

# International Journal of Human Sciences Research

Acceptance date: 19/12/2024

## FORMING INTEGRAL STUDENTS WITH SOFT SKILLS AT THE UPPER SECONDARY LEVEL OF THE INSTITUTO POLI- TÉCNICO NACIONAL

---

*María Mónica García Arroyo*

Instituto Politécnico Nacional

Pachuca de Soto, Hidalgo

<https://orcid.org/0000-0003-3908-6844>

*Mónica Ximena Sotelo García*

Instituto Politécnico Nacional

*Nahima Ivón Hurtado Duarte*

Instituto Politécnico Nacional

All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).



**Abstract:** Education at the national level has faced various challenges due to educational policies and globalization, which requires training citizens capable of successfully dealing with work and academic situations. Upper secondary education students develop soft skills, such as: establishing relationships, making decisions, managing conflicts and working in teams, which are complemented with the hard skills acquired throughout the bivalent baccalaureate of the Instituto Politécnico Nacional. This institution promotes a comprehensive education that provides students with human qualities to perform optimally in their social role in the educational, creative and innovative fields. The soft skills are divided into four blocks: intra and interpersonal, socioemotional; creation, resolution and decision making; information management, opportunities and risks and growth mindset. These skills enable them to interact effectively with their peers, control their emotions and adapt to different circumstances.

**Keywords:** Soft skills, social-emotional skills, cognitive skills, information management skills, mental growth skills.

## PROBLEM STATEMENT

Teaching and learning are fundamental and essential bases for the development of all human beings, present throughout life, from infancy to old age. Adequate progress in these processes is determined by the motivation, opportunities and circumstances that each individual finds in his or her family, cultural and social environment.

Adolescents experience social and emotional changes of their own that trigger reactions in them, which can positively or negatively influence their cognitive capacity, emotional well-being, academic performance and decision making. Therefore, it is crucial to develop interpersonal skills to address these issues by practicing assertive social relationships

and growing in supportive environments that contribute to enhancing their emotional skills and social competencies within the educational setting.

The social environments where young people develop have a significant impact on their emotional state; since these environments can provide protective factors or not (such as norms or values), which influences whether students develop positive social skills or present deficiencies in them (Cruz et al., 2023).

Soft competencies should be integrated into education regardless of the environment in which it is taught, although their application is influenced by economic, political and cultural factors specific to each country, such as history and current development trends (Matovich and Cardini, 2021). The interest in soft competencies continues to be notable in national and international education; in this sense, the Instituto Politécnico Nacional seeks to foster their development in students through their graduation profiles, being crucial to take into account that the application and teaching of soft competencies in technical careers such as medicine-biological, administrative-social and physical-mathematical vary according to the area of specialization and the student's context. It is important to consider that students take several learning units during the baccalaureate stage classified as: institutional, humanistic-scientific, basic technology and professional, which are considered hard skills.

Soft skills and competencies in school environments represent the abilities or aptitudes that help the student to perform integrally; these "soft skills", also so called because they are part of our personality and are developed through interaction at home, society and school, are essential for effective global performance when collaborating successfully with others.

Often, educational programs focus mainly on the acquisition of theoretical knowledge (know how to know), development of skills (know how to do), neglecting the development of skills such as effective communication, teamwork, problem solving and critical thinking due to the lack of social competencies in the curriculum (know how to be and live together).

Elementary level students lack the interpersonal and socioemotional skills necessary to successfully perform in work environments that allow them to relate effectively with their peers, recognize their emotions and adjust to numerous daily situations, so it is important that from preschool education children are taught to understand and express their emotions in a healthy way, improve school dynamics and foster a positive environment.

However, there is inequality in access to opportunities, as students who develop social competencies more effectively are more likely to have access to educational and employment opportunities, a situation that can, in turn, aggravate the existing gap between different groups of students.

The importance of soft skills in education lies in their contribution to the integral development of students. Their connection with academic and personal success demands a pedagogical approach that promotes them effectively, based on a solid theoretical foundation.

