Integrating Soft Skills into Net-Zero Environmental Education: An Exploratory Study in Moroccan Secondary « Life and Earth Sciences » Classes

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ABSTRACT:

Soft skills have gained an increasing acceptance as an important part of a balanced development of a learner, as an indispensable resource of survival in the modern scholarly and professional conditions. Even in the Moroccan secondary school system, however, the pedagogical practices are still largely disciplinary oriented and focused on technical competence, with little explicit focus on transversal competence. The research questions that will be addressed in this study are how can environmental education initiatives associated with Net Zero, specifically the composting activities in the context of the scientific baccalaureate and curriculum life and earth sciences, be used as a setting to purposefully develop soft skills. It was a quantitative descriptive design with the qualitative analysis of the open-ended responses that were conducted between March 2025 and October 2025. The information was gathered using an online questionnaire that was distributed to the 24 teachers of the life and earth sciences in the Provincial Directorate of Azilal (Morocco). Analysis of quantitative data was done in Google sheets and qualitative data using text mining software, including Voyant-Tools and WordArt. The findings indicate that 91.7 percent of the respondents believe that soft skills are essential to the development of a student, especially in terms of enhancing the level of creativity, time management, cooperation and critical thinking, but 78.3% note that they have not been specifically trained in the area. Approximately 66.7% of the teachers report having participated in composting or Net Zero-based projects, which are seen as promising contexts in which cooperation, problem solving and ecological engagement can be achieved despite limitations that are associated with time, resources and overloaded curricula. Lexical analysis cues time and lack as the most prominent terms, which indicate structural impediments to

experiential learning, and the ratio of words related to pedagogical tools pointing to the position of centrality of group work and practical activity. The identification of soft skills makes a considerable association between personal and relational competences by teachers, and less commonly, adaptive and cognitive dimensions. According to the research, Net Zero-oriented environmental programs, including composting, can be a nice place to introduce the use of soft skills into the curriculum of the subject, Life and Earth Sciences, and support the idea of eco-citizenship. It suggests, too, the necessity of specific teacher training and specialised learning platforms, following the orientation of the national policies, including the National Plan to Accelerate the Transformation of the Higher Education, Scientific Research and Innovation Ecosystem (PACTE ESRI 2030, Moroco), to generalise these practices by education tier.

Keywords: Net Zero; environmental pedagogy; soft skills; ecological education; composting; secondary science education; Morocco; sustainable development.

1. Introduction:

- Soft skills, which can be defined as a set of behavioural, interpersonal and emotional competences viewed as rather broad, have become the centre of concern in the modern education systems and labour markets [1]. As opposed to technical competence, or hard skills i.e. the ability to apply particular disciplinary knowledge, and know how that can be measured, soft skills refer to communication, collaboration, time management, critical thinking, adaptability, emotional regulation and other transversal skills which are deployed in various academic, professional and social contexts [2]. They are usually gained by experience and practice as opposed to merely attaining theoretical content. Soft skills historically regarded as secondary in relation to technical competency have become understood as factors essential in personal advancement, employability and the ability to participate positively in complex challenges facing society such as environmental crises. [3]
- Soft skills are strategic in the larger subfield of education as a means of sustainable development. Environmental issues like climate change, depletion of resources and loss of biodiversity need not just be conceptually understood by people and be scientifically literate, but the capacity to cooperate, negotiate, innovate and take action [4]. Environmental pedagogy that explicitly incorporates the soft skills therefore follows the vision of Net Zero which pertains to the attainment of the balance between anthropogenic greenhouse gas emissions and removals. Net Zero commitments include changes in behaviour, systemic change and participatory governance, which depend on competences in critical and anticipatory thinking, solving of problems in collaboration and eco-citizenship [5].
- The introduction of soft skills into the formal education procedures can be discussed as unequal and mostly implicit in the context of Morocco. Programs regarding transversal competences have tended to be focused on tertiary education and are limited by few human and financial resources [6]. At secondary education level and especially in the scientific streams, the pedagogical practices still give pre-eminence to developing disciplinary knowledge and examination-focused technical skills. Although this specialization is key to achieving success in school, it results in students being unprepared to handle the university and work-related settings where communication, cooperation and self-discipline grow to play a

decisive role. Lack of development of soft skills could impede the flexibility of the students and the ability to approach the problem of the environment and society critically [7].

