

Teaching in a Higher Education Institution of the Society of Jesus: Challenges to the Classroom Practices

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Abstract

Teaching in higher education is a complex task, not only considering the societal challenges we live in but also some constraints of global agendas of performativity and quality assurance. These trends tend to create some normalization of the curriculums and teaching practices. Particularly, considering highly differentiated institutions such as the Society of Jesus Higher Education, directed by Ignatian Pedagogy, this paper aims to explore how active learning strategies and interdisciplinarity are aligned with Ignatian Pedagogy and can contribute to the promotion of peace, social justice, and common good. Implications for higher education continuous development are also presented.

1. Introduction

The new millennium has been shaped by several challenges, since terrorism, the economic crisis, the COVID pandemic, as well as increasing risks of inequality and exclusion at the social level [1]. Also, political trends of extremism and populism generate significant disruption and misconfidence in institutions and leaders.

Particularly, in higher education workload and pressure for performativity [2], has been raising concerns and criticisms at the same time pressing for conformism to global curricula and practices. The last two decades in Europe were particularly framed by the Bologna process, the development of national agencies to evaluate quality, a significative change in the structure of courses, and adjustment of curriculums, a part of a pressure to increase research. All these circumstances put institutions under pressure for the nationalization of curricula and some uniformization of teaching practices. Despite the call for student-centred practices, several reports and research point out that this has not been yet a priority. The COVID-19 pandemic was, in this context, a moment for institutions to challenge their beliefs and practices and develop their efforts to promote what is called as innovative or active learning methodologies.

Despite this emerging drive, some institutions have clear guidelines and practices. That is the case of institutions of the Society of Jesus. Its educational

practices are based on the life experience and teachings of Saint Ignatius of Loyola, founder of the Society of Jesus. Ignatian Pedagogy, though, is based on the Spiritual Exercises and the Constitutions of the Order, particularly in its IVth part [3]. Despite being sometimes erroneously reduced to a method or a paradigm, in the words of Pedro Arrupe [4], this pedagogical approach intends to educate men and women for others, people who are conscious of themselves and the world they live in, competent to face and overcome professional, social and human obstacles, compassionate with others, demonstrating empathy and solidarity, and committed to a social and political transformation for a fairer society from a social and environmental perspective. Ignatian Pedagogy thus focuses on the integral development of the individual, from an intellectual and spiritual point of view, focusing on the value dimension of the person, starting from the fundamental value of the Gospel, that is, love thy neighbour [5]. As Adolfo Nicolás says, it is important not only to train the best students in the world but also the best for the world [6]. Those who can deal with technical and professional challenges but also their internal life, promoting the common good, social justice, and peace.

Based on the principle that learning is more effective when it is meaningful and experiential [6], this paper intends to explore the potential of active learning practices to promote integral human development but also the challenge of promoting interdisciplinary courses and projects as a step forward in higher education. Also, it will reflect about the alignment of these trends to the principles of Ignatian Pedagogy.

2. Active learning methodologies

The higher education institutions of the Society of Jesus, following St. Ignatius' tradition, are dedicated to preparing competent, committed, conscientious, and compassionate persons, professionals, and citizens so that they can become agents of social transformation [7]. Given this framework, the relationship with the active teaching strategies and methodologies [8] is an essential

prerequisite, because of its potential to enhance the person's development.

Four active methodologies, which are getting the headlines in higher education, and whose genesis has close application and alignment with Ignatian pedagogy, are presented from the vision of the "Ledesma-Kolvenbach University paradigm". In this section we intend to explore briefly the Ignatian debate, challenge-based learning, project and problem-based learning, and service-learning, reflecting about on its contributions to the development of integral human development of students.

Among other aspects, one of the common elements that stands out in these methodologies is interdisciplinary work. The importance of education through an interdisciplinary approach will be explored further in section 3.

