

The contribution of green training in promoting sustainable creativity at the Algerian Company for Leather and Derivatives (ACED), Djelfa unit.

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Abstract:

In light of challenging economic, social, and environmental conditions, organizations must adapt and prioritize sustainability by evolving their methods and culture. Our research at Algerian Company for Leather and Derivatives (ACED) in Djelfa examines the impact of eco-friendly training on sustainable innovation. We collected data from 60 respondents, yielding the following key findings:

- 1. Both green training and sustainable innovation are moderately adopted, reflecting their novelty in the organization.*
- 2. Identifying training needs and program evaluation significantly impact sustainable innovation, while program design and implementation have less influence.*

This study underscores the importance of integrating green training to drive sustainability, from needs assessment to program evaluation, and the need for developing green knowledge to enhance creative thinking and production processes.

Keywords: *Training, Creativity, Sustainability.*

JEL classification: *p36, Q31, Q53,*

1. introduction:

When one scrutinizes the current landscape, it's evident how extensively societies and businesses face formidable challenges. The perils we confront have evolved into multifaceted issues, with intertwined origins in environmental demands, societal necessities, and economic objectives. Therefore, the viability and longevity of entities hinge on their capacity to discover a harmonious blend that addresses these diverse requirements.

Organizations are nowadays required to go beyond finding creative solutions to sustainable solutions. Sustainable creativity has become a real endeavor that must be reached through access to creativity in knowledge, creativity in the product, creativity in processes and in entrepreneurial leadership. It goes beyond traditional thinking that seeks new ideas that take into account environmental and social economic considerations.

Recognizing the significance of integrating sustainable creativity is a top concern for our organization. We must actively explore avenues for reshaping our mindset and actions to align with sustainability objectives. Although this transformation is challenging, it presents the organization with an opportunity to shift its culture, practices, and performance towards sustainability. This is why we have chosen to endorse green training as a valuable resource for organizations embarking on their future endeavors. This choice is especially pertinent for the specific institution we are examining, which operates in a somewhat secluded manner due to the nature of its involvement in the leather industry. The company closely monitors its efforts to promote sustainability in this sector. Consequently, the following question arises:

To what extent does the green training contribute to promoting sustainable creativity in the Algerian Company for Leather and Derivatives (ACED), Djelfa Unit?

A number of sub-questions emerge from the previous problem:

- What is the extent to which the dimensions of green training are being realized within the institution under investigation?
- To what degree are the aspects of sustainable creativity being achieved in the institution under scrutiny?
- Is there a statistically significant impact, with a significance level of 0.05 or less ($\alpha \leq 0.05$), of the various facets of green training on the attainment of sustainable creativity within The Algerian Company for Leather and Derivatives (ACED), Djelfa Unit?
- To address the preceding issues, we propose the following hypotheses:
- There is a considerable level of green training within the institution under examination.
- The institution under study exhibits substantial levels of sustainable creativity.
- There is no statistically significant influence of the dimensions of green training on the realization of sustainable creativity within the institution under investigation.

Objectives of the study: The choice of this topic stemmed from various objectives, which include:

- Examining the key academic literature related to both study variables and the outcomes of prior research.
- Assessing the extent of green training within the institution under investigation and identifying the crucial areas in need of reinforcement and enhancement in terms of green training.
- Ascertaining the current status of sustainable creativity achieved by The Algerian Company for Leather and Derivatives (ACED), Djelfa Unit.
- Understanding the role of green training in contributing to the realization of sustainable creativity within the institution under study.

The significance of the study: The significance of this study is rooted in its focus on a critical contemporary issue – sustainability and environmental management. In the present day, the challenges we face have become all too real, with their impacts manifesting daily, both within organizations and in larger contexts. Consequently, these investigations represent an effort to seek solutions that have not yet been put into practice, with the hope of reaping positive outcomes that can be applied and shared broadly. This knowledge can prove valuable not only for organizations within the same sector but also across various industries. Furthermore, considering that sustainable creativity

2. literature review of Green Training

2.1 Green Training Concept: The greening of training or green training is one of the main functions of green human resources management, which has a direct impact on harmful environmental effects. It seeks to mitigate its risk, and from it, green training is compatible with sustainable practices (Lamichhane, 2018, pp. 1-2). The term "organizational environmental procedures" denotes established processes within a company aimed at equipping employees with essential information and fostering their active involvement. "Green training" is a product of the environmental context, stemming from elements like access to eco-friendly knowledge, the development of environmental skills, a heightened consciousness regarding sustainability, and the promotion of eco-conscious behavior. These elements collectively constitute what we refer to as "green competencies," which significantly influence an individual's dedication to environmental conservation. (Alola, Cop, & Enow, 2020, p. 3) .

Green training is a planned and systematic effort to change and improve an individual's or a group's knowledge, skills and attitudes through learning experiences in order to achieve effective performance of a specific set of tasks and activities (Alreshidi, 2016, p. 33). Green training is the most effective practice of human resource management that enhances superior environmental performance (Wu & al, 2021, p. 02). According to the

United Nations program in 2011, vocational and technical education and training has a role to play in ensuring that the knowledge, skills and competencies acquired by individuals will enable them to contribute actively to the development of the green economy, and in fact to follow sustainable practices in other areas of their lives. A green economy is “one that leads to improved human well-being and social justice, while reducing environmental risks and scarcity. (UNESCO-UNEVOC, 2017, p. 20)” In other words, it reflects the methods that will develop the skills of optimal use of resources and work to find solutions to environmental problems. (Bangwal & Tiwari, 2015) Therefore, training on green jobs aims to develop the green knowledge and skills of workers in light of the transition towards a green economy (Nasira & Elhabib, 2016, p. 34).