- In this scenario, Life and Earth Sciences (SVT: French, Science de la vie et de la terre) presents a very good point of departure in terms of associating soft skills and environmental pedagogy [8]. Ecosystems, care of resources, climate-related processes, are the issues that are already covered in SVT curricula and can be mobilised as context of active learning. The school-environmental projects, including the waste management, recycling, composting can be equipped with the feature of the real environment situations, when the students are to plan, collaborate, make decisions, and reflect on their actions. When such undertakings are directly related with the idea of Net Zero, i.e., when the amount of avoided emissions is calculated with the help of composting of organic waste, they may contribute to ecological literacy and climate mitigation policy awareness [9].
- In particular, composting applies in this case. Being a local, practical and tangible activity, it allows the students to see the biogeochemical processes, get familiar with organic matter cycles and reflect on the minimization of waste disposed of the landfill [10]. Using the Net Zero as the background, composting initiatives can be used to make students understand the connection between the daily activities of life, greenhouse gas emission, and sustainable resource management [11]. Meanwhile, they offer the chances to train soft skills in terms of group work, joint decision making, conflict management, taking initiative and thinking over the consequences of actions on the environment. This way composting turns out not only as an environmental activity but also as a pedagogical tool of developing eco-responsible behaviour and social competences [12].
- In spite of such a possibility, systematic development of soft skills using the environmental projects is not an entirely widespread practice in the Moroccan secondary schools. It is also common in the case of teachers to be constrained by packed programmes, large student population and limited material resources. Different people have lacked targeted training on the techniques of developing learning sequences that can be applied to achieve disciplinary outcomes and environmental goals and transversal competence. As a result, soft skills are more likely to be acquired indirectly without a premeditated pedagogical strategy or evaluation criteria and it can be less apparent and influential on the path of the students [13-14].
- The current paper aims at examining how soft skills can be integrated in Moroccan secondary schools in terms of environmental projects concerning Net Zero, and the area of composting within the SVT curriculum of the scientific baccalaureate considerately. It looks at the perception of soft skills by the teachers, the extent to which they integrate them in their practice as well as the challenges they face in the process. The case of composting projects herein is viewed as ideal cases of active learning environments that could instill problem solving, creativity and critical reflection in addition to improving ecological awareness and ecological citizenship. The paper has a number of objectives. First, it attempts to examine how teachers imply the role of soft skills in education as sustainable development, and more specifically, the Net Zero-oriented pedagogy. Second, it discusses the weaving of the soft skills into classroom and project-based activities connected to composting and waste management. Third, it determines the perceived central barriers and facilitating factors among teachers in the respect to the inclusion of soft skills in SVT teaching. Lastly, it speaks about how findings can be used to inform the design of learning spaces and platforms that are devoted to the development of soft skills based on the national policy orientations, like the national plan that highlights transversal competences and sustainable development as in the case of the PACTE ESRI 2030 (National Plan of Acceleration of the transformation of the higher education, scientific research and innovation ecosystem). Towards meeting these aims, the article adds to the growing literature on environmental pedagogy that focuses on Net Zero in the Global South and offers some

empirical information on how environmental undertakings can be exploited to enhance the enhancement of soft skills in the formal schooling. He/she is organized into three major axes that include the role of soft skills in education towards sustainable development and Net Zero; how they can be integrated as a model of active learning into composting; and what the consequences of such practices are in student motivation, responsibility and environmental citizenship.

2. Methodology:

- The qualitative method used in this study was both a quantitative descriptive approach and qualitative analysis of the open-ended responses [15]. It was intended to receive general inclinations as well as complex information about the practice of teachers and their attitude on the occurrence of soft skills within the teaching of SVT using Net Zero-related environmental projects. The open-ended nature of the mixed design enabled the integration of the rigour of the numerical statistics with the richness of the thematic enquiry which provided an all-inclusive perspective of the problems involved in the Moroccan educational reality [16].

