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REVIEW ARTICLE

The role of training in implementing corporate sustainability: A systematic literature review

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Abstract

Our literature review synthesizes the ways in which training (of management and employees) affects the implementation of corporate sustainability (CS) in organizations. We structure the research field according to the determinants of, approaches to, and outcomes of training for CS. We explain current issues in this field and develop a research agenda. We conducted a systematic literature review starting with an initial sample of 1755 empirical studies. Based on their validity, relevance, and reliability, we selected and discussed the 67 seminal sources in this field. We find that several factors foster the use of training. Besides an intrinsic organizational interest in CS, regulation and stakeholder pressure encourage organizations to prioritize training. We identify multiple approaches to and applications of training. Training on CS may be focused or multifaceted, mandated or collaboratively-driven, but it should always be closely aligned with structure and strategic goals, and must be regularly evaluated. The literature shows that such serious and well-designed training is linked to better environmental, social, and economic performance. Our review is the first to address the role and application of training for CS. We contribute a synthesis of empirical evidence in the field, as well as a research agenda. We highlight that practice should not see CS training from the perspectives of compliance or greenwashing, but embrace the opportunity to create a thus far underestimated alignment with strategy and long-term performance.

KEYWORDS
corporate social responsibility, corporate sustainability, sustainability accounting, sustainable development, systematic literature review, training

JEL CLASSIFICATION
A13, L3, M14, M4, Q1, Q5

1 | INTRODUCTION

The implementation of corporate sustainability (CS) has received increasing attention from academia, organizational practice, and regulators since the Brundtlandt Report in 1987 (Huang & Watson, 2015; Maon et al., 2009). CS encapsulates the idea of organizations integrating social and environmental actions into their business models (Lueg et al., 2015). The specific use of "corporate" in CS highlights that this includes all stakeholders that can affect economic performance, even if only in an indirect way, including compliance with regulations

(Harrison et al., 2020). Altruistic organizational actions affecting society at large may be included, but do not have to be. CS is an essential driver of sustainable competitive advantage, and thereby better economic performance (Margolis et al., 2009). CS encourages the effective and efficient use of resources (Lueg & Radlach, 2016), builds reputation and trust in stakeholder networks (Harrison et al., 2020), and creates transparency and accountability (López-Pérez et al., 2017; Ostrom, 1990).

However, many organizations do not succeed in implementing CS in a sophisticated manner, and thereby fail to reap its full benefits (Lueg & Radlach, 2016; Zohora & Hoque, 2014). One of the reasons for this is that managers and employees lack the training to understand the CS aspects of the organizational strategy (goals), or how their actions can contribute to implementing the CS parts of the strategy (processes) (Hayton, 2003; Huang, 2013; van Gelderen et al., 2005). Training has been proven to be a successful tool to overcome the implementation chasm, both for organizational novices (Teixeira et al., 2012) and experienced strategists (Peng & Litteljohn, 2001). Various studies in other fields have shown that employees' understanding of strategies has a significant impact on whether their implementation is successful. Taking shareholder value orientation as an example, Haspeslagh et al. (2001) investigated the link between a shareholder-oriented strategy and the tool of value-based management (VBM). They show that 62% of the organizations that successfully implemented the strategy had trained at least 75% of their managers whereas, in the less successful organizations, only 27% of the managers were trained in VBM. Riceman et al. (2002) show in their experiment—as expected—that managers who aimed for shareholder value, and were trained in VBM, clearly outperformed those who focused on internal key performance indicators only. A particularly interesting result from their study was that the managers who aimed for shareholder value but *did not* fully understand the mechanics of VBM actually incurred opportunity costs for the organization: they created even less value than their colleagues who relied on management practices that were conceptually inferior to VBM. We claim that the same might be true for organizations that aim for (corporate) sustainability: managers and employees who aim for sustainability, but are not trained in the tools to implement it, might cause more harm than good to stakeholders. The strategy implementation training literature is already well advanced, yet evidence on the role of training in CS implementation is still in its nascent stage. Prior research outlines the importance of communication (e.g., via training for internal stakeholders and annual reports for external stakeholders) for successful CS implementation (Baumann et al., 2011; Fatima & Elbanna, 2022; Maon et al., 2009). However, insights on CS communication from an internal angle are scarce, whereas plenty of studies explore organizations' communication with their external stakeholders (Chu et al., 2020; Fatima & Elbanna, 2022; Gödker & Mertins, 2018). To provide more insights on internal CS communication, we focus on the role of training and pose the research question: *What is the role of training in implementing corporate sustainability?*

To address this research question, we employ a systematic literature review. We started with an initial sample of 1755 academic articles. After applying rigorous exclusion criteria, we examined 67 seminal articles in detail regarding the determinants of, approaches to, and outcomes of CS training.

The results of this study show that the determinants can be categorized as either internal (top management commitment, organizational values) or external (stakeholder pressure, environmental policies). External determinants have a direct effect on CS training, as well as an indirect one through selected internal determinants (Vidal-Salazar et al., 2012).

We find that several patterns emerge. Organizations are free to choose a narrowly focused approach to training or to take a multifaceted approach. Successful CS training may be mandated. It can also be designed in a collaborative and action-oriented way that links directly to knowledge-building and organizational practices (Torabi et al., 2022). Some findings indicate fewer open approaches to training. For instance, CS training should always be closely aligned with organizational structure and strategic goals (Cullens & Waters, 2013). This can be facilitated at all hierarchical levels. Also, CS training should be evaluated regularly to stay effective (Pless et al., 2012). Last, we find that most studies confirm that sophisticated CS training has a positive impact on environmental, social, financial, and non-financial economic performance (Daily et al., 2012).

This literature review contributes to research and practice. It synthesizes empirical evidence in the field, and develops a research agenda. We offer insights for practice as to how CS training best creates value in the environmental, social, and economic dimensions. Additionally, the research provides guidance for human resources (HR) managers, consulting firms, and professional associations on how to develop training. Last, our findings are encouraging for regulators and unions who support organizations in offering CS training.

2 | THEORETICAL BACKGROUND

CS has become increasingly central to organizations' strategies in recent years (Ashrafi et al., 2019). The concept is rooted in the idea of sustainability, which has been shaped by the influences of politics, public opinion, and scientific research (Linnenluecke & Griffiths, 2010). CS is a largely voluntary practice that aims to provide for the needs of both current direct and indirect stakeholders in the long term but without compromising the ability of future generations to do the same (Dyllick & Hockerts, 2002). CS suggests that economic performance should be supplemented by social and environmental performance in order to create value for stakeholders in the long term (Dyllick & Hockerts, 2002). This concurrence is often referred to as the "triple bottom line" of sustainability, where the three components influence one another (Linnenluecke & Griffiths, 2010).

Montiel (2008) emphasizes the trends of research on CS, corporate social responsibility (CSR), corporate social performance (CSP), and environmental management (EM) and notes that the various terms used in the literature are all striving for the same goal and are often used interchangeably in business and research contexts. This review uses the term CS to encompass studies focusing on CSR,

sustainable development, and related concepts, as they are all attempting to achieve the goals of the triple bottom line.

Thorough implementation of CS is essential to achieve an alignment with stakeholder expectations and the strategic goals of an organization (Kaplan & Norton, 2008). Fatima and Elbanna (2022) develop a four-dimensional framework for CS implementation (awareness, communicating, embedding, and evaluation), which forms the theoretical background to this study. The framework is based on the concept of corporate citizenship elaborated by Maon et al. (2009) and Baumann et al. (2011). The first dimension, awareness, may be initiated for altruistic and/or instrumental reasons and can take place in both a top-down and bottom-up fashion (Baumann et al., 2011; Fatima & Elbanna, 2022) and includes the integration of CS into management control systems (Baumann et al., 2011; Fatima & Elbanna, 2022). The second dimension encompasses communicating CS to internal and external stakeholders. The means, type, and content of the communication must be defined. Internal communication can take the form of meetings, newsletters, and training (Maon et al., 2009) while external communication may be in the form of annual and CS reports, press releases and conferences, the creation of networks and ambassadors, and advertisement campaigns (Fatima & Elbanna, 2022; Maon et al., 2009). The third dimension requires a measurable embedding of CS into management controls and governance. Organizational members use tools such as CS policies, scanning and decision procedures, and cultural change to reinforce CS-compliant behavior (Baumann et al., 2011; Fatima & Elbanna, 2022; Maon et al., 2009). The fourth dimension includes the evaluation of CS performance and organizational learning. It measures the extent to which CS goals have been achieved, and what improvements still need to be made (Baumann et al., 2011; Fatima & Elbanna, 2022; Maon et al., 2009). This review focuses on the second dimension (CS communication) and explores nuanced aspects of CS training.

