

# The Impact on Learners' Identities of Aligning Pedagogy, Design and Technologies With Theory in Online Courses

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**Abstract:** In the past two decades, much of e-learning scholarship has reflected the tensions between what we as educators aspire to do, the theory we have to support what we do, and what we actually accomplish when it comes to technology supported learning. Some scholars are recognizing that inroads to resolving these tensions can be gained through a deeper understanding of the kinds of identities we promote in learners through our pedagogies, course designs and technologies. If our goals are to promote empowered, self-directed and life-long learners in our programs, then the practices, designs and technologies we employ must all be framed by theories that support such goals. Too often this is not the case. This study forms part of a larger longitudinal inquiry aimed at aligning these three components with 21st century goals and contemporary e-learning theory at a fully online higher education (HE) technical institution in Chile. An earlier pilot focussed on the reaction to this new alignment from the institution's broad student body of working adults (n=2,300), the majority from socially and academically disadvantaged backgrounds. Narrowing the lens on a small cohort of students (n=14) entering the institution into a cross section of career disciplines, we adopted a qualitative case study approach to uncover a deeper understanding of the identities of these students on first arrival. Our objective was to determine how highly interactive group work-based teaching practices, learner-centred instructionally designed programs and social media-based technologies such as forums and live videoconferencing sessions, impacted their identities over the course of the first 5-month period. Data collection involved in-depth individual and focus group bi-weekly interviews, reflective feedback from routine student questionnaires, field notes, instructor observations and digital activity online. Findings indicated the crucial nature of this initial period for influencing student's learning trajectories in terms of retention and for promoting the kinds of 21st century learner identities to which the institutional programs aspired. As a surge of institutions worldwide are more motivated than ever to finding effective e-learning solutions after experiencing challenges in their online programs during the pandemic, these results could provide empirical evidence of a viable pathway forward.

**Keywords:** higher education, instructional design, distance learning, contemporary learning theories and goals, learner identity

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## 1. Introduction and background

Despite the outpouring of literature that the COVID-19 pandemic has generated (Zhang et al., 2022) and the pessimism about online learning that in many cases it reflects, calls for understanding how to resolve issues such as learner engagement and learning challenges in e-learning settings, continue to resound. Calls for solutions in online learning spaces existed even prior to the pandemic and revolved around ways to connect theory to practice (Pange and Pange, 2011). The more recent ones are all the more urgent given predictions of a surge to distance and hybrid/blended learning in the post pandemic era (Rosenberg, 2021). While promising e-learning theories have been developed over the last 2 decades (Picciano, 2017), few have been put into 'real' use (Rientes and Toetenel, 2016). More recently, scholars have argued that inroads to resolving this dilemma involves applying instructional designs that reflect 21<sup>st</sup> century pedagogical practices and are supported by social media technologies in these settings. Yet, while the process of aligning pedagogy, instructional design and technology in virtual learning spaces has received some interest (Charbonneau-Gowdy and Galdames, 2021), there is a paucity of empirical evidence that shows the impact of this action on learners and learning.

The research study we report on here is part of a larger longitudinal study that takes place in a technical institute in Santiago, Chile. The driver of the original study was upper-level administrators acknowledging inconsistencies between the policy frameworks guiding their fully online programming and the kinds of high-quality returns that both institutional leaders and students expected. Although policies claimed to focus on learners and learning and to prepare students for the futures they will face in their technical careers, the instructional design model instead reflected outdated pedagogical teaching practices and the technical resources that supported industrial era workplace processes. In the larger study, our objective was to put in place action research (AR) involving all levels of the institution to address this disconnect (Charbonneau-Gowdy and Galdames, 2021). Encouraging findings indicated salient changes in learners' behaviours and in their identities. While these preliminary results of the AR were seen as promising, given that they were based primarily on quantitative results, it was clear that

a deeper understanding of such changes could confirm the connection to the alignment of pedagogy/design/ and technology initiative and not simply to the opportunities for further education, in and of itself.