2.1. Ignatian Debate

Debate is not new in the Ignatian pedagogical tradition. Since the sixteenth century, the Jesuits have used dispute (*disputationes*) as a teaching and learning method in their formation, operationalized in periodic debates organized by the teachers in which the students discussed political, social, and religious issues of great importance [9]. The debates, based on the principle of public and collective imitation, saw students as protagonists in a competition that not only promoted a sense of teamwork but also greater motivation and encouragement in their studies and search for truth. In this way, students are the protagonists of their learning, playing an active and self-training role in their education. To operationalize a debate (*disputatio*), there is a set of intervention rules [10]. Thus, at the beginning of a session, a thesis or a question is presented, which leads to a sequence of different arguments and the objections of one or more arguers. In the end, a synthesis of the arguments should be presented, and the solution defined [11].

As mentioned above, a central feature of this methodology, which consists of four stages: preparation, development, evaluation, and celebration [5], is the dialectical discussion between elements (opponents) [11] who defend different perspectives on a given topic [12]. In this way, Ignatian debate is characterized by the importance of knowing, deepening, and understanding a different view of reality, which is reflected in the construction of an argumentative capacity based on a rigorous study of reality and its protagonists [12]. This means that students face each other individually or in groups [11], preparing to discuss sensitive, current, and controversial issues [13], which will lead to dichotomous responses in each of the opposing teams.

To develop students' skills, it is important to consider three fundamental dimensions of the art of argumentation in Ignatian debates, which complement each other: Ethics (why and how to debate); Argumentation (analytical, critical, dialogical and systematic thinking); Research (correct, relevant and reliable information) [10]. In this way, the application of this methodology makes it possible to create a differentiated learning space that allows the development of investigative, intellectual, communicative, and creative tools that promote critical analysis of current issues such as migratory movements, inequality, and social exclusion, education, globalization [10], nationalism, racism, xenophobia, the impact of climate change, among others. In this way, and as noted by various authors, the Ignatian debate also facilitates conflict resolution and time management [14], respect for diversity, multiculturalism, and emotional and social competencies [15]. It is important to note that the Ignatian debate includes a phase of negotiation and reconciliation between the two visions and that a consensus must be reached in the debate as a large group, always based on the logic of the "greater good" and the protection of the most vulnerable.

2.2. Challenge-Based Learning

Over the years, many innovative pedagogical approaches and methodologies have been developed by different educators, to demonstrate their adherence to the objectives and mission of the Society of Jesus and to contribute to the integral formation of men and women for others and with others [4]. In this context, the methodology known as Challenge-Based Learning (CBL) has been developed, based on a pedagogical approach that involves the student in a real problem situation, stimulating a problem-solving process based on the analysis, design, and application of the proposed solution [16]. This process, in which the teacher acts as a mentor for the project, supporting the students and motivating them to solve the challenge, presupposes the creation of an experiential context in which all the actors involved can work collaboratively and creatively to solve a given challenge, facing a series of activities and at the same time deepening the subjects studied [17]. These characteristics, therefore, require the implementation of a coordinated interdisciplinary strategy, involving not only students and teachers but also specialists and professionals from outside the institution [18]. The CBL differs from other types of learning methodology in that it involves open-ended and broadly defined problems, that are posed to and responded to by the learner [16]. It is therefore a learning experience based on a holistic and inclusive approach [19] and an understanding of education as an active, participatory process that is integrated into

the social context and not just confined to the classroom, which aims to bring Ignatian values to the present, with the intention to transform not only educational but also social reality [20]. In this way, this methodology aims to make a positive contribution to the integral formation process of each student, while at the same time encouraging the development of their imagination, affectivity, and creativity [21].

2.3. Problem and Project-Based Learning

Problem-Based Learning is a teaching-learning methodology that promotes an active student-centered learning process, in which learners take the main role and are actively involved in the learning process [22]. Founded on the premise of using problems as a starting point [23], this approach promotes problem-solving strategies to solve a real problem while mobilizing the necessary knowledge and skills [24], by creating a product, that is not predetermined, that addresses the real problem and will be the subject of a public presentation.

To achieve meaningful learning this methodology must follow three stages Catusus et al. [8]: 1) the problem, which must be studied exhaustively, first from the mobilization of the student's previous knowledge, then the formulation of questions that arise from the problem and the need to find a solution; 2) researching information, carried out individually or in groups, through the use of different resources, in pursuit of defined goals; 3) presenting the results and understanding the problem.