## **THEORETICAL FRAMEWORK**

In prehistoric times, collaboration, empathy and leadership skills were essential for survival and progress. Human groups that developed these skills effectively were more likely to prosper and face the challenges of their environment (Aguirre, 2021).

According to Plato's readings, it is observed that he asked his students ethical questions, often related to the concept of the good, which indicates that the study of these skills has been

approached from a philosophical perspective. Likewise, during the Sui dynasty in China (581-618), evaluations were made every three years to officials to measure their skills and performance, which reflects an early interest in the assessment of these abilities in administrative contexts (Moreno, 2022).

Although it is not known with certainty who was the first researcher in this field, it is known that the U.S. Army recognized that the personal connection between soldiers went beyond the merely intellectual or complying with orders received, this led to research on these capabilities, culminating in 1968 with the introduction of the training doctrine called training systems engineering, this encompassed work-related actions, including skills such as responsibility, leadership, teamwork, critical thinking and problem solving (De la Ossa, 2022).

It was in the twentieth century when a formal interest in the development and research of these skills emerged, since in the 1920s, the psychologist Edward Thorndike coined the term "social intelligence" to refer to the ability to understand and relate to others. In the 1950s, psychologist Daniel Goleman popularized the concept of "emotional intelligence" and highlighted its importance for personal and professional success. Finally, in the 1980s, the importance of soft skills for productivity and organizational success began to be recognized in the labor field.

Soft skills are a set of personal attributes that complement the technical or hard skills, which are fundamental for the integral development of students; some theories are:

- Vygotsky's sociocultural theory highlights the importance of interactions between individuals in the development of social and emotional skills.
- Social learning theory, here interpersonal skills are developed through observation, imitation and practice.

- Emotional intelligence theory, according to Daniel Goleman, states that emotional intelligence encompasses skills such as self-knowledge, emotional control and empathy, being essential for success both personally and professionally.

The World Health Organization, Division of Mental Health (2024), defines them as a set of socio-affective skills necessary for interaction with others and that allow coping with daily demands and challenging situations, i.e., they enable the student to make decisions, solve problems, think critically and creatively, communicate effectively, recognize the emotions of others and build healthy physical and emotional relationships.

Education as an expression of social relations is conditioned, above all, by economic and political circumstances. In the Americas, one of the influential factors to take into account in the study of education is the socio-economic environment of poverty in which they develop, since some families belonging to the place prevent the use of study and opportunities.

Social-Emotional Learning (SEL) are social-emotional learning programs implemented in schools to develop skills such as self-awareness, self-regulation, and interpersonal skills.

In Mexico, in the 2017 educational model, comprehensive development is conceived from key learning located in academic training fields, with personal and social development, emphasizing training in socioemotional skills. In the SEP 0-23 Plan, integral development is a process that leads to the formation of Mexicans through the transversality of socio-cognitive resources: communication, mathematical thinking, historical awareness and digital culture, which allow access to knowledge located in the natural sciences, social sciences and humanities. As well as through socioemotional skills that allow the development of social responsibility, physical-bodily

care and emotional-affective well-being. These soft skills were formally incorporated into the curriculum of all compulsory basic education, with the purpose of contributing to a better knowledge of oneself, achieving autonomy, self-regulation, perseverance and favoring coexistence; it is not only about integrally forming productive and successful individuals, but people with social awareness who are responsible for themselves and who are able to contribute to the positive transformation of their communities.

Therefore, it is necessary to highlight the value that some environments have more than others, such as in education, because from an early age it is important that children learn to develop in social life, since they can also be considered as personal attributes that help us to interact with the environment and society, this with the objective that throughout their training process the student is facilitated to optimize their own performance and so that likewise, in professional life they stand out for these same skills and achieve success.

