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*The Importance of Language in the Relationships
between Humans and Non-Humans*

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STUDIES AND RESEARCH CONTRIBUTIONS

Degrowth and Pedagogy

Training Future Teachers in a Context of Ecological Crisis

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ABSTRACT

The initial training received in Spanish faculties of education by future teachers is influenced by the principles and approaches passed on by their lecturers and professors over the course of their programmes. This in turn will have repercussions on the schooling they provide to their future pupils. An examination was undertaken of the discourse relating to degrowth of academic staff and students at the Faculty of Education of the University of León, as a case study. This discourse was analysed through the triangulation of three research tools of a qualitative nature: interviews, discussion groups, and a documentary review of teaching guides for subjects taught in that faculty. The results show that university teaching staff tends to reproduce models linked to the predominant neoliberal discourse. Although the study has limitations due to the small sample size used in a case study, it is believed that its outcomes may be transferable to other university contexts. The conclusion is that there is an urgent need to provide training in degrowth to the teaching staff of faculties of education if there is to by education in a model of degrowth allowing future generations to inherit a sustainable planet.

Keywords: degrowth; ecological ethics; ecology; education; education for sustainable development; higher education; initial teacher training; pedagogy of degrowth; sustainability; teacher training.

1. INTRODUCTION

In a situation like the present, emerging from the experience of a global Covid-19 pandemic, it is vital to consider how to proceed to build a soci-

ety and a planet based on a new model. This should take a critical stance in the face of the global social and environmental deterioration being suffered by the world ecosystem, which also has influence over the appearance of pandemics (Gómez-Luna 2020). In this sense, experts advocate degrowth; living well with less, living differently and prioritising well-being and equity (Kallis *et al.* 2021; D'Alisa 2019). It is time to refocus on what really matters, i.e., the health and well-being of people and the planet instead of GDP [1] and the economic benefits of a minority (Kallis *et al.* 2022). Degrowth challenges the hegemony of economic growth (Fitzpatrick *et al.* 2022) and calls for a democratically led redistributive reduction of production and consumption in industrialised countries as a means to achieve environmental, social, and shared welfare justice (Demaria 2021).

Universities, higher and further education in general, have an inescapable social and pedagogical responsibility in this regard (Wakkee *et al.* 2019). There is an academic consensus that sees universities as the most suitable context to take a lead in creating scenarios and forms of education for degrowth (Valderrama-Hernández *et al.* 2020, 224). This is especially true of faculties of education, which train prospective teachers for all levels of schooling: infant, primary, and secondary.

In view of this, it would seem crucial to investigate the initial training on this topic received by those who will be going into the teaching profession in the future. This is because early awareness-raising regarding degrowth, bringing these subjects into university courses and into faculties of education in a transverse, ongoing way, may well be an essential measure in avoiding future ecological and planetary catastrophes (Weinberg *et al.* 2020). These topics should be integral to university policies and syllabi, to the training of teachers and to student assessment.

United Nations declared a decade of *Education for Sustainable Development* (ESD) running from 2005 to 2014, stressing the need to bring the principles, values, and practices of sustainability into all fields of education. Its aim was to encourage the behavioural changes necessary to advance towards a sustainable model for development (UNESCO 2005), although set within the viability of a capitalist economy (Schmelzer und Vetter 2019). UNESCO's *Global Action Programme on Education for Sustainable Development* (UNESCO 2014) also established change in university institutions as a priority, so as to make them into facilitators of ESD. These proposals, still within an economic context of capitalism,

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[1] Gross Domestic Product is the standard measure of the value added created through the production of goods and services in a country during a certain period.

permitted a speeding up in the inclusion of principles of sustainability into education (Vilches y Gil Pérez 2020). The 2030 Agenda for Sustainable Development launched by the United Nations in 2015 saw *Education for Sustainability* as one of the key principles and a transverse element in the contents, practices and proposals aimed at professional development of university teaching staff (Blanco-Portela *et al.* 2020).

The research being reported here goes beyond this approach, towards degrowth. This is because ESD has not yet really questioned this context in any depth (Kopnina 2020). Consequently, the questions guiding this research were: what knowledge, attitudes, and values are taught to future teachers in their initial university training on degrowth issues? and, in the case study of the Faculty of Education at the University of León, what principles and approaches are transmitted by academic staff with respect to education for degrowth?