2.1. Data Collection:

- The data were collected using a survey questionnaire that will be used online on Google Forms between March 2025 and October 2025. The questionnaire was made of open and closed questions. Close ended questions were used to obtain quantitative data on the profile of the respondents, the teaching environment, taking up environmental projects and their views of the significance of soft skills. The perceived relevance of soft skills, i.e. communication, collaboration, time management and critical thinking as applied in the teaching process of SVT and environmental education, was also probed in these items [17]. The open-ended questions were designed to encourage the teachers to share their experience with including the soft skills in their practice, describe the challenges they face in this area in their own language, constitutional tools they rely on and talk about their experience with composting and Net Zero programs. These narrative responses entailed the complexity of lived experiences of teachers, and the contextual limitation and tacit pedagogical solutions, which cannot be easily converted into numerical measures [18-19].

2.2. Sample:

- The questionnaire was filled by 24 SVT teachers. The participants were all members of the secondary schools that were governed by the Provincial Directorate of Azilal, Morocco. Most of them were over five years of teaching experience and had mostly served in rural schools which might influence their connection with effects on the local environment, availability of resources and school facilities. The sample size is small and has geographical boundaries that restrict the chances to generalise the findings to the national level. However, it offers an appropriate point of entry on a preliminary review on existing practice and issues surrounding the inclusion of soft skills in the teaching of SVT in a local setting [20-22].

2.3. Instruments and Data Analysis:

Gathered quantitative data obtained as a result of closed-ended questions was exported and processed in Google Sheets [23]. Descriptive statistics were developed to establish how respondents were distributed in terms of perceived score on the sense of the importance of soft skills, being involved in composting and Net Zero projects, and receiving professional development opportunities [24]. The qualitative data that was provided in the open-ended responses were used to analyse the data with the help of text-mining tools, namely WordArt and Voyant-Tools. These were the tools used to create the most frequent distributions and word clouds to visualise the most frequent terms and concepts [25]. Besides this, thematic coding was also conducted to categorize the responses of the teachers into broad categories in respect of integrating the soft skills, perceived barriers, and pedagogical strategies. In the analysis of the categories of soft skills, descriptions of teachers were divided into four general clusters adaptive competences, personal competences, cognitive competences and relational competences. The

descriptive statistics and the lexical-thematic analysis allowed associating the frequency of the occurrence of certain terms with the conceptual content of teachers in their stories, thus providing a multidimensional image of the perception and mobilisation of soft skills in environmental education connected with Net Zero and composting [26-28].

3. Results:

3.1. Quantitative Analysis:

- The key quantitative findings on the issue of integrating soft skills in education and pedagogy are summarised in table 1. The discussion confirms that most of the participants (91.7%) believe that soft skills are necessary components of the school curriculum especially in aiding in creativity, time management, teamwork and critical thinking. The number of teachers who consider these competences as of limited importance is 8.3% only, which proves a wide understanding of their importance to the academic and social success of students [29].

Table 1. Soft Skills and their Integration in Education and Pedagogy.

Theme	Criteria	Distribution/Frequency	Observations/Interpretations
Geographical Context of Institutions	Industrial Zone	5.3%	Institutions in industrial zones are few among the sample.
	Residential Area	36.8%	A moderate proportion of institutions in residential areas, with better access to educational resources.
	Village or Small Town	57.9%	The majority of institutions are located in villages or small towns, influencing teaching practices.
Importance of Soft Skills in Education	Very Important	58.3%	Strong recognition of the value of soft skills for students' overall development, especially creativity and critical thinking.
	Important	33.3%	Many teachers see soft skills as important but not paramount.
	Unimportant	8.3%	A small percentage of teachers do not consider soft skills essential to their teaching.
Frequency of Training on Soft Skills	Never	0	No participants reported never receiving training on soft skills.
	Rarely	25%	A few teachers reported receiving training on soft skills rarely.
	Sometimes	41.7%	A significant proportion of teachers receive occasional training on soft skills.
	Regularly	12.5%	A limited number of teachers receive regular training on soft skills, indicating a lack of continuous professional development.
Barriers to Integrating Soft Skills	Lack of Time	Main barrier mentioned (time constraints, curriculum overload).	Teachers highlight lack of time as the primary obstacle to integrating soft skills into teaching.
	Lack of Training	Frequently mentioned	Insufficient training on soft skills is considered a major barrier.
	Curriculum Overload	Frequently mentioned	The overloaded curriculum prevents the integration of these skills into daily teaching practices.