2.2 Characteristics of Green Training: Green training stands apart from conventional training due to several key features that distinguish them. These distinguishing features include:

- The primary characteristic of green training lies in its connection to the environmental aspect within organizational operations. It directly influences sustainability, as it helps mitigate errors by enrolling individuals in training programs that enhance their competencies and steer their actions in an environmentally responsible direction. (Rabah Al-Madhoun, 2023, p. 20).
- Training yields a range of positive outcomes, encompassing innovation and the development of unspoken abilities, enhanced adaptability, improved technical skills, and better self-management of organizational performance. Additionally, it fosters improved adaptability to diverse cultures. Furthermore, indirect benefits include fostering a sense of teamwork that can contribute to a more significant economic advantage (Alreshidi, 2016). This extends to improved coordination, enhanced planning capabilities, better communication, and more effective staff management (Alreshidi, 2016, p. 33).
- Green training is implemented within the organization across three distinct levels. Firstly, at the senior management level, needs are assessed and identified, followed by a second level known as the tactical level or the planned phase of training. Finally, it extends to the operational level, where practical sustainable solutions are actively pursued (Al-Saeedi & Thamer Bedno, 2023, p. 115)
- Green training needs all the elements of the environment that help individuals learn and upgrade their performance towards green performance. Among the requirements we mention the appropriate organizational climate, training halls, the trainer, training programs ... (Al-Moji, 2021, p. 104)

2.3. Green Training Objectives: Green training works to develop the spirit of human relations in the green organization and improve supervision. This enables them to adapt and act in a green way, not to mention that green training, thanks to material and moral

motivation, allows for more competition, which increases the opportunities for green creativity in the organization in various fields (Al-Moji, 2021, p. 98).

Green Training draws the attention of individuals and their knowledge towards environmental issues and creating environmentally friendly behavior by protecting from the dangers of pollution, saving energy, for example, and taking a new approach towards green initiatives and building greener individuals more aware of the environment (OLAIYA & OLAOSEBIKAN , 2022, p. 5).

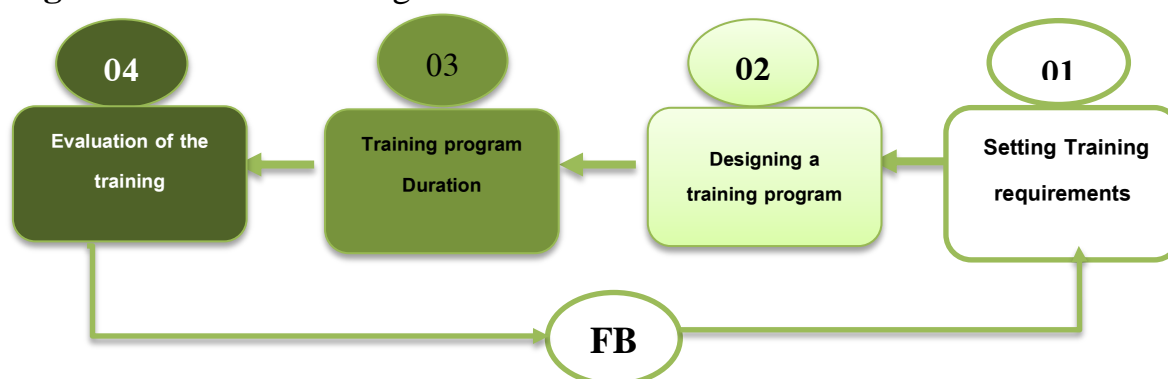
It ensures the guidance of ISO and introducing green practices that help innovation, thanks to the support of senior management, which leads to the implantation of a green culture among employees, which makes the green organization's orientation from a reactive strategy to a proactive strategy (Al-Saeedi & Thamer Bedno, 2023, p. 114).

Green training is complemented by additional education tailored to integrate environmental management objectives and aims. The overarching goal is to foster a sustainable organization through the implementation of green training. (Yaf, Tehseen, & Arslan Haider, 2021, p. 01).

In addition to the points mentioned earlier, the objective of green training is to progress towards a green economy. This shift is driven by the recognition that the demands of a green economy necessitate a skilled workforce, commonly referred to today as the "green workforce."

2.4. Dimensions of green training: Based on a study conducted by UNESCO-UNEVOC in 2017, it was proposed that the examination of green training should follow a specific set of steps. A study by Khalifa Al-Suwaii in 2023 has endorsed and adopted these same dimensions for further investigation..

Figure 01: Green Training Dimensions



Source: by the researcher based on previous studies

2.4.1. The first step is to identify training requirements: This step involves a thorough examination and comprehension of the greening process. It elucidates the rationale behind the greening process and how it can be integrated into a comprehensive, multidimensional curriculum. Part of this process is determining the scale, breadth, and depth of the greening efforts. This step serves to define the crucial economic, environmental, and social parameters involved. Furthermore, it aids individuals and teams within the organization in grasping the impending changes that will take place.