Training in general can be defined as an instrument to improve employees' knowledge and capabilities that help increase motivation, commitment, and performance regarding specific tasks (Jabbour & de Sousa Jabbour, 2016; Teixeira et al., 2012). CS training in particular is a communication medium for CS implementation (Fatima & Elbanna, 2022). It serves as a tool to communicate an organization's sustainability strategy, values, and attitudes and align them with organizational practices (Law et al., 2017). Training may empower employees to align their competencies with the organization's values and demands, and can serve as an *input control*. Organizations may require successful training before trusting employees and managers with specific decision-making, for example, on assessing the ecological impact of alternative technologies. At the same time, training can be a *process control* if it prescribes policies and procedures that employees and managers have to follow, for example, when complying with regulatory reporting standards (Long, 2018; Merchant & Van der Stede, 2017). By consciously engaging employees, management can create a competitive advantage for the organization in terms of CS implementation (Singh et al., 2019).

Training should be tailored to the organization's individual strategy: thus, it should be conducted in different forms. For example, there are internal and external providers of online and face-to-face training, and ex-cathedra lectures and interactive workshops (Basten & Haamann, 2018; Giannakos et al., 2022; Torabi et al., 2022). In addition, the duration of the individual training varies. Some training courses are aimed at honing a special capability or up-skilling in the same job, and are thus shorter than those which are focused on re-skilling for new jobs and might take several months (Pless et al., 2012). In either case, training should be evaluated regularly to ensure the best results (Perron et al., 2006).

Existing research has specifically addressed the role of training in strategy implementation in organizations, with a focus on value creation (Haspeslagh et al., 2001; Riceman et al., 2002). For example, Riceman et al. (2002) find evidence that the tool of economic value added (EVA) improves performance primarily when employees understand the mechanisms through which EVA works. Understanding of such concepts can be developed, particularly through training. Peng and Litteljohn (2001) confirm that the increase in knowledge achieved through training improves strategy implementation.

Currently, research on the role of training in CS implementation is limited. Some studies address the impact of individual organizational outcomes such as environmental behavior, employee commitment, or organizational reputation (Tharenou et al., 2007). However, as yet, no study has examined the role of training in CS implementation in organizations: the prevailing literature is largely concerned with green or ecological training (e.g., Law et al., 2017; Silva et al., 2019). Green training involves the implementation of training and orientation programs aimed at increasing employees' environmental awareness (Renwick et al., 2013). It aims to improve employees' environmental sensitivity, knowledge, and behavior by installing green values and training them to implement sustainable work practices (Renwick et al., 2013; Zoogah, 2011). Green training's goal is to help employees understand the connection between their activities and their impact on the environment. It is designed to equip them with the skills necessary to recognize environmental problems and take the necessary actions (Zoogah, 2011). Drawing on Fatima and Elbanna (2022) four-dimensional implementation model, our study aims to contribute to existing research by examining the determinants of, approaches to, and outcomes of CS training. We develop a research model in line with our theoretical foundation (Figure 1), aiming to answer the following three sub-questions:

1. What are the determinants for CS training implementation?
2. What approaches to application are used to establish CS training?
3. How does the use of CS training affect organizational outcomes?

This literature review considers all approaches that directly address CS training and are conducted in an organizational setting. It excludes training that is delivered to prepare for a career, such as apprenticeship training or higher education.

3 | METHODOLOGY

A systematic literature review is the most efficient and high-quality method for identifying and evaluating extant literature in a

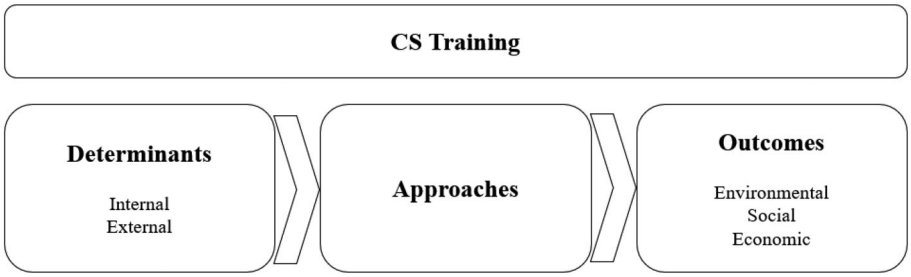

FIGURE 1 Research framework.

reproducible and unbiased manner (Mulrow, 1994; Tranfield et al., 2003). Conducting a systematic literature review comprises several stages (e.g., Albertsen & Lueg, 2014; Lueg & Schäffer, 2010; Lueg & Vu, 2015). We followed the recommendations of the *preferred reporting items for systematic reviews and meta-analyses* (PRISMA) statement to identify the relevant publications (Page et al., 2021). The flow diagram shows the selection process used (Figure 2).

First, we used the *Business Source Complete* and *Scopus* databases to identify a comprehensive list of literature. The Scopus database provides extensive coverage of peer-reviewed research literature while the Business Source Complete database includes a selected set of open access journals.

We searched for terms that we identified through a cursory reading of the literature. We acknowledge that there is already a large amount of literature on the specific topic of green training, so we added a second main search string incorporating the specific terms for green training. These search terms are supposed to be found in the title, abstract, or keywords of the relevant articles. Since *training* and *sustainability* are large fields in themselves, we required that a combination of these fields existed and used structured query language to search the databases. Our search strings were:

String 1: "implement*"

- AND ("CSR" OR "corporate sustainability" OR "sustainable development" OR "ESG" OR "triple bottom line" OR "social responsibility")
- AND ("training" OR "t&d" OR "empowerment" OR "GHRM" OR "green human resource management")

String 2: OR "implement*"

- AND ("GHRM" OR "green human resource management")
- OR ("CSR training" OR "green training" OR "environmental training")

We limited the search to scientific articles published in English language journals to maintain the internal consistency of the review. We did not set a starting date and searched all papers until the end of 2022. This initial search yielded 1755 articles. We first eliminated 186 duplicates, reducing the sample to 1569 articles.

Second, we assessed the eligibility of the remaining 1569 articles. By restricting the sample to articles published in peer-reviewed journals listed in the Academic Journal Guide (AJG, 2021) (all rating grades from 1 to 4*), we eliminated a further 1175 articles.

Third, we screened the titles and abstracts of the remaining articles for their eligibility. This process enabled an alignment between the selected articles and the objectives of the research (Mio et al., 2022; Sivarajah et al., 2017). We eliminated 282 articles that did not show a direct link between CS implementation and training.

Fourth, we conducted a full-text analysis of the remaining 112 articles. We accepted all empirical methods, including studies with qualitative, quantitative, and mixed method approaches (Tranfield et al., 2003), but removed all non-empirical articles. This resulted in the exclusion of an additional 29 articles. Second, we conducted a content analysis to verify which articles were within the scope of our research question. This entailed a specific focus on training and resulted in a further 27 articles being excluded. Three others had to be removed due to restricted access of non-mainstream publishers. This left 53 articles that matched all the selection criteria and were fully screened and analyzed.

To also include articles that match the search criteria but are not listed in the databases or do not contain the specific search terms, we applied the *ancestry approach* (Cooper, 1982). This involves tracking citations in the identified articles to find further articles that match our search criteria. Including sources not listed in the AJG is justified at this point, since articles rated by the AJG had found the sources so remarkable that they cited them, and the reviewers of these AJG-rated journals accepted these sources as valid and reliable evidence. We also used the *offspring approach* and checked on Google Scholar which had most recently cited the sources we identified. This way, we ensured that recent (and possibly soon groundbreaking) sources such as in-press articles and preprints of outstanding journals would be included. Through these ancestry and offspring approaches, we identified a further 42 articles, 14 of which met our outlined criteria of empirical analysis and fitted with our research question. Thus, the final sample contains 67 articles.

We organized our articles according to the three sub-research questions in three tables relating to determinants of, approaches to application, and outcomes of CS training. The tables include author, year of publication, educational focus, method, sector, independent variable, dependent variable, moderator, and mediator or, in the case of quantitative studies, the main outcome. This dataset is presented in Tables 1 to 3. The analyzed results of the descriptive analyses are presented in the corresponding sections.