In the present study, our focus was on a small group of 14 students, all working adults, a majority with similar profiles - disadvantaged backgrounds both socio-economically and educationally. The self-selected participants were in their first months of adapting to an online distance education context and being exposed to the institutional change initiative. Our aim was to unpack at a deeper level the images these individuals had of themselves as learners, i.e. their identities, on arrival at the institution and to trace any evolution of both their identities and learning practices in the initial months of their programs. By gathering richer information about the various identities these individuals were mediating, we felt better able to assess our institutional-wide initiative and to use this empirically grounded knowledge to make alterations to the programming, as needed. We were also aware of the importance of understanding their experiences and its impact on learners' sense of selves in the first few critical months in distance learning programs to questions related to attrition and retention (Aina et al., 2021) – of concern in all distance learning programs.

With these goals in mind, the following questions were used to frame the study:

- 1. What kinds of identities as learners does a small group of working adults in Chile arrive with when enrolling in a distance learning technical program?
- 2. How do their identities as learners evolve, if at all, over the first three months in the program?
- 3. What connection, if any, can be drawn between the program's alignment of pedagogy practices, course design and technologies used and the identity changes and learning practices of this group of individuals?

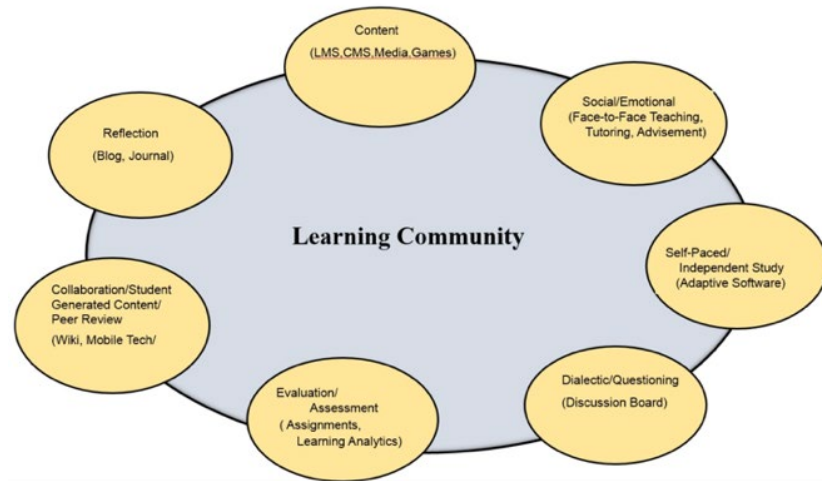
## **2. Theory and literature underpinnings**

Underpinning our study were established contemporary learning theories, especially those reflective of sociocultural perspectives and 21<sup>st</sup> century goals that: a) place learners and their agency at the centre of learning processes; b) are predicated on the understanding that learning is a complex social interactive phenomenon; c) involve learners in community collaborating on co-constructing knowledge based on their individual social contexts and experiences; and d) have important implications for learners' competencies and identities in a dynamic, technology-driven society. The three components of the initiative we had put in place in the institution involved: i) the pedagogical practices of instructors and learners online, ii) the instructional designs at the basis of these practices (ID), and iii) the technology tools supporting the programs. Together these components were intended to reflect the theoretical principles and goals listed above and to examine their impact on learners' identities and practices.

### **2.1 Current online learning theories, models and designs**

Scholars working to develop a model for online learning and distance education that reflect these perspectives and goals have been especially influenced by Garrison, Anderson and Archer's (2000) Online Learning Theory (CoL), Siemens' (2004) Connectivism Theory of Online Learning (CTOL) and Harasim's, (2012) Online Collaborative Learning theory (OCL). Based on these three e-learning theories, social interaction is framed through building deeper participation in a community of learning (CoL), moving internal individualistic internet activities to group, community and even crowd ones (CT), and through collaborative processes of knowledge construction (OCL). Within all three theories, learners are seen as active participants involved in a symbiotic relationship with others and with powerful technology tools that can lead to their learning.