On the other hand, the Ministry of Public Education (SEP) has implemented Competencies for Life programs as part of its approach to prepare students with practical skills to face real-world challenges, including effective communication and problem solving. These strategies and programs are designed to incorporate soft skills into the formal education system, recognizing their relevance to students' personal and professional success in a constantly evolving environment.

Soft skills in Mexico can be known in different ways, such as: soft skills, life skills, social-emotional skills and/or social skills. These skills are important to successfully face the demands and challenges of daily life in any daily and cultural environment; the relevance of these skills has been recognized and promoted in various sectors, including education and employment, as they are related to per-

sonality and emotional intelligence, which are essential for interaction and good development mainly in the workplace.

## DEFINITIONS

Goleman (1998) argues: He cites that soft skills are fundamental to emotional intelligence, which include managing one's own and others' emotions, building motivation, managing relationships, and resolving conflict. These skills are synergistic and increase in complexity with the need for emotional intelligence.

While, for Mujica (2015): Defines soft skills as abilities needed to manage in daily activities, including good communication, organization, teamwork, and adaptability. These skills allow people to be more flexible and open to change.

Ortega (2017): Describes soft skills as skills that allow better interaction in work and personal relationships. Communication is key to develop these skills.

Soft skills are distinctively described by some authors, according to (Norma, 2020) as those behaviors, aptitudes and habits that differentiate professionals and that mark a relaxation at the moment of undertaking a project, relating with others or solving conflicts. Being those characteristics and conditions that the individual has to interact with others effectively.

## METHODOLOGY

During the course of this study, a qualitative methodology was used, since it focuses on gathering information from the experiences and perceptions of the students while they participated in classroom classes corresponding to the learning units of the technological professional field in different disciplines. The objective was to know and understand the skills that were acquired and applied, as well as those that were strengthened during this process.

Field diaries provided by student informants belonging to the selected groups were used to carry out a detailed and descriptive analysis of the classes related to vocational training in the technological field. An effort was made to keep the information obtained as faithful as possible to reality, ensuring an adequate understanding of the development and teaching of soft skills in technical fields such as medical-biological, physical-mathematical and social-administrative. At the upper secondary level, such soft skills are enhanced simultaneously with hard skills.

## SAMPLE

The study subjects are five control groups of fifth-semester fifth-semester students of the technical careers of Nursing Technician (4EM3) and Clinical Laboratory Technician (4LM4) of the medical-biological area; Technician in Machines with Automated Systems (4MM2), Technician in Industrial Processes (4PM1) and Technician in Industrial Maintenance (4IM1) of the physical-mathematical area; Technician in Administration (4AM1) and Technician in International Commerce (4CM1) from the social-administrative area; in the 2024-B school year, their ages range from 16 to 20 years old, with a population between 30 to 35 students enrolled in the school year.

The context of this study is a foreign IPN center, located in the state of Hidalgo between the neighboring municipalities of San Agustín Tlaxiaca and Santiago Tlapacoya, with 12 years of public and bivalent high school, named Centro de Estudios Científicos y Tecnológicos No. 16 "Hidalgo" (CECyT 16 Hidalgo).

The research approach is non-experimental, explanatory and descriptive, since it tries to understand reality by identifying the deep nature of the actors' meanings, being a social type of research that deals with the context, scenario or cultural groups, but with a methodological organization.

## **INSTRUMENTS**

A selection of five portfolios of evidence from the groups was used, these are a systematic collection of documents, works, tasks, exercises that demonstrate the development of the learning unit, demonstrating the skills developed over time. In the context of the case study, this portfolio is evidenced through different tests, which demonstrate the expected learning per learning unit and these products show the skills, knowledge and competencies developed, allow evaluating the progress and achievement of specific objectives of teaching and learning.

## **ANALYSIS**

For the research, a review of various texts was carried out to incorporate a matrix to support observation and the filling out of the field diaries of the curricula of the three areas of knowledge, and a correlation was made between the competencies or learning outcomes and soft skills (Table 1).