1.1. *Theoretical context and state of the art*

The eruption of crisis in 2008 and the consequences in the shape of increased social inequalities and degradation of the environment contributed to revitalizing an alternative that approaches these problems from a global angle: degrowth (Latouche 2014). This approach has been put on the current political agenda thanks to people like the Swedish activist Greta Thunberg, who demanded that governments act against climate change resulting from an economy of extractive industries, contamination, and uncontrolled spoliation of natural resources (López-Lozano y Guerrero-Fernández 2019).

The capitalist growth model does not respond to the needs of humankind as a whole, but rather to the desires of a few, who accumulate wealth as inequalities increase (Enríquez y Pando 2017). The cost is a sacking of the planet and the accelerating of ecological catastrophe, putting in peril life on Earth and the survival of future generations (Dawson 2016). If all the inhabitants of the world used up the same amounts as average Northern Hemisphere consumers, four planets of the size of the Earth would be needed to keep up this level of consumption (Herrero *et al.* 2019).

Recovery from crises, including the recent Covid-19 pandemic, is seen as based on a need to increase consumption, productivity, and growth (Foerster and Choi 2016). For this reason, it is more than ever necessary to decolonize the collective mind and educate people about a model of society in accordance with a lifestyle that can be applied univer-

sally to the whole planet (Kaufmann *et al.* 2019). Hence, it is a question of breaking away from the capitalist mode of production and the consumer society, and heading in the opposite direction, towards degrowth (Krähmer 2022).

Degrowth specifically addresses the need to reduce production in the economy so as to achieve sustainable social, economic, and environmental development (Hickel 2021). This would slow down the breakdown of the biosphere's regeneration limits and at the same time, put an end to the multiplication of inequalities between people and societies generated by a cult of unlimited growth (Arias-Maldonado 2022). This means adjusting the economy to that of nature, supporting and ensuring the supply of basic necessities, replacing competition with cooperation, living frugally, and keeping the common good in mind (Hickel 2020). It means putting the spotlight on social justice, local relationships, cooperation, democratic participation, solidarity, humanist education on values, care for life, and so forth (Schmelzer und Vetter 2019).

1.2. *Aims of the research*

With the starting point being the idea that a growth society is unsustainable as well as undesirable, the study intends to discover if the degrowth approach is kept in mind in the university training received by prospective teachers, who in their turn will educate future generations. The reason is that the education they will give to these new generations in schools will largely depend on their views and conceptions on climate change and environmental viability in the planet (Prádanos 2015).

Recent research in this field (Cebrián 2019; Leal-Filho 2019; Valderrama-Hernández *et al.* 2020) considers it essential for there to be education on, and for, sustainability and degrowth in the school context if coming generations are to learn to live together in surroundings that are more ecological, just and guaranteeing solidarity with all humankind and its planet (Jones 2021). Likewise, it demonstrates that the calls on the teaching profession in the twenty-first century currently require them to give an urgent response to emerging fields such as education for degrowth (Getzin 2019). The new *Spanish Basic Law on Education* (known by its Spanish initials LOMLOE) recently enacted in Spain incorporates certain aspects in this sense as transversal elements.

University faculties of education can play a fundamental part on these lines in the training, analysis and debate promoting this change of model and mentality among future teachers as they undertake their initial

studies (López-Lozano y Guerrero-Fernández 2019; Blanco-Portela *et al.* 2020).

The syllabi for the current bachelor's and master's degrees constituting pre-service teacher training in education faculties, as also the instruction provided by the academic staff running these courses, may offer a valuable opportunity to incorporate approaches using as a benchmark the principles of degrowth (Kopnina 2020). Prádanos (2016) proposed a pedagogy of degrowth in the context of higher education. Kaufmann *et al.* (2019) did likewise in informal education and social movements.

Consequently, the research problem considered was to review and analyse the knowledge, attitudes and values imparted to prospective teachers of infant, primary and secondary levels in their initial training at university on the topics of sustainability and degrowth.

Finally, it should be pointed out that this case-study in Spain might be transferable (Korstjens and Moser 2017) to other contexts. It would address both the discourse of the university teaching staff and their selection of contents, as well as students' perceptions of the training they receive on these topics.

2. MATERIALS AND METHODS

2.1. *Research methods and procedures*

Research in social sciences has its own specific characteristics, arising from the peculiarity and complexity of the phenomena under study, in which a multitude of interlinked factors are involved, any isolating of which may trigger distortions in the information it is intended to discover. The option selected of a method fundamentally qualitative in nature is an approach found more and more commonly in social sciences research, seeking not so much to measure as to understand the phenomena under investigation. Hence, where quantitative research intends its results to be generalizable, and thus concentrates on seeking validity and reliability from large sample sizes (Denzin 2013), qualitative research, like that in the work being presented here, looks for transferability (Korstjens and Moser 2017). This means that as an outcome of an understanding of processes and complex realities achieved by this case-study of the Faculty of Education of the University of León in Spain there may be findings suitable for application in other, different, university contexts.

