# Creating An Empowering Learning Environment in Higher Education: A Modelization of Enhancing Student Learning Experience

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## Abstract

This paper explores the concept of an empowering learning environment in higher education, drawing inspiration from the capability approach of Nobel Prize laureate Amartya Sen. The empowering environment prioritizes students, valuing their emotions, needs, expectations, and fulfillment, while aiming to reconcile individual freedom with available resources. This research is based on an experience conducted with Master's degree students in Education at the University of Upper Alsace in France, demonstrating how to model and establish an empowering environment that considers individual differences and ergonomic factors to overcome learning obstacles and difficulties. The research endeavors  model this experience, providing insights into the levers that can be employed to foster an empowering environment. Methodologically and epistemologically aligned with the sociological and philosophical traditions of the Chicago School (John Dewey, Robert E. Park, and Ernest W. Burgess), this study adopts a qualitative, inductive research methodology grounded in practical experience. The findings shed light on the mechanisms necessary for creating conducive conditions for learning and empowering learners to flourish. Consequently, an approach known as IREM (Individual, Resources, Environment, Mindset) has been modelized to illustrate the experience and highlight four crucial levers for building an empowering environment. Overall, this research contributes to the discourse on empowering learning environments in higher education, offering practical insights and theoretical foundations to support educators and institutions in enhancing the educational experience for students. By embracing the IREM approach, educators can proactively address the diverse needs of learners and foster an environment conducive to their growth and development.

Keywords: Empowering Environment, Capability, Learning, Personal Development

## Introduction

The evolving landscape of higher education, marked by a shift from traditional to innovative learning spaces, necessitates a re-examination of these environments to foster student empowerment and engagement (Papaioannou, 2023). Social learning spaces have

been found to enhance student engagement through active learning, social interaction, and a sense of belonging (Matthews, 2011). The design of physical and virtual learning spaces should prioritize flexibility, adaptability, and contemporary learning and teaching strategies (Keppell, 2011). Lastly, the role of students in driving strategic change and improving the learning environment is crucial, with student engagement being a key focus (Dunne, 2013). Traditional pedagogical approaches often fail to address the diverse needs of students, leading to a disconnect between educational delivery and learner reception (Northedge, 2003). This is exacerbated in higher education, where concerns about retention and attrition rates have led to a focus on meeting learner needs, which may not be realistic given the extent of diversity (Haggis, 2006). Differentiated pedagogy is proposed as a solution, particularly in subjects like physical education, where traditional approaches may not be effective (Jarvis, 2017). Thus, Auerbach (2012) suggests a multifaceted approach, combining traditional lecture with interactive methods, to engage students in learning about diversity and discrimination. With this in mind, this article seeks to explore the concept of an "enabling learning environment", inspired by the capabilities approach of Nobel laureate Amartya Sen. My understanding of this concept is the corollary of a reflection on my professional practice in higher education, through a course on the systemic approach to organization that I taught to Master's students in educational science.

This course is known to be challenging for first-year Master's students in educational science at the University Upper Alsace in France. As a former student who took this course in 2014, I personally found it incredibly enriching and captivating, as it combines the sociology of organizations with the systemic approach. This discipline allowed us to understand how organizations function and solve the problems that arise within them, drawing on the work of the Palo Alto school of systemic analysis. My interest in this approach deepened, leading me to specialize in it and incorporate it into my doctoral research. However, many students in my cohort seemed to struggle with the course. Some even expressed feelings of trauma and had difficulty recalling the concepts covered. The learning conditions and the complexity of the topics made the course challenging to follow. In 2018, I was given the opportunity to teach this course. Faced with this situation, I had two options: continue teaching the course in the same format and conditions as when I took it, or opt for a completely different and innovative approach. I chose the latter. Through analysis and reflection, I identified two factors that could explain the students' aversion to the course. Firstly, the intensity of the course over a relatively short period of time. Students had to attend around 4 hours of classes per week, concentrated in half-day sessions, which made the sessions long and mentally taxing. Additionally, the physical, emotional, and psychological learning conditions were far from ideal. The classroom was cramped, the sessions took place during a hot period of the year, and the arrangement of chairs and tables was not ergonomic. Students were already fatigued from morning classes, and the lack of breaks during the monotonous course made the learning experience difficult. With these

factors in mind, I decided to reimagine the organization of the physical space, incorporate innovative pedagogical practices, and new methods to make the learning experience enjoyable for my future students. At that time, I was not yet familiar with the concept of empowering environments. Drawing on my own experience and through an experiential pedagogical process, I created conditions conducive to learning within the environment, empowering students to overcome the difficulties inherent in the course's pedagogical organization. These conditions, as Oudet (2014) describes, are considered conversion factors and essential elements of an empowering environment. From these factors, I will be able to develop an experiential model (IREM) based on four levers: individual, resources, environment and mindset. In summary, this experience with Master's degree students in education sciences explores how the organization of the learning environment influences personal development and the learning experience which is a complex and dynamic process, shaped by the interaction between the learner and their environment (Moye, 2021). According to Irving & Williams (1999), Personal development is a multifaceted process that encompasses various aspects of an individual's life. It involves enhancing one's confidence, self-worth, and motivation, as well as overcoming personal challenges and improving one's life circumstances. A range of studies have explored the intersection of personal development and learning experience. For instance, Leung (2013) emphasizes the importance of personal development in vocational education, advocating for active learning strategies and informal learning opportunities.