There is an emphasis on the learning process through autonomous student work as they search for a solution to a given problem to acquire specific knowledge [16]. In terms of learning outcomes, the response to the specific problem challenges students' ability to mobilize know-how and allows the development of metacognitive skills concerning one's own learning process [25].

Problem-based learning fulfils the demand set out in the *Ratio Studiorum* (1599) to provide stimulating teaching-learning contexts, providing the opportunity for practical and experiential learning, as in the Society of Jesus' tradition of Spiritual Exercises. This is in line with dimensions laid out in the Ledesma-Kolvenbach University paradigm [26], as it enables a process of learning whereby students take an active part and contribute to the construction of solutions (*Utilitas*) with the teacher's support. Solutions that involve interdisciplinary and holistic work (*Fides*) [19], within the scope of a cooperative effort between students (*Iustitia*), which, besides the acquisition of new knowledge, also promotes the integral development of the person (*Humanitas*) [8].

Project-based learning engages students in learning knowledge and skills through a broad inquiry process structured around authentic questions

[27], for which they are required to construct a solution. This active learning methodology, focus on the student as they take the centre stage: solving real problems, assigning meaning, and being reflective about their learning [28].

This methodology enables the mobilization of knowledge through its practical application, which makes learning more meaningful [7], by making it possible for students to review the theoretical concepts presented in the classroom from a realistic and motivating perspective. As a result, students acquire an in-depth understanding of the subject matter, along with critical thinking, collaboration, creativity, and communication skills.

According to the "Gold Standard PBL" model, this methodology integrates a set of 7 essential elements: 1) Problem or question to be solved or answered; 2) Sustained research, insofar as students engage in a broad but rigorous process of asking questions, finding resources and applying information; 3) Authenticity, given that the project involves real-world context, tasks, and tools; 4) Voice of students, who are active agents in decision-making about the project, including how they work and what they create, and express their ideas in their own voice; 5) Reflection, as students and teachers reflect on learning, the effectiveness of their research activities, the obstacles that arise and the strategies to overcome them; 6) Critique and Review, in which students give, receive and apply feedback to improve their processes and products; 7) Public product, relating to the presentation of the project, sharing it, explaining it or presenting it to people other than the classroom. Through this process, students understand that knowledge has a purpose, which is a key element of Ignatian Pedagogy, as stated in the *Ratio Studiorum* (1599), also in line with the *Utilitas* dimension of the Ledesma-Kolvenbach university paradigm [26].

Thinking about the teacher's role as a facilitator vs. specialist and the peer learning process, both project-based learning and the Ignatian Pedagogy, highlight the importance of mutual help in the teaching-learning process and that the purpose of knowledge is to be able to provide a better service to others (*Constitutiones scholasticorum S. I. Patavii*, 1546).

2.4. Service-Learning

Service-Learning (SL) is part of the broad body of teaching methodologies, which enhances the development of innovative teaching dynamics that operationalize the relationship between theory and practice in a symbiotic way, bringing learning processes and service actions closer to the community [29]. This methodology is integrated into the academic curriculum, simultaneously satisfying social and knowledge needs, facilitating the learning

of course contents and the development of personal and professional skills [30], seeking to offer students contextualized learning experiences, based on authentic and real situations, in their communities. Thus, the community is used as a resource for learning to make students realize the broader value and usefulness of academic lessons provided by traditional disciplines [31], but also benefits from the knowledge that universities provide to.

In the scope of SL experiences, several trends exist, from more secular perspectives to highly spiritual experiences, in which service is more than an application toward a situation but a way to enact a sense of purpose and care toward marginalized people to the limits of their human dignity. It can therefore be said that the key elements of Ignatian pedagogy and the SL methodology coincide, not only because their essence results in intersubjective relationships, in recognizing the other, in transforming the person in all its dimensions based on a critical analysis of reality, but also in educating for a greater good, to help and promote justice, peace and other values [32].

Integrating this methodology into the teaching-learning context and, specifically, considering it in terms of the integral development of students, makes it possible to identify a series of possibilities for active and experiential teaching that motivate university teachers and students in the search for an exchange of knowledge, experiences, and opportunities. In fact, by promoting active learning in the context of real problems, the integral development of students is possible by a strong openness to understanding the problems of today's world, in a meaningful learning environment oriented towards the development of the competencies necessary to live in the 21st century. In this context, the university has a great potential to create new forms of interaction, from its teaching, research, and contact with different social partners, to move towards an adequate and decisive social and political commitment [32,33].