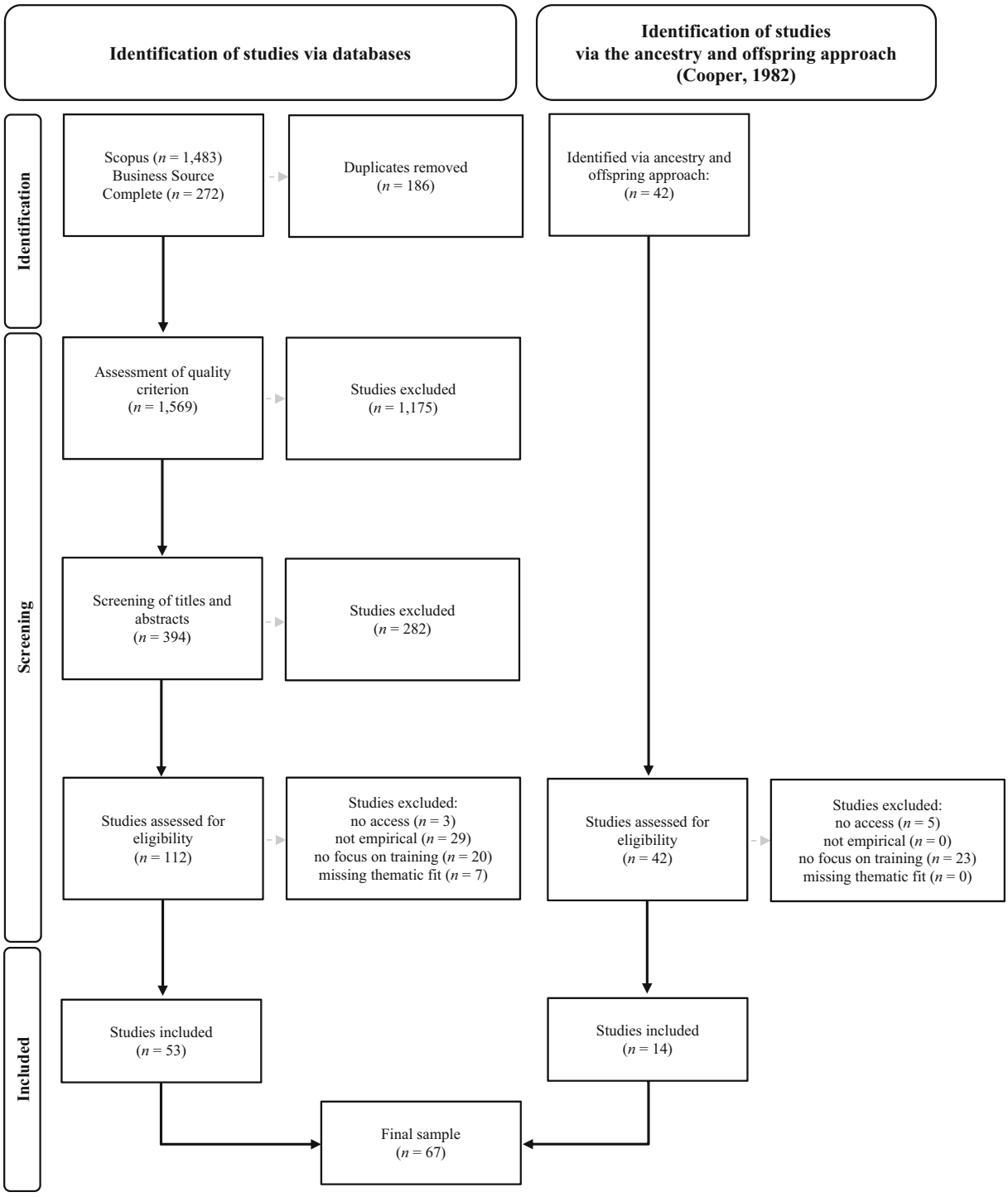

FIGURE 2 PRISMA 2020 flow diagram. *Source*: Figure adapted from the PRISMA framework (Page et al., 2021).

4 | RESULTS

4.1 | Bibliometric analysis

Figures 3-7 depict the frequency distribution of the reviewed articles by publication year, geographic location, sector, methodological approach, and research focus. Figure 3 shows the development of the research field over time. The number of studies is steadily rising, and increased more than six-fold in 2019 compared with the previous year. These findings indicate that there is a growing interest in the research field.

Figure 4 displays the sample regions of the articles and shows the International Monetary Fund's classification of their economy (IMF, 2022). Most articles use samples from emerging and developing

TABLE 1 Empirical research on determinants of CS training.

Authors	Year	Country	Focus 0 = training 1 = training and GHRM 2 = GHRM	Method 0 = quant. 1 = qual. 2 = mixed	Sector(s)	Independent variable	Dependent variable	Mediator	Key findings
Del-Castillo-Feito et al.	2021	Multinational	0	0	Various	• Environmental policies	• Legitimacy	• Employees' environmental training • Dialog with local community	• Environmental policies have a positive effect on the legitimacy of multinational organizations • These are supported by dialog with local communities and environmental training of employees • Environmental commitment represents a key factor for organizational legitimacy
Goddard et al.	2016	UK	1	1	Construction	N/A	N/A	N/A	• Strong communication and commitment to training programs increase the motivation to implement CS training • Stakeholder pressure on organizations positively influences compliance with sustainability standards
Guerci et al.	2016	Italy	0	0	Various	• Customer pressure • Stakeholder pressure	• Environmental performance	• Green training and involvement	• Customer pressures improve the implementation of all GHRM practices leading to improved environmental performance • Stakeholder pressure leads to green hiring only
Liu et al.	2020	China	0	0	Manufacturing	• Top-management support • Moderator • CSR culture	• Green procurement	• Green training on awareness and responsibility • Green training on technical knowledge and skills	• Green training on awareness and responsibility and on technical knowledge and skills mediates the effect between top management support and green procurement • GTKS has a stronger effect. CSR culture may weaken these two mediation effects negatively

TABLE 1 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM 2 = GHRM	Method 0 = quant. 1 = qual. 2 = mixed	Sector(s)	Independent variable	Dependent variable	Mediator	Key findings
Sarkis et al.	2010	Spain	0	0	Manufacturing	• Stakeholder pressure	• Eco-design practices • Environmental management system practices • Implementation of source reduction practices	• Training	• Stakeholder pressure has a major impact on the implementation of environmental practices • The training fully conveyed the relationship between stakeholder pressure and the adoption of three major groups of environmental practices
Singh et al.	2019	UAE	0	0	Various	• Environmental ethics	• Environmental performance • Competitive advantage	• Environmental training	• Environmental ethics influence environmental training, performance, and competitive advantage of organizations • Employee training meditates the influence of ethics on environmental performance and competitive advantage
Singh et al.	2020	UAE	1	0	Manufacturing	• Green transformational leadership	• Environmental performance	• Green ability • Green innovation	• GHRM practices mediate the influence of green transformational leadership on green innovation • GHRM indirectly influences organizational environmental performance through green innovation • The relationship between HRM and environmental performance does not depend on the additive effect of green transformational leadership and green innovation as an antecedent or mediator, but on a mixture of both combination forms

(Continues)

TABLE 1 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM 2 = GHRM	Method 0 = quant. 1 = qual. 2 = mixed	Sector(s)	Independent variable	Dependent variable	Mediator	Key findings
Vidal-Salazar et al.	2012	Spain	0	0	Tourism	• Innovativeness	• Proactive environmental strategy	• Environmental training	• Innovativeness is a requirement for the adoption of ET and OL • In the studied organizations, both mechanisms promote the adoption of PES • Managers should take these results into account when deciding which mechanism to use when aiming for a proactive environmental policy

economies (69%), such as China (7), India (7), and Vietnam (6). Only 19% of the articles use samples from developed economies, such as Spain (3), Italy (3), and the United Kingdom (2).

Figure 5 consolidates the sectors in which the respective analyses of the included articles were conducted. Most contributions stem from the manufacturing (19), hospitality (8), and tourism (4) sectors. The findings indicate that scholars heavily investigate those sectors that cause major damage to the environment and there is less research interest in sectors such as education, healthcare, and finance.

Figure 6 synthesizes the articles according to our research framework and method. Most studies examined the outcomes of CS training (51), followed by the determinants (8), and approaches (8). Scholars predominantly applied quantitative methods to investigate the determinants and outcomes, and qualitative methods (mostly case studies) to examine training approaches. Of the 67 selected articles, 45 specifically focused on training while the remaining 22 considered training in combination with other human resource management (HRM) practices.

4.2 | Determinants of training for CS

We first analyzed the articles on the determinants of training for CS implementation. Generally, we find that CS training in organizations can be driven both by internal determinants—such as the goal of improving employee awareness and developing environmental competencies, and external determinants – such as pressure from external stakeholders or policies.

4.2.1 | Internal determinants

Internal determinants are factors that arise within the organization. They can be driven by external factors, such as stakeholder pressure, or other internal factors, such as the values of the organization and top management. Often, the use of training is driven by green transformational leadership. The values and interests of top management have a notable influence on the practices of organizations: for example, if they hold sustainable values and beliefs, this has a positive impact on employee training to enhance their green capabilities (Singh et al., 2020). Top management support also has a significant impact on the implementation of green training on awareness and responsibilities, as well as on technical knowledge and skills (Liu et al., 2020). Interestingly, Liu et al. (2020) find that top management support may decrease in the presence of an already existing CS culture in the organization, arguing that top management perceives a decreased need for support in such a setting (also see: Andersen & Lueg, 2017; Dalby et al., 2014; Kutzschbach et al., 2021). An organization's ethical beliefs, values, and norms regarding environmental issues in themselves may lead to the implementation of training. Training is used to share the organization's values and provide employees with knowledge about sustainability and sustainable behavior to improve environmental performance and thus create a competitive advantage (Singh et al., 2019).

TABLE 2 Empirical research on approaches for the application of CS training.