Picciano's (2017, p.178) Multimodal Model for Online Education (Figure 1), heavily influenced by the CoL, CTOL and OCL theories was particularly relevant to our study context. The seven intersecting components of the model comprise the essential opportunities for learning available in a quality online program – through *media content, reflection, collaboration, assessment, dialogue, self-directed learning* and *social/emotional support*. These components are reflected in the pedagogy/design/technology aligned programs that participants and all newcomers to the institution were confronting in returning to formal learning after many years, and in an online site. These components help frame the kinds of adaptations students were expected to mediate in terms of their practices and identities and are integral to understanding their experiences.



**Figure 1:** Multimodal model for online education (Picciano, 2017)

Instructional designs (ID) are considered an effective vehicle to ensure conformity in applying theory, models and technology into effective practice. Yet, as pointed out above and given the challenges reported online during the pandemic, there has been relatively little uptake of this strategy in distance learning settings. One reason for this stalemate appears to be the lack of empirical evidence to show the viability and impact of applying contemporary learning theory-based IDs more broadly and over sustained periods. Margaryan et al (2015) used 10 guiding principles of effective online learning practice (Table 1) to compare and evaluate the IDs of 75 MOOC programs. Surprisingly, the authors found that the IDs in all of these programs rated poorly according to their scale. In the context of the present study, these ID principles are reflected in the pedagogical practices being initiated in all programs across the institution.

**Table 1:** Guiding principles of effective IDs (Margaryan et al., 2015)

Guiding Principle	Description
Problem-centred	Learners learn skills in the context of real-world problems
Activation	Learners activate their existing knowledge and skills for developing new skills
Demonstrated	Learners learn when exposed to 'real' examples of new skills to be learned rather than information.
Application	Learners have opportunities to apply their new skills to solve problems.
Integration	Learners have opportunities to reflect on, discuss and defend their new skills
Collective Knowledge	Learners contribute to collective knowledge
Collaboration	Learners collaborate with others to build knowledge
Differentiation	Learners have options according to their individual needs
Authentic Resources	Learners are put in real world situations
Feedback	Learners are given regular feedback

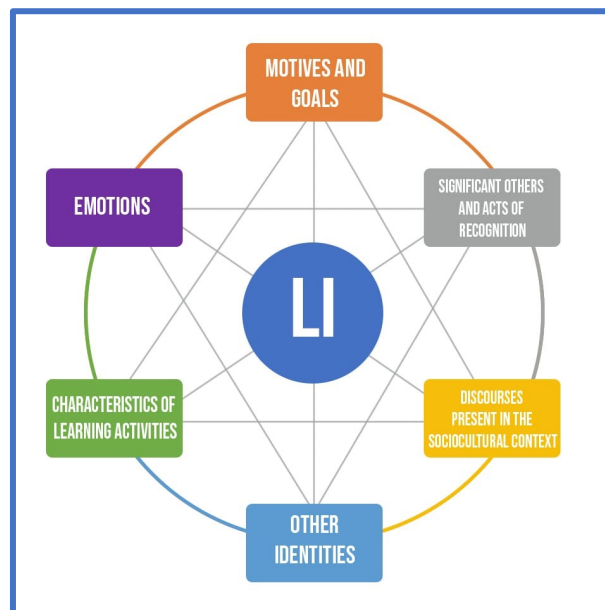
## 2.2 Perspectives on identity and investment in online learning

In viewing learning from a sociocultural perspective, the multiple nested contextual influences – political, social, cultural, economic, that exist in learning spaces, are receiving increased attention. Norton (Darvin and Norton, 2015) defines identity as “the way a person understands their relationship with the world, how that relationship is built across time and space, and how the person understands the possibilities for the future” (p. 4). Viewed through this lens, identity is conceptualized as a site of struggle, structured by relations of power existing in social contexts - including within educational systems. As Bourdieu (1998, p.43) points out: “A large part of social suffering stems from the poverty of people’s relationship to the educational system, which not only shapes social destinies but also the image they have of their destiny.”