2.4.2 The second step revolves around planning and designing the green training program. During this phase, a comprehensive framework for the green training process is created in alignment with predefined objectives and identified needs. This framework also incorporates the evaluation criteria to be employed. Essentially, this plan illustrates the entire sequence of steps, from the initial phase to the conclusion of the training program. It encompasses all the necessary skills and prerequisites required for the process, taking into consideration environmental, economic, and social standards. This meticulous planning aims to ensure the attainment of maximum environmental advantages through the training.

2.4.3. The third step is about the Implementation of the green training program: The training program is launched according to a timetable and with specific individuals and teams, each according to his needs and according to the requirements of his job according to the objectives outlined. The Department will also choose appropriate means of communication and training such as lectures, distance education and programmatic learning...etc.

2.4.4. The fourth step deals with the evaluation of the training program: Green training efforts are monitored and evaluated according to the selected criteria in the first step, although we can modify them to reach important and credible results that can improve the performance of the green employee. This stage is important for the feedback of all previous stages based on the identification of sustainable needs, which is an evolving and different reality from time to time.

3. Sustainable Creativity literature Review

3.1. The concept of sustainable creativity: Before we address the concept of sustainable creativity, we will remember the concept of creativity in general.

3.1.1. The concept of creativity: Creativity is the ability to create or bring into being, and to innovate in a new world. Creativity is not the ability to create from nothing, but the ability to generate new ideas by combining, changing or reapplying old ideas (Okpara , 2007, p. 02). Creativity involves generating new ideas or recombining known elements into something new, providing value and solutions to a problem, and it also involves motivation and emotion. Creativity is also an essential feature of human intelligence in general (Sefertz, 2000, p. 30). The American Organization for Training and Development defined it as the process of producing real or imaginary ideas or things and putting them in new and useful ways (Scarna, 2011, p. 18)

Thus, creativity involves the generation of novel ideas or the evolution of existing ones, contingent upon the aptitudes, groundwork, and individual traits that empower people or groups to amalgamate prior notions with fresh advancements. This is crucial for addressing present and anticipated challenges, as it's imperative to embrace change and adaptability, ultimately fostering progress and enhancing human life across diverse domains.

3.1.2. The concept of sustainable creativity: It is the production, assimilation, or exploitation of a new product, production process, service, management, or method of operation of the enterprise (its development or adoption) that results throughout its life cycle in the reduction of environmental risks, pollution, and other negative impacts of resource use (including energy use) compared to related alternatives (Luqmani, Leach , & Jesson, Factors behind sustainable business innovation: The case of a global carpet manufacturing company, 2017, p. 95).

It is widely acknowledged that creativity, driven by the human desire to address resource depletion and promote both present and future well-being, unfolds through a combination of individual activities, management systems, and designed systems. Its beneficiaries include individuals and nonprofit organizations, while various supporting factors such as government initiatives, financial investment, technological advancements, and cultural influences play a pivotal role in shaping the creative landscape. (Hussein & Ali Hussein, 2021, p. 679). Sustainable innovation is a process in which sustainability considerations (environmental, social, financial, etc.) are taken into account and integrated into a company's systems from idea generation to R&D and marketing. This applies to products, services, and technologies, as well as new business and organizational models (Boons, Montalvo, Quis, & Wagner, 2013, p. 03). (Hussein & Ali Hassan, The psychological contract and its impact on sustainable creativity in organizations, 2021, p. 36) think that sustainable creativity came to fruition when individuals recognized the negative consequences of irresponsible creative actions facilitated by significant technological advancements, resulting in unfair production practices that had detrimental effects on the environment. This realization prompted them to validate their creative endeavors through participation in international conferences and a commitment to sustainability, with the ultimate goal of attaining sustainable production. The (Majeed & Esmael, 2021, p. 60) concept of sustainable creativity has been summarized as the replacement of old products with new ones that are based on entrepreneurship at all levels while preserving the natural environment without compromising the depletion of natural resources. In fact, our pursuit of sustainable development cannot be achieved without creative processes because creativity is not just a painting, but rather the generation of new ideas, talents, skills and achievements (Laužikas & Mokšėckienė, 2013, p. 12). There are those who believe that sustainable creativity is an opportunity for sustainable solutions and a positive phenomenon that

generates social well-being for both the individual and groups (Lemmetty, 2020, p. 04). In fact, creativity drives society to sustainability through its ability to imagine, see and vice versa. Efforts to promote the pillars of sustainable development are an incentive to unleash creativity (d'Orville, 2019, p. 66).

3.1.3 Characteristics of sustainable Creativity: According to (Sutcliffe, 2016, p. 1):

Sustainable creativity is based on the following principles:

- **Focus on Social or Environmental Benefit:** Sustainable creativity places a deliberate emphasis on directing research and innovation products towards achieving positive social or environmental outcomes.
- **Assessment of Impacts and Prioritization:** It involves a comprehensive evaluation and prioritization of the potential social, ethical, environmental, and cultural impacts, risks, and opportunities associated with innovation. This evaluation considers both current and future implications and aligns them with technology and business aspects.
- **Active Engagement of Society:** Sustainable creativity emphasizes the continuous and consistent participation of society throughout the entire innovation process. This participation includes the involvement of both the general public and non-governmental organizations who share a commitment to the common good.
- **Emphasis on Social and Environmental Well-being:** These characteristics highlight the primary focus on promoting social and environmental benefits, emphasizing ethical considerations, and engaging various stakeholders to enhance the well-being of society and the environment.
- **Openness and Transparency:** Openness and transparency are integral to the research and innovation process. This ensures that the process is accountable and accessible to all stakeholders.