Thus, it demonstrates that creating an empowering environment, through interventions such as spatial planning, promoting interaction, and accommodating learners' needs, fosters active participation and satisfaction among learners (Marin, 2015). Research in education sciences has consistently shown that the organization of the learning environment significantly impacts the learning experience (Fuller & Unwin, 2004). Moreover, the integration of personal and organizational development in expansive learning environments has been shown to be beneficial (Ibid.,).

Our research, conducted with Master's degree students in educational science at the University of Upper Alsace, France, ventures beyond conventional educational methodologies. It aims to establish an environment that acknowledges and adapts to individual differences and ergonomic factors. This approach is vital in overcoming learning obstacles and facilitating holistic educational experiences.

Drawing upon the sociological and philosophical traditions of the Chicago School, namely the works of John Dewey, Robert E. Park, and Ernest W. Burgess, this study adopts a qualitative inductive methodology grounded in practical experience. The findings illuminate the mechanisms necessary for creating conditions conducive to learning, thereby empowering learners. This paper introduces the 'IREM' approach (Individual Resources, Environment, Mindset) as a conceptual framework to underscore the significance of four key levers in establishing an empowering learning environment. This research contributes

to the discourse on enhancing educational experiences in higher education, offering both practical insights and theoretical underpinnings to aid educators and institutions."

In the following section, I will provide a detailed description of the experience, while also offering theoretical support for the concept of an empowering environment and the related notions, such as the capability approach and conversion factors which are key elements of an empowering environment.

## Building An Empowering Environment: Experience And Conceptual Framework

It's 1pm in room 310 of the Faculty of Letters, Languages and Humanities at the University of Upper Alsace. About thirty Master 1 students in educational science are gathered, forming a diverse group in terms of age, social background and ethnic origin. Every year, the number of students increases, making the space cramped. This diversity also reflects the multi-ethnic, multicultural population of Mulhouse, a French town where the university is located. It's a working-class town with a rich industrial past. According to historian Marie Claire Vitoux, Mulhouse perfectly represents the demographic reality of France, where we are all immigrants. In fact, different waves of migration, from Romans to Huns, Visigoths to Ostrogoths, have left their mark on this area. It is known that Mulhouse's history is closely linked to the arrival of these peoples, and the Alsace plain (area of Mulhouse) was an essential passageway for them. It was against this multicultural and intercultural backdrop that a special, even strange, course took place for Master 1 students in education sciences. Their reactions to the course were marked by strangeness and astonishment, but also interest and amusement. They found the course captivating and used these terms to describe it. What was it that captivated their attention to such an extent that they came to this conclusion? The answer is simple. It's September, at the start of the academic year, when temperatures are high and the weather is dry, reminiscent of summer. As I enter the classroom, I notice tired, even hungry faces. Classes started early in the morning, at 8 o'clock. The last class ended at 12:30, leaving them barely 30 minutes to eat a sandwich, a piece of fruit or a salad. They now had to sit through a four-hour course entitled "A Systemic Approach to Organizations". The course title alone suggests neither fun nor pleasure. It sounds complex, complicated and demands maximum concentration, which they find hard to maintain. And so it is. This is not an easy course. It's very theoretical and the concepts are abstruse. So I introduce myself, the course and the main concepts to be covered. I try to be honest, explaining that it may seem difficult at first, but that I'll do everything in my power to make the experience comfortable without lowering the standards. At these words, they look at me with astonishment and bewilderment, while I display an optimistic confidence. Then I tell them about my working method, my values and my way of supporting them. I also explain that I'm counting on their collaboration,

mutual trust and active participation. I tell them that the course will be built with them and thanks to them, within a well-defined framework. Not everything is set in stone, so everything can be negotiated and adjusted according to needs, constraints, and expectations, but on certain aspects I'll remain uncompromising such as work class evaluation or assessment. Then I ask them to do something almost impossible: that we all be on a first-name basis. I give them the right to be on a first-name basis with me. Although it's not compulsory, I strongly recommend this approach, but I respect their choice if they don't want to adopt it. At first, it destabilizes them. It's an unusual practice, an experience they've never had before in the French education system. I offer them my help to ease this transition, reminding them of this way of proceeding in case they consciously or inadvertently forget, or simply feel uncomfortable. At first, this was embarrassing for most of them, but over time and thanks to my regular reminders, they ended up playing along naturally. After this presentation, both of myself and of the course, its pedagogical objectives and what it will concretely bring them, as well as expectations and how it works, I introduce ice-breaking exercises (which I call rituals) to encourage cohesion and lighten the atmosphere. Next, I carried out a personal development activity, accompanied by an online test, which prompted discussion and reflection on oneself, as well as on the link between organizations and personalities. I also gave a 45-minute presentation on analytical psychology, focusing on the work of Carl Jung and his theories on psychological types. I also discussed the contributions of Kathryn Cook Briggs and Isabel Myers Briggs, the creators of the MBTI (Myers Briggs Type Indicator) psychometric test. This presentation was enriching, as it enabled us to understand that personality is made up of eight preferences identified by Jung (1971) and Myers-Briggs (1985): extraversion, introversion, intuition, sensation, thought, feeling, judgment and perception. This exploration also enabled us to grasp that organizations are formed both by individuals and by a diversity of personalities that interact, evolve and influence the organization's functioning, structure, vision and values. It is essential to recognize that both personalities and organizations can evolve over time, adapting to changing circumstances and environments. This understanding of psychological types and their influence on individual and organizational dynamics enables us to gain a deeper understanding of interactions within a structure, identify strengths and weaknesses, and explore ways of optimizing relationships and performance within an organization or in a classroom. In addition, essential values such as optimism, trust, collaboration, participation, mutual aid, benevolence, the quality of exchanges and proximity to learners, as well as the non-judgmental sharing of experiences and reflections, playful activities and the freedom granted to learners, played a crucial role in creating conditions conducive to learning. These factors, referred to as "conversion factors", which will be defined later in this paper, are at the heart of the notion of an empowering environment, as it is shown in the following students testimonials:

Table 1: Excerpts from corpus analysis learners' reflexive feedback

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| T1: From the very first lesson, we established a climate of trust and mutual respect. |
| T2: First of all, I was struck by the rapport you establish between us and yourself. It's very nice to know that we're not looked down on and treated like children. I enjoyed coming in a relaxed atmosphere. |
| T3: The fact that you've given us the opportunity to be on first-name terms with you is surprising, but it puts us at ease and, I think, creates a good atmosphere and a pleasant climate. |
| T4: In any case, I appreciated the friendly atmosphere of your course, which smoothed out a fairly fast pace, a real depth of shared reflection and some very enriching discovery work for me. |

But what do I really mean by an empowering environment, and how is it defined in specialist literature? First, it is important to underline that in recent years, the fields of human and social sciences, particularly social psychology, have highlighted the critical importance of the environment in an individual's psychosocial development (Bandura, 1977; Bronfenbrenner, 1979; Vygotsky, 1978). These influential scholars have emphasized the significant role of the environment in shaping behavior, personality, and individual growth (Bandura, 1977; Bronfenbrenner, 1979; Vygotsky, 1978). Understanding the impact of the environment on learners' autonomy, skills, and well-being has become increasingly important (Csikszentmihalyi, 1990; Deci & Ryan, 1985; Maslow, 1970).

Thus, the empowering environment is based on the capability approach of Nobel Prize-winning economist Amatya Sen. This approach opens new perspectives in educational science, particularly in terms of ergonomics and the organization of learning. It also makes it possible to adapt learning situations to the individual learner, to reinforce his or her abilities and capabilities. According to Sen (2001) the concept of capability refers to possibilities that enable everyone to realize his or her potential by reconciling freedom of accomplishment with available resources. In contrast to the competency-based approach prevalent in our western education system, my course focuses on learners from the outset, by valuing their emotions, needs, expectations, personalities, development and personal fulfillment. Capability can be defined as the freedom "to be" and "to do" which takes place within a previously defined, reflective framework and time-space that determines opportunities and choices for the individual's benefit (Nussbaum, 2011). The empowering environment encompasses a set of functionalities accessible to individuals, taking into account individual differences such as age, gender and culture, and compensating for deficiencies linked to aging, illness and disability (Falzon, 2009). According to Oudet (2014) integrating the concept of the empowering environment into training engineering opens up new perspectives and more realistic pedagogical approaches, favoring the transfer

of skills from work situations. This approach invites us to go beyond the framework of competencies based on knowing how to act, as advocated by our current education system, and focus on developing learners' power to act, their abilities and their capabilities (ibid.). This orientation offers opportunities for training that is more in tune with reality and facilitates the acquisition of transferable skills. On the other hand, the author stresses that a capability implemented in a favorable environment does not guarantee success or achievement for the individual in his or her quest to realize potential and self-fulfillment. It is necessary to consider the conversion factors, which are a set of factors that enable the ability to be realized and transformed into capability in a given situation. Thus, the organizational, technical and social conditions of the environment must enable the individual to make effective use of the resources at his or her disposal, in order to convert them into concrete, actionable achievements. Conversion factors can take many forms, whether individual (gender, age, genetics, experience, level of education), social (social capital, friends, social network, family, work team) or environmental (geographical or institutional constraints or opportunities, cultural context, technical means, etc.). In other words, conversion factors are elements that can either facilitate or hinder the appropriation of resources made available to the individual in the (empowering) environment. These factors are therefore closely linked to the notion of freedom of choice. It is only when this freedom of choice, of acting and of being, is present that I can speak of capability and of an empowering environment. Therefore, an environment is said to be enabling when the individual has the possibility of accessing resources that can be mobilized both externally and internally, and of converting these resources into concrete, applicable achievements, by relying on conversion factors. From a learning point of view, this also means making specific adjustments to suit learners' profiles and adapting the environment to each individual. For example, during a session dealing with particularly complex and difficult notions, I suggested an innovative approach to the learners to alleviate this difficulty and make it more manageable. Before the Covid-19 pandemic, I suggested the idea of organizing an aperitif dinner during the session itself. The aim was to allow participants to move around freely during the course to eat and drink, with their consent and approval. I thus created moments of pause where I gathered around convivial tables to share drinks and snacks. These moments of conviviality enabled us to tackle all subjects without taboos, fostering an open and sincere exchange, with mutual respect and trust. The benefits of this approach were twofold. On the one hand, it helped to lighten the mood and create a more informal atmosphere, encouraging greater receptiveness to the complex content discussed. On the other hand, it reinforced the sense of community within the group, encouraging exchanges between participants and facilitating collaborative learning. This is a perfect illustration of the notion of conversion factors or facilitating elements that enable learners to convert resources into opportunities, possibilities, strengths, actionable levers...In this case, the aperitif dinner offers opportunities to the students to learn in a relaxed atmosphere