Historically, and evidently during the pandemic, online education has positioned learners as passive recipients of information that they are expected to manipulate, and in roles that involve acts of human/machine interactions. In this scenario, learners are forced to assume marginalized and incompetent identities, where their desires to build social, cultural, symbolic and economic capital are denied. Norton has coined the term ‘investment’ (Darvin and Norton, 2015) to explain an opposite scenario in which learners are provided opportunities for exerting agency in their learning through interaction and knowledge building with others. In these social interactions, increasingly occurring in digital spaces, an individual’s strengths, experience and

knowledge are recognized. 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).

Engell and Coll's (2021) model (Figure 2) 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.



**Figure 2:** Elements involved in mediating learner identities (translated from, p.5)

Each of the models and theories discussed above supported our analysis and understanding of the stories from participants about their past educational experiences and those they were living in the initial stages of the distance learning program.

### **3. Methodology**

The study took place over five months between March and July, 2022. It is positioned within the qualitative paradigm in which we adopted a case study approach due to: i) the complex understandings we were seeking through our research questions and ii) the relevancy of the contextual conditions in the study site to the phenomenon we were studying (Baxter and Jack, 2008). E-learning research is increasingly being recognized as a social-based practice (Gruba et al., 2016), especially by many who experienced online learning during the pandemic. The “growing maturity and global influence of qualitative research in the human disciplines” (Denizen & Lincoln, 2018, p. 9), its suitability for uncovering knowledge embedded in complex human experiences and for revealing participants’ voices (Creswell, 2007), supported our research aims.

Data Included: 1) transcriptions of bi-weekly group and individual interviews; 2) online classroom observations; 3) participants’ written reflections of the challenges and highlights; 4) field notes that included digital activity in the forums and feedback from faculty. 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 took place at a HE technical institute in Chile. Chile is considered an economically stable country, one of only two OECD members in South America. Despite its stability, for over a decade the deep socio-economic divide in the country has led to annual violent student protests seeking greater access to education. In the years between 2014-2018, HE enrolment numbers rose 140.7%. As a further indication of the demand for equity, in 2019 country-wide rotating strikes protesting inequality in education, health care and pensions as well as privatization and high living costs, rocked the country and brought it to a standstill for several months. The country has recently elected a leftist coalition government – a dramatic about-turn after years of predominantly right-leaning ruling parties whose interests have been closely aligned with upper class society, powerful religious bodies and business interests. Despite great hope in this new government and its promise of change, a recent vote on a referendum-driven initiative to rewrite the constitution that would have reversed many existing policies, has failed to pass.

The institute where the study took place is privately owned, founded in 1985. Since 2017, it has offered 100% online programs, one of few HE institutes in Chile pre-pandemic to do so. The institution provides technical courses in 15 career streams organized in 5 areas: administration, education, industrial, health and social. Its mission statement not only includes the development of the professional skills and competencies of its students, but also the promotion of their well-being, attitudes and empowerment to respond to the current dynamic demands in work lives.

The student body consists generally of fully employed individuals, the majority from socially, educationally, and economically deprived backgrounds, seeking to upgrade their skills and/or obtain certification to enable career changes in technical areas. The programs receive an influx on average of 1,600 new students bi-monthly, made up of 58% female and 42% male students. The average attrition rate prior to the study was 44 %.

Fourteen individuals completed the study, 12 females and 2 males with ages in the following ranges: four in their 20's, three in their 30's, two in their 40's, four in their 50's and one in her 60's. Their technical careers included: Preschool Education (3), Information Systems and Networks (1), Logistics Administrations (2), Human Resources Administration (2), Pharmacy (3), Social Work (1), General Accounting (1).

