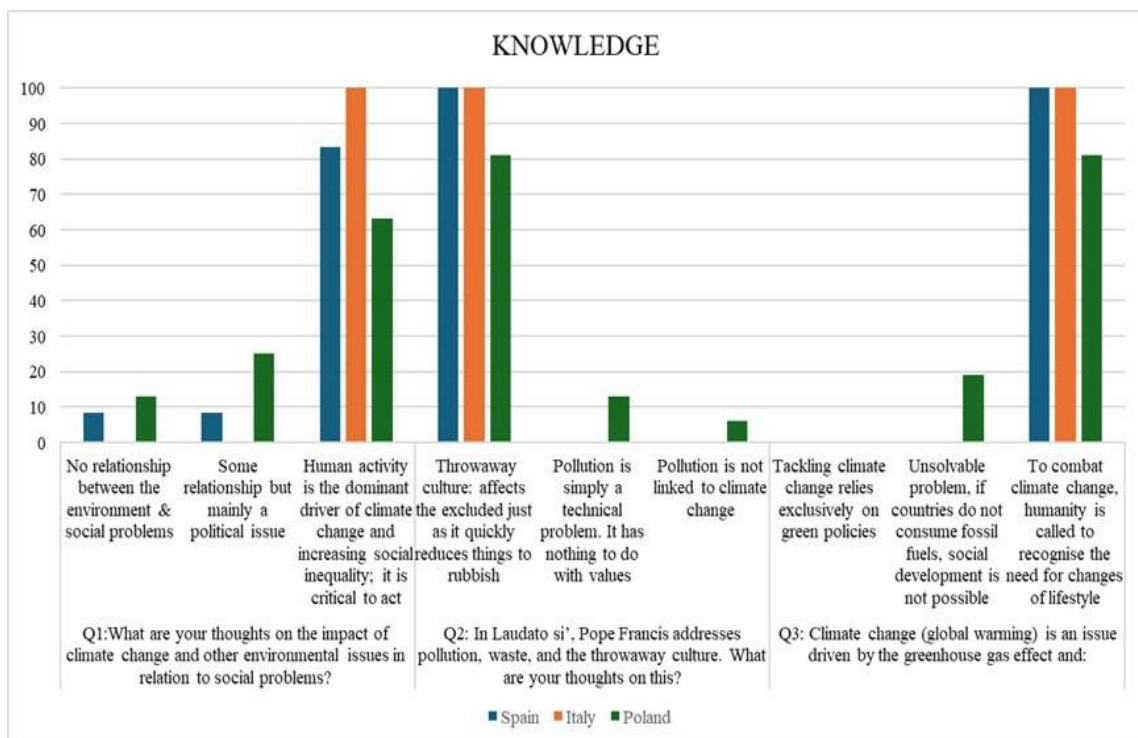


Figure 1. Higher education teachers' answers about their knowledge concerning the link between climate change and CRE.

Finally, 100% of the Spanish and Italian teachers, and 81% of the Polish teachers also point out that the climate is a common good and that to face the increase in the average temperature of the Earth (or, at least, to reduce the human causes that produce or aggravate it), human beings should recognise the need for changes in lifestyle, production, and consumption.

3.2. Competencies to be developed for Teaching Catholic Religion in the Context of Climate Change

Regarding the second key aspect, competencies, it is worth noting that the core competencies considered essential for leading a responsible life and protecting the common good coincided in the

three countries with those that foster both the body of knowledge and the characteristic behaviour promoted by CRE. These two most voted competencies were ethical engagement (Spain: between 96.8%-100; Italy: between 62.5%-100%; Poland: between 75%-93.8%); and critical thinking (Spain: between 84.38%-94.4%; Italy: between 50%-87.5%; Poland: between 62.5%-81.3%) (questions 4-6; Figures 2a, 2b, and 2c). In Italy, the second most valued competency to encourage behaviour promoted by CRE was shared between ethical engagement and management and problem solving (Figure 2c).

In the three countries, entrepreneurship and leadership was the least valued competency both for leading a responsible life and protecting the common good, and for promoting knowledge and

behaviour associated with CRE (Spain: between 22.2%-33.3%; Italy: between 0%-37.5%; Poland: between 6.3%-31.3%) (Figures 2a, 2b, and 2c).

