

Title: Bridging Contemporary Theory With Online Practice: The Sustained Impact on Student Identities

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Abstract: Higher Education (HE) Institutions that offer online programs seek to connect their training promises with the kind of learning and learners 21st century workplaces demand. Fulfilling these objectives implies promoting empowered, collaborative, and self-directed identities in learners during their formal learning and beyond. While learning theories and societal demands might support such identity development in individuals, ensuring these goals are met and importantly sustained has been problematic for institutions. Putting theory into practice becomes a greater challenge when the training process is completely mediated online. This inquiry is one of a four-part longitudinal study aimed at aligning the instructional design, pedagogical practices, and use of social learning-based technology tools in all programs with 21st century goals and contemporary theory of e-learning at a fully online technical HE institution in Chile. In the first three studies, we examined the impact of this alignment across all programs on the learner identities of students: 1) at the outset of their programs ($n=2,300$), 2) after 5 months ($n=14$), and 3) through the perspectives of faculty ($n=82$). Findings in all three studies suggested that many students in the institution, most from socially and academically disadvantaged backgrounds, transitioned to clearly evident 21st century learner behaviours. In the present investigation, our aim was to gather a deeper understanding of these changes and the implications of the design/practice/technology alignment *after one year*. We focussed on the same students ($n=14$) to uncover evidence, if any, of *sustained* changes as they graduated and moved back full time to their respective workplaces. A qualitative methodology was employed where data collection involved individual interviews, field notes, observations, and online digital activity. Findings reveal student identities with significantly increased confidence in their abilities and skills, placing important value on life-long learning as a means to transform their present and future lives and positively influencing their workspaces. This study provides strong empirical evidence of sustained changes that an instructional design based on social learning and mediated by technology generated in our students. At the same time, it contributes valuable and practical answers for overcoming the challenges that still beset many online programs in higher education.

Keywords: Instructional Design, Higher Education, Distance Education, Contemporary Learning Theories, 21st Century Learning Goals, Connecting Theory To Practice.

1. Introduction

HE Institutions must be able to respond to the new social, economic and technological challenges that society presents. In response to the various educational needs to meet these challenges, decades ago, in many countries distance learning programs in HE began to be installed (Chavez, 2017). Currently, due to the prolonged migration of academic programmes to online delivery as a result of the pandemic, a large body of literature (Zhang et al., 2022) has been generated. Based on the outpouring of scholarship, it remains a challenge to understand and demonstrate how it is possible to position the learner at the centre of the learning process, especially in technology-mediated spaces. Scholars working to ensure quality education in online programs have produced a growing body of studies documenting promising theories and frameworks for online education (García, 2019; Picciano, 2017), in which educational models and instructional designs position students as the protagonists of their learning. Understanding the influence of putting these contemporary theories into practice in virtual environments and reflecting the development of 21st century learning skills remains of academic interest and requires further empirical evidence (Charbonneau-Gowdy and Galdames, 2022). This research is part of a longitudinal study conducted during the years 2020-2023, which was carried out in a HE Technical Training Institution in Chile. A collaborative initiative was developed involving the macro/meso/micro levels of the institution aimed at aligning the frameworks of its online programmes with contemporary learning theories and 21st century goals. In the first three studies, we examined the impact of this cross-program alignment on students' learning identities: 1) at the beginning of their programs ($n=2,300$), 2) after 5 months ($n=14$), and 3) through the teachers' perspectives ($n=82$). Findings in all three studies suggested that many students at the institution, the majority from socially and academically disadvantaged backgrounds, transitioned to 21st century learning behaviors and more confident and empowered learner identities (Charbonneau-Gowdy and Galdames, 2022). Although these signs were encouraging, the findings from all three mini studies were not considered sufficient evidence to show that these transitions would be sustained over time and influence the trajectory of lifelong learning.

In the present study, we aimed to unravel a deeper understanding of these changes and the implications of design/practice/technology alignment after one year. We focused on the same students ($n=14$) following up after one year, to uncover evidence, if any, of sustained changes in these individuals in the final stage of their formative process and, if so, indications of an influence of the changes on their future learning and work.

To achieve this objective, we used the following questions to frame the study:

- 1) What kinds of sustained changes, if any, occur in students' learning practices?
- 2) How do their learner identities evolve, if at all, until the end of their training process?
- 3) How does a social learning-based online instructional design relate to the changes in their learner identities at the end of their programmes and beyond?