to help them make the most of the course. What's more, the sessions were marked by debates, reflections, exchanges, laughter, joy, and good understanding. The classroom was buzzing with life, where intellectual freedom and individual creativity were enthusiastically and cheerfully invited into this wonderful educational experience as related in these following testimonials:

Table 2: Excerpts from corpus analysis learners' reflexive feedback

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| T5: There were several things that struck me about this course: first of all, the rituals that allowed us to tell a joke or share a cultural moment to lighten the mood and get the course off to a good start. |
| T6: I appreciated the "apero class", the principle of being able to get up to eat and drink and, above all, not sit in silence for hours on end was interesting, but no student abused this "privilege". |
| T7: Studying the MBTI personality test and discovering its applications in daily, personal and professional life. I think it's an invaluable tool for getting to know ourselves and organizing many aspects of our lives. I appreciated the approach chosen in your course, which involved integrating tests, games and playful aspects to help us discover very serious and effective methods of reflection and analysis of human relationships, which can be used in all our present and future relationships. |
| T8 : What appealed to me from the very first session was when we studied the psychology of Carl Jung. The psychological types exercise was a lot of fun and surprising for me, because these types reflected the different behaviours we can have in different situations. |
| T 9: In terms of its contribution to my personal life, it was the MBTI test in particular that made me realize that certain recurring problems actually stemmed from "incompatibility" with other character types. |

Furthermore, it's important to strike a balance between the complexity of the pedagogical activity and the learner's skills, either reinforcing the latter or reducing the complexity of the activity (Falzon, 2009). Langevin (1996) suggests distinguishing activity from achievement. The activity consists in stating or describing what is to be done, which is what I did in the first session, explaining to the students what is to be achieved, the expectations, the pedagogical objectives, the methods of support and assessment, and so on. As for the implementation, this specifies how the activity is to be carried out. So, before starting an activity, it's essential to give clear, precise instructions, which can be discussed and negotiated with the learners to promote their appropriation and avoid any ambiguity. This approach enables me to act on intervention levers that help striking a balance between carrying out activities, learners' abilities (cognitive, social, affective skills, etc.) and their

capabilities (freedom to be and freedom to act). In this experience, it turned out that the empowering environment was instinctively designed according to the principles of cognitive ergonomics as defined by Falzon (2009). This means that the environment was adapted to meet learners' needs, offering them a setting where difficulties are manageable and enabling them to design activities appropriate to their level of demand. From this point of view, the aim is not to eliminate the effort, or cognitive or physical difficulties faced by learners, but rather to provide them with the resources they need to manage success and satisfaction, while helping them to cope with failure and the frustrations that can result. The whole of my experience is based on this fundamental principle, which truly embodies the essence of an empowering environment that helps learners to overcome challenges and enhance their learning experience.

### Modeling The Experience of An Empowering Environment

As mentioned earlier, the aim of this research is to model the experience gained from the "systemic approach to organizations" course and propose a heuristic model to represent the possible actionable levers of an empowering environment. As a reminder, modeling involves the construction of a theoretical or conceptual representation that describes a complex phenomenon or system. A model serves as a simplified depiction of reality, aiding in the understanding, analysis, and prediction of specific aspects within a field of study. It allows for the formalization of abstract concepts, exploration of intricate relationships, and generation of theoretical knowledge to enhance comprehension of human phenomena (Goldspink, 2009). In the human sciences, modeling typically follows a multi-stage process (Epstein, 2008; Patton, 2011). Initially, the targeted phenomenon, whether it pertains to social processes, human behavior, interactions, or organizational structures, must be identified. In this study, the objective is to model a psychoeducational process within an organizational structure. Subsequently, relevant data is collected, research is conducted, and a literature review is performed to gain a deeper understanding of the concepts and variables involved in the phenomenon under investigation. The methodology section outlines the data collection process, including acquisition and processing methods. Using this information as a foundation, a model is developed to depict the relationships between the various variables or components within the phenomenon. This model can take various forms, such as diagrams, equations, or schematics, which facilitate analysis, prediction, and simulation to improve comprehension of the phenomenon at hand. Furthermore, it can serve as a basis for future research, refining as new data and knowledge emerge (Gilbert & Troitzsch, 2005). In this study, my model is to be used to represent the lived experience and facilitate understanding of the empowering environment concept in our own context. Conceptually, this model echoes the work of Langevin (1996), particularly in

understanding the role of environmental organization and resources in learning.