COMPETENCIES

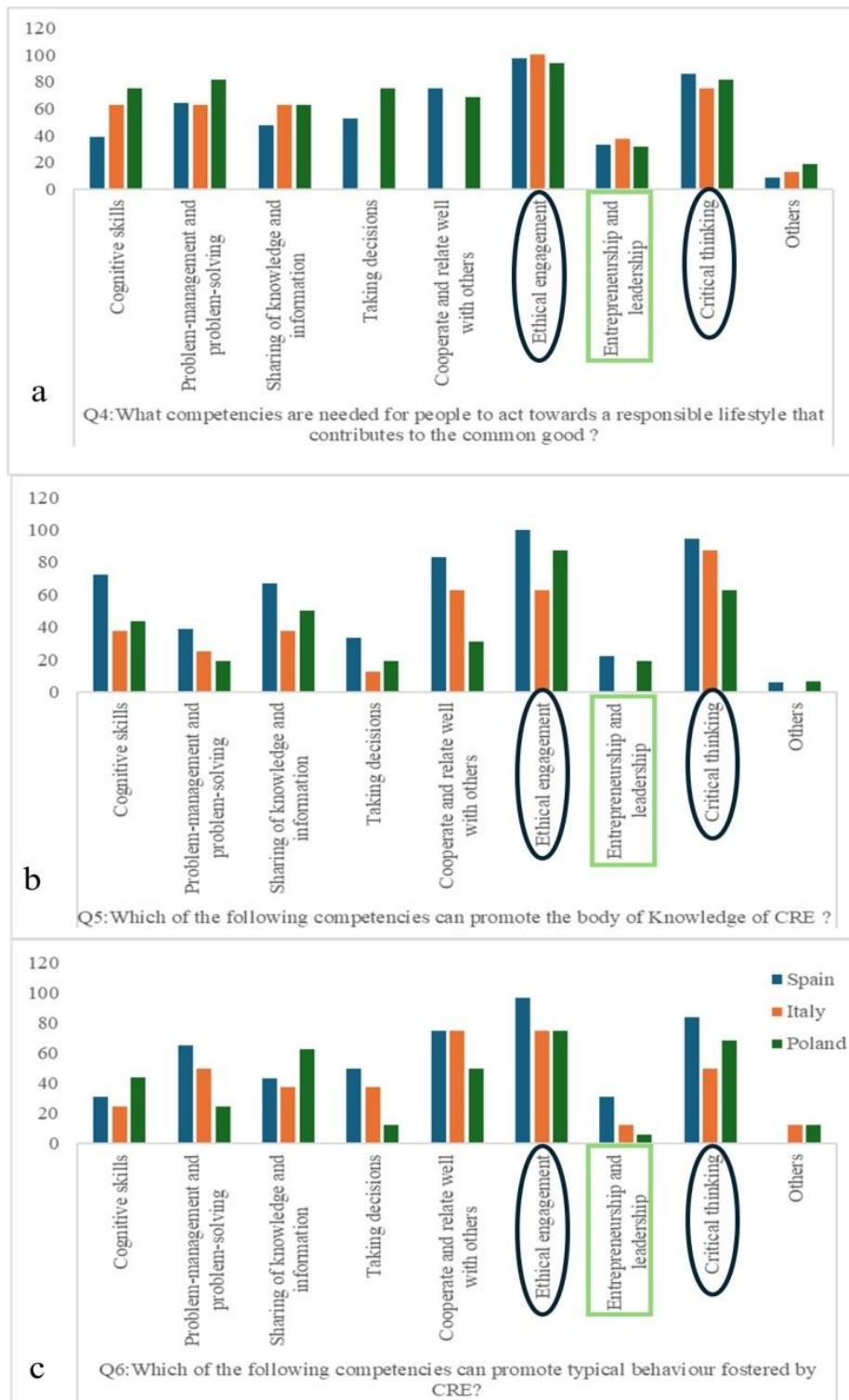


Figure 2. Higher education teachers' answers about the competencies to be developed (a) for leading a responsible life and protecting the common good; (b) to foster the body of knowledge promoted by CRE and (c) to encourage the characteristic behaviour promoted by CRE.

Of the respondents, 66.6% of the Spanish, 50% of the Italian and 31.3% of the Polish teachers stated that they strongly agree or agree that CRE in schools helps students perform actions to fight

climate change, which is a demonstration of skills. The participating teachers that strongly disagree or

disagree represent 11% in Spain, 25% in Italy, and almost 44% in Poland (question 7; Figure 3).

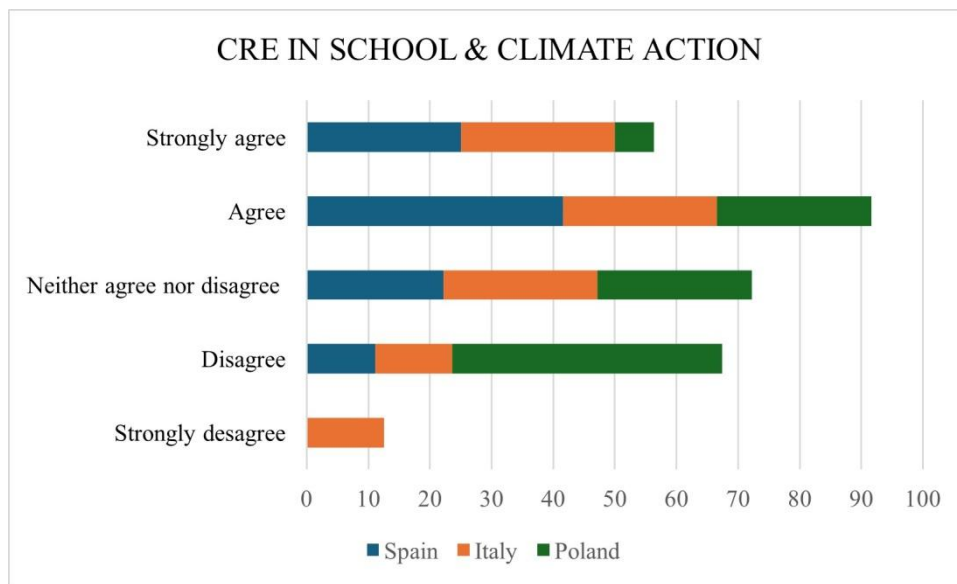


Figure 3. Teachers’ opinion (ranging from strongly disagree to strongly agree) on the idea that CRE in schools can foster climate action.