Now, an adaptation of a table of skills was made according to the authors: Zepeda, Cardozo, & Cortés (2019), Youth Business International (2019), UNESCO (2021), Gómez. A. et al (2015), where in the penultimate column the definitions of the skills according to different authors are described and in the last column is the result that according to the field diaries have been defined according to the teaching-learning process.

## **RESULTS**

Soft skills in the teaching-learning process of upper intermediate level students of the Instituto Politécnico Nacional.

## **DISCUSSION**

The need to integrate these skills within the framework of competencies during the educational process are important to prepare students to face the challenges of the labor, social and academic professional world, not only in technical knowledge but also involving adaptation in different environments; despite the importance of being developed and empowered within the academic environment, the lack of specific programs to foster these skills may result in insufficient preparation for students at the time of entering the labor market.

The incorporation of soft skills in the educational curriculum is a challenge. Therefore, it is necessary to design strategies or methodologies that allow teachers to teach and evaluate the skills effectively, such as the implementation of interdisciplinary, transdisciplinary, multidisciplinary and integrative projects such as the Classroom Project that promote collaboration and communication among students.

Training in soft skills should begin in basic education and continue throughout the educational trajectory. It has been observed that students lack these skills, which affects their integration in the different educational levels they go through until their working life, since there is a significant gap between what is taught in educational institutions and the skills demanded by employers.

**Integral Development:** Social skills complement technical knowledge, promoting the integral growth of the student, being fundamental to prepare students for the challenges of the work environment, where both technical competencies and interpersonal communication skills are appreciated.

**Teamwork:** In an integrative project, students must collaborate and maintain effective communication, as well as the ability to work with multiple partners, peers, teacher, authorities to solve problems and foster creativity, which contributes to the success of the project.

Category	Today's skills	Future skills	Definition authors	Skills in the teaching-learning process at CECyT 16
Intra- and interpersonal, social-emotional and social-emotional skills.	Self-esteem and self-control	Focus of thoughts	Driving towards what is important without getting distracted or dispersed. (Hernandez, 2020)	<ul style="list-style-type: none"> <li>Managing distractions, attracting attention during the face-to-face class, asking questions or interacting with students Use of specific colors or illustrations, videos Focus on the content of a class. Follow-up of the didactic planning in accordance with the current study program.</li> </ul>
		Self-knowledge and self-realization	It involves knowing and valuing oneself, identifying personal and contextual factors that shape identity, formulation of personal goals and recognizing the strengths and weaknesses that can favor or hinder their achievement.(Chernicoff, 2018)	<ul style="list-style-type: none"> <li>Personality traits that know why they are studying and set goals. Know your own vision and strategy in the way you study and solve exams. Perform activities that allow them to know themselves, such as SWOT to identify possible weaknesses or key points to improve and perform academically.</li> </ul>
	Communication	Oral and written expression	A communication skill or ability that has no meaning without comprehension, processing and interpretation of what is heard. Written expression is a linguistic skill, referring to the production of written language. (Baralo, 2000)	<ul style="list-style-type: none"> <li>Written reports of integrative activities. Presentations, either individually or in teams, on topics related to the end of each learning unit or the integrating project: Classroom Project. Participation in projects with articles, papers and/or congresses.</li> </ul>
		Negotiation	Two-way communication that aims to reach agreement when different parties have competing interests. (CEUPE, 2019)	<ul style="list-style-type: none"> <li>Understanding between two or more people, allowing you to share knowledge, from teacher to student or peer to peer, adapting your message to different audiences Presentations of class topics given by the students, in which they do their own research and then discuss them as a group. Assign tasks, set deadlines and resolve differences of opinion, in collaborative work.</li> </ul>
	Social skills	Networking, crowd, team or collaborative work	Integration of specific cognitive, behavioral and affective competencies that allow team members to adapt and optimize their performance (Paris, et al. 2000).	<ul style="list-style-type: none"> <li>Collaborate in an organized manner to achieve a common goal in carrying out integrative projects or activities in an inclusive environment such as discussion forums, class activities. Promotes active and participatory learning in the classroom and prepares you for your future career. They learn to value diversity and consider different points of view.</li> </ul>
		Empathy and humanism	Understanding the emotional situation of the other, another culture, another way of life or another belief, means being able to understand their needs, desires or actions. (Rifkin, 2010)	<ul style="list-style-type: none"> <li>Understand the perspective of others in experiencing emotions when working in a team or flexibility in the delivery of activities or tasks. It creates an environment of trust and mutual respect, facilitating learning. Promotes respect, inclusion and collaboration where they feel more confident to participate, ask questions and express their opinions and doubts.</li> </ul>
		Stress management	Identify the sources of tension and stress in daily life, know how to recognize their different manifestations and find ways to counteract them in a healthy way. (EDEX Foundation)	<ul style="list-style-type: none"> <li>Approach problems in a structured way by ordering thoughts, with the organization of carrying out tasks and managing time and study techniques. Activities outside the classroom, such as a game every so often that, without losing the purpose of the learning unit. Active breaks before starting the class: games, music, movements, dance, laughter, shouting 5 to 10 min.</li> </ul>
		Responsibility	Considered as a value of the human being, which is characterized by the individual's ability to act in the right way (or in accordance with what is expected) and commit to joint purposes. (Escudero, et. al., 2018)	<ul style="list-style-type: none"> <li>Ensure commitment to work, understand the impact of their decisions and actions in their school environment, recognize their duties, deliver on time and in the manner requested by the teacher. Motivate students with some dynamic with a possible reward, such as some extra point, focused on making an effort to learn and comply with their activities, gamification. Responsible persons actively participate in the classes, asking questions and offering their own ideas.</li> </ul>