Langevin was among the few in France to bridge the gap between ergonomics and educational sciences. His study published in 1996, titled "Ergonomics and education of people with intellectual disabilities laid the groundwork for the concept of empowering environment in education. Thus, this model highlights an approach based on four essential components: Individual, Resources, Environment, and Mindset (IREM) as follows (see diagram below):
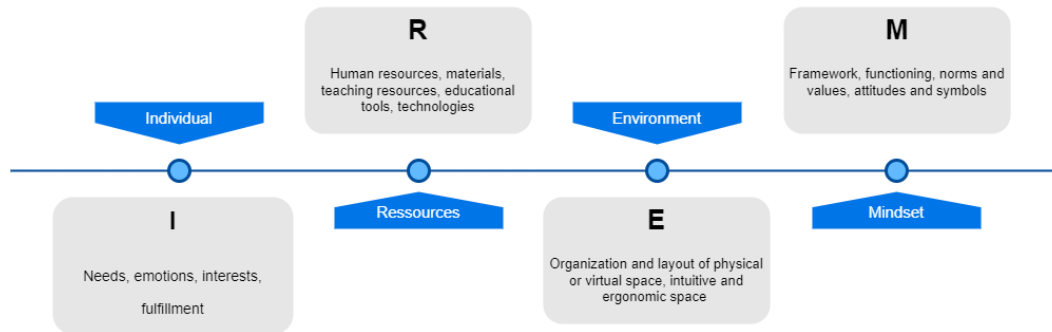


Figure 1: Model of IREM (Individual, Resources, Environment, Mindset) model

What does each component of the IREM model mean? What kind of leverage does it represent for an enabling environment? What scientific theory can be referred to for each of these levers or components?

**Individual**

Central to the teaching and learning process is placing the learner at the core and considering their emotions, needs, interests, and personality to foster personal and psychosocial development throughout the learning journey. Paying attention to the learner's personal growth is a fundamental aspect of educational psychology. This aspect can be found in Rousseau's philosophy of education (Emile de l'éducation) and in the work of European pedagogues such as Ovide Décroly (1871-1932) and Edouard Claparède (1873-1940). Claparède famously stated, "Pedagogy should be built upon the child, just as horticulture is built upon knowledge of plants. This truth seems elementary, yet it is disregarded by most pedagogues and nearly all educational authorities. To truly know a child, one must observe them." To complement this quote, I would add that to truly know a learner, I must not only observe them but also guide them in learning through self-knowledge. Therefore, right from the initial sessions, I integrated a psycho-pedagogical approach that incorporates this aspect of personal development. This approach has had a positive impact on the learners' learning experience, as evidenced by the following

testimonials:

Table 3: Excerpts from corpus analysis learners' reflexive feedback

| T10: The main thing that appealed to me was the personality test, which I found really relevant. |
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| T11: I'd say that what appealed to me most was the MBTI personality test based on Carl Jung. |
| T12: The first thing that struck me about this course was the good atmosphere. The second thing that struck me was the result of the MBTI test. |
| T13: My favorite part was the section on MBTI testing. |
| T14: And finally, I appreciated all the work done at the beginning of the course on personalities. |

Questions that can be asked to work on the individual aspect (I): What are the learners' expectations and needs? What are their interests? What are their preferences? What is their profile? What are their fears? What are their prospects? Etc.

Tools that can be used: individual interview, focus group, diagnostic questionnaire, personality test, positioning test, pedagogical registration form, etc.

**Resources**

As per Langevin's (1996) perspective, resources encompass all the human, material, and pedagogical elements provided and made accessible to learners throughout the learning process. On a human level, my expertise, professional experience, and confident, positive, and optimistic demeanor have served as vital human resources from which learners have benefited, contributing to the overall success of their learning experience. From a pedagogical and didactic standpoint, learners have been able to access high-quality content, such as slides, videos, and written materials. Additionally, they have utilized digital tools like Wooclap and Kahoot, engaged in enjoyable games like card games and post-it games, among others. However, it is crucial to leverage these resources effectively. The design of teaching sequences and the pedagogical facilitation have been meticulously crafted for each session, tailored to address specific learning needs. Tools and resources can provide added value, but their usefulness for learning must be carefully considered. Otherwise, they may prove ineffective or even become barriers to learning. In this regard, Oudet (2014) emphasizes that the well-being of an individual or group is not determined by the quantity of resources, but rather by what these resources enable them to achieve and accomplish in alignment with their aspirations and goals. Therefore, sustainable, and responsible management of resources mobilized within an empowering

environment is crucial. Resources should be both useful and usable, promoting optimal learning outcomes.

Table 4: Excerpts from corpus analysis learners' reflexive feedback

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| T15: Your approach to education, your way of teaching people and your didactics really "make sense" to me. |
| T16: I said straight away "this teacher is good". When I arrived in the classroom on the 3rd session, I had no idea what we were in for. |
| T17: This course is still different from other courses, as each session is different, which is appreciated by most students. This is something I'd like to develop further professionally. Using different technological tools like Wooclap is a big factor. |
| T17: I appreciated the approach you took in your course, which consisted of integrating tests, games and playful aspects to help us discover very serious and effective methods for thinking about and analyzing human relationships, for use in all our present and future relationships. |

Questions that can be asked to work on the ressources aspect (R) : what resources are available in the learning environment (human, technical, financial, pedagogic, etc.). How can these resources be mobilized to meet students' needs, expectations, and prospects?