3.2. The relationship of creativity to sustainability: (Brem & Puente-Díaz, 2020) argue that the different types of problems must be undefined, useful and new in order to be considered creative, and therefore creativity must provide sustainable solutions to difficult and huge problems. It takes place on three levels of the foot (Brem & Puente-Díaz, 2020, p. 04)

3.2.1. Industry-wide (production): Innovation and sustainability research can inform and complement each other. In terms of finding the creative solution, this leads to many benefits at the consumer, business and community level.

3.2.2. At the consumer level: Sustainable products will attract the attention of potential adopters of sustainable solutions, and enable companies to have a purposeful and distinctive location, because they have an important competitive advantage along with an ethical commitment to take care of this planet, and it must be emphasized that:

- our current levels of consumption are unsustainable, and governments and businesses have had to reassess their business objectives;

- Consumers need to rethink their consumption priorities; designers are in turn responsible for sustainability and need to re-evaluate how their products are designed and developed based on sustainability research;

3.2.3. At the community level: It will be easier to justify new solutions and you will receive higher levels of social support. In terms of the benefit component, creative sustainability solutions should work better than previous solutions. They therefore need to demonstrate the potential benefits of sustainability solutions that outweigh their potential costs.

3.3. Dimensions of sustainable creativity: Sustainable creativity has been studied by researchers through many doorways, but we have noticed that there are some studies that dealt with this topic through its types such as the research conducted by (Nadji Ajil, 2022, p. 86) and the one conducted by (Hussein & Ali Hussein, *Modifying organizational behavior and its impact on sustainable creativity, an applied study in Al-Rafidain and Baghdad Colleges of Economic Sciences and Al-Nisour.*, 2021). In addition to (Hussein & Ali Hassan, *The psychological contract and its impact on sustainable creativity in organizations*, 2021). Sustainable creativity includes:

3.3.1. Creativity of knowledge: Knowledge is the prerequisite for any creative process. Understanding needs, exploiting opportunities and threats, and gathering information needs to know what surrounds the organization. This ensures the generation of new ideas and new methods of performance that carry added value to any business.

3.3.2. Process creativity: It includes environmental training, employee participation, open communication, and the use of a system of rewards and incentives. It also helps individuals within the organization to participate in the development of science procedures and methods. This allows for increased environmental awareness that enables them to find solutions to the environmental issues and problems that they face now and in the future.

3.3.3 Product creativity: One of the best practices of environmental sustainability is the idea of supervising the product while taking into account the environmental impact on the product life cycle. This is done through some techniques known as product management and marketing, starting from the launch of the product until its termination or replacement from the market. Organizations ensure that they deliver their services in more sustainable ways.

3.3.4. Entrepreneurial leadership: Creativity is undeniably the linchpin of entrepreneurship, particularly in the context of ensuring the enduring viability of an organization's innovations. It is irrefutable that this capacity transforms organizations into entrepreneurial entities. Sustainable creativity, in this regard, aspires to furnish novel, yet cost-effective, eco-friendly products. This involves practices such as utilizing environmentally sustainable materials or recycled resources to conserve natural reserves.

Furthermore, these innovations are imbued with social responsibility, yielding benefits for the customer. This signifies that entrepreneurial leadership assumes a multifaceted role of environmental stewardship, social responsibility, and economic accountability.

3.4. Requirements and challenges of sustainable creativity: The challenges posed by the upcoming phase necessitate the adoption of novel strategies, decisions, and cultural paradigms that align with sustainability.

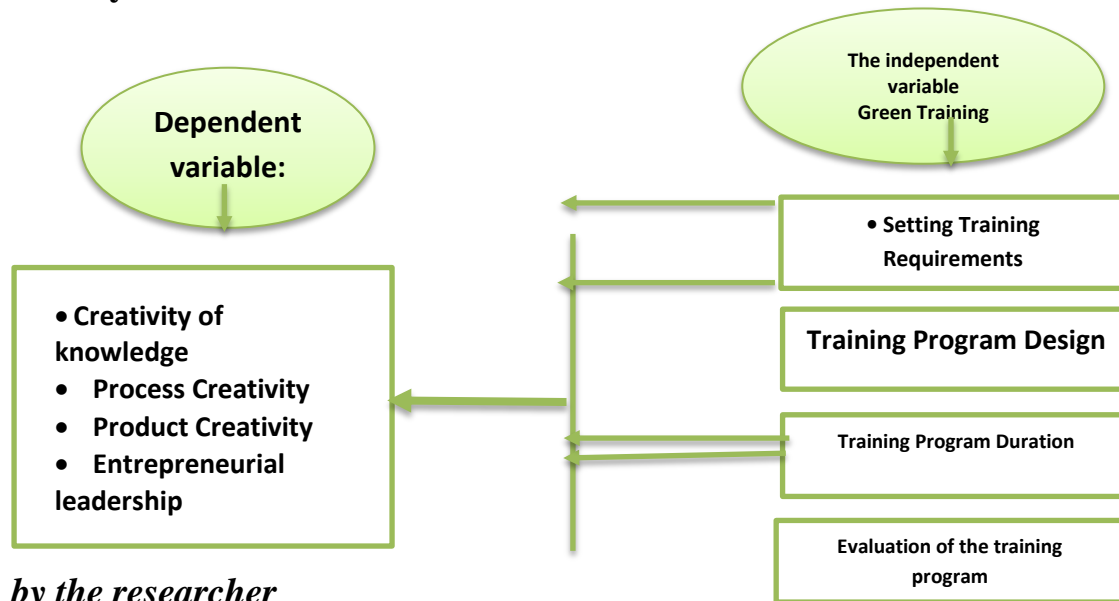
- **Striving for a Green Economy:** This entails devising solutions to address the limitations associated with the impact of resources, with a focus on sustainability.
- **Incorporating Comprehensive Measures:** This involves integrating coherent policies, structural changes, new solutions, and innovations across all sectors and fostering a culture of creativity.
- **Transitioning to a Circular Economy:** This shift from a linear to a circular economy is imperative. The circular economy's objective is to decouple economic growth from the consumption of natural resources and ecosystems by enhancing resource efficiency and introducing recycling infrastructure.
- **Engaging Private Sector Innovation:** Many private sector companies worldwide are actively involved in green innovation, investing in research and development to create new generations of environmentally friendly products and technologies.
- **Harnessing Human Ingenuity and Creativity:** In light of the finite nature of planetary resources, tapping into the ultimate renewable energy source, human ingenuity and creativity, is crucial.
- **Promoting Creativity and Knowledge Sharing:** Encouraging creativity, facilitating knowledge exchange, formulating innovative policies and procedures, and utilizing digital tools play a vital role in this transition.
- These strategies and actions collectively align with the need for sustainability and responsible resource management in the face of evolving challenges.