2. Theory and literature underpinnings

The core of our study, as in the two previous studies (Charbonneau-Gowdy and Galdames, 2021; Charbonneau-Gowdy and Galdames, 2022) lay in contemporary learning theories, especially those reflecting 21st century socio-cultural perspectives and goals that: a) place students and their agency at the centre of the learning process; b) are based on the understanding that learning is a complex interactive social phenomenon; c) engage students in community by collaborating in the co-construction of knowledge based on their individual and social context and experiences; and d) have important implications for students' competencies and identities in a dynamic, technology-driven society. The three components of the initiative we had launched at the institution involved: 1) the pedagogical practices of instructors and online students, 2) the instructional designs at the core of these practices (ID), and 3) technological tools used to support the programmes. These components were intended to reflect the principles and theoretical objectives listed above and as a way of possibly influencing students' learner identities and practices throughout their formative process in the institution.

2.1 Current Online Learning Theories, Models and Designs

Scholars working to develop online learning models that reflect contemporary learning theories and 21st century goals to ensure quality in education are based on principles framed by Moore's (1989) Interaction Theory (IT), Garrison et. al's, (2000) Online Learning Theory (CoL), Siemans' (2004) Connectivism Theory of Online Learning (CTOL) and Harasim's, (2012) Online Collaborative Learning theory (OCL). Based on these e-learning theories, social interaction is a backbone for the creation of intentional participation in a learning community, emphasizing collective learning experiences and community over individualism, through collaborative or co-constructed learning processes. These theories have a common vision positioning students as the protagonists of their learning, as active participants involved in a mutual relationship with others supported by social media technology (Picciano, 2017). Instructional design (ID) is considered an effective vehicle for ensuring conformity in the application of theory, models and technology in practice. Our study used Picciano's (2017, p.178) Multimodal Model for Online Education as its theoretical backbone, which is strongly influenced by IT, CoL, CTOL and OCL theories. This model is composed of seven interconnected elements that promote the generation of learning experiences to deliver a quality online programme. These components are reflected in the pedagogy/design/technology aligned programmes that participants and all newcomers to the institution faced when returning to formal learning after many years, and completely in an online space (Charbonneau-Gowdy and Galdames, 2022). The learning pathway of the online programmes guided by these components generated the types of activities that facilitate students to appropriate new learning practices and to reconstruct their identities.

2.2 Perspectives on Identity and Investment in Online Learning

As we mentioned in the previous article (Charbonneau-Gowdy and Galdames, 2022), learning from a socio-cultural perspective is receiving increased attention in the e-learning literature. Within this perspective, the academic sphere plays a fundamental role in the construction and reconstruction of people's identities. Norton (Darvin and Norton, 2015) defines identity as "how a person understands his or her relationship to the world, how that relationship is constructed across time and space, and how the person understands possibilities for the future" (p. 4). Seen from this perspective, identity is conceived as a site of struggle, structured by the power relations existing in social contexts, including educational systems. As Bourdieu (1998, p.43) points out "A large part of social suffering is due to the poverty of people's relationship with the educational system, which not only determines social destinies, but also the image they have of themselves and also the image they have of their destiny".

Many scholars have shown that online education, based on human interactions and machine-mediated content, has placed students as passive recipients of information, pushing them to work individually, a situation that has become evident during the migration of this modality in the wake of COVID-2019. This scenario limits the possibility for individuals to become more understanding of themselves and their learning experiences, prevents them from reconstructing their identities, and marginalizes them from accumulating social, cultural and symbolic capital. Norton has coined the term 'investment' (Darvin and Norton, 2015) to explain an opposite scenario in which learners are offered opportunities to exercise agency in their learning through interaction and knowledge construction with others. In these social interactions, which increasingly occur in digital spaces, an individual's strengths, experience and knowledge are made available to others. In reaction to such favourable conditions for exercising agency, their desire to invest in learning is ignited with a view to gaining a broader range of symbolic and material resources. In other words, in these ideal conditions, learners will choose to engage and invest in learning for the value they see in doing so for increasing their capital and social power and for the visions they have of their futures (Darvin and Norton, 2015, p.46).