Thus, and from a Jesuit educational tradition, the application of this methodology promotes a holistic vision of education of the human person, through a practical, social, and humanistic dimension as well as the transcendent and meaningful dimension [34]. By favouring an education that shares the learning achieved, making it available to the needs present in the social context in which one lives, the empowerment of the student for social needs will allow an important return but especially a societal transformation toward social justice.

3. Interdisciplinarity in teaching and learning

The Bologna Process introduced several changes in organization, structure, and teaching

methodologies. The course structure was achieved with the organization between cycles, curricular changes were implemented with the supervision of higher education assessment and accreditation agencies. Apart of the need to update teaching practices, which must be more student-centred, it's crucial to challenge the "transition from the 'monodisciplinary' methodological concept of science that still prevails in European universities to the 'interdisciplinary' and 'transdisciplinary' concepts" [35].

The rapid demographic changes, globalization, and digitalization [36], but also the pressure of the complexity approaches [37,38], acceleration of time, [39] and change in contemporary societies [40] are stressing universities, and a new generation of leaders aware of these challenges and driven by social justice and human values are necessary. A signal of these challenges is the United Nations (UN) Agenda, to focus on Sustainable Development Goals (SDGs). The 2030 Agenda of the UN is composed of 17 SDGs challenging institutions and sciences to contribute to its achievement. The fact that the SDGs are such general guidelines makes it imperative to "adjust" their teaching and sharing based on realities and contexts. In this regard, Annan-Diab and Molinari [41] refer to the importance of education through an interdisciplinary approach, recognizing that different scientific areas can contribute to solving complex problems. An example of such evaluations is performed by the League of European Research Universities that, in 2016, addressed definitional and epistemological aspects related to interdisciplinarity, and in 2023, highlighted the "virtuous circle between disciplinarity and interdisciplinarity as a fundamental condition for the progression of knowledge" [42].

Some evidence exists about its effect on student's skills, particularly, their competence for synthesizing and applying knowledge, to explore theories and practices from multiple disciplines to address complex problems and find innovative solutions that wouldn't be possible in a disciplinary context [43]. This has been a discussion and a goal to address complex challenges but the implementation in curriculum and institutional practices is still ongoing.

4. Ignatian Pedagogy in Higher Education

In the Jesuit tradition, the teaching-learning process doesn't occur in a vacuum. It must include the circumstances surrounding each person or group of students (environments, backgrounds, communities, etc.) to teach them well. A careful observation of the environment allows for careful discernment to determine the appropriate changes to adapt the educational process to the times and places where it is applied [5, 44, 45].

Human experience is the starting point of Jesuit education, so teachers are concerned with what kinds of learning experiences most deeply engage students as whole persons. In this sense, Jesuits universities are applying active teaching methods aligned with the Ignatian principles, through which they can accompany students in exploration and discernment of the object of experience, creating conditions whereby students gather and recollect what they already understand and assimilate new information, thus facilitating students' experiential journey [5, 44]. Reflection, or, in a more Ignatian way, "discernment", is key in the Ignatian Pedagogy. Klein [3] points out that reflection is an essential moment of the process because Ignatian Pedagogy does not propose only to teach subjects or accumulate data in the minds of students. The teacher lays the foundations so that students "learn how to learn" [4], engaging them in skills and techniques of reflection - memory, understanding, imagination, and feelings that are deployed to grasp more fully what is being studied. So, the reflection becomes a process of formation that builds the consciousness of the students.

Action is aimed at both personal and social (family, community, political, etc.) change. Jesuit education stresses the commitment to improve the conditions of the world, so students are urged to move beyond knowledge to action, thus helping the global community through actions that are rooted in justice, peace, and love [5, 44]. These dimensions are deepened when active methodologies such as Ignatian debate, challenge-based learning, project and problem-based learning, and service-learning are implemented in the classroom.