2.2. *Sample*

The selection criteria for the academic staff participating in this research were based on the following criteria: university teaching experience (more than 15 years of teaching experience, between 5 and 15 years, and less than 5 years of experience), teaching time (full time, part time, sporadic dedication), gender (parity in participation was sought, with half plus one being women) and age (less than 35 years, between 36 and 50 and more than 51 years). The criteria for selecting the students were: representation of all the courses and all the degrees taught at this faculty, and gender (parity, equal number of boys and girls). And the criterion for selecting the subjects whose teaching guides were to be analysed was that they were core subjects, compulsory and representative of the most classic and important subjects taught in the different degrees of the faculty.

The sample consisted of 21 participants in interviews, 27 participants in discussion groups, 15 teaching guides. In total, 48 participants and 15 subjects.

Throughout the research, the ethical rules of social research were considered and applied so as not to harm those who took part in the study, respecting their dignity, and ensuring their safety, privacy, and anonymity, requiring in all cases their consent to be part of the study.

2.3. *Research instruments and procedures*

Hence this study, qualitative in nature, was performed by means of the triangulation of three research tools: interviews of academic staff, discussion groups with academic staff and students, and an analysis of teaching guides for subjects taught in the Bachelor of Infant Education, Bachelor of Primary Education and Master of Secondary Education courses. This triangulation of instruments and sources of information made it possible to verify complementary points of view (Kharbach 2020).

A first phase of documentary analysis was carried out of the teaching guides of fifteen subjects representative of the degree programmes in Early Childhood Education and Primary Education, and of the master's degree in Secondary Education at the University of León. The aim of this analysis was to identify the contents, approaches, and priorities adopted in the subjects taught in the initial training of schoolteachers. The most recurrent expressions that appeared in the 15 guides were collected, as well as all aspects related to degrowth, the connections between expressions were noted, as well as the incoherencies or inconsistencies detected

(Chun 2019), in addition to highlighting those subject guides where no mention was made of any aspect related to degrowth or where aspects contrary to this approach were raised.

The analysis of the written material of the fifteen teaching guides generated the first categories related to degrowth. These emerged analysing the priorities of the objectives established in the teaching plans, the methodological proposals, and the selection of certain contents and competences, together with the evaluation priorities.

As a second phase of the research process, an in-depth interview model was designed, neither standardised nor directive but open and based on those categories initially obtained through the documentary analysis of the teaching guides.

For this purpose, 21 in-depth interviews were designed and applied to active academic staff who teach or have taught classes in the Faculty of Education of the University of León. The interviews lasted an average of three hours, in some cases having to be conducted in two meetings. They were conducted in neutral places, outside the academic space, and began with open-ended questions on the topics under investigation but adapted to the responses and the dynamics of the conversation as it slowly emerged. In some cases, however, the interview had to be redirected to refocus on the aspects or themes that had been considered fundamental to address in the interviews.

In a third phase, three discussion or focus groups were planned and put into operation. These groups, made up of 9 selected individuals who discussed the object of the research, were used to collect data through group interaction in a calm and frictionless atmosphere.

Three discussion groups were held, with different members of the university community, with 9 participants each: the first one was with university teaching staff from the Faculty of Education, in which 9 members from different areas and specialities participated; the second one was with university students from the Faculty of Education with the participation of 9 students from different levels: undergraduate, postgraduate, master's and doctorate; and a third mixed discussion group with simultaneous participation of four academics and five initial training students from the Faculty of Education of the University of León. They were formed on an equal basis and, in the case of the teaching staff, according to the same profiles established for the interviews. In the case of the students, the criteria used to request their participation were: degree they were studying (early childhood, primary and secondary education), years they were in (second, third and fourth) and gender (girls and boys, so that there would be parity).

The discussion groups made it possible to gather information rich in nuances and diverse points of view, achieving a perspective that reflected multiple opinions that interacted and sometimes conflicted, even between what was set out in the teaching guides, what was recorded in the interviews and what emerged in the focus groups. In fact, perceptions of the same reality sometimes did not coincide as they were seen from different angles.