Engel and Coll's (2021) model of learner identity (LI) also served to frame our inquiry. This model explains the various components in learning contexts, including multimodal-based ones, that are involved in the act of identity mediation. The elements include: i) reasons for participating in learning activities and the learning goals pursued; ii) significant others participating in the learning experiences and their acts of recognition; iii) discursive resources present in the broader sociocultural context; iv) convergence or interference of other identities of a person; v) characteristics of the learning activities; and vi) emotions associated with the learning. Importantly, the model exposes the critical nature of social context and material resources to our understanding of learner mediation of identity especially in online sites.

We considered these models and theories as a framework of the study in analyzing participants' accounts of their academic experiences, emotions and expectations in the final stages of their programmes.

3. Methodology

The study was carried out during the final semester of the participants' academic career, January to March 2023. This inquiry is positioned within the qualitative paradigm in which we adopt a case study approach, longitudinally following the 14 students who started their programs at the beginning of 2022. Case studies are considered an ideal methodological approach when the goal is to understand in depth a social phenomenon taking place in an educational context and as a means of "getting to the details and nuances of the experience, emphasizing processes and meanings" (Da Costa et al., 2016, p.649). In addition, e-learning research is increasingly recognized as a social practice (Gruba et al., 2016). As Koro-Ljunberg and Douglas (2008) point out constructive research should, in most cases, ask 'why' and 'how' questions rather than 'how many'. These premises supported our methodological choices. Data included: 1) transcripts of individual interviews; 2) transcripts of interviews with focus group teachers; 3) questionnaires to teachers; and 4) field notes that included digital activity in the forums and feedback from the faculty. The ethical guidelines established by our institution to protect the rights and privacy of the participants were strictly adhered to throughout the study process.

3.1 Context and Participants

The study was conducted in a technical institute of higher education in Chile. Chile is considered an economically stable country, one of only two OECD members in South America. Stability has not been enough to appease the social inequality that has led to marked social protests comprised mainly of students seeking greater access to quality education. This drive for higher levels of education can explain why distance undergraduate programmes from 2014 to date have shown a sustained growth in enrolment in the first year of undergraduate education, with a 17.9% increase in 2022 compared to the previous year, and a 162.7% increase in the last five years. Online education has an entry profile mainly of working adult students, since this modality allows them to continue or resume their studies, especially because of the flexibility they offer to reconcile their different roles (Chávez, 2017). The challenges posed by the social and educational demands in Chile are fully aligned with those outlined by UNESCO (2022), in the context of lifelong learning: "The abiding challenge for adult learning and education is to reach those who need it most"(p.4) and it is considered an indispensable factor to achieve equity and inclusion, to alleviate poverty and to build equitable, tolerant, sustainable and knowledge-based societies (UNESCO, 2009). In order to respond to these challenges, HE institutions are required to take their online programmes along the path of continuous improvement to guarantee quality processes in accordance with the learning demanded by the 21st century. The institute where the study was conducted is privately owned,

founded in 1985. Since 2017 it offers all its programmes 100% online, one of the few HE institutes in Chile pre-pandemic to do so. Currently, the institution offers 19 technical careers organised in 5 areas: administration, education, industrial, health and social. Its mission includes not only the development of its students' professional disciplinary skills and competences, but also the promotion of their well-being, attitudes and competences to respond to the current dynamic demands of working and social life. In general, learners are working adults, mostly from socially, educationally and economically disadvantaged backgrounds, who wish to upgrade their skills or obtain a certification that will enable them to propel their career path in their field of work. The programmes receive an average annual intake over the last 3 years of 2,500 new students, composed of 58% women and 42% men. The average dropout rate before starting the original study in 2020 was 44%.

Of the 14 participants who originally volunteered to be studied in their final stages in the program, we managed to interview twelve - 11 women and 1 man with ages in the following ranges: four in their 20s, two in their 30s, two in their 40s, four in their 50s and one in his 60s. Their technical careers included: Early Childhood Education (3), Information Systems and Networks (1), Logistics Management (1), Human Resource Management (2), Pharmacy (3), Social Work (1). Of the original fourteen participants, one man withdrew for health reasons although continued his studies and another left the institution.

3.2 Research Design

This study was developed in three phases, which allowed a comprehensive understanding of the evolution of the students' practices and identities in their final stage of the program. The first phase consisted in the follow-up, in virtual classrooms, of the 14 participants who had been involved in a previous study in 2022. Field notes were generated every four months until the last course of the course in 2023. In these observations, attention was paid to the degree of participation, mainly in reflective forum activities and collaborative work.