Pedagogical Methods for Integrating Soft Skills	Group Learning	Frequently mentioned in teachers' responses.	Collaborative learning is a preferred method for teachers to develop soft skills in students.
	Practical Activities (e.g., composting)	Most recommended activities	Teachers see practical projects, like composting, as opportunities to develop soft skills.
	Digital Tools (videos, resources)	Mentioned but less frequently used	The use of digital and audiovisual tools is mentioned sporadically, and remains an underexplored area.
Skills Associated with Soft Skills	Adaptive Skills	15 mentions	Adaptability and flexibility are key skills frequently mentioned by teachers in teaching.
	Personal Skills	30 mentions	Stress management, autonomy, and initiative are commonly mentioned personal skills.
	Cognitive Skills	19 mentions	Critical thinking and problem-solving are essential skills, but less frequently addressed.
	Relational Skills	32 mentions	Teamwork and communication skills are highly valued by teachers.

- This acknowledgement notwithstanding, seven-out-of-ten respondents report that they have never been given some form of in-service training on soft skills. The gap implies the lack of correspondence between policy or discursive focus on transversal competences, and the actual opportunities provided to teachers in their professional development. There are also a lot of respondents who encourage their desire to attend the training sessions devoted to the implementation of soft skills in their instruction and especially to the realization of environmental and Net Zero projects [30]. This articulated requirement demonstrates that there is a gap between the need to support and resource operationalisation of these competences in classroom practice. In the question of being involved in the environmental projects, about 66.7% of the teachers note that they have participated in composting or other programs that are directly connected with the Net Zero goal in their classroom practices. Such projects are popularly integrated into SVT departments on waste management, soil and ecosystems [31]. Teachers see them as positive environments to incorporate soft skills like cooperative work, accountability and problem solving, at the same time heightening awareness of the students about environmental problems and mitigation of climate change. However, the process of implementing such projects is limited by a number of factors [32]. To impediments in the incorporation of active project-based learning, teachers often cite material resources which are scarce, a dearth of time and pressure due to overloaded curricula. Such limitations inhibit the frequency and intensity of the composting processes, thus, limiting their opportunities as organized possibilities of soft skills training and Net Zero literacy [33]. The quantitative findings thereby describe a contradiction between conceptual soundness of teachers on their high conceptual support of soft skills and Net Zero-oriented pedagogy and structural impediments that do not allow realising these intentions into practice. This tension gives the setting onto which the qualitative findings can be projected particularly in terms of how teachers express the barriers, pedagogical resource and types of competence in their own language [34].

3.2. Qualitative Analysis:

3.2.1. Barriers to the Intake of Soft Skills:

- Lexical analysis of responses to open-ended postulates highlights the key challenges that the teachers feel about wanting to apply soft skills in their pedagogical activities using environmental projects. The importance of the words time and lack are obvious as the word log of the most common words related to obstacles

indicates that these words are the dominant ones (Figure 1). Such visualisation is representative of a repetitive rhetoric where lack of time, not only in the schedule, but throughout the school year, seems to be the central inhibitor of experiential learning and project-based incorporation of soft skills [35].