Tools that can be used: observations, inventory of resources (human, technical, financial, pedagogical).

**Environment**

The environment encompasses the physical or virtual structure that is designed to ensure learners' comfort and freedom of movement during the learning process. In this experience, the space was conceived as a hybrid, combining physical elements (classroom layout) and virtual components (Moodle LMS platform). To address the issue of cramped conditions with cluttered tables and chairs, I transformed the room into a workshop and coworking space. This layout freed up physical space and facilitated interaction among learners and teachers. A study conducted by Classum and Gul (2017) on the impact of an empowering environment on student engagement in a university context demonstrated that factors such as room layout, table, and chair arrangement (island setup instead of battle setup), room temperature, windows, air conditioning, lighting, and other factors ensuring learners' physical comfort had an influence on their thinking and learning abilities. Additionally, the integration of digital technology (Moodle platform) and the digitization

of course materials helped expand the learning space. By transferring a portion of the course content and pedagogical activities to Moodle, learners were able to work autonomously, whether at home or outside the classroom (such as in hallways, verandas, patios, or university green spaces). The goal was to transform the physical or virtual space into a "living place," a vibrant environment that encourages encounters, collaboration, innovation, creativity, knowledge sharing, and co-creation. As previously mentioned, an empowering environment should foster the development of capabilities, providing learners with the freedom to be and act. The organization and structuring of the space create conditions of freedom, autonomy, movement, and active participation for learners. The aim is to ensure that learners feel at ease in an environment where existing or potential objects are arranged, organized, and structured in an ergonomic and intuitive manner.

Table 5: Excerpts from corpus analysis learners' reflexive feedback

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| T18: What I like about this course is that I was able to work independently on some of the assignments. I find that interesting, especially since the course was interesting. |
| T19: Learning is autonomous and intuitive. |
| T20: First, the construction of the course, its organization and flow. It was fun and easy to learn. |
| T21: We were ourselves involved in our own learning thanks to the activities |
| T22: As far as the course itself is concerned, for me it's an innovative one. In fact, I think it's one of the only classes I've attended throughout my school career where you feel most at ease in a neutral, caring space. |
| T23: In this course, I felt comfortable, at home. |

Questions that can be asked to work on the environment aspect (E) : what's the learning environment like? Physical, virtual, hybrid? How can this environment be designed to optimize learning?

Tools that can be used: digital and IT tools, technological tools, furniture, decoration, outdoor space, cultural and educational outings, etc.

**Mindset**

Langevin (1996) defines mindset as the framework within which learning occurs. It encompasses the symbols, values, norms, operational rules, signifiers, and signified that shape individuals' behavior and guide interactions towards an ideal, a vision, and a way of living and doing things. The mindset represents the collective state of mind and culture embedded within the environment, including the overall atmosphere. In the context of this course, various rituals such as icebreakers and games, the use of first names, the cultivation

of friendliness and trust, as well as the enjoyment and freedom granted to learners, have all played a significant role in fostering a healthy and pleasant environment. These elements have instilled a genuine desire to learn, share, and simply be present in the learning space.

Table 6: Excerpts from corpus analysis learners' reflexive feedback

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|---|
| T18: Everything we do has a meaning, but we won't understand that meaning until the end. |
| T19: From the very first lesson, we were established in a climate of trust and mutual respect. |
| T20: What caught my attention was the closeness of the course. |
| T21: There were several things that struck me about this course: first of all, the rituals that allowed us to tell a joke or share a cultural story to lighten the mood and get the course off to a good start. |
| T22: It's the organization of the course and the relationship that the teacher creates with his students, in particular with tutoring and transparency. |

Questions that can be asked to work on the mindset aspect (M) : What are the mental models? beliefs, psychosocial biases, cultural traits?

Tools that can be used:  Individual interviews, focus groups, literature reviews, team building, psychometric tests, etc.

## Methodology

The methodological approach employed in this research is qualitative and inspired by the Chicago School and adopts both a qualitative and an inductive approach. Recognizing the importance of actors 'perspectives, this approach considers their viewpoints as essential for comprehending contextual reality and defining social meanings (Mead 1934). The goal is to develop a heuristic model in the meanings derived from learners' experiences. The research is theoretically oriented, seeking to understand and interpret the unique significance of events within a specific context. It is firmly rooted, drawing upon experience, context, and intervention. This approach utilized is known as "grounded theory," which involves extracting the essence of an experience to generate theories, hypotheses, heuristic or experiential model based on the specific data collected (Patton 2011; Charmaz, 2014). Intersubjectivity is central to this research, fostering the development of specific knowledge related to social cognition (Park & Burgess 1921). Qualitative research is distinguished by its ability to understand complex phenomena through detailed, in-depth analysis of non-quantifiable data, employing methods such as open interviews, focus groups, observation and text or image analysis to gather more subjective, descriptive information (Paillé & Muycchielli 2016, Bardin 1997). This approach, often narrative, aims to identify themes, motifs and meanings. It is characterized by its flexibility, enabling researchers to modify their approach according to their growing

understanding of the subject under study, and to develop or refine theories throughout the research process, based on the data collected. In this dynamic, the researcher frequently interacts with participants, which can influence and be influenced by them, and results are presented in the form of detailed narratives, descriptions or case studies. In short, qualitative research is inherently more subjective, exploratory and contextual, offering a rich and nuanced perspective on the subjects studied (Ibid.). The research field is progressively constructed through the active participation of the actors, their representations, and their interactions. Interpretations of observed facts are grounded in shared experience, both objectively and intersubjectively, and include a symbolic dimension when necessary. Thus, learners are the key actors in this research, and their representations, interaction dynamics, and feedback provides meaningful elements to guide the research towards a heuristic model.