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Key findings
Cullens and Waters	2013	Multinational	0	1	Various	Establishment of an approach so that leadership development can be embedded within a CSR Framework to create: • Competitive advantage • Stakeholder benefits • An economic return while investment in CSR and training is often reduced Modular leadership program delivered through multiple channels in close alignment with the organization's strategy.
Haugh and Talwar	2010	India	0	1	Various	• CS training should happen organization-wide and should not only be accessible to individual groups • It should be part of a long-term learning strategy in which reflection and feedback are given • Practical work increases employees' interest in, commitment to, and knowledge of CS.
Leidner et al.	2019	Multinational	1	1	Various	• CS training as part of organizational learning is more successful than using CS training as a metric for setting bonuses for executives • Focus on the meaning of training.
Perron et al.	2006	Canada	0	1	Energy	• Training must be evaluated to make sure the provided training is successful.
Pless et al.	2012	Multinational	0	1	Various	• Service-learning program whereby leaders are exposed to challenges and have to get out of their comfort zone • Facing cultural and ethical issues → motivation to change perspective on life • Emotions generated contribute to the learning process.
Sammalisto and Brorson	2008	Sweden	0	1	Education	• Training should include managers and employees • Certain functions will need more detailed knowledge • Training should be adapted to the individual strategy, e.g. academic traditions • Interactive training methods are more successful → use of discussions and seminars instead of traditional one-way teaching methods
Torabi et al.	2022	Iran	0	2	Tourism	• Jigsaw teaching strategy leads to improved environmentally conscious behavior and improves employee attitudes • 18 months of training showed significant differences between jigsaw and traditional teaching in attitude and environmentally conscious behavior
Zohora and Hoque	2014	Bangladesh	0	1	Financial	CS can be reached by • Providing appropriate knowledge and experience • Conduction of appropriate CS training • Qualification of the trainer • A crucial role is also played by the timeliness of the training

Last, innovativeness also plays an important role in the application of environmental training. Organizations that rely on the development of innovative processes and are subject to environmental regulations need trained personnel. Only if there is also an understanding of the objectives and knowledge of sustainable behavior can a successful, forward-looking CS strategy be developed (Vidal-Salazar et al., 2012).

4.2.2 | External determinants

External factors, such as stakeholder pressure and environmental policies, also foster the use of training for CS implementation.

Stakeholder pressure has been widely studied in the literature as a determinant of the use of environmental training (Guerci et al., 2016; Gull & Idrees, 2022; Upstill-Goddard et al., 2016). According to Freeman (1984, p. 46), a stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives." Stakeholder pressure is particularly triggered by stakeholders other than shareholders as they increasingly express concerns about negative impacts on the natural environment. In the absence of stakeholder pressure, sustainable knowledge-creation methods are unlikely to be adopted because they are not an organizational priority and usually involve effort: if non-compliance does not pose an immediate business risk, organizations generally allocate their resources elsewhere (Upstill-Goddard et al., 2016). On the other hand, when stakeholders put pressure on an organization, it is forced to adjust its strategy (Gull & Idrees, 2022).

In contrast to the above results, Guerci et al. (2016) find that only customer pressure has an impact: a customer boycott would have instant negative effects for the organization, while pressure from other external stakeholders does not have a significant impact on the adoption of CS training.

Environmental policies and regulations are also determining factors for the implementation of CS training (Del-Castillo-Feito et al., 2021). They force organizations to adapt their strategies and meet environmental requirements. To fulfill the policies, the commitment of the employees is of particular importance. Organizations should invest in the training of their employees to prepare them for a successful implementation of CS policies and to create the necessary knowledge to accomplish them (Del-Castillo-Feito et al., 2021).

4.3 | Applications of training for CS

The research stream regarding applications has been rather marginal so far. It investigates how different trainings are integrated by organizations to improve their triple bottom line. First, research has shown that training should always be adapted to the organization's individual strategy (Cullens & Waters, 2013; Sammalisto & Brorson, 2008). Sammalisto and Brorson (2008) show, for example, that employee training in university environments should be adapted to academic traditions and that, in this regard, trainers must be prepared for appropriately multi-layered, lengthy, and complicated discussions on broad environmental and sustainability topics.

Most studies have also shown that collaborative training approaches, in particular, are suitable for implementing CS in organizations (Sammalisto & Brorson, 2008; Torabi et al., 2022). Collaborative training describes a situation in which several people learn something together, which promotes an exchange between the participants. Research shows that participants behave in a more environmentally friendly manner after collaborative training and are more likely to practice what they have learned compared to attending lecture-based training (Torabi et al., 2022).

In addition, training should be technical, social, and action-oriented to embed CS. By making training practical, employees' interests and commitment are strengthened. This way, they understand how to directly use and recognize the purpose of what they have learned. Generally, training should be a part of a long-term learning strategy. This is why it should also include the integration of social learning opportunities where reflection and feedback are provided (Haugh & Talwar, 2010). Additionally, research shows that it is helpful to complement formal training with informal sessions by providing a space for exchange and discussions (Sammalisto & Brorson, 2008).

In terms of the target audience for training, the research shows that training should be directed not only at managers, but at employees across all hierarchical levels of the organization. The value chain usually extends across all levels of the organization, and accordingly, sustainable behavior is needed from all employees if the goal is to improve CS (Haugh & Talwar, 2010; Sammalisto & Brorson, 2008). However, certain roles, such as managers in organizations, require more detailed knowledge than others (Sammalisto & Brorson, 2008). Managers need to improve their thinking, skills, and knowledge in terms of the triple bottom line in order to be able to transfer their knowledge to the organization. Again, there is no consensus in the literature. Pless et al. (2012) explored a service-learning program for managers in which the participants were presented with challenges and had to act outside their established comfort zones. They were confronted with cultural and ethical issues and thus motivated to change their perspective on their jobs. The feelings evoked contributed to the learning process, and created an intellectual basis of learning (Pless et al., 2012). The goal of leadership training is to ensure an effective transfer of knowledge and behavior from the classroom to the workplace and to embed sustainable leadership skills in the organization (Cullens & Waters, 2013).

Furthermore, as with any training approach, regular evaluation of the training is crucial as it helps to identify problems and initiate improvements (Perron et al., 2006).

4.4 | Outcomes of training for corporate sustainability

The examination of the outcomes of CS training is the most intensive research topic in research, with 51 studies addressing this. CS training mitigates the barriers to implementing CS in organizations (Pham,

TABLE 3 Empirical research on outcomes of CS training.

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Abbas et al.	2022	Pakistan	0	0	Education	• Green training and development Moderator: • Gender	• Sustainability	• Top management commitment towards greening	• GHRM practices promote green employee behavior and sustainability • "Green training" and "top management commitment" have a positive relationship with sustainability • The mediating effect of TMC plays a crucial role between GT and sustainability.
Alola et al.	2022	Turkey	0	0	Hospitality	• Green training	• Perceived behavioral control	• Organizational citizenship behavior	• Green training is an effective tool to directly promote OCBE and perceived organizational control.
Amrutha and Geetha	2021	Malaysia	0	0	Service	• Green training	• Voluntary workplace green behavior	• Green supporting climate • Employees green satisfaction	• Green supportive climate in organizations mediates the positive influence of training on voluntary workplace green behavior • Employee satisfaction with green initiatives significantly impacts VWGB, leading to better environmental performance.
Anwar et al.	2020	Malaysia	1	0	Education	• Green competence building practices	• Environmental performance	• OCBE	• Green HRM practices have a significant impact on OCBE • There is a significant relationship between OCBE and environmental performance • The OCBE of academic staff ensures that a university's green HRM practices can positively influence the environmental performance of a university campus.
Ashrafi et al.	2019	Multinational	1	1	Maritime	N/A	N/A	N/A	• Sustainability awareness and training programs fully integrated sustainability as a core value into the organization's strategy.

(Continues)

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Birou et al.	2019	US	0	0	Manufacturing	• Sustainability training and knowledge	• Environmental economic performance • Operational performance	• Sustainable supply chain practices • Sustainable supply chain outcomes	• Training on organizational sustainability has a positive impact on SSCP • Application of SSCP leads to SSCO, having a positive impact on OPP and EEP.
Cabral and Chiappetta Jabbour	2020	India	0	0	Tourism	• Green training	• Environmental performance	• Green competencies • Proactive environmental management maturity	• There is a positive and significant relationship between green education and environmental performance • There is a mediating effect of green business practices • There is a mediating effect of the maturity of proactive environmental management • There is a moderating effect of environmental commitment.
Chaudhary	2019	India	1	0	Manufacturing	• GHRM • Green training	• Task-related green behavior • Voluntary green behavior	N/A	• Low level of implementation of various GHRM practices in the automotive organizations surveyed • Only green training and development and green employee engagement received an average score of 3 • GHRM practices significantly predict employees' task-related and voluntary green behaviors.
Colombo et al.	2022	Brazil	0	0	Energy	• Green training	• Individual green performance	• Interactive/ diagnostic use of PMS	• Green training and participation influence the interactive and diagnostic use of PMS and the organizational rationale for sustainability, which influences individual green performance.
Cop et al.	2020	Turkey	0	0	Hospitality	• Green training	• Organizational citizenship behavior • Environmental commitment	• Perceived behavioral control	• Green training positively impacts the environmental commitment and OCBE • Perceived behavioral control mediates this link.