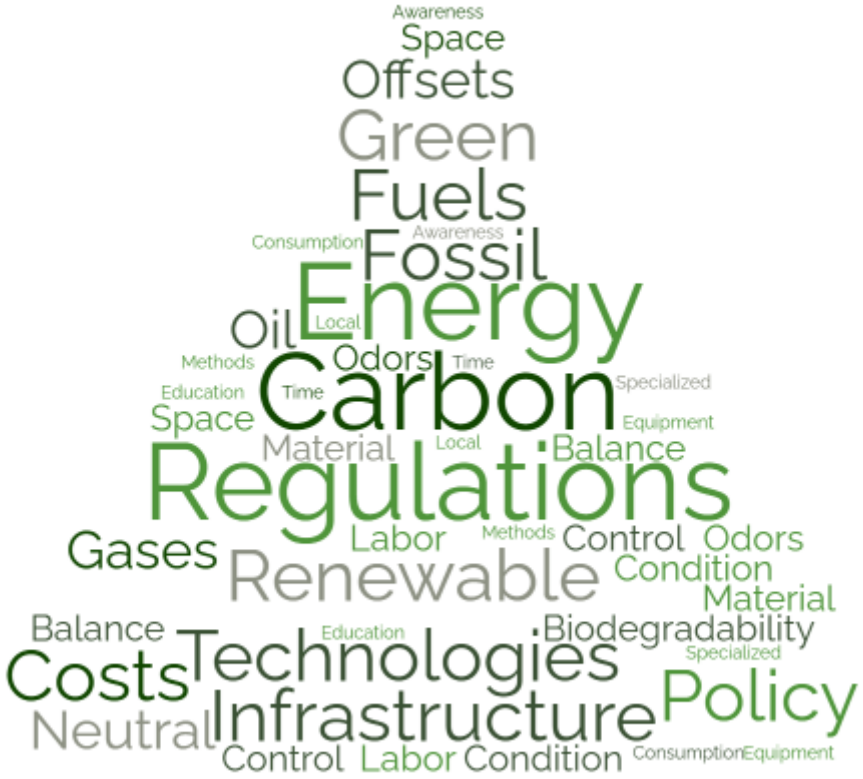

Figure 1.The most frequent obstacles as word cloud.

- According to teachers, the SVT curriculum is thick and far-reaching in terms of acquiring knowledge that is necessary to pass high-stakes examinations. In this framework, project work involving composting and Net Zero is considered to be an additional endeavor to be incorporated to an already overloaded programme [36]. This means that prospects to have active pedagogies implemented in a sustained manner are curtailed and teachers occasionally tend to have brief fragmented activities which restrict the scope of development of soft skills [37]. Besides the time limitations, the respondents also often state that the low level of training, the shortage of material resources and the institutional incentives dichotomous as a feature that seriously hinders them. Most educators point out that they have been forced to either improvise or train themselves through the design and management of composting projects, and in most cases, have to utilize their own resources or community collaborations. On the one hand, this creativity shows that the commitment to professional efforts is undertaken, but on the other hand, this initiative explains the susceptibility of this approach, which relies on personal incentives, not frameworks. The overtness of the barriers associated with time, resources and training is an indication that implementation of the soft skills on Net Zero environmental pedagogy cannot be made dependent on the work of individual teachers. Rather, it has to do with curriculum modifications, specific professional training and the supply of pedagogical and material assistance [38]. In the absence of such systemic changes, the prospects of composting projects to develop transversal competences and ecological interests are unlikely to be met in full regardless of the favourable attitude of teachers [39].

3.2.2. Pedagogical Resources and Techniques:

• Figure 2 presents how the most important terms regarding pedagogical tools and methods are spread throughout the open-ended answers corpus. The keywords such as both practical and group are used with a certain frequency, which means that the two terms are closely intertwined by educators since the development of soft skills is closely connected to the concept of group work and practical activities [40]. Most respondents reiterate that group and project-based activities, including the planning and operation of a composting system, bear natural circumstances in which students need to apportion positions, distribute responsibilities and communicate efficiently [41].