### **3.2 Research design**

Table 2 illustrates the various overlapping phases of the study and the tools used to collect the data in each phase. Prior to conducting the present inquiry, a series of changes to program ID's that reflected contemporary learning theories and 21st century goals had been put in place across the institution (Charbonneau-Gowdy and Galdames, 2021). Essentially the changes to the ID of the programs involved changes as well to both technology tools and pedagogical practices that included: a) adding synchronous videoconferencing sessions in all courses for building learning communities; b) providing increased opportunities and resources for student collaboration on both learning assignments/projects and assessment processes; c) using group project-generated media as course content ; d) incorporating forums, padlets and career-designated community sites into courses for students to exchange ideas and opinions; e) creating separate institution-wide faculty and student online community sites.

In the first phase of the study, during March 2022, all incoming students were solicited to participate in the study. From that mailout, 16 students agreed to take part. Written ethical consent was gathered from each of these individuals once the institution had given formal permission for one of the co-author researchers, herself an administrator in the institution, to conduct the inquiry.

In the second phase of the study, extending from April to June 2022, the co-researcher met with the participants for the first interview. In this initial semi-structured group interview, background information – both professional and personal, especially pertaining to earlier education experiences, were discussed. The six interviews were conducted bi-weekly, transcribed and translated. Written reflections prepared by each participant and submitted to the co-researcher prior to their meetings were used as the basis of discussion for the following five interviews. In these reflections, participants summarized their ongoing transition into their respective technical program areas – both the highlights of their experiences and any challenges they were encountering. During this period, observations of digital activity in the forums and engagement in videoconferencing sessions were

conducted. Notes were kept by the co-researcher in a reflective journal to record any changes displayed by participants in terms of their identities and practices in these settings.

In the third phase, in July 2022, a final interview was conducted with participants ( $n=14$ ). This discussion centred not only on their ongoing program experiences, but also any changes they perceived in their learning practices. This information was used to substantiate observations of levels of engagement being gathered from other data sources. In this period, for example, the co-researcher attended videoconferencing classes to observe participants in action. In this phase as well, faculty ( $n=9$ ) who worked with the cohort of all new students provided feedback and comments on their experiences with and observations of these incoming students over the 5-month period.

**Table 2:** Phases of the study and data collection

Phases of the study	Data Tools	Description of Data
<b>Phase 1</b> March 2022 <b>Gaining Access</b>	Field notes	-E-mail soliciting volunteers ( $n= 120$ ) Institutional documents (enrolment figures, policy, attendance records)
<b>Phase 2</b> April – June 2022 <b>Gathering Data</b>	Interviews	-Eight, 60-75-min. bi-weekly focus group interviews ( $n= 6$ per focus group); 10 hours -Twenty, 30 to 40-min. individual interviews ( $n=20$ ); 12 hours
	Questionnaires	-Participants’ reflective journals – highlights and challenges ( $n=54$ )
	Field Notes	-Reflective journal - researcher -Digital activity - 12 online forum sessions
<b>Phase 3</b> July 2022 <b>Analysis</b>	Interviews	-Two, 60–75 min. focus group interviews ( $n=5-6$ ); 2 hours -Seven, 40-minute individual interviews ( $n=7$ ); 5 hours -Whole group interview ( $n=12$ ); 1.5 hours
	Observations	Observations of 3 synchronous videoconferencing classroom sessions
	Field Notes	Feedback from faculty ( $n=9$ ) on students’ progress

### 3.3 Data collection and analysis

Data was analyzed using grounded qualitative coding methods in a combined inductive-deductive process (Miles et al., 2014). Through this rigorous process, we sought to enhance the trustworthiness of the findings. After establishing a conceptual framework, a series of iterative steps were taken including: i) inspecting data sets for data to inform the research questions; ii) multiple readings and considerations of data sets; iii) condensing and coding data for key concepts and ideas that related to the theoretical framework and literature review; iv) identifying and refining salient or common themes from coded data; v) forming a conceptual framework that could be corroborated by findings.