Some of the potential arguments for and against this idea are presented in Table 2 (question 8). The responses in which the participating teachers expressed strong agreement or agreement are grouped into three categories. The first one is environmental and social responsibility. This category encompasses all the reasons related to promoting environmental and social responsibility through CRE. The second one refers to ethical and personal development. This category includes reasons related to the development of personal convictions, critical thinking, and reflective skills fostered through religious education principles. The third category, Christian foundational principles, brings together the reasons referring to the relationship with Creation, faith, and biblical and Church teachings. The participating teachers in all three countries agree on certain points. For instance, the statement referring to the fact that teaching religion in schools causes concern for real-world issues is shared in Italy and Spain, while the

statement that it serves to develop critical thinking is highlighted in both Italy and Poland.

Table 2 also shows the reasons why the respondents strongly disagreed or disagreed with this idea. These responses are grouped into a fourth category, challenges and limitations. This category refers to the structural and ideological obstacles that could be encountered when teaching CRE in schools under this new paradigm of promoting climate action. In all three countries, the reason that appears to prevent this relationship between teaching religion and climate action from materialising is that it is not specified in the curriculum. When comparing this to the other three categories, it is contradictory. In the other categories, for instance, teaching religion means teaching the value of Creation, nature, and/or the common good. Although it is not explicitly stated in the religious education curriculum, some teachers clearly perceive the implicit connection.

Table 2. Reasons why teachers agree or disagree with the idea that CRE helps students perform actions to fight climate change.

Thematic categories	Code	Country
Strongly agree or agree		
(1) Environmental and social responsibility	Concern for real-world issues	Spain, Italy
	Social responsibility	Spain
	Responsibility creation	Spain
	Care for our common home	Spain
	Respect and care for nature	Spain
	Commitment to improving the world	Spain
	Climate and the common good	Spain
	Encourage climate action	Italy
(2) Ethical and personal	Personal convictions	Spain

development	Reflect on the impact of our actions	Spain
	Educate mentalities	Spain
	Sense of belonging to humanity	Italy
	Cultivation of self-awareness	Italy
	Develop critical thinking	Italy, Poland
	Educate through exemplarity	Italy
(3) Christian foundational principles	The nature of God and Creation	Spain
	Draws from the Christian faith	Spain
	Biblical teachings	Poland
	Church teachings	Poland
	Faith-centred religious instruction	Poland
Strongly disagree or disagree		
(4) Challenges and limitations	Not specified in the religious education curriculum	Spain, Italy, Poland
	<i>Laudato si'</i> is not known	Spain
	<i>Laudato si'</i> has not been assimilated	Spain
	Reflection process is needed	Italy
	Lack of awareness among teachers	Poland
	Political and ideological prejudice	Poland
	Lack of information	Poland

3.3. Teaching Resources for CRE and Climate Engagement

When analysing the results of the third key aspect, the teaching resources (question 9; Figure 4) necessary to teach religion promoting the paradigm shift towards climate action, two prevailing resources that coincided in the three countries were found: Pope Francis' *Laudato si'* encyclical (100% in Italy, 91.7% in Spain and 75% in Poland) and the Bible (93.8% in Poland, 75% in Italy and 72.2% in Spain). The teachers surveyed do not seem to require any extra material to teach religion. In all three countries, the sacred texts of the Catholic religion are mainly used, complemented by textbooks, as well as traditional materials such as documentaries and films.

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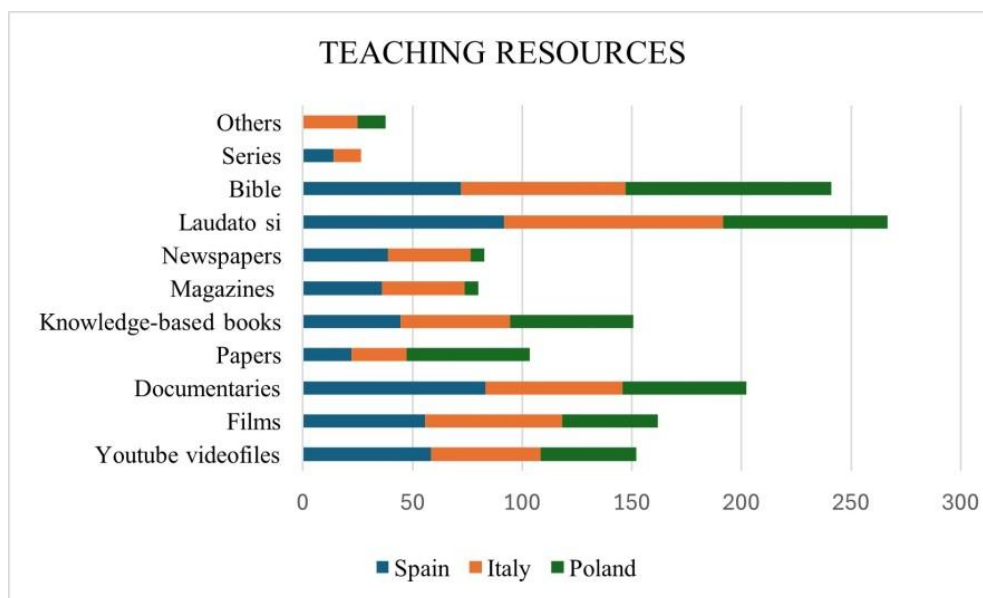


Figure 4. Teaching resources for CRE and climate engagement.