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Daily et al.	2012	Mexico	0	0	Manufacturing	• Environmental training	• Environmental performance • Economic performance • Social performance	• Internal/external GSCM practices	• Managers see environmental training and empowerment as important to themselves and their employees • Environmental training has a stronger overall relationship with the dependent variables than environmental empowerment. • Environmental teamwork mediates the effect.
Fahad and Rahman	2020	India	1	0	Various	• Employee CSR training	• CSR disclosure	N/A	• CSR training has a negative impact on CSR disclosure.
Galbreath	2017	Australia	0	0	Public	• Board Structure Moderator: • CSR training	• CSR	N/A	• Insiders tend to have a short-term orientation and therefore have a negative impact on CSR • Compensation linked to environmental and social indicators and CSR training directors as moderating variables lead to positive results.
Gangadharan	2006	Mexico	1	0	Manufacturing	• Environmental training	• Over-compliance with environmental regulations	N/A	• Providing environmental training to employees increases the likelihood of over-compliance • The local community has a positive impact on over-compliance.
Ghouri et al.	2020	Malaysia	1	0	Manufacturing	• Green competence building practices	• Business performance	• Environmental performance	• There is a significant relationship between GHRM and EP • There is a significant relationship between EP and BP • EP significantly mediates the relationship between GHRM and BP.
Gull and Idrees	2022	Pakistan	0	0	Manufacturing	• Green training	• Organizational efficiency	• Green competencies	• Green training is essential for environmentally conscious organizations to achieve their goals of efficient resource use • Employees need to be provided with eco-friendly skills that will enable them to adopt eco-efficient business practices.

(Continues)

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Jabbour	2015	Brazil	0	0	Various	• Environmental training	• Environmental management maturity	N/A	• Environmental training is positively and significantly related to firms' environmental management maturity • ET's power of determination over EMM can be considered "large."
Ji et al.	2012	China	0	0	Manufacturing	• Firms' environmental attitude Moderator: • Employee training	• Sustainable development performance	N/A	• The more trained employees are, the more likely it is that firms' environmental attitude will help improve their sustainable development performance. • Employee training can have a positive direct effect on organizations' sustainable development performance.
Joshi and Dhar	2020	India	0	2	Manufacturing	• Green training	• Green creativity	• Green dynamic capability	• Green training influences the organization's green creativity both directly and indirectly.
Liu et al.	2014	China	0	0	Manufacturing	• Future orientation Moderator: • Employee training	• Performance of sustainable development	• Business environmental commitment	• Cultural value is an important predictor of environmental commitment. • An organization's sustainable performance is a consequence of its environmental commitment. • The relationship is positively influenced by the level of employee training, if all other conditions remain the same.
Longoni et al.	2014	Multinational	1	0	Manufacturing	• Training • Social sustainability action programs • Environmental sustainability action programs	• Environmental sustainability performance • Social sustainability performance	N/A	• Training has a direct positive impact on environmental and social sustainability performance • Training creates a positive interaction between social sustainability action programs and performance.

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
López-Pérez et al.	2017	Spain	0	0	Various	• CSR • Reputation • Brand image Moderator: • Managers' training on CSR	• Financial value	• Reputation • Brand image	• Specific CSR training is important and makes this type of training a valuable resource for business management and society. It is possible to promote business management models where sustainability and profit can coexist. • There are still significant gaps in education and training, especially in the SME sector.
Marrucci et al.	2021	Multinational	1	0	Various	• GHRM • Green training Moderator: • Circular environment	• Circular performance • Environmental performance • Environmental reputation • Economic performance	N/A	• There is no significance on circular economy • Circular economy practices are relatively new → the development of training models in this field is still evolving.
Masri and Jaaron	2017	Palestine	0	2	Manufacturing	• Green training	• Environmental performance	N/A	• Green training has the lowest effect compared to other GHRM practices • Reason: training is perceived as a burden in the Palestinian Manufacturing Sector • Due to financial constraints other practices seem more profitable.
Moraes et al.	2019	Brazil	0	0	Financial	• Environmental training	• Eco-efficiency	N/A	Environmental training positively influences eco-efficiency.
Nejati et al.	2017	Iran	1	0	Manufacturing	• Green training and development Moderator: • Resistance to change	• Green supply chain management	N/A	• GHRM practices have a positive impact on GSCM • Resistance to change hinders the establishment of a sustainable corporate culture,
Nisar et al.	2021	Pakistan	0	0	Manufacturing	• Green training	• Environmental passion • Green behavioral intention • Pro-environmental behavior	N/A	• No effect of green training on environmental passion, green behavioral intention, pro-environmental behavior due to the objectives of the training

(Continues)

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Paillé et al.	2020	France	1	0	Healthcare	• GHRM • Green training Moderator: • Satisfaction with organizational environmental engagement	• Individual environmental performance	• Perceived organizational support for the environment	• Training is the best method of GHRM for predicting individual environmental performance • Perceived organizational support for the environment increases the effect of individual environmental performance only when employees are highly satisfied with organizational environmental commitment,
Pellegrini et al.	2018	Italy	0	0	Retail	• Training	• In-role sustainable behavior • Extra-role sustainable behavior	• Affective commitment to change	• No positive relationship • This finding may be related to differences in the scope and nature of training programs offered by individual subsidiaries to their employees,
Pham et al.	2022	Vietnam	0	0	Construction	• Organizational barriers • CSR characteristics • Industrial barriers Moderator: • Education and training	• Social responsibility performance	• CSR practices	• Organizational and industrial barriers negatively impact CSR practices • Education, training, and government support can enable construction organizations to reduce the impact of these barriers,
Pham et al.	2022	Vietnam	0	2	Hospitality	• Environmental training Moderator: • Environmental knowledge	• Intention to implement environmental activities	• Environmental awareness • Environmental concern • Environmental knowledge	• Environmental training promotes employee intention to implement environmental activities • Environmental concern and awareness mediate this relationship • The relationships between environmental concern and awareness and employee intentions are not moderated by environmental knowledge,

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Pham et al.	2019	Vietnam	0	0	Hospitality	• Green training Moderator: • Green employee involvement • Green performance management	• OCBE	N/A	• GHRM has a positive effect on OCBE • Behavior improvement is dependent on the level of green performance management and green employee participation • Green training is seen as a key mechanism to promote voluntary green behavior among employees.
Pham et al.	2019	Vietnam	0	0	Hospitality	• Green training Moderator: • Green reward • Green organizational culture	• Employee commitment towards the environment	N/A	• GHRM practices are important tools to increase employees' environmental commitment • Positive two-way interaction between green training and green organizational culture • Positive three-way interaction between green organizational culture, green reward, and green training • Insignificant interaction between green training and green reward,
Pham et al.	2020	Vietnam	0	0	Hospitality	• Environmental training Moderator: • Cultural influence	• Employee in-role green performance	• Employee environmental commitment	• The relationship between environmental training and EIGP is mediated by environmental commitment • The mediating role of environmental commitment is stronger in hotels managed by Western hospitality organizations • Cultural influence does not reduce the effect,
Pham et al.	2020	Vietnam	0	0	Hospitality	• Green training Moderator: • Green performance management	• Employee environmental commitment • OCBE • Corporate environmental performance	• OCBE	• Training promotes OCBE as well as environmental performance • OCBE mediates the impact of training on environmental performance • Performance management is not significant,

(Continues)

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Pinzone et al.	2016	UK	1	0	Healthcare	• Green competence building practices	• Collective OCBE	• Collective affective commitment to environmental management change	• Green HRM practices encourage collective OCBE • Employees' collective effective commitment to environmental management change partially mediates this relationship,
Pinzone et al.	2019	Italy	0	0	Healthcare	• Green training	• Job satisfaction • OCBE-o • OCBE-I	• Green POS • Green goal difficulty	• Green training strengthens OCBE • Green goal difficulty mediates the effect as it motivates employees to behave environmentally friendly • POS through green training makes employees more satisfied with their work,
Rizvi and Garg	2022	India	1	0	Various	• Green training	• Environmental sustainability performance	N/A	• Green training is related to environmental sustainability performance,
Saeed et al.	2019	Multinational	1	0	Various	• GHRM • Green training Moderator: • Environmental knowledge	• Pro-environmental behavior	• Pro-environmental psychological capital	• Green HRM practices positively affect employees' pro-environmental behaviors; pro-environmental psychological capital mediates this relationship • Employee environmental knowledge moderates the effect of green HRM practices on pro-environmental behavior,
Shah and Soomro	2022	Pakistan	1	0	Manufacturing	• Green training and development	• Task-related green behaviors • Voluntary green behaviors • Green innovation	N/A	• Green training and development are positive related to task-related green behavior, voluntary green behavior and green innovation.
Silva et al.	2019	Brazil	0	1	Chemical	• Environmental training	• Sustainability competence development	N/A	• Environmental training, which is structured to meet the strategic goals of the organization in the field of sustainability, contributes to the development of competencies in the field of environmental sustainability.