## 4. Analysis and discussion of findings

Although many Chileans suffer from the inequities of a discriminatory educational system, recent government efforts to resolve these issues have been evident. One such effort is the fully subsidized opportunity offered to citizens working in technical areas to return to higher education institutions to upgrade their skills. This opportunity is considered by many as a means to rewrite their lives and gain the knowledge, experience and skills that will equip them for the global work settings in which they can better compete and hopefully prosper. Many who seize this opportunity initially envision the logistical demands of time and energy in returning to study as a major hurdle. Yet, many soon realize that despite their determination to succeed, misgivings and feelings about themselves as learners create more daunting barriers. Falsafi and Coll (2011, p.1) conceptualize these feelings as one’s learner identity (LI) which “can be understood as an analysis process by which people come to give meaning to [their] participation in learning activities through the recognition of [themselves] as learners and the values and emotions that accompany this recognition”.

In analyzing the data, especially from the early phase, the influence of the LIs that participants had constructed in their former educational lives factored importantly into their feelings about themselves as they entered their programs. Two themes surfaced in the thematic analysis process that conceptualize the identity trajectories many experienced over the 3 to 4-month period in the program: 1) LIs on entering the online program 2) LIs being reconstructed through social learning online environments.

#### 4.1 Learner identities on entering the online program

LI, or the perception of oneself as a learner, is developed based on a subjective experience and dependant on the quality of interactions with others and resources (Julio-Maturana, 2017) in a learning context. Many participants testified to those perceptions in recounting the kinds of interactions they were confronted with in their earlier education.

For some participants, their earlier images as learners are reflected in the label that they attached to themselves - "*not a good student*". In our analysis, we uncovered roots of this label in their interactions with materials, assessment and teachers during past experiences in classrooms. Martin, for example, emphasized the fact that his grades acted as the defining influence on his view of himself as a student. He recounts: "*I didn't like it. I was not even very good at grades, I was always between a 5.0 and 5.5, tops. But I passed (passing the course), that was the important thing*" (Group interview, April, 2022). Here, Martin reveals his estimation of himself as a student. Rather than being focussed on learning, in previous schooling his goal was simply on achieving a passing grade and finishing his mandatory academic career. Like many Chileans for whom academic grades are a national obsession and a benchmark of one's worth, in Martin's eyes, his LI can be described as unmotivated and ambivalent about the value of learning. His comments echoed by other participants revealed that his teachers were boring, the majority of whom relied on rote teaching practices. His systematic low grades, indicative of his distancing himself from the efforts needed for achievement, led to his resignation in accepting his LI as "*not a good student*".

Leo described himself similarly as a poor student. In his case, Leo revealed that he lacked effective study skills and faced socio-economic challenges that interfered with his learning. He explained: "*I was never really good at studying... I didn't stand out much in my studies either... And well, a poor family in the 80's was complicated, there were many problems, many social problems, work problems, which also influenced my school performance*". (Group interview, April, 2022) Leo recognizes his marginalized LI – an average student, indistinguishable from others in his achievements. He attributes his low-achieving, lackluster student identity to the multiple socio-economic contextual realities in which he was living. Through the lens of sociocultural theory, within these contextual boundaries that intersect with one another exist multiple layers of influence on learners' identities.

Maria's reservations and angst as an incoming student also reflect negative learning experiences in the past that impacted her LI. She shared: "*I feel insecure too, because even though I am a bit crazy... I still have that insecurity, those fears of knowing if I can continue or not, well, that is on the way... besides, studying online is new*". Although not referring directly to her early schooling, the influence on her view of herself as a learner is ever-present - unsure of her abilities to continue, especially in an online space. Maria's fears of inadequacies in this new digital learning context reflect the power imbalances that Bourdieu contends (1998) exist in all learning contexts and that depending on how her LI evolves will determine her future destiny in the program and thereafter.