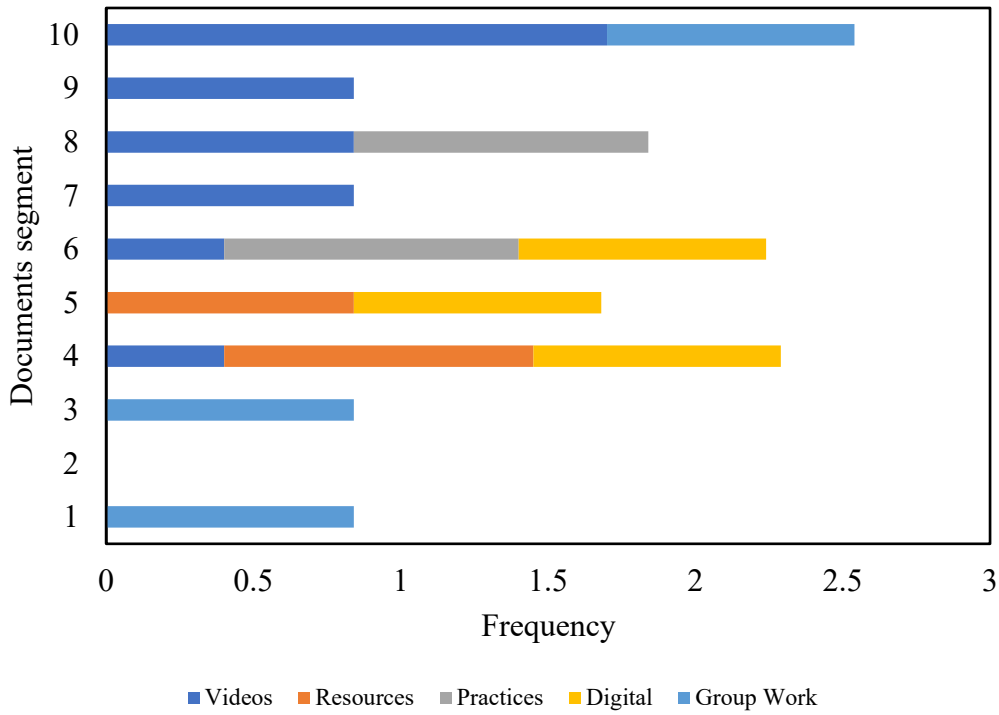

Figure 2. Keywords Distribution The frequencies showed in each document segment based on Main Key Terms relating to Pedagogical Tools and Methods.

• Conversely, the use of the terms video and digital tools are not as prevalent or uniform and actually have higher peaks in certain sections at times. This tendency indicates that digital or audio-visual use to assist in environmental projects is still in its infancy, though it is spread by some teachers [42]. Some of the respondents report that the barriers to the use of digital technologies include the lack of access to equipment and connection, especially within rural schools. The word resources is also predominant implying a long-term worry with the access to pedagogical resources, facilities to compost and contextualised teaching resources. Educators also state that they would like to use organized educational packages, recommendations and online tools that would help them create Net Zero-oriented initiatives and explicitly incorporate soft skills into it. Altogether, the qualitative data demonstrate that the teachers are more likely to prefer to apply collaborative and experience-based methods to address environmental issues and at the same time mention that access to both physical and digital resources should be improved. The result of this study is consistent with the wider research on active learning in science education that highlights the importance of practical group learning in helping to build engagement, ownership and greater insights of complex problems like climate change and sustainable resource management [43-44].

3.2.3. Types of Teachers Associated Soft Skills:

• Figure 3 and Table 2 display the soft skills mentioned by teachers, sorted into four general clusters, namely: adaptive competences,

personal competences, cognitive competences and relational competences. As can be seen, the most common categories mentioned are personal and relational competences [45]. Emotional regulation, stress management, self-confidence and self-discipline are some personal competences which are developed when students have to devote much time and take certain responsibilities when working in environmental projects [46]. Central ones are also characterized by relational competences including teamwork, communications, empathy and respecting the ideas of other people [47]. The teachers view composting projects as the environment where learners organize activities to listen to one another, conflict, and solve shared and common challenges in waste collection and monitoring composting site, and waste monitoring [48]. In such situations interpersonal dynamics emerges a major aspect of learning process. Adaptive competences, such as flexibility and adaptation to new situations, and cognitive competences, such as creativity, innovation and critical thinking, are less mentioned, and yet, found in the discourse of teachers. Several respondents indicate that adaptive problem solving and creative thinking are needed in managing composting systems when they operate under changing conditions, e.g. the changing of season or the change in types of waste. Others underline the necessity of such critical analysis during which students should appreciate the environmental impact generated by composting and its share in Net Zero goals [49-50].