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Srivastava and Shree	2019	India	0	0	Tourism	• Employee green involvement Moderator: • Green training	• Perception of CSR	N/A	• Employees' green involvement has a positive significant relationship with their perception of CSR • The relationship between green involvement and perception of CSR is more positive the higher the green training.
Teixeira et al.	2016	Brazil	0	0	Various	• Green training	• Green supply chain management • Green purchasing and collaboration with customers	N/A	• Green training helps organizations improve their green supply chain management to collaborate with customers and realize green purchasing.
Usman et al.	2022	Pakistan	0	0	Various	• Green training Moderator: • Intrinsic spirituality	• Eco-friendly behavior outside of work (including: reuse of things, reduced consumption of resources and consumption of eco-friendly products)	• Connectedness to nature	• Green training positively influences eco-friendly behavior outside of work • Connectedness to nature mediates the effect • Intrinsic spirituality moderates the positive relationship between training and connectedness to nature.
Xie and Zhu	2020	China	0	0	Manufacturing	• Green training Moderator: • Ambidextrous learning	• Green innovative behaviors • Sustainability performance	N/A	• Green training is positively related to sustainability performance via green innovation behavior • Ambidextrous learning positively moderates this effect.
Yong et al.	2020	Malaysia	1	0	Manufacturing	• Green training	• Sustainability	N/A	• Green recruitment and green training have positive impacts on sustainability • No significant relationship was found for other GHRM practices.
Yu et al.	2020	China	1	0	Manufacturing	• GHRM • Green training Moderator: • Internal GSCM	• Environmental cooperation with customers • Environmental cooperation with suppliers	N/A	• GHRM is positively related to environmental cooperation with customers and suppliers • The relationships are moderated by internal GSCM.

(Continues)

TABLE 3 (Continued)

Authors	Year	Country	Focus 0 = training 1 = training and GHRM	Method 0 = quant. 1 = Qual. 2 = mixed	Sector	Independent variable	Dependent variable	Mediator	Key finding
Yusoff et al.	2020	Malaysia	1	0	Hospitality	• Green training	• Environmental performance	N/A	• Green training and development have a significant relationship with environmental performance.
Zaid et al.	2018	Palestine	1	0	Manufacturing	• GHRM bundle	• Environmental Performance • Economic Performance • Social Performance	N/A	• GHRM practices have a direct effect on sustainable performance • GSCM mediates this effect • Internal GSCM practices positively mediate this effect • External GSCM practices mediate the relationship between bundled GHRM practices and the environmental performance.
Zhang and Teng	2022	China	0	0	Agriculture	• Environmental orientation Moderator: • Green training	• Environmental performance • Financial performance	• Agricultural green production	• Environmental orientation is positively related to environmental and financial performance • Green production partially mediates the relationship between environmental orientation and environmental and financial performance • The positive effect of environmental orientation on green production is enhanced by green training.
Zhang et al.	2019	China	1	0	Various	• Education and training	• In-role green behavior • Extra-role green behavior	• Information needs	• Education and training, have a significant positive influence on employees' in- and extra role green behaviors • Information needs play a mediating role in influencing education and training in employee green behavior in the workplace.

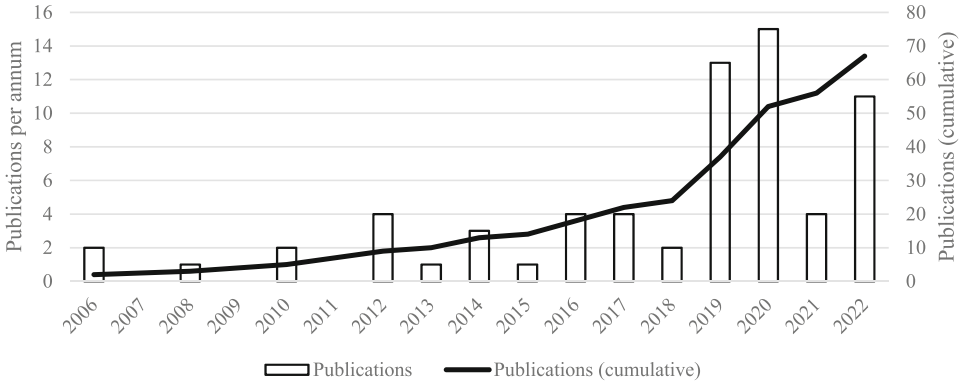

FIGURE 3 Number of reviewed papers by publication year.

FIGURE 4 Geographic focus of reviewed papers.

Pham, & Dang, 2022) and aims to achieve sustainable employee development and the implementation of various CS practices in organizations (Jabbour, 2015; Sarkis et al., 2010; Silva et al., 2019; Yong et al., 2020). The literature suggests that CS training has positive long-term effects on economic, social, and environmental performance (Abbas et al., 2022; Galbreath, 2017; Rizvi & Garg, 2022; Xie & Zhu, 2020; Zaid et al., 2018). Most studies refer to the impact of CS training on the environmental performance of organizations, which is

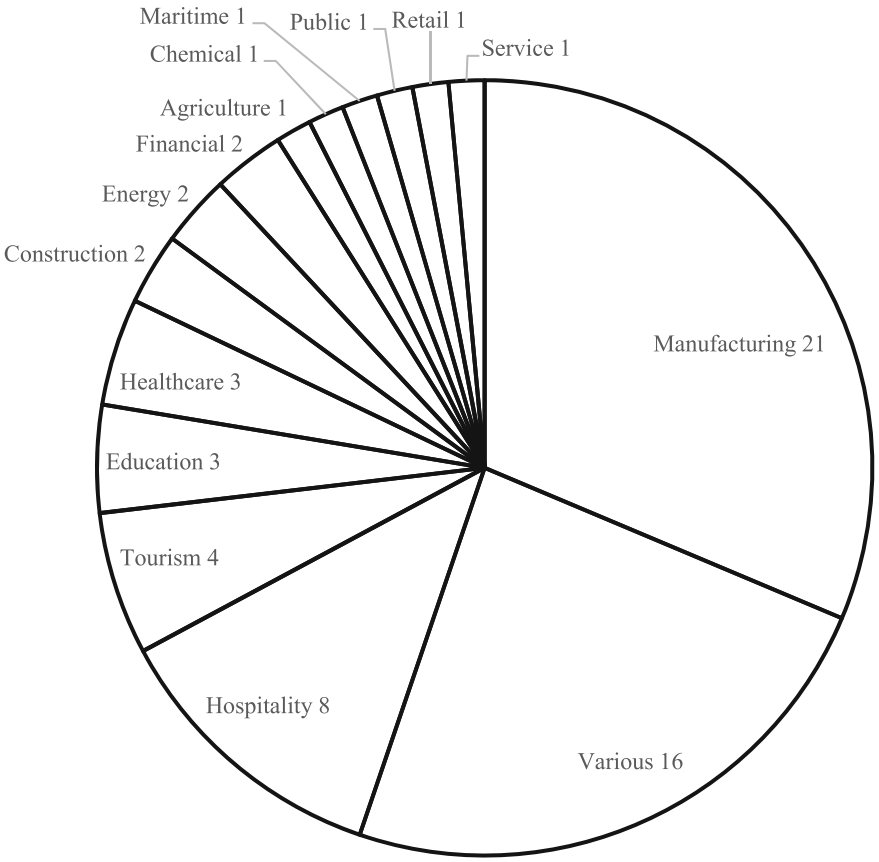

FIGURE 5 Sector studied in reviewed papers.

positively influenced by the strengthened post-training commitment, knowledge and capabilities of employees (Pham, Vo-Thanh, et al., 2020; Yusoff et al., 2020). Organizational reputation and financial performance are also positively affected by CS training in the long term (Ghouri et al., 2020; Marrucci et al., 2021). In the following, we distinguish between the environmental, social, and economic outcomes of CS training.

4.4.1 | Environmental outcomes of training

Most research on the impact of CS training concludes that its implementation in organizations has a positive impact on their environmental performance (Anwar et al., 2020; Moraes et al., 2019; Paillé et al., 2020; Pham, Vo-Thanh, et al., 2020; Singh et al., 2020). The implementation of green training provides employees with knowledge about sustainable behavior, and thereby leads to an increase in their environmental commitment. A green culture and sustainable behaviors in the organization support this commitment (Cop et al., 2020; Pham, Jabbour, et al., 2022; Pham, Vo Thanh, et al., 2020; Tan Pham et al., 2019).