The second phase was a review of the results of previous research where information was collected from teachers through a questionnaire ($n=72$) and focus groups ($n=10$) on the general perception of students including: i) student participation in the different activities; ii) the possibilities of developing transversal competencies in students with the pedagogical resources of the classrooms; iii) changes in the academic trajectory of students; iv) the influence of teacher-student and student-student interaction spaces to develop learning. These results served as a point of comparison for our analysis of the data in the current study.

The third phase of the study took place between February and March 2023. Individual interviews were conducted with the participants. In these semi-structured interviews, the 6 elements of identity construction framed in Falsafi and Coll's (2011) model explained by Engel (2021) were considered. These elements include: i) the learner's motives for engaging in learning activities and the learning objectives pursued; ii) the significant others involved in the learning experiences and their acts of recognition; iii) the discursive resources present in the broader sociocultural context; iv) the convergence or interference of other identities with an individual's learner identity; v) the characteristics of the learning activities; and vi) the emotions associated with these activities. This information led to an in-depth understanding of the evolutions of these students' practices and identities during this final stage of their academic programs.

3.3 Data Collection and Analysis

Data were analyzed using qualitative coding methods based on a combined inductive-deductive process (Miles et al., 2014). Through this rigorous process, we sought to ensure the reliability of the findings. After establishing a conceptual framework, the six steps suggested by Braun and Clarke (2006) were followed: i) familiarization with the data; ii) generation of initial codes; iii) search for topics; iv) review of topics; v) definition and name of the topics; vi) preparation of a report in relation to the findings and responses to the research questions.

4. Analysis and Discussion of Findings

Higher education in an online modality at a national and international level is mainly chosen by adult students to continue or return to the dream of obtaining a degree that was often forgotten, or worse, that they believed that they lacked the skills to achieve. When analyzing the data that emerged at the end of their formative process, the responsibility that institutions have to deconstruct these beliefs was revealed. Three themes emerged in the thematic analysis process: 1) sustained transformations in learning practices; 2) reconstruction and sustainable transformation of the identities of adult learners; 3) life-wide and life-long learning.

4.1 Sustained Transformations in Learning Practices.

In recent decades, social learning perspectives, and the designs and theories to implement them, have received special attention as viable or even desirable frameworks for research and practice related to the teaching-learning process, particularly in virtual environments (Hill et al, 2009). Although there is a diversity of social learning frameworks, one commonality shared by these models is the principle that learning usually takes place among peers or between groups of people, in collaboration, and/or in communities (Shea et al, 2019). Teachers who adhere to the value of this social constructivist principle promote activities that favour the co-construction of learning, or in the words of one of the teachers participating in an earlier inquiry "Collaborative learning allows students to make their contributions and express their concerns (Teacher Interviews January 2023).

From the student's perspectives, the learning experiences that allow them to both create a community and interact with their peers and teachers, are seen as a means to enhance their learning. Ana attested to her recognition of their value in the following excerpt: "Thematic forums help us a lot to know the points of view of other colleagues or perhaps ideas that can come to serve us at some point" (Ana, Individual interviews, March 2023). Many students also recognized that the forums allowed them to feel part of a community, and to generate affective ties, which are key elements in learning. As Luciana pointed out: "You still feel that affinity with the other, you still share with the other, maybe we don't see each other physically, but we still share experiences, lessons learned" (Luciana, March 2023). Another student, Nilma, shared: "We form an affective bond, but a great one, although we don't know each other" (Individual interviews, March 2023). According to Garrison et al. (2000) these affective bonds can help develop a sense of social community defined not only by the interaction of the participants, but also by their ability to integrate cognitive knowledge, social and educational presence. Only one student, Colomba, indicated that he was not able to create bonds with his peers and form trust. In an act of transparency, Colomba admitted: "The issue of teamwork, for me it is a totally issue... I am a person who is too distrustful" (Individual interview, March 2023). Colomba's admission shows that it is neither easy nor simple to rebuild our identity and appropriate new learning practices, as all the other students evidenced. It is a path that for some takes longer. Yet, these spaces allowed him to become more aware of the importance of developing these skills: "I feel, unfortunately, that, on this occasion, I was not able to develop teamwork" (Individual interviews, March 2023). Table 1 shows the appropriation by the students of new active learning practices, which from the first months showed emerging changes in their ways of learning and then after a year how these changes were sustained in line with 21st century skills.