In these focus groups, an attempt was made to stimulate open conversation and debate with the intention of deepening the participants' knowledge and opinions in relation to the values that were transmitted in the initial training. The dialogue was guided at all times by a member of the research team, who guided the discussion among the individuals in the group, encouraging the intervention of all participants and trying to build as much as possible a shared interpretation of the topic. In each group, the key points of view expressed by the participants in the dialogue on the issues raised were recorded in writing, and the attitudes and reactions of the participants were also noted. While the member of the research team coordinating the discussion group facilitated the interaction, another member of the research team took notes, which were subsequently analysed by the whole team.

2.4. *Data analysis*

The information gathered with these three research tools was recorded in a matrix of emerging categories, built up over the whole course of the investigation. This matrix was the outcome of a mixed process, combining deduction based on a bibliographic and conceptual review of the object of study, and induction grounded on a discourse analysis of the statements of participants in the research, by means of open coding (Strauss 1987), permitting procedures to be completed and adjusted progressively.

The matrix of categories was used to facilitate in this way the process of mapping, both of discourse on degrowth expressed in interviews and discussion groups by the academics and students taking part in the investigation, and of the contents noted in the teaching guides for the fifteen most representative subjects, whether core, obligatory, or optional, from the various degree programmes in the Faculty of Education. On-going debate and checking of these categories among the research team made it possible to ensure fulfilment of the conditions that must be met by any system of categories: exclusivity, exhaustiveness, relevance, mutual exclusion, and a unique classificatory principle (Rodríguez Sabiote *et al.*

2005; Belzunegui *et al.* 2012). This provided internal consistency for the tool and allowed the classification, synthesis, and grouping of the data obtained to be structured, as well as the analyses to be refined and the subsequent generation of hypotheses and interpretations that answered the research questions.

3. RESULTS

The documentary analysis of teaching guides and the contents covered in courses that was carried out highlighted the fact that very often there were no contents, activities or teaching proposals directly linked to degrowth, this being true for most of the subjects in the various degree programmes. Nonetheless, teaching guides for some of the subjects reviewed did explicitly include in the sections relating to competencies or learning outcomes, certain aspects relating at least to education for degrowth, although no mention was made in any instance of degrowth.

Student perceptions reflected in the discussion groups also revealed a scant presence of these topics, or of activities related to them, in the practice of instruction in the pre-service training they received in the degree programmes of the Faculty of Education. Nevertheless, when teaching staff were asked in interviews and discussion groups, the majority did state they were specifically concerned to incorporate education for sustainability more than for degrowth as a prominent aspect in their courses. Indeed, some stated that such an approach was implicit in what was taught, even if not yet explicitly developed, and insisted that they intended to move towards doing this.

It is necessary to point out that some of the academic staff teach subjects related to natural sciences and did explicitly show interest and involvement regarding degrowth. One of the academic staff explained this in an in-depth interview. She declared that for years she had been working in the field of ecology and had brought in both contents and teaching strategies so that the students who were training to become teachers in the future would include degrowth in their way of thinking and acting and commit themselves to a more radical approach. She stated that this was so because the future of humanity would depend upon them (Interview 12-AG).

It should be kept in mind that from the moment when the European Higher Education Area (EHEA) was created, with the consequent Spanish Royal Decree concerning the designing of syllabi for European con-

vergence, universities began to incorporate sustainability as a transverse competency, shared by all degree programmes, including those in education. Despite this, the term "degrowth" appears very rarely in teaching guides and the contents of courses taught. All the same, mention is made of certain procedural contents, but above all attitudinal topics, among competencies sought, relating to biodiversity, social justice, or a sustainable economy. This fact has already been confirmed by other recent pieces of research (Geli de Ciurana *et al.* 2019; Gómez-Jarabo *et al.* 2019).

In the initial training of prospective teachers there has been no implementation of competencies, or teaching and learning strategies, that would contribute effectively to involving them in becoming aware and making a commitment to an equitable, sustainable world, as suggested by Goal 8 of the learning objectives of UNESCO's *Education for Sustainable Development* (UNESCO 2014, 9). Hence, it is explicable that there has been even less movement towards introducing the philosophy of degrowth into the teaching practices of the Faculty of Education.

A further noteworthy result is that academic staff, both in interviews and in discussion groups, stated that they did not feel particularly encouraged to introduce this sort of viewpoint into their courses. The reasons to which they alluded fell into two main groupings. The first related to the lack of support and motivation received at an institutional level in this regard from other people since it was not considered in the process of accreditation or access and stability in their professional career. The second had to do with what was termed "academic neutrality" by various participants in the discussion groups.