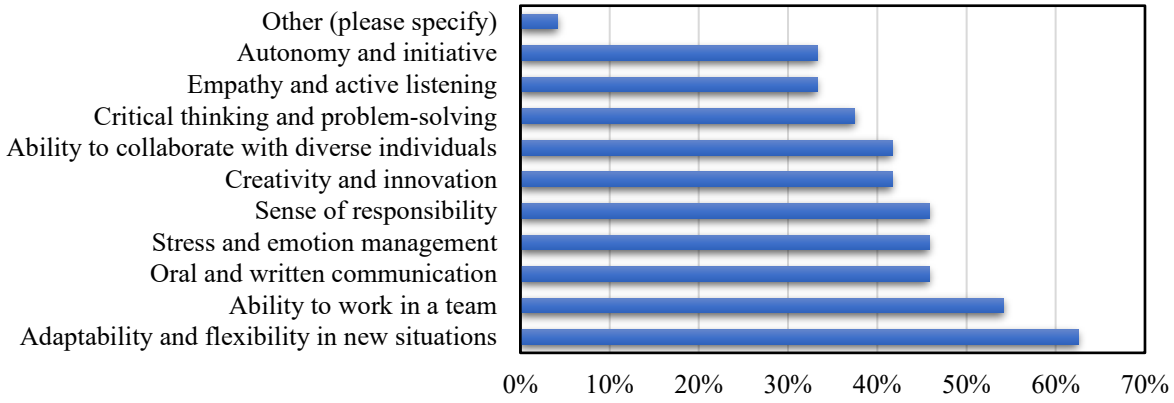

Figure 3. According to teachers, soft skills.

Table 2. Soft Skills Distribution in Four Groups.

Category	Soft Skills Included
Adaptive Skills	• Adaptability and flexibility in new situations
Personal Skills	• Stress and emotion management • Sense of responsibility • Autonomy and initiative
Cognitive Skills	• Critical thinking and problem-solving • Creativity and innovation
Interpersonal Skills	• Teamwork ability • Oral and written communication • Empathy and active listening

- Figure 4 also shows the proportion of repeated use of the different categories in the responses, which confirms that the personal and relational competences are viewed as having a

more direct identification and, perhaps, more familiar to teachers in comparison with the adaptive and cognitive ones. This bias can be connected not only to inadequate training in the conceptualisation and measurement of the soft skills, but also to the comparative youngness of the notions under pedagogical discussion [51]. Few interviewees also note the possibility of artificial intelligence, which can be utilized to facilitate the appearance and training of soft skills, either via adaptive learning units or via digital simulations [52]. Nonetheless, this is a peripheral aspect and means that AI has yet to be thoroughly exploited in this sphere as an educational means. The prevalence of personal and relationship competences in teacher representations suggests that first-time and on-the-job training to intensify teacher perceptions of soft skills should be approached towards more systematic dimensions of adaptive and cognitive thinking, especially when facing Net Zero challenge and sustainability issues, which need anticipatory, systemic, and creative minds [53].

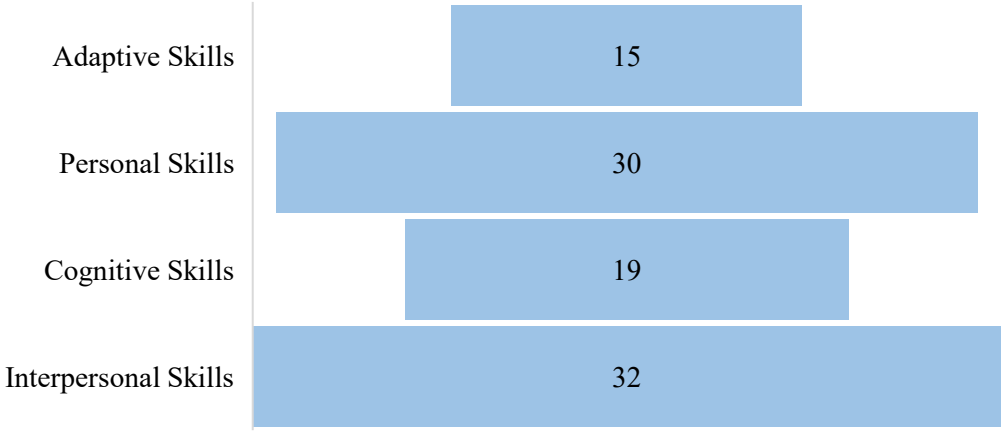

Figure 4. Soft-Skills Categorical Frequency.