In the Ignatian Pedagogy, evaluation includes but goes beyond academic mastery, to encompass learners' well-rounded growth as persons for others. The Ignatian evaluation does not pretend to quantify the educational process. Instead, it intends to demonstrate the cognitive, affective, and behavioural states provoked by the experience, the reflection, and the action. Thus, multiple aspects of Ignatian pedagogy and active methodologies are intertwined in the university environment: direct and real experience, the formation of the whole person, the interpretation of the context, as well as discernment and action in favour of others to influence the transformation of structures of injustice and inequity in society [32,33].

The celebratory dimension is a final moment in which the achievements reached in the process are presented and deserve to be highlighted, saving them from everyday triviality. It is a moment for students to become aware of the values they have achieved, of the attitudes with which they want to make a difference in the world, of the commitment they are acquiring in their formation and growth, and, why

not, of the transcendental dimension that the things they are learning can have [5].

4. Conclusions

The present paper aims to reflect on the potential of active learning methodologies to promote integral human development but also the challenge of promoting interdisciplinary courses according to the principles of Ignatian Pedagogy.

As you can see from the text, several methodologies have gained prominence in the international debate, but their relationship with the principles of Ignatian pedagogy is clear. In common is the relationship with the context, valuing experience, reflection, action, evaluation, and celebration, making it a meaningful learning experience for integral development. And while this can be done in a disciplinary context, social problems require alternative and more ambitious responses. And the implementation of interdisciplinarity can be a solution for developing the skills of new generations. Continuous teacher training is essential for this. Programs such as the one described in a previous publication [quote the text of the proceedings] can help deepen the sense of mission, but specific training in teaching methodologies and support for teachers in designing and implementing interdisciplinary pedagogical projects is crucial for preparing generations of young people who are better able to promote fraternity, hope, care for the common home, social justice and hope.

The challenge to institutions is permanent and the need for resources and recognition of small experiences, with a view to involvement and continuous improvement. In this sense, through reflection on today's complex world and analysis of the structural causes of injustice, higher education is a starting point that fosters creativity in building alternative paths for education, as well as preparing the next generation of leaders who will introduce policies and measures for a better life for the most disadvantaged people. To this end, the entire educational community must be committed and responsible for the realization of this Ignatian pedagogical project, which although for many is innovative, as Lopes [45, 46] points out, is a renewed pedagogical project within the tradition. In this way, in teaching that is framed, guided, and directed by the profound Jesuit heritage and transmission, we recognize the role that the university must play in society, especially in its social forces, to build a fairer, more humane, and more peaceful society.