Table 1: Evolution of student learning practices

Perceived changes in learning practices	Evidence from teachers	Evidence from students
Valuing and incorporating social practices for learning.	"In the case of teamwork, collaborative work, although it was an instance that was difficult to implement at the beginning, has become evident and most of the students have commented on it as a vital instance forgetting to know each other, sharing, developing a group activity and also feeling identified with the institution in their formative process". (Interviews January, 2023)	"From Rancagua, from Iquique, from Santiago. So that also helps to complement all this, because you can see that there are other people with the same effort and sacrifice to get ahead in their careers and at different ages. That is extremely important" (Luciana, March 2023). "It helps us... and also to give us strength, to give us energy, because we are the four women" (Sara, March 2023).
Participation with further reflections and opinions.	"There has been an important growth, from those who were not very interested in participating, some of them have been migrating, and you can see the difference, and today it is more technical, with more argumentation, more knowledge; (Teacher interview, January 2023). "The collaborative work is a sign that teamwork is strengthened, students manage to strengthen ties and discuss their ideas and opinions on the various topics covered, the feedback in the forums with their peers, and the fact that they are able to work together as a team" (Teacher interview, January 2023).	"In the forums, we are there answering things that we are learning as we go through the subjects...And I feel that it is very good to get to that point and say, oh, am I prepared to answer the question, to do this topic? Or to talk to my classmates, because in reality, as we don't really know each other in person... as time goes by I feel that now I am less afraid, because we are getting to know each other as we interact" (Elena, March 2023).
Self-directed practice: researching ideas, proposing topics for further study, active participation in forums and classes.	"Students demonstrate assertive communication in the thematic forums. Teamwork in "Collaborative Work", Creativity in their video exam, as no rigid structures are asked, but they can create their answers" (Teacher interview, January 2023).	"In the forums I obviously put my observations, and as I am a bit controversial, even to encourage, with the intention of encouraging learning" (Gael, 2023).

The testimonies in Table 1 reflect theoretical frameworks where technology is a medium for quality learning (Garcia, 2019; Medina, 2018; Picciano, 2017) where flexibility and interaction respond to the social needs of individuals in adult education. These features of quality learning should be the concerns and on the agendas of institutions globally. As UNESCO (2022, p.6) reminds us: "In the future, the key feature will be the openness of education systems and their capacity to bring about personal and social change".

4.2 Reconstruction and Sustainable Transformation of The Identities of Adult Learners

According to scholars who work in the field of identity, such as Falsafi and Coll (2011) and Norton (2015), learner-centred instructional designs provide opportunities for students to experience academic and social relationships. The results presented in Table 1 are evidence of these postulates. These relationships affect the reconstruction of a learner's identity and investment in learning, highlighting the role of agency in learners' commitments to a specific task, i.e. having an interest in performance and persevering in that performance (Engel and Coll, 2021). Many students, upon accessing these online programs, experience feelings of inadequacy and insecurity as learners. Yet, the designs of the online programs based on social learning along with the pedagogical approaches and technologies permit these students to interact with other students and with teachers and in so doing construct changes to their identities as learners. In these spaces of interaction, acts of recognition, which are a powerful tool aimed at promoting the construction of the learner's identity (IdA) by mediating the attribution of meaning to learning, were fundamental (Falsafi and Coll, 2015). We can hear this construction of identity in the words of the participants when talking about the interaction with others in their learning: "It feels good that they [other learners] value your opinion and your comment, your participation".... "it excites me, because it's nice to be told, hey, that's good, I think so" (Student interview, March 2023). Interaction in virtual environments has been widely studied, noting that it should have a qualitative dimension characterized by intentional and systematic discourse (Moore, 2003) and is considered a mode of communication that aims to influence critical and reflective thinking (Garrison and Cleveland-Innes 2010).

Table 2 illustrates with excerpts from the data the sustained transformations in the students' learner identities that have been mediated during their formative online educational process.

Table 2: Sustained transformation in the learner identities of adult learners.