4. The practical framework of the study:

4.1. Methodology of the field study:

4.1.1. Study model: A study model has been prepared that clarifies the variables and hypotheses of the study

Figure 2: Study Model



Source: *by the researcher*

4.1.1. The community and sample of the study: The study focuses on assessing the impact of green training on fostering sustainable creativity, using a field study conducted at the Algerian Company for Leather and its derivatives. The study encompasses all 113 employees within the organization, irrespective of their roles or positions. A random sample of approximately 60 workers, constituting 53.09% of the total study population, was selected. Out of the distributed questionnaires, 49 were returned, and 45 of these were deemed suitable for analysis, accounting for 75% of the initial sample size.

4.1.2. Study tool: The study utilized an information questionnaire as its primary data collection

instrument. This questionnaire was designed by drawing from both theoretical concepts and practical insights. The following sections provide an overview of the components of the study tool:

- **Part I:** It includes the characteristics of the study sample in light of the personal and functional variables: (gender, educational level, career level, seniority years).
- **Part Two:** It includes (16) paragraphs aimed at determining the dimensions of green training: (identification of training needs, design of the training program, implementation of the training program, evaluation of the green program).
- **Part Three:** It includes (13) paragraphs, aimed at promoting sustainable creativity (knowledge creativity, product creativity, process creativity, entrepreneurial leadership)

The questionnaire statements were rated using the five-point Likert scale, which consists of five response options. Before administering the questionnaire, it underwent a validation process through a panel of expert reviewers (virtual validity). These reviewers possessed the necessary competence to assess the questionnaire's content and structure. After their evaluation, the arbitrators approved the questionnaire following essential revisions and adjustments to ensure its validity.

4.1.3. Validity and stability of the study tool: To assess the validity and reliability of the study tool, we will examine both its internal consistency and the stability of measurements using Cronbach's alpha coefficient:

4.1.3.1. Internal consistency: The degree to which each paragraph is related to the overall degree of all the paragraphs of the dimension to which it belongs was calculated by **Pearson's correlation** coefficient.

- For the paragraphs of the green training axis, Pearson correlation coefficients are shown in the following table:

Table 1: Correlation coefficients between the questionnaire paragraphs and the green training axis

Evaluation of the training program		Training Program Duration		Designing the training program		• Setting Training Requirements	
Correlation coefficient	Paragraph	Correlation coefficient	Paragraph	Correlation coefficient	Paragraph	Correlation coefficient	Paragraph
665	13	904	09	793	05	893	01
828.	14	.881	10	.829	06	715	02
799.	15	.692	11	.822	07	864.	03
.726	16	0.861	12	805.	08	736	04
* *Statistically significant at a significance level (0.01).							

Source: *by the researcher based on the results of the spss.*

The table above illustrates that all correlation coefficients are positive, indicating a direct relationship between the questionnaire items and the total score of the dimensions within the green training category to which they pertain. These coefficients ranged from a high of 0.904 for paragraph 09 to a low of 0.665 for paragraph 13. Importantly, all the statements exhibited statistical significance at a confidence level of 0.01, affirming that the items effectively measure what they were intended to assess.

- For the paragraphs of the sustainable creativity axis, Pearson correlation coefficients are shown in the following table:

Table 2: Correlation coefficients between the questionnaire paragraphs and the axis of sustainable creativity

Entrepreneurial leadership		Process Creativity		Product Creativity		Knowledge Creation	
Correlation coefficient	Para	Correlation coefficient	Para	Correlation coefficient	Para	Correlation coefficient	Para
0.720	10	863.	07	0.216	04	0.259	01
0.858	11	0.851	08	0.237	05	0.503	02
918	12	0.821	09	950	06	.960	03
0.884	13	-					
		* *Statistically significant at a significance level (0.01).					