3.4. Teaching Methodologies

As far as teaching methodologies (questions 10–12) are concerned, nearly all interviewees reported feeling more comfortable using active approaches in their classes (88.8% in Spain and 87.5% in both Italy and Poland) (Figure 5a). The three most preferred methods among Spanish teachers are case studies (63.9%), cooperative learning (58%), and service learning (50%). In Poland, the top choices are collaborative learning (82%), service learning

(68%), and case studies (63%). In Italy, case studies (87.5%), cooperative learning (75%), and the flipped classroom (50%) are the most favoured methods (Figure 5c).

Despite this preference for active methodologies, a significant number of teachers also report using the expository method (44.4% in Spain, 37.5% in Italy, and 12.5% in Poland). However, in most cases, this instruction approach is interactive, and teachers engage students by

asking questions, resolving doubts, and/or initiating discussion (Figure 5b).

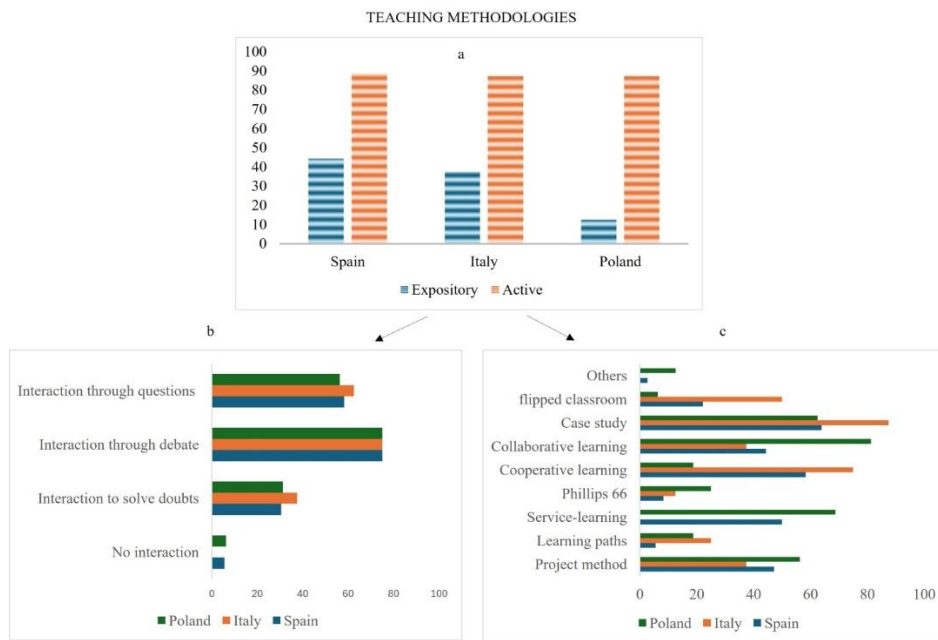


Figure 5. (a) Teachers' preference for expository-based versus active learning approaches in classroom methodologies; (b) Teacher-student interaction during expository-based classes; (c) Active teaching-learning methodologies used across different countries.

Those teachers who responded they promoted critical thinking among their students were asked how they encouraged it (question 13). Their responses are shown in Figure 6. Some strategies were shared in the three countries - namely, discussion and information searching- as well as others, which, although not identical, are grounded in the same educational principles. As shown in the conceptual map created, four categories emerge. The first one (A) is dialogic and reflective learning (Wegerif, 2011), which includes discussions, expressing personal opinions, and the Oxford-style debate. The second category (B), experiential and contextual learning (Kolb, 1984), comprises the strategies of observation of reality, practical

experiences, problem-solving, and case studies. The third one (C) is creative and constructive learning (Sawyer, 2012), which brings together the maieutic methodology, the synectics teaching strategy, the 635 method and asking questions. The fourth category (D), inquiry-based learning (Hmelo-Silver et al., 2007), includes information searching, text commentaries, and in-depth text analysis. It shares asking questions, problem-solving and case studies (because of their cross-curricular nature) with the second category. Interviewees in Spain mentioned watching films and documentaries, an activity that can complement any of the strategies previously mentioned, but falls outside the clusters that emerged from the analysis.

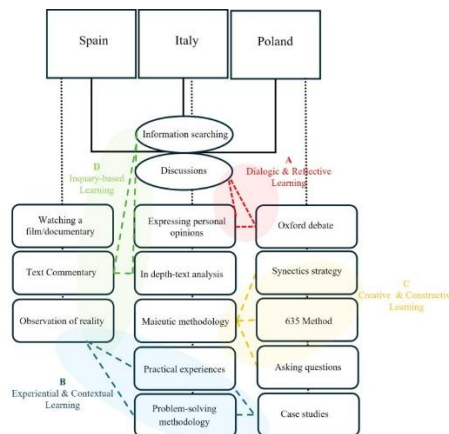


Figure 6. Strategies used by university teachers to foster critical thinking. Some strategies are shared across the three countries analysed (1), while others are country specific (2). Most can be grouped into educational

clusters or categories: A (red) - Dialogic and reflective learning; B (blue) - experiential and contextual learning; C (yellow) - creative and constructive learning; D (green) - inquiry-based learning

The strategies the participating teachers commonly implement to foster student participation in the classroom (question 14) are shown in Figure 7. Generating questions is a strategy shared across all three countries. Case

studies and dialogues are prevalent in Spain and Italy, while presentations, problem-solving, and discussions are commonly used in Spain and Poland. The remaining strategies are specific to each country.