In contrast to Martin, Leo and Maria, a few participants spoke of themselves as "good students". The reasons for the identity labels they attached to themselves were revealed as the stories of their earlier schooling were pursued. Rocio's testimonies, for example, provide insight into the source of this alternative LI view. She attested to seeing herself as "a good student". Yet, eventually, personal and financial circumstances prevented her from building on the positive images she once held of herself as a learner and forced her to abandon her studies and find employment. Her stories are reminiscent of many in deprived socio-economic conditions, in Chile and elsewhere, whose potential for development are thwarted by societal inequities. Rocio speaks poignantly about her loss of opportunity earlier in her life:

*The truth is that I was a very good student.... I had good teachers, I had good grades...I studied at the high school, up to fourth grade [final year of secondary school] and I had my daughter, and well, my parents were separating, and the process was very complicated; and therefore I had to start working to support my daughter at that time. (Interview, April, 2022)*

Rocio ties her sense of self as a 'good student' to the identities of others, that of her teachers – who in her eyes were effective, and to her own as a learner - hard working, diligent and successful. Circumstances, both seemingly unexpected, interrupted her plans for advancing her studies. Despite her intentions, contextual

factors beyond her control acted as powerful deterrents in her formal learning process and denied her the opportunity to prove herself through further education.

Through the lens of identity theory, the data revealed that virtually all participants – the ‘not good student’ and those labeling themselves as a ‘good student’ on entering their online programs, were burdened with feelings of inadequacy as learners that endured from early schooling years. For Leo, Martin and María, the “not good students”, their LIs were tied to failing to measure up at school, from a lack of motivation due to ineffective teaching practices, disinterest, fears, insecurities, and socio-economic issues. And even for individuals like Rocio who attested to being ‘a good student’, feelings of regret and unfulfillment due to their sociocultural and economic challenges, marked their LIs and left them fearful that further uncontrollable circumstances might once again prevent their proving themselves academically.

#### 4.2 Identities being reconstructed through social learning online environments

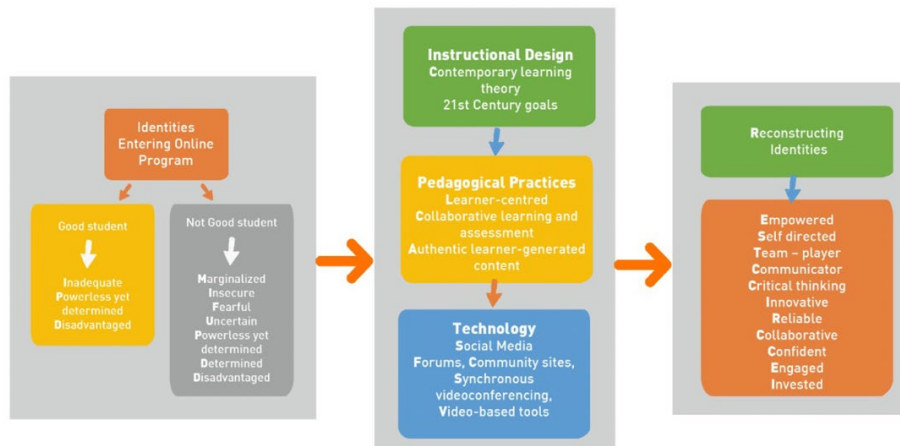
Feelings of inadequacy and insecurity as learners permeated the early data. Yet, there were also signs of determination to escape such labels and to prove oneself. Laura remarks: “I made the decision to take up studying again, more than anything else to see what I am capable of” (Interview April, 2022). As Weedon’s (1987) notion of identity explains, individuals are diverse, contradictory, dynamic and changing throughout historical time and social space.

Our analysis revealed various features of the online program precipitated this dynamic process in LI construction. Resources like the reflective forums and practices involved in collaborative group work led participants to interact regularly and systematically with their peers and teachers. Participants highlighted these interactive spaces as locations where they developed or enhanced their skills and generated greater security and confidence in their abilities. Signs of empathy for and support of their peers and active co-construction of knowledge in these forums were uncovered. The reconstruction of their LIs to more empowered and confident ones, most noticeably among those who initially recognized themselves as “not so good students”, was evident both in data from participants and from the observations of faculty. Figure 3 illustrate two representative data excerpts to substantiate this analysis.