With regard to the first aspect there was virtual unanimity. One of the academics interviewed stated there was a need for initiatives and pedagogical proposals supporting consensual social values to be appreciated and recognized, as an incentive to their inclusion in teaching practices both in the university and elsewhere (Interview 27-JB). This received broad agreement from teaching staff and from students alike. The general view was that what was valued was what was assessed, and that academic staff won merit for publications or research, but rarely for curricular and methodological innovations in this way.

In respect of the second aspect, there was much more disagreement. It is true that the majority of the academic staff interviewed did declare themselves committed to degrowth. However, this was at a personal level and on a voluntary or altruistic basis, as pointed out by various instructors in one of the discussion groups (GD3). Nevertheless, some of the teaching staff made plain their reticence about incorporating such contents into their teaching, seeing this as a politicization of academic

subjects (Interview 12-RT). When this question was raised in discussion groups, it became clear that this viewpoint was quite widespread among some academic staff, even though the debate related to the objectives of the United Nations' Agenda 2030. This led most of the students to note in the discussion group that matters like degrowth which involve a stance being taken in respect of ethical values and options, tended to be avoided or tiptoed past (Discussion group 1-AR), as if they were minor points or not sufficiently important to be given any meaningful academic space or time. Both teaching staff and students agreed that such topics were not covered or relevant to assessments of subjects, either directly or when aspects applicable or related to the context of educational action were being addressed. This caused them to be considered as matters at best tangential to what was seen as important to learn in teacher-training courses (Discussion group 3-EM).

It was somewhat surprising to find such a defence of supposed "neutrality" in discussion groups, in which debate and reflexion on this aspect proved unable to reach consensus. In the discussion group for teaching staff, all the participants, from different academic fields and areas, recognized that the curriculum, contents, and even teaching and research practices, built up a network in harmony with the dominant social system. In the end, the majority recognized that universities contribute towards "civilizing", inducing in the academic community a given ingrained mind-set, which is a capitalist world view (Discussion group 1-ED). They admitted that a "common sense" consensus has been constructed around certain basic topics concerning the economy, development, and the future of the human race, tied to an unequivocally capitalistic view of progress. This has emerged thanks to the collaboration of the university, or at least to its complicit silence. However, it is necessary to take a clear position if the intention is building a more equitable society and a more sustainable planet. Nevertheless, a number of four teaching staff from two discussion groups showed themselves very reticent to adopt such a stance and bring degrowth into their subjects from a post-capitalist angle or going beyond an approach based on capitalism (Discussion group 3-EF and 3-AK).

In fact, in interviews many of the academics stated that they attempt to present the contents and principles transmitted in initial teacher training as elements that are "technical", "neutral" or "aseptic", to cite expressions used. They tended to present contents as if they were "objective" and purely "neutral" matters, whether it was a question of nuclear power, transgenic foodstuffs, the ozone layer, or the climate. They also recognized that topics involving value judgements and ethical options were usually avoided.

Hence, it is not a surprise to note another pertinent result, which emerged, above all, in discussion groups. It was possible to observe two different, and even clashing, discourses in the perceptions of students and the views of academic staff in respect of degrowth. Members of the teaching staff declared that it was a question of transmitting values linked to degrowth, such as solidarity, ecological and transitional justice, cooperation, questioning of excessive growth, and the like. However, the students stated that this was not the general rule. They claimed that, with a few exceptions, the trend was to adopt and transmit values more connected with the predominant model, such as competitiveness, seeking personal success, out-doing others, or pragmatism. Indeed, one of the students participating in the mixed discussion group commented that academics told their trainees that they should be critical and work cooperatively, but in reality, the teaching staff themselves did not challenge the enterprise model of university currently in place, or the system for which learners were being prepared and were being induced to believe in, because it seemed they saw it as the only possibility. Whilst there were a few academic staff that constituted an exception, the truth was that the majority did not call into question the predominant system or its values (Discussion group 3-EF).

Moreover, when, exceptionally, academic staff did refer to contents or proposals relating to degrowth, they tended to use vague, generic terms (Discussion group 3-MS). Mostly these related to what might be called "social desirability" or "political correctness", but according to one participating student they lacked credibility, because they did not seem to be compatible with what their practices or the example they set (Discussion group 3-MS).