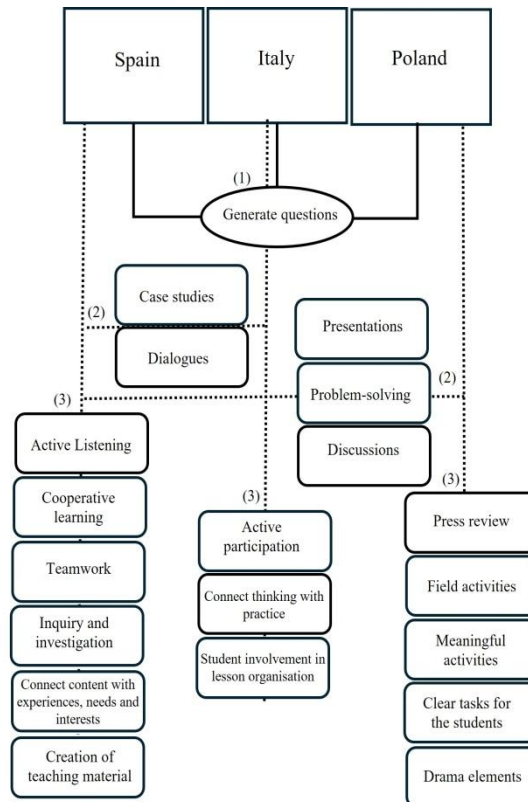


Figure 7. Strategies used by university teachers to foster classroom participation. Some strategies are shared across the three countries (1) or between two of them (2), while others are country specific (3).

Following the same rationale as in the previous case, these strategies can be grouped into categories based on shared educational principles. In addition to the categories identified in the previous question, a new one, cooperative and participatory learning

(E), emerges in this context. Some strategies, such as case studies or problem-solving, may be associated with more than one category because of their multifaceted nature. A detailed summary is provided in Table 3.

Table 3. Strategies grouped in clusters based on their educational principles: (A) Dialogic and Reflective Learning (DRL); (B) Experiential and Contextual Learning (ECL); (C) Creative and Constructive Learning (CCL); (D) Inquiry-Based Learning (IBL); and (E) Cooperative and Participatory Learning (CPL)

Strategy	A (DRL)	B (ECL)	C (CCL)	D (IBL)	E (CPL)
Active listening (Spain)	✓				
Dialogues (Spain, Italy)	✓				
Discussions (Spain, Poland)	✓				
Generate questions (All)	✓			✓	
Press review (Poland)	✓				
Connect thinking with practice (Italy)	✓				
Case studies (Spain, Italy)		✓		✓	

Connect content with experiences, needs, and interests (Spain)		✓			
Field activities (Poland)		✓			
Meaningful activities (Poland)		✓			
Creation of teaching material (Spain)			✓		
Drama elements (Poland)			✓		
Problem-solving (Spain, Poland)			✓	✓	
Presentations (Spain, Poland)			✓		
Cooperative learning (Spain)					✓
Teamwork (Spain)					✓
Active participation (Italy)					✓
Student's implication in lessons organisation (Italy)					✓
Clear tasks for students (Poland)					✓

3.5. Difficulties

Regarding the questions associated with the difficulties (questions 15-17) that may arise when including these contents in their classes, it is observed that 97.2% of the teachers in Spain, 100% in Italy, and 93.8% in Poland think that religious beliefs influence our relationships with God, people, nature, and things. Furthermore, more than 97% of the teachers in the three countries state it is important to integrate care for our common home and sustainability. They consider these contents should be included in university courses in a cross-curricular manner, and not only in those degree programmes related to environmental issues. Finally, over 80% -in all three countries- believe it is necessary to develop a culture of caring for people and for the Earth. All of this seems to indicate there is no resistance to

teaching religion incorporating these contents and this view, at least not in the case of the surveyed sample.

The teachers were also asked about the difficulties encountered in promoting sustainable behaviour (question 18). These responses are grouped into the following emergent categories (Table 4): (1) elements referring to moral and ethical deficiencies; (2) those indicating cognitive and educational limitations; (3) economic and political interests; (4) aspects related to excessive self-focus, reflecting individualism and egocentrism; (5) psychological and emotional factors; (6) spiritual and religious aspects; and (7) structural and practical barriers. All categories are represented across the three countries, except for the last one, which appears exclusively in Spain

Table 4. Teachers' difficulties in promoting sustainable behaviour grouped into seven emergent categories

Emergent category	Associated issues
(1) Moral and ethical deficiencies	Lack of values
	Lack of moral conscience
	Lack of responsibility
	Moral relativism
	Lack of self-criticism
	Lack of civil conscience
	Lack of respect for others
(2) Cognitive and educational limitations	Lack of reflection
	Lack of critical thinking
	Lack of critical analysis
	Lack of knowledge
	Lack of culture
	Inability to understand a complex problem
	Lack of education
Lack of awareness	
(3) Economic and political interests	Consumerism
	Economic interests
	Political interests
	Materialistic society
(4) Individualism and egocentrism	Egocentrism
	Egoism
	Individualism
	Anthropocentrism
	Living only for today