Data Evidence of Identity Transformations in Online Practice
<p><b>INÉS:</b> Collaborative work helps us a lot to always be like, I don't know, like one of us is always in charge as a leader, so it is very useful for us to communicate our things. We always do collaborative work for group work, we always try to give our opinions, brainstorm ideas and that is very useful for us, to organize ourselves. We always divide up the tasks and that is something that I find works best in teamwork and in the thematic forums as well. I find that it is a very good thing, because many ideas are put forward and everyone has different points of view. So it also helps us to see things from a different perspective. (Interview, Inés, June 2022)</p>
<p><b>MARTIN:</b> In the forum at the beginning, it was very difficult for me to describe things, and to express myself... then when interacting with my classmates and receiving feedback from the teachers, one becomes more confident... now, I feel more prepared, more prepared, with more tools, for example, in the forums I am very participative... I find, for my part, that one is more confident. First of all, the first videos, for example, I recorded the one on preparation a thousand times looking for perfection, but as time goes by, one has more self-confidence, sitting in front of a camera and answering questions. All of that. (Interview, Martin, June 2022)</p>

Figure 3: Evidence of identity transformations

For Inés, active group work and forum spaces were instrumental for her mediating an identity marked by confidence and leadership as well as teamwork skills - collaboration, communication of and openness to ideas, creative thinking and organization. Her collective use of the word “we” suggests that these skills and competencies were not exclusive to her but rather to others both in the research group and more broadly among other newcomers in programs. Martin’s testimonial echoes similar sentiments of changes to his identity in the online spaces – new confidence from interacting and communicating with peers, engaged, invested in learning, determined, creative and open to challenges. Both testimonials as well as those from others are framed by the components in Engell and Coll’s (2021) model (See Figure 2) that emphasize the key social and contextual influences on learner identity mediation. The transitions in LI uncovered in the analysis are summarized in Figure 4.



**Figure 4:** Identity transformations in aligning pedagogy, design and practice

Importantly, nowhere in the data were there signs of loss of interest, discouragement nor feelings of being overwhelmed - typical cues in HE contexts of a potential for abandonment of a program, a disturbingly typical reality in many distance learning contexts (Siemans, 2015).

## 5. Conclusion

The solid evidence reported here combined with that from the larger pedagogy/design/technology aligned initiative (Charbonneau-Gowdy and Galdames, 2021) provide insights into the power of multi-level institutional efforts for influencing human development. The impressive transitions that were evidenced in these individuals reflected emerging, empowered, confident, self-directed learner identities with evolving skills - teamwork, innovative and critically thinking and effective communicators, that project well for their present and future work worlds. Based on the solid data that was generated, clearly this development cannot be attributed solely to decisions on the part of the participants to further their education, but the result of enriched opportunities for development in this unique learning context. Opportunities for community building and shared knowledge construction were offered in videoconferencing synchronous sessions and institutionally organized career blogs, in the critical thinking involved in interacting in forums, in shared group work and socially-constructed assessment and feedback practices, and in digital, including video, content generating. These enriched opportunities for professional and personal development did not occur due to the institution simply reassessing and rewriting their overall learning policies, nor through *macro* level administrators installing top-down directives to *meso* and *micro* level practitioners to alter their pedagogical practices and their use of technology. The opportunities the participants enjoyed are the result of a combined multi-level dialogic effort to match contemporary social learning principles and 21<sup>st</sup> century theoretical goals with cross-program instructional designs that guide pedagogical practices that are supported by powerful social media tools (Charbonneau-Gowdy and Chavez, 2019; Charbonneau-Gowdy and Galdames, 2021). We acknowledge that stories of positive identity transformations uncovered in these findings cannot be generalized to the entire student body, nor indeed across all e-learning sites. We also recognize that the size of the study and number of participants is limited, and a longer timeline could have added to the authority of our results. Yet, along with calls for similar large-scale, cross-institutional approaches in e-learning research (Zhang et al., 2020), especially in light of what we as a society have recently experienced in the move to online education, we believe our findings support the search for theoretically based, practical global solutions to the challenges we all face going forward.

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