4. Discussion:

- This work has explored the application of soft skills to Net Zero oriented environmental pedagogy in secondary Moroccan educational systems; specifically composting projects in SVT curriculum in under scientific baccalaureate. It uses a mixture of quantitative and qualitative tools to examine why and how responses of 24 teachers in the Provincial Directorate of Azilal conceptualised soft skills and mobilised and restricted them in practice, giving back an initial image of how soft skills are conceptualised.
- The results indicate that the issue of the significance of soft skills to the wholesome growth of students and the efficacy of environmental education has a wide consensus among educators. These competences are deemed critical by a huge majority (91.7%) and specifically in relation to promoting creativity, time management, collaboration and critical thinking. Composting initiatives that are connected with the Net Zero are also recognised as favourable venues of the evolution of these competences and 66.7% of the interviewees have undertaken projects in composting. These activities are prescribed by teachers as the way of students to work in groups, to be responsible, to solve some problems and think about the effect of their action on the environment [54].
- Nevertheless, the research also shows that there are great structural and institutional challenges. Although they have positive attitudes, 78.3% of the teachers also affirm to have had no specific training in terms of soft skills, and many teachers affirm the lack of time and resources as an important limiting factor towards the implementation of active and project-based learning. The fact that the words time and lack can be periodically found reveals the lexical analysis that with the efforts to integrate the soft skills are being made in the background of low time and material margins [55]. Moreover, digital and audiovisual tools, which may be used in the development of innovative Net Zero pedagogy, are used sporadically and cannot be expanded due to infrastructural constraints [56].

- Regarding the type of competences, teachers predominantly relate soft skills to the personal and relational aspect which includes emotional control, self confidence, working with teams and communication skills. Creativity and innovation as adaptive and cognitive competences are less frequently stated, which points to the fact that the dimensions are less well conceptualised, or even better stated during practices. This imbalance can sustain the potential of environmental projects to provide students with a higher-order thinking skill to respond to the complex sustainability problems [57-58].
- The study describes the necessity to go beyond the single efforts and create a more coordinated strategy of the incorporation of soft skills into Net Zero environmental pedagogy. This strategy would encompass a number of complementary dimensions. First, the training of teachers, initial and in-service, must expressly touch on the soft skills concerning environmental and climate education offering conceptual frameworks and pedagogic strategies and assessment devices. Second, the curricular and institutional structures need to find space of project-based learning, such as incorporating composting and other Net Zero-related courses into formal programmes and school development strategies. Third, special platforms and resources ought to be created to help teachers in designing such projects, implementing them and evaluating them. In this regard, the development of learning platforms that focus on soft skills as planned in the strategic documents like the PACTE ESRI 2030 can be expanded and modified to include secondary education to ensure that the practice of the above is generalised at all levels of education.
- Lastly, the paper indicates that environmental pedagogy focused on Net Zero can be an effective key to reconsidering the meaning and activities of science education. Attaching real world constructions like composting with abstract concepts like green house gas emissions and sustainable resource management, teachers will be able to develop both disciplinary and transversal skills needed to make eco-citizens. The inclusion of soft skills in such projects does not simply create an extra track to the curriculum; it serves to create learners who can be able to act fairly and in a responsible manner, collaborate and be creative in a world being faced by pressing environmental changes.

5. Conclusion:

- This paper examined how soft skills could be incorporated in Net Zero-based environmental pedagogy using composting at the SVT curriculum of Moroccan secondary schools. The results indicate that there is a high agreement among teachers with respect to the significance of soft skills with 91.7 per cent of the educators acknowledging that soft skills are the core component of promoting creativity, teamwork, critical thinking and time management. The activities of composting are generally considered to be good steps towards building these competences and 66.7% of the respondents affirm to have introduced such projects in order to enhance the ecological activities and responsibility among students. Nonetheless, the inclusion of soft skills is still systemically limited. Over half of educators (78.3%) note that they have had no specific training and lexical analysis throws up frequent challenges associated with time constraints, resources and institutional facilitation. Though the use of practical and group-based activities are a normal practice, the use of digital tools is underutilised since there is a challenge of infrastructures. Soft skills are mostly linked to personal and relation skills in elements of teaching, but the aspect of adaptive and cognitive dimensions is not clearly explained. These results highlight the importance of specifically focused professional training, flexibility of curricula and systematic pedagogical materials in accordance with the national priorities, including the PACTE ESRI 2030. Enhancing the involvement of the soft skills in Net Zero environmental projects may lead to the improvement of the eco-citizenship among students and in preparation to meet the environmental and societal challenges awaiting them.
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8. Author Declaration:

- The authors declare that this work is original and has not been published previously, nor is it currently under consideration for publication elsewhere. All authors have contributed to the preparation of the manuscript and have approved the final version for publication.
- The authors declare that they have no conflicts of interest related to this study.