Perceived changes in students' learner identities.	Evidence from teachers	Evidence from students
Learners who are more capable, confident and self-assured in themselves and in their learning.	"I think that in each of the existing instances we are seeing a change, a mutation, a migration, at different levels of intensity... So, this empowerment can be seen in all the instances. From the structure of the responses in a forum, for example, in the collaborative work as well, where you see a consolidation and a maturity".	"Honestly, yes, I feel like I make a contribution... you kind of live in the moment through the comments... the instance where you're learning. "Today I really feel much more capable. When I started studying, I said, this is not going to be my thing. So, if I got this far and I have nothing left, I can continue studying". "Oh, look at the confidence, the security and showing young people that if they work hard, they can do it.
Improved participation and analysis in reflection forums.	"It is very comforting to see how students broaden their analytical skills by acquiring new learning" (Teachers' questionnaires, January 2023).	"The truth is that when my peers respond, I feel very good... it's what I think from my point of view and that others see it as I see it, I think it's great".
Increased engagement with their learning in all learning experiences.	"and there one sees this maturity that is acquired in the different interventions, in the way of interacting. These are aspects that go beyond knowledge, empowerment"	"Well, I'm committed to studying, so my goal is to do well and be committed. "I want to continue studying... at that level of continuing to advance as a woman, as a mother, etc..".
Researchers and agents of their learning.	"They have developed the capacity to learn quickly and to provide solutions to the problems that arise, I see that they are becoming more and more empowered in their territorial contexts"	"I feel amazing, I am at a stage where I want to study and I like it, I am learning things that I thought I would never learn. The truth is, I have changed... I am a mature woman who does her best to make things go well, I am focused on my future and on getting my degree"
Increased empathy with peers and leadership development.	"I have been able to see the development of skills such as leadership, problem solving, empathy, tolerance, goal-oriented teamwork, can be appreciated through the synchronous classes with their stories and also in the collaborative work"	"I have developed patience, why not say it too, and in a way empathy for others. I had a hard time when my mother passed away. Then other classmates also, others were parents, and we learned to be empathetic." "I feel like it has given me tools to be like a leader in my studies and in my field of work." "I feel like I don't have that fear anymore, that fear of speaking my mind, I feel calm and I encourage others, you don't have to be afraid of success."

In the narratives of students and teachers, there were notable and sustained signs of empathy, leadership and active co-construction of knowledge in different spaces where interaction takes place, inside and outside the classroom. These appropriations of skills generated sustained transformations in their learner identities, allowing them to see themselves as more self-confident, competent, empowered learners and as individuals who value learning how to learn. These findings highlight the responsibility that HE institutions have in generating academic activities that favour the reconstruction of identities in students where they can identify themselves as competent, with greater confidence in their academic and social skills, a view that is shared by a growing number of recent scholars in learning, of which e-learning is a part (Abello, 2019; Valdés et al., 2016).

Our analysis of the significant data detailed in Tables 1 and 2, which align closely with findings in our previous studies, and summarized in Figure 1 (Charbonneau-Gowdy and Galdames, 2022) we believe offer compelling evidence that changes to students' learner identities in the institution, were sustained over the year(s) they spent in the program.

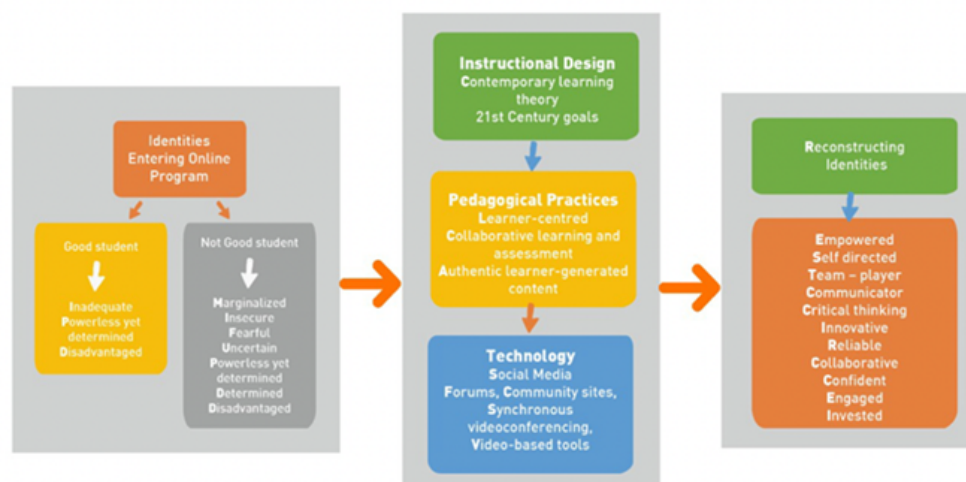


Figure 1: Identity transformations in aligning pedagogy, design and practice (Charbonneau-Gowdy and Galdames, 2022)