		Emotional and/or social intelligence	Ability to monitor one's own and others' feelings and emotions, to discriminate between them, and to use this information to guide one's own action and thinking. (Mayer & Salovey, 1997)	<ul style="list-style-type: none"> <li>Ability to recognize, control and adequately express one's own emotions and to manage social relationships with judgment and empathy within the school context. Overcome anxiety when presenting their topics in front of their peers. Facing academic challenges for problem solving.</li> </ul>
School self-regulation		Rule tracking	It allows for specific indications, whether oral or written, becoming the basis for learning (González, et. al., 2021).	<ul style="list-style-type: none"> <li>Following rules and regulations within the classroom and campus, as well as following instructions on tests or activities. Establish an entry time and expect students to be punctual. Prohibit the use of unauthorized materials during evaluations.</li> </ul>
		Resolution of doubts	Questions help to initiate interactive learning and problem-solving processes, as well as to maintain them until the objectives are achieved and new problems and new learning situations are posed. (Zuleta, 2005)	<ul style="list-style-type: none"> <li>Ask for help when you don't understand what to do: counseling, tutoring, participation, losing fear. Adapt the explanation of a topic to the individual needs of each student. Constant practice with extra exercises Pay attention to what is being said, without interrupting or being on the cell phone and ask clarifying questions. Adapt to different learning styles and unforeseen situations.</li> </ul>
		Perseverance	Habit of continuing to fight in the face of adversity, regardless of the challenges and difficulties that have to be faced. (Román, 2010)	<ul style="list-style-type: none"> <li>If the activities, tasks, exercises, exams do not work, we keep trying until we demonstrate that there really is learning, no matter how difficult it may seem, which will lead to future rewards. When doing a difficult math problem and, instead of giving up, spend extra time looking for different solving strategies.</li> </ul>
	Openness to diversity	Willingness to recognize others from different social groups	Tolerance and understanding, as it implies recognizing and actively promoting the equal value of all people, without condescension. (UNICEF)	<ul style="list-style-type: none"> <li>Feelings about the arrival of someone different from the group, such as students who are recurrences or have a special condition of disability or illness. Curiosity for the customs and traditions of other countries or socioeconomic backgrounds</li> </ul>
Creation, resolution and decision making skills	Planning, organization, execution and management skills.	Planning and adaptive management	Effective strategy deals with goals, as well as detailed plans which serve for decision making, but, at the same time, it must have the flexibility to adjust plans according to the environment. (Mintzberg, 1998).	<ul style="list-style-type: none"> <li>Ability to process and make sense of previous knowledge acquired in order to integrate new knowledge, as well as to adapt to the different methods of imparting such knowledge by teachers. Tasks of different levels of complexity so that each student is challenged according to his or her abilities. Use assessment results to adjust teaching strategies. Incorporate student events or interests into lessons. Elaborate the didactic planning, assigning specific times to each activity and content.</li> </ul>
		Documentary research	Ability to collect, analyze and use information from diverse documentary sources to address problems and make informed decisions (Martinez, 2020).	<ul style="list-style-type: none"> <li>Search and classification of information: concepts, definitions, principles, demonstrations, axioms, theorems, that support what has been learned, the same information that must be captured by the student, to his own understanding, in a mental or conceptual map, summary or graphic organizer. Combine different areas of knowledge to address a complex problem. Collect data to prepare a scientific report with introduction, methodology, results and conclusions.</li> </ul>
		Time management	Establish priorities; allowing the fulfillment of deadlines (Covey, 2003).	<ul style="list-style-type: none"> <li>Setting objectives, organizing tasks, deciding the most important activities and others that will have to be programmed based on prioritization such as integrating activities. Use of organizational tools to schedule tasks, meetings and important dates. Propose daily routines in the classroom to optimize time and minimize distractions.</li> </ul>