	Attitude of dominance
(5) Psychological and emotional factors	Laziness
	Hopelessness about the future
	Resistance to change
	Comfort
	Convenience
(6) Spiritual and religious aspects	Unwillingness
	Not acknowledging God as Creator
	Lack of spiritual awareness
(7) Structural and practical barriers	Separation between faith and ecology
	Lack of facilities
	Lack of resources
	High prices of sustainable products
	Social pressure and trends

3.6. Challenges and Educational Values

With reference to the challenges they may face (questions 19-22), between 87%- 100% of the Spanish and Italian teachers and 63%-75% of the Polish teachers agree or strongly agree that CRE can promote:

- ✓ a pro-environmental and climate action attitude in students
- ✓ more sustainable habits
- ✓ knowledge and understanding of the relationships between humankind and nature
- ✓ Pope Francis' call for ecological conversion

Finally, concerning the educational values of the proposal (questions 23-26), between 80%-94% of the Italian and Spanish respondents and 56% to 81% of the Polish respondents agree or strongly agree that the following aspects should be addressed:

- ✓ promote peaceful coexistence, sacrifice, and care for the environment
- ✓ follow the steps regarding climate change suggested by Pope Francis' encyclical *Laudato si'*
- ✓ include all those methodologies and develop competencies that link climate action to religion
- ✓ encourage values and beliefs that lead to motivation, commitment, and active participation in fighting climate change

4. DISCUSSION

4.1. Integrating Climate Action into CRE

The results of this study reveal a strong consensus among higher education teachers in Spain, Italy, and Poland regarding the intrinsic relationship between the Catholic faith and environmental responsibility. More than 80% of the respondents recognised that climate change is primarily caused by human activity and that addressing it constitutes an ethical imperative. These results indicate not only the willingness of the academic community to include environmental issues in CRE, but also the need to deepen the understanding of integral ecology.

The respondents' openness to incorporating ecological content is strongly justified by the teachings of Pope Francis, who continued the thinking of Paul VI, John Paul II, and Benedict XVI. Pope Francis stressed the need for the Church to engage in the debate on the ecological crisis (Turina, 2021) and the need to take effective action at the economic, social, and cultural level. He proposed extending the traditional understanding of the relationship between man and God, neighbour, and self with a fourth relationship: with Creation and the natural environment (Bremer, 2016). By doing so, he gave a new dimension to the concept of sustainable development. It can become an integral part of religious education at all levels of education and is an important benchmark for addressing these issues in the context of papal teaching.

In his encyclical *Laudato si'* (2015), the Pope pointed out that phenomena such as migration, armed conflict, and poverty are closely linked to environmental degradation, including desertification, water shortages, and loss of agricultural land (Fountain, 2015; Senut et al., 2009). He referred to scientific research confirming the anthropogenic sources of global warming (National Centers for Environmental Information, 2023), and to the existence of natural factors affecting CO₂ emissions, such as volcanic eruptions and changes in the Earth's orbit and axial tilt (Berner & Hollerbach, 2003). Religious teaching should therefore refer to current scientific research and present the problem of the ecological crisis from various perspectives. It is important to consider the broader context, including the religious one. This should lead to greater awareness of the causes of the current situation, of ecological conversion, and of every human being's actions.

Pope Francis clearly defined climate change and environmental degradation as a moral evil that primarily impacts the poorest and future generations. Criticising excessive anthropocentrism in the context of the common good and justice (LS, 49), he emphasised that the climate is a common

good belonging to all and meant for all (LS, 23). The encyclical places these issues in the context of two key principles of Catholic social teaching: the dignity of poor people and indigenous communities, and the intrinsic value of Creation as part of God's plan of salvation (Northcott, 2016). Thus, caring for Creation is not merely a technical or political issue, but a deeply moral and spiritual one.

In this framework, CRE, as a space for shaping conscience and ethical attitudes, becomes a key tool in promoting integral ecology. The results of this research and previous findings (Deane-Drummond, 2018) point to the potential of religious education in shaping moral and ecological awareness. CRE therefore provides a favourable environment for promoting environmental ethics and collective responsibility based on Christian values.

4.2. Ethical Engagement and Critical thinking as Core Competencies

Across the three participating countries, ethical engagement and critical thinking emerged as the most valued competencies for promoting sustainability within CRE. These results reflect a shared understanding that environmental action should be based on moral reflection and personal responsibility. However, the less valued competency of entrepreneurship and leadership suggests that teachers still perceive ecological education as a reflective process rather than as a proactive or action-oriented endeavour. One possible reason for this approach maybe they fail to understand that values such as responsibility, solidarity, and ethics are key to entrepreneurship. It should not be reduced to the technical ability to organise economic activity. Gałkowski (2006) explains that entrepreneurship provides a space for the development of moral, social, and environmental values. Therefore, people should acknowledge the limits not be exceeded in the exploitation of natural resources. They should know "eco-development" requires in-depth reflection on the (biological, economic, and cultural) values inherent in nature.

CRE should hence not only promote moral reflection, but also develop leadership and entrepreneurial skills that enable implementing sustainable development principles in specific social and institutional activities. This gap points to the need for professional development programmes that empower educators not only to discuss ethical dimensions, but also to lead initiatives and projects fostering ecological conversion in their institutions. In recent years, numerous initiatives have been launched that combine theory with practice (e.g. *Laudato Si'* Action Platform, 2021; O PROJEKCIE

LAUDATO SI, 2026), but further action is needed to inspire their inclusion in religious education.