Therefore, two specific data collection tools are employed. The first is a reflective document in which learners share their impressions of their course experience. They are encouraged to express anonymously with their consent what they have learned, which aspects of the course have interested them, and how they can integrate these elements into their professional practice. They can also provide suggestions for improvement and offer a critical assessment of the course. Between 2018 and 2022, a corpus of 67reflective writings (n=67) was collected. The students were also participants and actors in the research. They were informed that the experience would be the subject of experiential research and scientific publication. This corpus was subsequently subjected to automatic content analysis using Tropes software. Processing the reflective writing corpus using Tropes thematic analysis software has yielded valuable insights into students' perceptions of the course, the learning environment, the pedagogical approach, the methods employed, and their overall learning experience. The graphical representations and selected quotations obtained through Tropes have provided significant findings that enhance our understanding. A thematic analysis of the data, which consists in grouping verbatim extracts by theme (Bardin, 1997; Braun &Clarke, 2006). This method differs from coding, whose results are often presented as percentages (Ibid.,). Thematic analysis highlights verbatim extracts in relation to themes. The themes that emerged during the analysis correspond to the acronym of our IREM heuristic model (Individual, Resources, Environment, Mindset). The second tool is participant observation, wherein the researcher is present during learning sessions to capture interactions, group dynamics, and manifestations of the enabling environment. Detailed notes are taken regarding observed behaviors, discourses, and situations. To analyze the data, an in-depth thematic analysis is conducted. The corpus of reflective writings and observation notes undergoes repeated reading and to identify themes and recurring patterns. This analysis provides a comprehensive understanding of learners' perceptions and the factors contributing to a positive learning experience. By employing these data collection methods and conducting

an in-depth analysis, this research aims to model the experience and gain a profound understanding of learners' experiences, the learning environment, and the factors that promote positive learning outcomes.

## Discussion

This study has certain limitations as it is based on an experience conducted within a specific context and with a particular goal to create an empowering environment for students in a master's program in education at the University of Upper Alsace. The aim was also to provide a positive learning experience for the "systemic approach to organizations" course. It is important to acknowledge that this experience may differ in other contexts with different challenges and goals, thus limiting generalizability. The IREM model presented earlier is not a prescriptive method or a ready-to-use recipe for creating an empowering environment, but rather a simplified representation of the reality and outcomes of the conducted experience, aimed at better understanding and analyzing the concept of an empowering environment while considering the psycho-pedagogical dimension of learning. In this research, the mechanisms at work within a learning environment has been explored to generate practical knowledge that contributes to a deeper understanding of the empowering environment concept. It should be noted that despite my efforts, the constraints of time and pedagogical organization of the course were not fully addressed, and learners themselves acknowledged this negative aspect. Drawing on Falzon's (2009) work in the field of ergonomic sciences, it can be hypothesized that the objective of an enabling environment is not to eliminate the inherent difficulties and constraints of learning, but rather to provide a framework in which these challenges become manageable, enabling learners to engage in tasks with an appropriate level of demand.  Furthermore, this study opens avenues for further investigation into the practical application of the IREM heuristic model as a psycho-pedagogical approach and method for learning. It could be utilized to address issues such as university dropout rates or to foster student engagement and retention. From a technological standpoint, the IREM model could be used to train artificial intelligence algorithms in modeling learning environments. This would allow teachers to employ "predictive learning" algorithms to anticipate learners' specific needs and challenges and adapt their teaching sessions accordingly. Additionally, this technology could suggest predefined models of learning environments tailored to individual learners' psychological profiles and learning styles. An initial experience was conducted in this direction as part of an e-learning platform development project in which I have been involved over the past two years. It can be attempted to train algorithms to recognize learners' learning styles based on their personality profiles, which I refer to as "micro-adaptive learning". However, due to limitations in technical, human, and financial resources, this project is still in the

experimental phase.

## Conclusion

In conclusion, this research on the enabling environment offers potential for further development in the fields of learning ergonomics, psycho-pedagogy, and educational technologies such as AI, applicable to face-to-face, distance, or hybrid learning approaches. It has provided valuable insights into the significance of the empowering environment within the realm of training and learning. Analysis of various environmental dimensions, including spatial organization, learning organization, and peer interaction, has underscored their crucial role in establishing a conducive environment for learner development. By incorporating a psycho-pedagogical approach, it is possible to address the unique aspects of individuals within the learning context, such as their personality, their needs and emotions. This holistic approach has emphasized the importance of considering learners' personal growth as a fundamental element in nurturing their self-confidence and intrinsic motivation for learning, despite organizational, pedagogical, and administrative challenges. The experience conducted with master's students in educational sciences at the University of Upper Alsace has served as a concrete illustration of how to design and cultivate an empowering environment that integrates both ergonomic and psycho-pedagogical dimensions. The results have demonstrated that the convergence of these perspectives can foster optimal conditions for learning and learner fulfillment. To this end, the IREM model (Individual, Resources, Environment, Mindset) has been introduced and developed as a framework to reflect on pedagogical practices and design learning environments that promote learners' holistic development.