Critical thinking skills	Systematic thinking	It understands the system as a whole as well as identifying how each part contributes to the overall functioning” (Ackoff, 1999). (Ackoff, 1999).	<ul style="list-style-type: none"> <li>• A creative, skillful and disciplined way of thinking about any topic, content or problem through conceptualization, synthesis and/or evaluation of information. Investigation of the causes, consequences and possible solutions, connecting different aspects of the problem. Relationships between different concepts or processes in different types of graphic organizers.</li> </ul>
	Leadership	Inspire and motivate team members; generating commitment and enthusiasm among collaborators (Northouse, 2018).	<ul style="list-style-type: none"> <li>• Maintains communication among team members in projects, defining the positions of each member; presentations, class dynamics, debates and decision making. Assume a specific role (leader, secretary, moderator, others) and must coordinate the team’s tasks. Encourage discussion and consensus to solve problems and make joint decisions.</li> </ul>
	Organization	Structure tasks efficiently to achieve goals more effectively, with greater productivity and with minimal confusion.(Robbins,2017)	<ul style="list-style-type: none"> <li>• Manage their time, set goals and keep up with responsibilities, deadlines relationship, as it allows them to set schedules and assign priorities Keep a diary or some other organizational dynamic that is constantly in use Develop study schedules, set goals and prioritize assignments for timely delivery.</li> </ul>
	Problem or conflict resolution	To decompose a problem to make it more manageable in order to analyze each component and apply solutions in general. (Osborn, 1957).	<ul style="list-style-type: none"> <li>• Manage, determine or resolve differences that may arise between individuals, groups, when carrying out a project, including the solution of a written evaluation. Making fair decisions in a given problem and allowing to keep calm at the time of it. Respect for the rights of others is peace -Benito Juárez</li> </ul>
	Decision making	Taking into account the factors involved, knowing the risks as well as the benefits, and also having possible consequences, scenarios; entails a reflective analysis and a deep understanding of the situation (Janis, 1977).	<ul style="list-style-type: none"> <li>• Choice among a set of alternatives based on specific criteria: tasks, teachers, group, friends, family, goals. Present projects with multiple approaches for them to choose how to approach them. Explain the reasons behind their choices.</li> </ul>
Creativity and innovation skills	Creativity and innovation, design and imagination	Ability to think and generate unconventional original ideas; implies functionality and empathy generating a creative and innovative design, crossing the line between the creative and the real, combining different needs and designs (Rogers, 2014).	<ul style="list-style-type: none"> <li>• To perceive, devise, express and turn into reality when carrying out institutional projects of Proyecto Aula, re forced in the approach and development of the same in some program, prototype, drawing. Create a safe environment for students to express their ideas without fear of judgment. Pose hypothetical questions to stimulate the imagination.</li> </ul>
Information, opportunity and risk management skills	Search for opportunities, recognition and evaluation	Opportunity creation and management	<p>It involves recognizing, evaluating, prioritizing and implementing opportunities that arise in the context of your organization.</p> <ul style="list-style-type: none"> <li>• Autonomous learning, performance evaluation and improving the conditions in which they are in order to see areas of opportunity in their environment, improving a process without the need to create something new. Encourage the use of professional social networks. They develop the confidence to take initiatives and assume calculated risks.</li> </ul>
	Information search and management	Information management	<p>Gil-Montelongo (2011) says that information management is “everything that has to do with getting the right information, in the right form, to the right person, at the right cost, at the right time, in the right place and articulating all these operations for the development of a correct action.</p> <ul style="list-style-type: none"> <li>• Identification and selection of the tasks requested by the teacher, always consulting at least 3 reliable sources, preferably recommended by an educational manual provided by the institution, as well as sharing information among classmates and teachers for feedback. Ability to find relevant information to solve problems.</li> </ul>