4.3. The Role of Sacred Texts and Traditional Resources

The predominance of *Laudato si'* and the Bible as teaching resources demonstrates the centrality of religious and ethical narratives in addressing climate change through CRE. The Bible is one of the three main sources of catechesis (Pontificio Consiglio, 2020), alongside the Liturgy and Tradition. Referring to them in religious education gives the message authority and consistency with religious identity, and, in the context of integral ecology, it can lead to a change in man's approach to Creation. Biblical texts present the world as a gift from God (Genesis 1-2), which gives rise to a responsibility to protect it. This perspective is key to the concept of "ecological conversion," which, as Pope Francis emphasised, is a response to environmental degradation and social inequality (Edwards, 2016).

Environmental issues are often presented in technical or economic terms, which may seem distant from everyday values. Sacred texts give these issues a deeper meaning, presenting care for Creation as a moral and spiritual duty arising from man's relationship with God. This shifts the emphasis from "we must protect the planet" to "we are responsible before God for the gift of Creation." Research shows that scientific knowledge alone does not always lead to behavioural change. It may even cause eco-anxiety (Hickmann et al., 2021). Religious texts, however, offer a positive narrative based on hope and responsibility, which encourages motivation to act. Education should not only inform, but also inspire.

It seems that the teachers surveyed use the Bible and the Magisterium of the Church to stress moral responsibility, care for Creation, and social justice. Nevertheless, the limited use of contemporary materials -such as scientific papers, documentaries, and digital tools- indicates the persistence of the traditional approach (Aldrin, 2024; Kahn, 2022). This can be seen both as a strength, ensuring consistency with religious identity, and as a limitation in the context of the growing need for interdisciplinarity (Walbank, 2022). Updating teaching resources towards interdisciplinary perspectives can strengthen the link between faith and science, supporting UNESCO's (2023) call for a systemic transformation of education for sustainable development (ESD). Integrating religious sources with current scientific knowledge increases the credibility and practical dimension of environmental education.

4.4. Active Methodologies and Teaching Innovation

The findings also show a broad preference for active learning methodologies, with over 85% of the respondents in each country favouring approaches such as case studies, cooperative learning, and service-learning. These strategies are consistent with educational models that promote dialogue, experience, and critical reflection - key elements of transformative education (UNESCO, 2022). Similar conclusions appear in international literature, where active methods are recognised as effective in developing competencies related to ESD (Martínez Valdivia *et al.*, 2023; Díaz-Pareja *et al.*, 2021).

Despite this trend, a significant number of teachers continue to use expository methods, often combined with interaction with students. This points to a pedagogical transition phase in which traditional and participatory methods coexist (Molina-Torres & Ortiz-Urbano, 2020). Encouraging more experimental, problem-based, and community-oriented practices can enrich religious education in the context of achieving the goals of ESD and climate action (Aramburuzabala & Cerrillo, 2023; Álvarez-Vanegas *et al.*, 2024). According to the teachings of *Laudato si'*, environmental education cannot be limited to the transmission of ideas, but should lead to ecological conversion (Ormerod & Vanin, 2016), a transformation of the heart and mind that engages the whole person in caring for our common home (LS 216–217). Franchi (2021) emphasises that CRE should integrate spirituality, ethics, and humanism to shape attitudes of responsibility and solidarity towards Creation. Research by Rousell and Cutter-Mackenzie-Knowles (2020) indicates that creative and participatory methods, such as art projects, storytelling, and social action, effectively engage young people in climate issues, reducing eco-anxiety and strengthening their sense of agency.

In this context, the introduction of environmental education marks a new direction in the fundamental principles of CRE. Environmental education is more than just one of the topics included in CRE. It can provide a broader conceptual framework that, with the aim of encouraging unity, combines traditional Catholic spirituality with a commitment to bringing about meaningful and lasting changes in the way we live (Polito, 2022; Francisco & Flores, 2024, Aldrin, 2024). It should be stressed that this is a major challenge today. To create a new lifestyle based on integral ecology, long processes of renewal are required (Borda & Ceglarek, 2016; Ormerod & Vanin, 2016).

4.5. Barriers and Opportunities for Sustainable Religious Education

Although most teachers expressed great willingness to incorporate sustainability into their teaching, several structural and cultural challenges persist. The difficulties identified include moral and ethical deficiencies, lack of reflection and knowledge, economic and political pressure, and an enduring individualistic worldview. These barriers reflect the moral and anthropological criticism expressed in *Laudato si'*, suggesting that true ecological conversion requires not only curriculum reform, but also a profound transformation of values and lifestyles (Francis, 2015; Kureethadam, 2019).

International research confirms that similar obstacles exist in ESD: lack of teacher preparation, overloaded curricula, insufficient institutional support, and exam pressure (Parry & Metzger, 2023; Sreerekha, 2025). The literature also emphasises the importance of overcoming “disciplinary silos” and developing intercultural dialogue competencies for religious education to effectively integrate ecological perspectives (Franchi, 2016; UNESCO, 2022).