5. References

- [1] J. E. Stiglitz, *The Price of Inequality. How Today's Divided Society Endangers Our Future*. W. W. Norton & Company, 2013.
- [2] A. M. Magalhães, "Education in Higher Education in the Era of Performativity," in *Higher Education in a Digital Era through Project-Based E-Learning*, P. Dias et al. Eds.: Aletheia., 2023, pp. 71-94.
- [3] L. F. Klein, "A Pedagogia Inaciana e a sua força impulsionadora: os Exercícios Espirituais, Itaici-Revista de Espiritualidade Inaciana," *Itaici-Revista de Espiritualidade Inaciana*, vol. 95, no. 3, pp. 69-82, 2014.
- [4] P. Arrupe, "Hombres para los demás. La promoción de la justicia y la formación en las asociaciones," *International Association of Jesuits Universities*, 1973. https://iaju.org/sites/default/files/pdf/2018/SP.%20Arrupe.%2001.Sept._1973.%20Spanish.pdf (Access Date: 12 May 2023).
- [5] V. P. Mieles, "Aportación de los Colegios Jesuitas a la Educación en Ecuador y propuesta de formación en pedagogía ignaciana," Tesis doctoral, Universidad de Deusto, 2017.
- [6] A. Nicolás, *Misión y Universidad: ¿qué futuro queremos?* EDUCC - Editorial de la Universidad Católica de Córdoba, 2017.
- [7] S. G. Martínez, R. E. Tejedor and A. M. Arenaza, "Cuadernos de Pedagogía Ignaciana Universitaria: Aprendizaje basado em proyectos". Universidad Pontificia Comillas, 2022.
- [8] M. G. Catusus, M. J. M. Rodrigo, M. P. González and L. P. Puig, "Cuadernos de Pedagogía Ignaciana Universitaria: Aprendizaje basado em problemas". Universidad Pontificia Comillas, 2022.
- [9] C. Labrador, A. Diez, J. M. d. I. Escalera, and F. d. I. Puente, *La pedagogía de los jesuitas, ayer y hoy*. Conedsy y Universidad de Comillas, 2002.
- [10] J. Caro and M. A. y. P. Azpitarte, "El debate como una buena práctica de metodología activa alineada con la Pedagogía Ignaciana," *Best Practices in Jesuit Higher Education*, vol. 1, 2021.
- [11] J. M. M. Lopes, "A Ratio Studiorum, um modelo pedagógico," in *Ratio Studiorum da Companhia de Jesus (1599): Regime Escolar e Plano de Estudos*, M. Miranda Ed.: Axioma, 2018, pp. LV-CII.
- [12] L. B. Gálvez, A. A. I. Alberdi, M. P. Ursúa, and A. d. I. R. Berjillos, *El debate ignaciano*. UNIJES, 2022.
- [13] R. X. Ang, Q. H. Chew, M. Y. Sum, Somnath Sengupta, and K. Sim, "Systematic review of the use of debates in health professions education - does it work?," *GMS Journal for Medical Education*, vol. 36, no. 4, 2019, DOI: 10.3205/zma001245.
- [14] A. J. Fuad, I. W. A. Sulton, and D. Kuswandi, "Observing debate in learning on students' critical thinking," *Journal Pendidikan Humaniora*, 2018.
- [15] M. Martínez, "Hacia una resolución efectiva de conflictos en las aulas universitarias: Ejemplos a través del debate cooperativo.," *Zona Próxima*, vol. 24, 2016, doi: <https://doi.org/10.14482/zp.24.8724>.
- [16] Observatorio de Innovación Educativa del Tecnológico de Monterrey, *Reporte EduTrends. Aprendizaje Basado en Reto*, Tecnológico de Monterrey, 2015.
- [17] K. Fuerte and C. Guijosa, *Glosario de Innovación Educativa*, Observatorio. Instituto para el Futuro de la Educación: Tecnológico de Monterrey, 2020.
- [18] S. L. Olivares-Olivares, M. V. López-Cabrera, and J. E. Valdez-García, "Aprendizaje basado en retos: una experiencia de innovación para enfrentar problemas de salud pública", *Educación Médica*, 2018, 19(53), pp. 230-237.
- [19] P.-H. Kolvenbach, "Presentación del M.R.P. Peter-Hans Kolvenbach", in *Discursos universitarios*, M. Agún Ed., UNIJES, 2008, pp 5-6.
- [20] S. Bou Ysás, C. Carretero González, P. Castro González, Pilar, A. Echániz Barrondo and L. Hassi, *Aprendizaje basado en retos*. Universidad Pontificia Comillas, 2022.
- [21] F. de la Puente Samaniego, "Pedagogía Ignaciana. Un planteamiento práctico", in *La pedagogía de los jesuitas, ayer y hoy* E. Gil Coria Ed., Universidad Pontificia Comillas, 1993, 2a ed., pp. 329-383.
- [22] B. Duch, S. E. Groh and D. E. Allen, *The Power of Problem-Based Learning: A Practical "How-to" for Teaching Undergraduate Courses in Any Discipline*. Sterling, Va.: Stylus, 2001.
- [23] H. S. Barrows, *Problem-based learning Applied to medical education*. Springfield: Southern Illinois University Press, 2000.
- [24] M. A. Manzanares, "Sobre el aprendizaje basado em problemas" in *El Aprendizaje basada em Problemas: Una propuesta metodológica em Educación Superior*, Escribano A. and A. del Valle, Coords: Narcea, 2008, pp. 14-23.
- [25] P. Morales and V. Landa, "Aprendizaje basado em problemas", *Theoria*, 13, 2004, pp. 145 – 157.
- [26] M. Agundez, "El paradigma universitario Ledesma-Kolvenbach", *Revista de Fomento Social*, vol. 63, no. 252, 2008, pp. 603-631.
- [27] J. Ravitz,, N. Hixson, M. English and J. Mergendoller, *Using project-based learning to teach 21 st century skills: Findings from a statewide initiative*. Conference: American Educational Research Assotiation at Vancouver, BC, 2012.