4.3 Life-Wide and Life-Long Learning

According to Engel and Coll (2021) "The learner identity (IdA), can be influenced, supported or inhibited by the learner's other identities such as social class, culture or gender... In this case we speak of identity interference, as a more elaborated type of identity" (p.8). The results of our findings lead us to share this premise. Students' testimonies denote how their socio-cultural capital, gender and age had defined the way they see themselves as learners and these new experiences allowed them to deconstruct those identities and feel proud. Examples of such compelling testimonies from the students about to graduate include: i) "For us it is still an achievement as a family, we are going to be the only two professionals of all the siblings"; ii) "As a student, having achieved what was difficult for me before, with my own means, with my own effort, I feel like a more fulfilled, more complete woman"; iii) "Even there in the clinic they also admire the fact that I am studying at my age. And I give it as an example, you too, go on, study, get your degree"; iv) "You also feel proud that your family is proud of you, I have shown them that I have been able to make the time to study. Now they feel confident to ask me for help with their homework, which has generated an educational connection with my daughters"; v) "Now that I have taken up my studies again, I intend to continue with my professional career, even if I am as old as I am, and maybe I won't find a job because of my age, but it is a personal satisfaction that I want to achieve". (Student interviews, March 2023). These quotes are a small sample of how students have overcome their previous beliefs about when and who could successfully achieve higher education and how this achievement is not only lifelong but also involves life-wide and life-deep learning (Banks et al, 2007). As (Schuetze and Slowey, 2012) point out: "Human beings not only learn throughout life, but they also learn throughout and across the lifespan" (p.71). From this view of lifelong and life-wide learning, the testimonies presented reveal how a person's different identities as women, adults, workers, mothers, and fathers are interfered with by new learning experiences in their different daily roles.

5. Conclusion

The powerful evidence presented in this study on evolutions to more collective learning practices and more empowered, confident and self-directed identities underlines the fundamental role of HE Institutions in the design of learning activities, particularly in virtual environments. This design of academic experiences, where social learning is an axis of educational practice, supported the installation of spaces for the evolution of skills aligned with the learning demanded in the 21st century: teamwork, critical thinking, effective and assertive communication. Undoubtedly, such skills and identities are projected into present and future social and occupational spheres. The impressive reconstructions of learner identities that we show in this study along with the solid data that was generated by the three previous inquiries, allow us to understand the necessary synergy and harmonisation that must exist in a pedagogical/design/technology alignment (Charbonneau-Gowdy and Galdames, 2021). We strongly believe that participants' decisions to persevere in their academic path and invest actively in learning have roots in this alignment. Learning activities involving interaction in its three dimensions (student-content/student-teacher/student-student) such as: synchronous classes; reflective forums; collaborative work and co-assessment, offered opportunities to share experiences and opinions that developed or enhanced transversal competences that are critically necessary and valued today: empathy, companionship, teamwork, assertive communication and creativity (García, 2019, p.260). For the development of these opportunities to take place in virtual classroom practices, it was not enough for the institution to declare in its formative and normative frameworks its aspirations for students. Importantly, it was essential to involve and unite all stakeholders in the institution at macro/meso/micro levels with contemporary theories of social learning and 21st century goals. We believe that the results of this research combined with those of previous studies provide empirical evidence that a consistent design of these principles, where all levels of the institution adhere to them, provided powerful educational experiences for students where they are called to be agents of their learning process mediated by technology. Based on the foundations of constructivist qualitative research, we recognise that the stories of appropriations of reconstructed empowered identities uncovered in our findings cannot be generalized for all learners, let alone across all virtual environments. Yet, we also recognise that the longitudinal nature of the combined studies carried out from 2020 to 2023 has allowed us in the present study to raise solid results where the transformations of learner identities have been sustained over time and, as Engel (2021) pointed out, have positively intervened in their other identities (social, cultural or gender). We argue then, in light of the events experienced in the transition of distance education in recent years as a result of the pandemic, that our findings support the search for theoretical, practical and global solutions to the challenges we face in education. Furthermore, considering that lifelong learning is currently at the forefront of national and international educational agendas, our findings could be a viable way forward in providing quality opportunities in technology-mediated educational spaces for people who have felt marginalised from educational systems for years.

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