Source: *By the researcher based on the results of the spss.*

Based on the provided table, it is evident that all correlation coefficients displayed a positive trend. This suggests a direct association between the questionnaire paragraphs and the overall level of empowerment within the work teams they pertain to. The range of these correlations spans from a high of 0.960, associated with paragraph 03, to a low of 0.216, linked to paragraph 04. Importantly, all the statements achieved statistical significance at a confidence level of 0.01, reaffirming that the paragraphs accurately measure what they were intended to assess.

4.1.3.2 Stability of the study tool: The stability value was extracted through the Cronbach's alpha coefficient for the questionnaire as a whole and for the study variables as follows:

Table 3: Study Stability Test

Title	Number of	Cronbach's alpha
Green Training	16	0.957
Sustainable Creativity	13	0.925
The total questionnaire	29	0.769

Source: *By the researcher based on the results of spss*

Table 3 shows the values of the stability coefficients for the two axes of the questionnaire and the questionnaire as a whole, and it is clear from the value of Cronbach's alpha for the first variable, green training, **which is (0.957)**, as it is a high value, and this confirms the stability of this axis and the possibility of relying on its results and benefiting from them in interpretation and discussion. The value of Cronbach's alpha for the sustainable creativity variable is (0.925), which is very high, and this confirms the stability of this axis and the possibility of relying on and benefiting from its results, and it is also clear from the stability value of the questionnaire as a whole (**0.769**), which is a high value that indicates the stability of the questionnaire as a whole and the reliability of it.

4.1.4. Normal Distribution Testing: In order to ensure that the extracted data follows the normal distribution, we conducted the **Kolmogorov-Smirnov** test, and we obtained the following table:

Table 4: Results of the normal distribution test of the study

Field	P- value
Green Training Area	0.218
Sustainable Creativity Field of Action	0.001
Questionnaire	0.22

Source: *By the researcher based on the results of the spss.*

Table (06) shows that the probability value (Sig.) All areas of the study were greater than the significance level (= 0.05), so we can say that the study data are subject to normal distribution, which allows us to use parametric tests to answer questions and hypotheses.

4.2. Presentation of the results of the study:

4.2.1. Personal and functional characteristics of the study sample

To view the personal and functional characteristics of a sample we display the following table:

Table 5: Distribution of Sample Members by Personality and Functional Variables

Title	Column Content	Frequency	Percentage	Percentage
Gender	Male	42	93.3	100%
	Female	3	6.7	
Educational level	Technical	16	35.6	100%
	Technician	12	26.7	
	Bachelor degree	11	24.4	
	Engineer/ Master	2	4.4	
	Postgraduate level	00	00	
	Other	4	8,9	
Grade	Control Aid	13	28.9	100%
	Implementation aid	18	40	
	Bollard	10	22.2	
	sublime frame	4	8,9	
Seniority	Less than 5 years	3	6.7	100%
	5 to 10	21	46.7	
	11 to 15years	16	35.6	
	From 16 up to 20 days	5	11.1	
	More than 20 years	-	-	

Source: by the researcher based on the outputs of spss

From Table (07), we note that the majority of the study sample is male at 93.3%, and for the educational qualification, the majority of the sample was from those who obtained a certificate (Technical and Technician Sami) at about 62%. As for professional experience, the sample varied between the different years of experience, where the largest percentage of the category was between 5 and 10 years.

4.2.2. The level of both green training and sustainable creativity of the institution under study

4.2.2.1. Green training level: To know the level of green training in the institution under study, we will analyze the trends of the study sample by calculating the weighted arithmetic mean and the standard deviation of the paragraphs of this axis as follows:

Table 6: Arithmetic mean and standard deviation of the paragraphs of the green training axis

Orientation	Rank	Standard Deviation	Arithmetic mean	Statements	phrase number	nois and
Sometimes	1	1.031	3.266	From time to time, our organization collects the environmental needs that we must take into account from the economy of resources, water conservation, waste disposal and others	01	• Setting Training Requirements
Sometimes	2	0.877	3.155	I believe that meeting environmental needs requires identifying the green knowledge we need to overcome and adapt to the coming periods	02	
Often	4	1.124	3.088	Our organization identifies the needs of qualified human competencies to develop our green knowledge	03	
Sometimes	3	0.884	3.111	The organization must determine its material needs that are required by caring for the environment inside and outside the organization	04	
Sometimes	2	1)011	3.022	Our organization sets environmental goals to be achieved during the coming period that are objective and measurable	05	Training Program Design
Sometimes	1	0.889	3.733	Our institution counts and mobilizes the various material and human resources necessary for the green training process, taking into account	06	
Sometimes	3	1.104	2.911	With a sustainable vision, the most appropriate way to receive training is chosen either in person or remotely using information technology	07	
Rarely	4	0.966	2.555	Our organization develops a timeline to which the training applies that takes into account the objectives set and the division of the constituent teams	08	
Sometimes	3	1.0357	2.866	Our organization offers us training courses on caring for the environment that enhance our green knowledge and guide our environmental performance in each course	09	Training Program Duration
Sometimes	2	1.1041	2.911	Our organization organizes awareness days from time to time on environmental threats and how to overcome them within our work and competence	10	
Sometimes	1	1.0435	3.044	I believe that environment-oriented training programs focus primarily on increasing our awareness of the environment and our responsibility towards the environment in which we work	11	
Sometimes	4	1.1055	2.777	Our organization works to encourage and reward all green initiatives that can be implemented in the organization and even outside it	12	
Rarely	4	1.0995	2.8	The selected training programs are environmentally friendly and not wasteful of resources and are keen to use and benefit from technology	13	Evaluation of the Training Program:
Sometimes	3	1.3073	3.133	I notice that there is a change in me and my colleagues' behavior in terms of respecting and protecting the environment. Our behavior has become more responsible	14	