	Coping with ambiguity, uncertainty and risk	Wellness management	Holistic approach that recognizes that a person's health is not limited to his or her physical state. It is not limited to mental and social health, and extends to the community as a whole.	<ul style="list-style-type: none"> <li>Promote healthy habits to cope with the pressure of class work, during the semester and exams. Incorporate conscious breathing exercises at the beginning or end of classes. Strategies to manage emotions such as anger, sadness or anxiety.</li> </ul>
		Coping -VICA- Volatility, Uncertainty, Complexity and Ambiguity	Coping with FICA should avoid overreacting, accept the inevitable, work on self-knowledge, use inter and intrapersonal intelligences, and practice empathy (Rosquez, 2024).	<ul style="list-style-type: none"> <li>Facing these challenges and being able to take risks, always taking into account the possible consequences or benefits that this may bring. Projects that require constant adjustments based on new data or changes in circumstances. Search and learn new information autonomously.</li> </ul>
Growth mindset skills	Persistence, tenacity, resilience	Determination	Action or effect of determining. Attitude of the one who is determined and convinced about what should be done.	<ul style="list-style-type: none"> <li>Perseverance in the pursuit of a long-term achievement, following what is already planned in the realization of the activities or in the classroom. Set clear and specific goals for your projects, breaking them down into small tasks. Use visual tools such as graphs or charts so that your progress can be monitored.</li> </ul>
	Flexibility and adaptability	Agility	The ability or quality of being agile (quick, easy and loose moving), either physically or mentally.	<ul style="list-style-type: none"> <li>Ability to change classes, learning units, contexts, environments, and semesters quickly, and to be able to carry out and interpret any change without deviating from the purpose. Create unexpected scenarios so that students must rethink their strategies and find alternative solutions.</li> </ul>
	Future goals, optimism, motivation	Active learning. Motivation for continuous learning	Teaching approach in which students participate in the learning process by developing knowledge and understanding.	<ul style="list-style-type: none"> <li>Motivation for continuous learning with increments, rewards to incentivize accreditation of the learning units Maintain a future vision that can be molded according to the teachings and learning, strengthening the knowledge obtained in the process (gamification).</li> </ul>

Table 1: Soft Skills in the teaching-learning process at CECyT 16 "Hidalgo".

Table 1: Own creation

**Adaptability and Leadership:** The inclusion of soft skills in education allows students to adapt to different scenarios and lead work teams. This is especially relevant in the era of Industry 4.0, where flexibility and leadership are valued.