The final significant result to emerge from this research had to do with the contradictions in the social patterns currently in force. Society is governed by an economic model based on growth and unlimited exploitation of natural resources, paying no heed to the environmental repercussions of the extractive activities these bring with them. At the same time, society imposes upon universities a twofold task. On the one hand, there should be education about the values and principles of degrowth, social and ecological justice, but on the other, students should be prepared for a life and world of work marked by completely different values. The problem arises when decisions must be made about what type of social model should be adopted, since any attempt to live ecologically, sustainably, and justly would make it hard to achieve success in a capitalist society such as is currently in place, according to one member of the academic staff in her interview (19-MD). Such a contradiction was stated

by one of the participating students who was reading for a master in Secondary Education. She stated that although the teaching guides incorporated principles and values coinciding on most points with the 2030 Agenda for Sustainable Growth, it seemed that the reality of training and the true curriculum for the subjects taught involved contents, practices and priorities having very little in common with it. Rather, these conformed to the model that capitalism demanded, adapting to its principles and philosophy of competition, growth, accepting inequality, putting ecological considerations on the back burner, and tolerating indifference to injustice (Discussion group 3-AK).

Finally, it should be noted that one aspect repeatedly appearing in the comments made in interviews and discussion groups referred to a "need for the tribe". This was a label for involving all of society in a process of commitment to a model of degrowth if there really is a desire for it to be effective, and not just leaving it all in the hands of education.

4. CONCLUSIONS AND DISCUSSION

The current research leads to the conclusion that, despite the directives and recommendations put forward by Spanish entities such as the Conferencia de Rectores de las Universidades Españolas (CRUE 2015), insufficient advances have been made towards educating in and for degrowth in initial teacher training (García *et al.* 2019; Gómez-Jarabo *et al.* 2019; López-Lozano y Guerrero-Fernández 2019). Moreover, as it was also confirmed by Valderrama-Hernández *et al.* (2020), the guidelines, syllabi, pedagogy, and teaching plans still do not bring in a degrowth approach in an overall, systematic fashion. It is necessary to undertake an urgent in-depth review of the contents of degree programmes offered in faculties of education so as to reformulate on such lines all the plans, teaching guides, subjects, courses, and practices affecting prospective teaching professionals (Giesenbauer and Müller-Christ 2020; Guillén de Romero *et al.* 2020).

The building of a society of degrowth requires a strategic approach, because of the need to educate with an ecological and social curriculum in accordance with these declared aims (Kallis *et al.* 2020). One of the crucial factors for achieving success in this are the attitudes and the involvement of university teaching staff (Kapitulčinová *et al.* 2015; Cebrián 2021). The latter also need to be able to count on institutional incentives and supports (Mínguez y Pedreño 2021) to incorporate into

their teaching activities ecological pledges and a critical transformation of the growth society (Geli de Ciurana *et al.* 2019; Weinberg *et al.* 2020).

There is thus a need to train the trainers, as may be deduced from this piece of research. This means specific, on-going training of the university staff who teach degree courses in faculties of education (Oscar 2020). This training in degrowth should aid teaching staff to rethink their priorities (Vilches y Gil 2021) regarding the curriculum and evaluation, teaching objectives and methods, and also offer them attractive, motivating alternatives in which they can involve themselves and their students (Aznar-Minguet *et al.* 2017). This training should also allow simultaneous rethinking of the contents of syllabi for the pre-service education of prospective teachers (Vásquez y Alsina 2021). It should introduce contents breaking the vicious circle of the current economy of excess, questioning, deconstructing, and decolonizing minds of the production-driven reasoning and bringing in considerations of the physical limits of the planet (*ibid.*).

Research (Disterheft *et al.* 2013; Escámez Marsilla y López Luján 2019; Wakke *et al.* 2019; Coronado-Marín *et al.* 2020) has confirmed that universities play a fundamental role in promoting the principles of degrowth, contributing to a paradigm shift towards a more sustainable present and future (Kopnina 2020); thus, avoiding the ecological and social collapse of the current Anthropocene epoch (Vargas-Roncacio *et al.* 2019). In this sense, education has a fundamental role in promoting a Critical Pedagogy of Degrowth (Latouche 2014; Prádanos 2015; Getzin 2019; Kaufmann *et al.* 2019; Kopnina 2020; Jones 2021).

This piece of research is not without its limitations, first of which is the sample considered, restricting it to a case study. However, from the start it was declared that there was no claim that its results would be generalizable, but rather transferable (Korstjens and Moser 2017), able to be applied in other, different university contexts.

In terms of a possible future research, it would be necessary to extend the research sample to other faculties of education at a regional, national, and European level, with the possibility of promoting international research because this is an issue on which the future of all humanity depends, given that there is no alternative planet B (Shor 2021).

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