Key to fully understanding the message of the encyclical is the concept of “integral humanism,” which combines traditional anthropology with a modern approach to global challenges. It refers to the “educational crisis” (diagnosed by Pope Benedict XVI) in the context of the challenges posed by consumerism, which limits the scope of human life (Franchi, 2016). A positive solution to this crisis is possible within CRE if it integrates spiritual, ethical, and social dimensions. However, the absence of significant ideological resistance among the respondents is a promising starting point for implementing sustainability-oriented reforms in religious education.

4.6. Towards an Ecological Conversion in CRE

The data clearly demonstrate that most participants believe CRE can foster pro-environmental attitudes, sustainable habits, and a deeper understanding of the relationship between humans and nature. These findings are consistent with the ecological spirituality framework proposed by Pope Francis (2015) and supported by recent research linking moral virtue, empathy, and ecological behaviour (Kalaycı Alas & Korutürk, 2024). CRE emerges not merely as a space for theological instruction, but as a transformative context capable of integrating ecological ethics, critical awareness, and faith-based motivation. It holds potential as a bridge between spirituality and climate action, particularly when grounded in educational approaches that prioritise community,

dialogue, and ethical commitment (UNESCO, 2022). For Catholic teachers, this means developing a culture of dialogue -both with other religious traditions and with secular movements- as a prerequisite for effectively responding to global challenges (Congregation for Catholic Education, 2013; Franchi & Davis, 2021).

4.7. Limitations and future research directions

Given the exploratory nature of this study and its relatively small sample (62 teachers in three countries), results should be interpreted with caution. Further research should involve larger and more diverse populations. It should include longitudinal or mixed-method approaches to assess how sustainability-focused religious education influences students' attitudes and behaviours over time. Additionally, comparative studies between religious and secular educational contexts could help clarify how different moral frameworks shape climate engagement amongst teachers and students.

When analysing data from over 1,100 students in Austria and Germany, Altmeyer (2021) found that religious perspectives typically play a minor role in environmental issues. However, the results of this study also show that religious education can support the development of attitudes of responsibility and resource stewardship. Based on a systematic review of the literature, Aldrin (2024) notes that despite an increase in publications on religious education and climate change between 2011 and 2022, there is still a lack of research focused on practical aspects. He also points out that religious education is considered crucial for communicating the importance of interconnections and developing theory and practice. Further quantitative and qualitative research is therefore needed, as few of the numerous analyses on religious education refer to climate issues. More in-depth research on the role of religious education in implementing the idea of "our common home" is hence required.

5. CONCLUSION

This exploratory study provides empirical evidence that CRE in higher education can play a significant role in fostering ecological awareness, ethical responsibility, and climate action. Across Spain, Italy, and Poland, university teachers strongly agree on the ethical nature of climate change and its close connection with social injustice, in line with the view of integral ecology proposed in *Laudato si'*. Climate change is not just widely understood as a scientific or political issue, but as a moral challenge that calls for personal and collective transformation.

One of the central findings of the study is the prominence attributed to ethical engagement and critical thinking as core competencies for promoting sustainable behaviour in religious education. These competencies are perceived as fundamental both for safeguarding the common good and for embodying the values traditionally associated with CRE. However, the less valued competency of entrepreneurship and leadership points to a persistent gap between ethical reflection and action-oriented engagement. This suggests the need to reconceptualise leadership and entrepreneurship within CRE as expressions of moral responsibility, social commitment, and ecological stewardship. The results also show that teachers primarily rely on foundational religious texts, especially the Bible and Pope Francis' *Laudato si'*, to address climate-related issues. While this reliance reinforces coherence with Catholic identity and provides a strong moral and spiritual narrative, it also reveals a limited integration of interdisciplinary and contemporary scientific resources. Strengthening the dialogue between faith and science through updated materials and interdisciplinary approaches could enhance the credibility and practical impact of sustainability education within religious contexts.

In terms of teaching, the widespread preference for active methodologies such as case studies, cooperative learning, and service learning reflects a growing alignment with transformative and student-centred educational models. These approaches are particularly well suited for promoting ecological conversion, as they engage students cognitively, ethically, and experientially. Nevertheless, the continued use of expository methods indicates that Catholic higher education is still in a transitional phase, where traditional and innovative teaching methodologies coexist. It is important to note that the study reveals no substantial ideological resistance among teachers to integrating sustainability and climate action into CRE. The main obstacles identified are related to moral and educational limitations, individualism, economic and political interests, and structural constraints. This finding suggests that the challenge is less about acceptance and more about providing proper institutional support, teacher training, and curricular frameworks that explicitly incorporate environmental concerns.

In conclusion, CRE emerges as a valuable and distinctive space for advancing sustainability education in higher education. Integrating ethical reflection, spiritual motivation, and active educational practices can contribute meaningfully to the development of pro-environmental attitudes and sustainable habits. Despite the exploratory

nature and limited sample size of the study, the findings point to the need for further research with larger and more diverse populations, as well as longitudinal studies to assess the long-term impact addressing the global ecological crisis and promoting care for our common home.

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Declaration of AI using Assisted Technologies

The research teams made use of artificial intelligence tools: ChatGPT Enterprise and Claude 3.5 Sonnet, strictly as analytical assistants.

of sustainability-oriented religious education on students' behaviour. Strengthening this line of inquiry can help position CRE as a relevant actor in

Data Availability Statement

The details of this project and the results obtained are available on the Erasmus Results Platform: <https://erasmus-plus.ec.europa.eu/projects/search/details/2020-1-ES01-KA203-083010>

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