Most studies addressed the impact of CS training on employees' *organizational citizenship behavior toward the environment* (OCBE) (Cop et al., 2020; Pham et al., 2019; Pham, Vo Thanh, et al., 2020; Pinzone et al., 2016; Pinzone et al., 2019). OCBE is the voluntary, non-work-required behavior of employees to help protect the environment (Cop et al., 2020). Positive interactions have been found in the

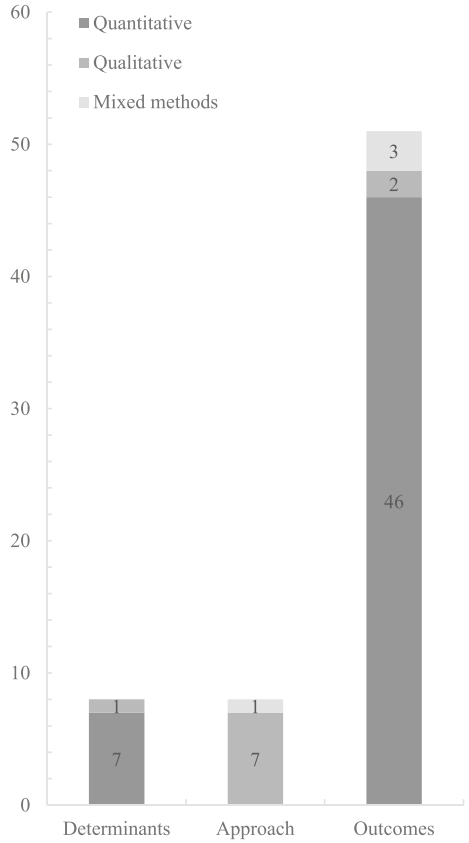

FIGURE 6 Method sorted by content of reviewed papers.

healthcare and hospitality sectors in particular (Cop et al., 2020; Pham et al., 2019; Pham, Vo Thanh, et al., 2020; Pinzone et al., 2016; Pinzone et al., 2019). Environmental awareness and competencies provided through training enable employees to take positive actions affecting the environment that go beyond their job requirements (Cabral & Chiappetta Jabbour, 2020; Pham et al., 2019; Pinzone et al., 2016; Pinzone et al., 2019). Pinzone et al. (2019) distinguish between organization-related and co-worker-related OCBE and find positive effects in both directions. The literature shows that green goal difficulty (Pinzone et al., 2019) and perceived behavioral control (Cop et al., 2020) contribute to enhancing the effect.

In contrast, Nisar et al. (2021) do not find any effect of green training on employees' environmental enthusiasm or voluntary pro-environmental behavior. This could be the result of the training objectives which were to protect the organization from lower profit margins due to resource wastage (Nisar et al., 2021) rather than to encourage employees to conserve resources to protect the natural environment (Cop et al., 2020; Pham, Jabbour, et al., 2022; Pham, Vo Thanh, et al., 2020; Tan Pham et al., 2019).

Overall, the results largely show that CS training has positive impacts on employees' pro-environmental behavior (Amrutha & Geetha, 2021; Chaudhary, 2019; Saeed et al., 2019; Shah & Soomro, 2022). It not only imparts knowledge but also increases the ability to identify sustainability issues. This has an overall positive impact on employees' environmentally friendly behavior (Colombo et al., 2022; Paillé et al., 2020). Zhang et al. (2019) and Pellegrini et al. (2018) studied employees' in- and extra-role green behavior. In-role green behavior is the behavior in the workplace that employees engage in while performing their tasks, while extra-role green behavior includes the behavior that goes beyond the actual tasks. While Zhang et al. (2019) discovered a positive relationship, Pellegrini et al. (2018) were unable to show one. This finding may be related to differences in the scope and nature of training programs offered by individual organizations to their employees (Pellegrini et al., 2018). In addition, CS training improves employees' innovative behavior and green creativity in terms of product design, clean production, and end-of-life processes (Joshi & Dhar, 2020). Through CS training, employees are equipped with the necessary knowledge to successfully drive green innovation and feel more motivated to engage in innovative processes (Joshi & Dhar, 2020; Shah & Soomro, 2022; Xie & Zhu, 2020). Usman et al. (2022) show that CS training gives employees a closer connection with nature, which leads them to reduce their use of resources, reuse things and use more sustainable products in their private lives as well.

No positive effects of training have been demonstrated on the impact on the circular economy (Marrucci et al., 2021). The circular economy aims to replace the end-of-life concept of resources with the reduction, reuse, recycling, and recovery of materials. Potential explanations include the fact that circular economy practices are relatively new and, accordingly, the development of training models in this field is still evolving (Marrucci et al., 2021). Masri and Jaaron (2017) conclude that green training has a relatively low impact on the environmental performance of organizations when considering the effect of other green human resource management (GHRM) practices. GHRM is an umbrella term for HRM practices that foster environmental sustainability (Renwick et al., 2013). GHRM reconciles employees' behavior with the organization's environmental goals (Yong et al., 2020). Examples of key GHRM practices include developing green abilities (e.g., via training), motivating employees, and providing opportunities to employees (Renwick et al., 2013). The relatively low effect of green training on environmental performance could be attributed to the sample of the Palestinian manufacturing sector, as training is perceived as a burden by many organizations due to its high cost, particularly in developing countries. Many organizations either do not provide CS training at all or only provide low-quality training (Masri & Jaaron, 2017).

4.4.2 | Social outcomes of training

The effects of CS training on the social performance of organizations are the least explored in the literature. There are currently only four studies that examine these effects, three of which find that CS training has positive effects on social performance (Daily et al., 2012; Longoni et al., 2014; Xie & Zhu, 2020).

CS training increases employee job satisfaction more than any other training (Longoni et al., 2014; Pinzone et al., 2019). Training provides employees with the knowledge and skills required to perform environmental management tasks as well as helping them to recognize the purpose of their daily work behavior. This positive effect is reinforced by the perceived organizational support of green practices, as employees feel that the organization will continue to support them in the future (Pinzone et al., 2019).

CS training positively influences teamwork. Training helps team members to contribute to shared, strategic goals that address synergies and helps all team members to acquire a similar knowledge set. This reduces team and departmental conflicts, and increases solution-oriented compromises (Daily et al., 2012). CS training nudges employees to commit to the services they provide and to codes of ethics to meet the needs of both the public and the government (Xie & Zhu, 2020).

4.4.3 | Economic outcomes of training

Studies also examined the effect of CS training on economic outcomes, differentiating between financial and non-financial effects. In the case of financial effects, studies relied on key performance indicators for their investigation. The results indicate largely positive direct and indirect effects of training (Ghouri et al., 2020; López-Pérez et al., 2017; Xie & Zhu, 2020; Zhang & Teng, 2022). Ghouri et al. (2020) show that the positive impact of CS training on environmental performance also affects corporate financial performance (profit growth, market share growth, market penetration rate growth, market value growth, and net income growth). CS training results in an increase in sustainability performance in organizations, including an

increase in profit growth due to reductions in both energy and material consumption (Ghouri et al., 2020; Xie & Zhu, 2020). Some studies show that CS training affects financial performance through improved reputation. A sustainable image satisfies stakeholders' interests, such as customer loyalty (López-Pérez et al., 2017; Zhang & Teng, 2022). Zhang and Teng (2022) show positive effects on sales, net profit, return on investment, and return on assets in China. Agricultural producers in China often lack skilled workers, which hinders green agricultural production but CS training can contribute to green agricultural production by providing knowledge. Consumer loyalty to the market achieved through training increases sales and thus financial performance (Zhang & Teng, 2022).

CS training also affects the non-financial economic outcomes of organizations and positively influences organizational reputation. CS gives stakeholders a sense of organizational behaviors and enhances organizations' reputations. If employees and management are trained, CS implementation will be more successful (López-Pérez et al., 2017; Marrucci et al., 2021). Moreover, CS results in a competitive advantage for organizations that practice it. Singh et al. (2019) demonstrate that the mediating role of training enhances the positive impact of environmental ethics on competitive advantage, as training improves the organization's environmental management goals.

Organizational efficiency also improves through training (Gull & Idrees, 2022). Green training provides employees with environmentally friendly competencies and skills that help ensure that employees complete tasks in an innovative and efficient manner. In addition, employees feel involved and are motivated to contribute to success through resource-saving behavior (Gull & Idrees, 2022). Furthermore, CS training and the transmitted knowledge have been found to lead to improved sustainable supply chain practices and outcomes, which positively affects both financial and non-financial economic performance (Birou et al., 2019; Nejati et al., 2017; Teixeira et al., 2016).

5 | SYNTHESIS: DISCUSSION AND FUTURE RESEARCH AGENDA

5.1 | Accounting for other determinants

The preceding content analysis identifies external and internal determinants of CS training. Extant studies predominantly investigate internal determinants such as top management, organizational values, and organizational innovativeness (Liu et al., 2020; Sarkis et al., 2010) and external determinants such as stakeholder pressure (Guerci et al., 2016) and environmental policies (Del-Castillo-Feito et al., 2021). Future research could extend the analysis of the determinants and investigate which organizational characteristics (e.g., size, type, diversification) drive CS training. For example, organizational complexity could drive CS training because the complexity of the required management practices increases with that of the organization (Chenhall, 2003; Läger et al., 2022). To ensure that they implement (sustainable) management practices effectively, complex organizations might be more likely to draw on CS training for control purposes. Other determinants, such as the organization's competitive strategy, could drive CS training. Vidal-Salazar et al. (2012) show that innovativeness is an important precondition for training when the organization faces environmental regulations. Future research could extend these findings and investigate whether organizations following an innovative competitive strategy (i.e., prospectors) are more likely to implement CS training than those with less innovative strategies (i.e., defenders) (Miles & Snow, 1978).