Sometimes	2	9,989	3.155	Today, I support my organization in spreading environmental awareness inside and outside the organization and I value all green environmental behaviors	15	
Sometimes	1	1.0636	3.222	I believe that green work is ongoing and needs more. Therefore, developing our environmental performance requires continuing to raise awareness and increase green knowledge of the Company.	16	

Source: by the researcher based on the outputs of spss

From the findings presented in Table 6, it becomes apparent that there is a notable variance in the responses of the study participants concerning the extent of green training. In terms of training needs, it is evident that the efforts have been rather limited, with the exception of the third paragraph, where the respondents believe that the organization requires skilled human resources to effectively manage the process. In contrast, in the second dimension, the responses indicate a consensus that the planning process is distinct from the training process and that the organization still has significant deficiencies in this regard. This observation is further substantiated by the outcomes of the second dimension, which underscore that the absence of robust planning leads to a lack of execution and evaluation of training requirements.

Table 7: Mean and Standard Deviations of Green Training Dimensions

Level	Rank	Standard Deviation	Arithmetic mean	Dimensions of Green Training
Moderate	1	0.792	3.155	01
Moderate	4	.806	2.805	02
Moderate	3	0.895	2.900	03
Moderate	2	0.845	3.077	04
Moderate		0.737	2,984	Green Training

Source: by the researcher based on the results of spss

Based on the data presented in the table above, it is evident that the extent of adoption of green training practices within the studied institution falls within the realm of an average rating. The arithmetic mean of this level stands at 2.984, with a standard deviation of 0.737. **This finding contradicts the initial hypothesis**, which posited that the adoption of green training practices within the Algerian Leather Industry and its derivatives is at a high level.

When considering specific aspects of the training practices, the identification of needs emerges as the highest-rated, with an arithmetic mean of 3.155. Following closely is the evaluation of training programs, which garners an arithmetic mean of 3.077. The implementation of training programs is slightly lower with an arithmetic mean of 2.900, and the design of the training program lags further behind with an arithmetic mean of 2.805.

4.2.2.2. Sustainable level of creativity: We will analyze the trends of the study sample by calculating the weighted arithmetic mean and standard deviation of the paragraphs of this axis as follows:

Table 8: The arithmetic mean and standard deviation of the paragraphs of the sustainable creativity axis

Orientation	Rank	Standard Deviation	Arithmetic mean	Statements	phrase number	Dimensions
Sometimes	3	0.980	2.644	Our organization encourages continuous learning related to our work that enables us to improve and upgrade our performance	17	Creativity of Knowledge
Sometimes	1	1.086.00	2.955	Our organization is keen to keep up with the needs of today, as it is based on modern knowledge	18	
Sometimes	2	6.223	3.888	I believe that the ways we perform our jobs and tasks evolve from time to time to serve the requirements of sustainability	19	
Sometimes	3	957	2.755	Our management supervises and controls our services (our products) from the beginning until delivery, as it gives attention to respecting environmental standards	20	Process Creativity
Sometimes	2	1.260	3.044	In our organization, we consider the customer's opinion very important and any forms or feedback that our management takes into account	21	
Sometimes	1	6.198	4:111	We can engage in the field of competition related to environmental protection and social responsibility measures at various stages of our work and aspire to sustain these competitive advantages	22	
Sometimes	3	1.156	2.933	We can comfortably suggest new ideas in our organization because we find a listening ear, which allows them to be transformed into reality	23	Product Creativity
Sometimes	1	1.072	3.377	Our organization respects all government laws related to environmental protection and social responsibility	24	
Sometimes	2	1.153	3.177	In our institution, there is a law related to the ethics of humiliation, which is considered as a constitution that we follow and respect	25	
Sometimes	1	1.099	3.466	Environmental and health safety inside and outside our organization is our priority	26	Entrepreneurial leadership
Sometimes	4	1.137	2.977	Our management is keen to track our performance in which it attaches great importance to sustainable performance	27	
Sometimes	2	1.192	3.177	Our officials have all the qualifications that make our organization a social and environmental leader	28	
Sometimes	3	1.018	3.088	I believe that the decisions made by our leaders are very rational, as they are deep and deliberate to serve the institution and its customers	29	

Source: Source: By the researcher based on the outputs of spss

From the previous table, it is clear that all the paragraphs of the axis were (sometimes) oriented, and this indicates that the efforts made to promote sustainable creativity still did

not meet the required level. We find the highest value of paragraph 22 with a calculative average (4.111) and the lowest value of paragraph 17 with an arithmetic mean (2.644).

Table 9: Mean and Standard Deviations of Sustainable Creativity Dimensions

Level	Rank	Standard Deviation	Arithmetic mean	Dimensions of Sustainable Creativity
Moderate	3	2.258	3.163	01
Moderate	1	2.130	3.303	02
Moderate	3	0.952	3.163	03
Moderate	2	.940	3.177	04
Moderate		1.218	3.200	Sustainable Creativity

Source: by the researcher based on the results of spss

Through the general results in Round 9, we note that the level of sustainable creativity in the Algerian Company for Leather and its derivatives was average, and this averages (3.200) and a standard deviation (1.218), which is somewhat dispersed in the answers of the study sample, which **negates the validity** of the **second** hypothesis, which considers that the level of sustainable creativity is high in the Algerian Company for Leather and Derivatives (ACED). As all the dimensions of the study came with an average level and the highest value of the arithmetic mean (3.303) and the lowest value (3.163). These are very close results. This reflects that the modern subject requires time to crystallize as a thought and as a practice in our Algerian institutions.