- [28] C. E. Hmelo-Silver and H. S. Barrows, "Goals and Strategies of a Problem-based Learning Facilitator", *Interdisciplinary Journal of Problem-Based Learning*, 2006, DOI: 10.7771/1541-5015.1004.
- [29] D. Monteiro and C. V. d. Silva, "E-service-learning: a gerontological social work approach," *ICERI2022 Proceedings, IATED Academy*, 2022, DOI: 10.21125/iceri.2022.
- [30] M. R. Rodríguez-Gallego, "El Aprendizaje-Servicio como estrategia metodológica en la Universidad," *Revista Complutense de Educación* vol. 25, no. 1, 2014, DOI: 10.5209/rev_RCED.2014.v25.n1.41157.
- [31] I. Fiorin, "Ricostruire il patto educativo: la sfida del Service-learning," in *Construire Comunità*, M. Cinque, I. Culcasi, and L. Dalfollo Eds. Roma: AVE, 2021, pp. 123-140.
- [32] C. M. Motta, "The ignatian charism, the University and Service-Learning," in *Spirituality and Higher Education: Perspectives from Service-LEarning*, M. N. Tapia Ed.: Uniservitate Collection, 2022, ch. 5, pp. 84-91.
- [33] H. Opazo, P. Aramburuzabala, and L. Mcilrath, "Aprendizaje-servicio en la educación superior: once perspectivas de un movimiento global.," *Revista De Pedagogía*, vol. 71, no. 3, 2019, DOI: 10.13042/Bordon.2019.03.000.
- [34] T. M. Vinagre, C. P. Mardaras, J. P. R. Milagrosa, S. Martín, and J. T. Lucas, *Aprendizaje-Servicio (Cuadernos de Pedagogía Ignaciana Universitaria)*. Universidad Pontificia Comillas, 2022.
- [35] *Official Journal of the European Union*, vol. C 251 E, 2021.
- [36] K. Schwab, "The fourth industrial revolution: Its meaning and how to respond," *Logistics & Transport Focus*, no. 19, 2017.
- [37] M. D. Lewis, "The promise of dynamic systems approaches for an integrated account of human development," *Child Development*, vol. 71, 1, 2000.
- [38] K. Mainzer, "Challenges of complexity in the 21st century. An Interdisciplinary introduction," *European Review*, vol. 17, 02, 2009.
- [39] H. Rosa, *Social acceleration: A new theory of modernity*. Columbia University Press, 2013.
- [40] W. Weiten, D. S. Dunn, and E. Y. Hammer, *Psychology applied to modern life: Adjustment in the 21st century*. Cengage Learning, 2014.
- [41] F. Annan-Diab and C. Molinari, "Interdisciplinarity: Practical approach to advancing education for sustainability and for the Sustainable Development Goals," *The International Journal of Management Education*, vol. 15, no. 2, B, 2017, DOI: 10.1016/j.ijme.2017.03.006.
- [42] D. Wernli and J. Ohlmeyer, *Implementing interdisciplinarity in research-intensive universities: good practices and challenges* (League of European Research Universities). LERU, 2023.
- [43] I. Ashby, M. Exter, *Designing for Interdisciplinarity in Higher Education: Considerations for Instructional Designers*. *TechTrends* 63, 2019, pp. 202–208. DOI: 10.1007/s11528-018-0352-z.
- [44] "GRACOS", *Pedagogia Inaciana. Uma abordagem Prática*. GRACOS, 1994.
- [45] J. M. M. Lopes, "A Universidade Católica e a Ideia de Pessoa em Peter-Hans Kolvenbach," in *Educação em Tempos Incertos*, Pedagogia 3 J. M. M. Lopes, A. P. Pinto, M. J. Lopes, A. Galvão, and P. Dias Eds.: Axioma, 2020, pp. 261–94.
- [46] J. M. M. Lopes, "Linhas Características da Pedagogia da Companhia de Jesus," in *A Pedagogia da Companhia de Jesus – Contributos para um Diálogo* J. M. M. Lopes Ed. Braga: Axioma - Publicações da Faculdade de Filosofia, 2018, pp. 5-72.

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