5.2 | Strengthening the link between CS training and social and economic outcomes

Prior research on the outcomes of CS training focuses on the environmental aspects of CS. It indicates that training encourages knowledge acquisition and increased awareness, which results in more sustainable and conscious behavior on both the individual and organizational levels (Ji et al., 2012; Joshi & Dhar, 2020; Pham, Jabbour, et al., 2022). CS training enhances employees' environmental commitment (Cop et al., 2020), positively affects organizational behavior affecting the environment (Pham et al., 2019), and influences employees' green innovative behavior (Shah & Soomro, 2022), and green creativity (Joshi & Dhar, 2020). These effects are explained by the development of employees' skills involving sustainability through training (Cop et al., 2020; Joshi & Dhar, 2020; Tan Pham et al., 2019; Xie & Zhu, 2020). A few studies investigate the outcomes of CS training for the social and economic aspects of CS. For example, previous studies pointed to the positive effects on employee satisfaction (Pinzone et al., 2019), teamwork (Daily et al., 2012), and commitment to their services and codes of ethics to ensure they meet the needs of both public and government (Xie & Zhu, 2020). Xie and Zhu (2020) have shown that profit growth increases through green education regarding lower energy and material consumption. Future research could extend existing studies on the social and economic outcomes of training by investigating its direct or indirect effects on customer perception, overall CSR performance, and organizational legitimacy (Fatima & Elbanna, 2022). Moreover, research on the link between CS training and *greenwashing* remains scarce and would benefit from further investigation. Greenwashing describes an inauthentic behavior of organizations with respect to all forms of CS activities (George, 2020; Lueg & Lueg, 2020, 2021). Prior research indicates that employee training can serve as an indicator for *institutionalized* CS activities (integrated into an organization's operations) (Sterbenk et al., 2022). Future research could provide insights on whether organizations that have implemented CS training are less likely to engage in *greenwashing* and its subsequent effect on social and economic outcomes.

5.3 | Investigating other contexts

The bibliometric analysis indicates that existing research focuses on developing and emerging countries. Future research could address under-researched contexts such as developed countries and compare

the results to those in developing and emerging countries. The bibliometric analysis also reveals that extant studies focus on heavily polluting sectors. Future research could examine the determinants of, approaches to, and outcomes of CS training in allegedly clean industries, such as banking and insurance. An in-depth analysis of how approaches to CS training differ in different contexts could yield further insights. Finally, future research could utilize large-scale, multinational analyses to enhance the generalizability of research findings.

5.4 | Contributions to research

This literature review contributes to the CS training research field in several ways. First, we synthesize the research field on CS training according to its determinants, approaches, and outcomes by constructing an integrated framework. We create an overview of the variables used in these studies (Figure 7) which structures the effects and interactions, and highlights remarkable results. The review contributes to previous studies and frameworks on CS implementation by providing deeper insights into the role of training in shaping CS communications (Fatima & Elbanna, 2022; Maon et al., 2009). We contribute to an enhanced understanding of the mechanisms of *how* training facilitates CS implementation. Second, we contribute to the management control literature by outlining how CS training can serve as effective input and process controls to ensure an organization's sustainable transformation. For example, we outline that collaborative training (Torabi et al., 2022), informal sessions (Sammalisto & Brorson, 2008), and regular feedback loops (Perron et al., 2006) contribute to effective training. Finally, we create a research agenda to direct future investigations. We discuss controversial and contradictory relationships that would benefit from future research efforts. Controversial relationships often arise from uncomparable research contexts, specialized datasets, or uncontrollable, external influences and may require further investigations. We also offer suggestions on largely unexplored determinants (e.g., organizational complexity) and outcomes (e.g., social outcomes) of CS training that would benefit from further insights.

5.5 | Implications for practice

We also offer implications for practitioners. The study provides a comprehensive analysis of recent literature on the role of training in the implementation of CS, which is of great importance to organizations.

First, the research shows how to improve strategy alignment and CS implementation through CS training. We outline that both internal and external factors drive CS implementation. External stakeholders in particular have a great interest in improving the CS of organizations. Through their influence, we see the potential for regulators and unions to foster and support CS training in organizations.

Second, our literature review elaborates on diverse training approaches to derive best practices. We highlight that effective

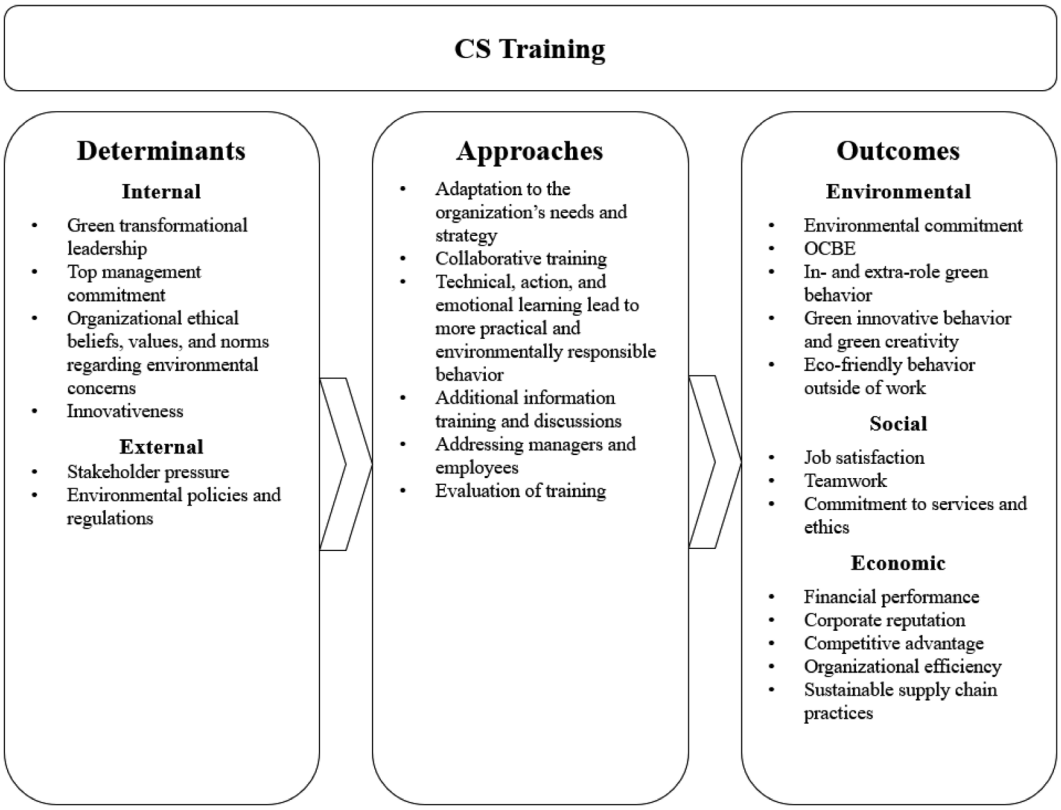

FIGURE 7 Main findings by determinants, approaches, and outcomes of CS training.

training should be collaborative to foster exchanges between participants and that it should contain practical components to strengthen the participants' commitment (Sammalisto & Brorson, 2008; Torabi et al., 2022). Practitioners should integrate training into their long-term strategy and offer training sessions across all hierarchal levels of an organization (Haugh & Talwar, 2010). As part of the long-term strategy, training should undergo regular evaluations to ensure its effectiveness (Perron et al., 2006). The findings provide important insights for HR employees as well as consulting firms that are often involved in designing training. Professional associations could also use the findings by developing training external to organizations, setting an industry standard.

5.6 | Limitations of our work

The limitations that arise from this literature review are primarily methodological. First, there is the risk of omitting relevant studies published in languages other than English or which are not listed in the AJG ranking. Our rationale for only including English-language literature listed in the AJG ranking was to avoid language barriers and ensure a certain level of consistency and quality. Second, we cannot fully exclude personal judgment biases in the study selection process. To remedy subjectivity, we applied a systematic selection process according to the PRISMA framework (Page et al., 2021). Finally, the chosen search terms could also lead to the omission of pertinent studies. Not every study on CS training would have been identified by our search terms. For example, studies on diversity training are often not listed under the term CS. However, an expansion by individual specific types of training would have run the risk of distorting the results. We added the ancestry and offspring approach to offset the omission of studies not identified by our search terms.

6 | CONCLUSION

The concept of CS is becoming more and more important in the organizational environment. Training can help an organization understand the strategies they need to implement in order to become successful. Different external and internal factors, such as regulations, stakeholder pressure, and organizational values, can influence an organization's decision to use training. Organizations often use different approaches to training, such as seminars, discussions, and service-learning programs. Training can have positive impacts on environmental, social, and economic performance, such as increased knowledge, improved employee satisfaction, and increased financial value. There can also be negative effects or no effect at all, depending on the type of training, the context, and the sample size. In order to ensure successful training, organizations should evaluate their training regularly and focus on their individual organizational strategy when planning training.

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