## References

Auerbach, A. H. (2012). Teaching diversity: Using a multifaceted approach to engage students. *PS: Political Science & Politics, 45*(3), 516–520. https://doi.org/10.1017/S1049096512000406

Bandura, A. (1977). Social Learning Theory. Prentice Hall.

Bardin, L. (1997). *L'analyse de contenu*. Presses Universitaires de France. https://doi.org/10.3917/puf.bard.2013.01

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Harvard University Press.

Charmaz, K. (2014). *Constructing grounded theory*. Sage.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper & Row.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum.

Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin, 125*(6), 627-668.

Dunne, E., & Owen, D. (2013). The student engagement handbook: Practice in higher education.

Epstein, J. M. (2008). Why model? *Journal of Artificial Societies and Social Simulation*, *11*(4), 12. https://doi.org/10.18564/jasss.1214

Falzon, P. (2009). Cognitive ergonomics: A practitioner's perspective. In W. Karwowski & M. S. Marras (Eds.), *The occupational ergonomics handbook* (2nd ed., pp. 51-64). CRC Press.

Fisher, C. D. (2001). The ergonomic environment: Its effects on learning, competence, motivation, and health. In W. Karwowski & M. S. Marras (Eds.), *The occupational ergonomics handbook* (2nd ed., pp. 241-254). CRC Press.

Fuller, A., & Unwin, L. (2004). Expansive learning environments: Integrating organisational and personal development.

Haggis, T. (2006). Pedagogies for diversity: retaining critical challenge amidst fears of 'dumbing down'. *Studies in Higher Education, 31*(5), 521-535.

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement.* Routledge.

Irving, J.A., & Williams, D.I. (1999). Personal growth and personal development: Concepts clarified. *British Journal of Guidance & Counselling, 27*, 517-526.

Jarvis, J. M., Pill, S. A., & Noble, A. G. (2017). Differentiated pedagogy to address learner diversity in secondary physical education. *Journal of Physical Education, Recreation & Dance*, *88*(8), 46-54.

Jung, C. G. (1971). *Psychological types.* Routledge.

Keppell, M., Souter, K.T., & Riddle, M.D. (2011). Physical and virtual learning spaces in higher education: Concepts for the modern learning environment.

Langevin, P. (1996). *Ergonomics in the workplace*. CRC Press.

Leung, A.S. (2013). Learning through personal development at the Hong Kong institute for vocational education. *International Journal of Learning and Development, 3*, 1-32.

Marin, E. (2015). Experiential learning: Empowering students to take control of their learning by engaging them in an interactive course simulation environment. *Procedia - Social and Behavioral Sciences*, 180, 854-859.

Maslow, A. H. (1970). *Motivation and personality*. Harper & Row.

Matthews, K.E., Andrews, V., & Adams, P. (2011). Social learning spaces and student engagement. *Higher Education Research & Development*, 30, 105-120.

Moye, J.N. (2021), "Learning Experience", The psychophysics of learning. Emerald Publishing Limited, Leeds, pp. 87-106.

Myers, I. B., & McCaulley, M. H. (1985). *Manual: A guide to the development and use of the myers-briggs type indicator* (2nd ed.). Consulting Psychologists Press.

Myers, I., & Myers, P. (2016). *Comprendre les types de personnalité*. Montréal, Canada: De l'homme.

Northedge, A. (2003). Rethinking teaching in the context of diversity. *Teaching in Higher Education,* 8(1), 17-32. https://doi.org/10.1080/1356251032000052302

Nussbaum, M. C. (2011). *Creating capabilities: The human development approach.* Harvard University Press.

Oudet, S. F. (2014). Promoting autonomy and competence in classroom environments: A Self-determination theory perspective. *Educational Psychology, 34*(6), 645-661.

Paillé, P., & Mucchielli, A. (2016). *L'analyse qualitative en sciences humaines et sociales*. Armand Colin. https://doi.org/10.3917/arco.paill.2016.01

Papaioannou, G., Maria-Garyfallio, V., Spyridon, K., & Demosthenes, V. (2023). Learning spaces in higher education: A state-of-the-art review. *Trends in Higher Education*, 2(3), 526-545. https://doi.org/10.3390/higheredu2030032.

Park, R. E., & Burgess, E. W. (1921). Introduction to the science of sociology. In R. E. Park, E. W. Burgess, & R. D. McKenzie (Eds.), Introduction to the science of sociology (pp. 1-30). University of Chicago Press.

Sen, A. (2001). Development as capability expansion. In N. Birdsall, R. Sabot, & R. Ross (Eds.), Escaping poverty's grasp: The environmental foundations of poverty reduction (pp. 41-58). World Bank Publications.