4.2. Testing the relationship of influence between study variables:

This axis seeks to test the **third hypothesis**, which states: "There is a statistically significant effect at a significant level ($\alpha \leq 0.05$) of the green training dimensions (identification of needs, planning for training, implementation of the training plan, evaluation of training) on promoting sustainable creativity in the Algerian Company for Leather and Derivatives (ACED), Djelfa Unit

In order to test this hypothesis, **multiple linear regression analysis was used. Before that**, we will verify the validity of the model to test the hypothesis, based on the results of the regression variance analysis. The results were as follows:

Table 10: Results of regression variance analysis

Source of variance	Squares Total	Degree of freedom	Mean squares	Value (F)	Significance level (F)
Regression	35.963	4	8.991	12.256	€ 0.00
Error	29.343	40	0.734		
Nephrology	65.307	44			

*: statistically significant at a significant level ($0.05 = \alpha$)

Source: by the researcher based on the outputs of spss v25

It is clear from Table (10) that the calculated value of (F), which is (12.256), is greater than its scheduled value, in addition to that the level of significance is (0.00), which is less than the assumed level of significance, which is ($0.05 \leq \alpha$), and therefore we conclude that the model is valid for testing this hypothesis.

Table 11: Multiple Linear Regression Analyses

The independent variable	B	Beta	T	Significance level T	Trace or not
Constant	523	-	0.950	-	-
• Setting Training Requirements	0.584	.380	2.012	0.50	There's a trail.
Designing the training program	.124	0.82	0.444	0.659	There is no trace
Training Program Duration	-0.54	-0.40	216	0.830	- No, not a trace.
Evaluation of the training program	5549	0.381	2.2267	0.029	There's a trail.
R	0.742				
R2	0.551				
Significance F	0.00%				

Source: by the researcher based on the outputs of spss

Through Table (11), it is clear that there is a statistically significant effect of identifying green training needs to promote sustainable creativity in the institution under study, based on a value of(T) calculated for the dimension (2.012), which is greater than its scheduled value . In addition, the level of significance is estimated at (0.05), which is equal to the full value of significance (α). We also note that there is no statistically significant effect of the design dimension of green training on the promotion of sustainable creativity of the institution under study, given the calculated value of T (0.444), which is less than its tabular value. In addition, the level of significance (0.659) is greater than the level of significance estimated at ($\alpha \leq 0.05$). It is also clear from the table that there is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) after the implementation of the training program to promote sustainable creativity in the institution under study. This is due to the calculated value of T (0.2016-), which is much lower than its scheduled value, and the level of significance of T is greater than the level of significance ($\alpha \leq 0.05$), which reached 0.830. As for the last dimension, we find that there is a statistically significant effect after the evaluation of the green training program on promoting sustainable creativity in the place of study, and this is due to the calculated value of T (2.2267), which is greater than its scheduled value, in addition to the fact that the level of significance is less than the level of significance ($\alpha \leq 0.05$), as it reached 0.029.

From the above, we conclude that we will accept the hypothesis in one part and reject it in another part.

- **Part I:** There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the two dimensions (identification of training needs and evaluation of the training program) on promoting sustainable creativity at the Algerian Company for Leather and Derivatives (ACED), Djelfa Unit.
- **Part II:** There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) for the two dimensions (design of the training program and implementation of the

training program) to promote sustainable creativity in the Algerian Company for Leather and Derivatives (ACED), Djelfa Unit.

5. Conclusion

In spite of the pressing need for green training within organizations today, there remains a notable lack of interest in this critical area. It is essential to recognize that the key to any creative process, regardless of the level, is yet to receive the attention and dedication it truly requires. Embracing green training as a new culture that supports environmental consciousness demands genuine commitment and belief. The organization's responsibility to its customers, society, and the environment should drive the acquisition of knowledge among its members and foster innovative, environmentally friendly initiatives.

The institution under study serves as a representative example of our national institutions, significantly impacting the environment and society, owing to the specific products it offers. Following our field study, we've arrived at several key findings:

- The organization is making efforts to identify its green needs, encompassing both practices and behaviors.
- There is a notable absence of a well-defined process for designing and planning the green training program. Instead, efforts have primarily focused on training related to workflow and equipment advancement.
- Despite the organization's emphasis on occupational safety, the implementation of sustainable practices remains lacking. This is particularly important given the environmental risks and damages associated with the organization's operations, even affecting nearby residents.

Based on the aforementioned findings, we propose several key recommendations for the organization:

- Embrace green training as the solution to the challenges the institution faces, and transition from traditional training to comprehensive green training that covers all stages of development.
- Acknowledge that economic returns are no longer the sole objective; social and environmental goals have gained prominence and can surpass economic ones.
- Foster a culture of sustainability within the organization, promoting environmental responsibility and social accountability.
- Organize joint seminars in collaboration with environmental protection institutions and associations to support the organization's sustainable initiatives and direction.

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