**Assessment and Learning Outcomes:** Integrative projects are an educational strategy that provides students with the opportunity to demonstrate their skills. The assessment of these projects encompasses both technical knowledge and the application of soft skills, which underscores their importance in the educational curriculum.

## CONCLUSIONS

Soft skills are increasingly valued in all fields, and education is no exception. Integration into the curriculum will reduce time and resource constraints that may hinder the inclusion of activities, but assessing soft skills is more complicated than assessing theoretical knowledge.

Because of the above, there are teachers who may oppose new methodologies that promote the development of the same; but interdisciplinary and collaborative projects can be used, in addition to creating collaborative learning environments and improving communication, respect and empathy, among them, making teachers can create classrooms where students feel motivated and committed to their learning. Also supported with tutoring and counseling programs, linking with students, which facilitates the understanding

of their needs and the development of personalized or targeted teaching strategies to help them improve in their personal development and can be effectively incorporated into the labor field.

Likewise, the use of technologies, digital tools (social networks) can favor personal growth with proper guidance.

The situation of each student should be considered, such as: their social, family and demographic context, as well as their academic trajectory, in order to know what their needs are and thus be able to work on their strengths and weaknesses. Due to its importance within the field of education and labor type, it is requested to continue with the study of soft skills in the study programs of third semester and fourth semester that entered

with the redesign 2021 (new programs), first to identify the soft skills with respect to the objectives of the same and thus according to the area of knowledge propose a series of strategies, techniques, active methodologies that allow to potentiate and improve the teaching-learning process to form the soft skills in future graduates and according to their profile.

As a Mexican public institution, the Instituto Politécnico Nacional encourages the development of soft skills that are perceived as innovative and prepared to train the professionals of the future. And so students feel valued and supported in their integral development to continue their studies in the same, creating a more cohesive and supportive educational community.

## REFERENCES

- Ackoff, R. L. (1999), *Re-Creating the Corporation: A Design of Organizations for the 21st Century*. New York: Oxford University Press
- Aguirre-Sánchez, J. R., & López-Pérez, M. D. (2021). Las habilidades blandas en el ámbito educativo: una revisión sistemática de la literatura. *Revista Española de Educación*, 87(2), e024. <https://www.redalyc.org/journal/5709/570971314013/570971314013>
- Baralo, M. (2000). El desarrollo de la expresion oral en el aula de E/LE. *Carabela*(47)
- CEUPE. (25 de Junio de 2019). La negociación. Obtenido de <https://www.ceupe.com/blog/la-negociacion.html>
- Chernicoff, L., & Rodriguez, E. (2018). Autoconocimiento: una mirada hacia nuestro universo interno. *Didac*(72), 29-37.
- Cordoba, J., Castillo y N. (2018). Creatividad e innovación: Motores de desarrollo empresarial, *Lámpsakos*, nº 19, pp. 55-65. <https://www.redalyc.org/journal/6139/613964506006/>
- Covey, S. R. (2003). *Los 7 hábitos de la gente altamente efectiva*. PAIDÓS.
- Cruz, G. B., Albújar Verona, C. E., Becerra Cerna, E. R., Fernández Otoy, F. A. (07 de Junio de 2023). Social skills in secondary education students. Obtenido de SciELO: [http://scielo.sld.cu/scielo.php?script=sci\\_arttext&pid=S1990-86442023000500120&lang=es](http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1990-86442023000500120&lang=es)
- De la Ossa, J., V. (2022). Habilidades blandas y ciencia. *DOAJ (DOAJ: Directory Of Open Access Journals)*. <https://doi.org/10.24188/recia.v14.n1.2022.945>
- Escudero, L., Velasco, E., & Palmera, J. (2018). La responsabilidad como valor esencial durante la formación escolar. *Cultura. Educacion y Sociedad*, 9(3). Obtenido de [https://www.google.com.mx/url?sa=t&trct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiO6dumztuDaxWfIEQIHW0ED0IQFnoECCEQAQ&url=https%3A%2F%2Frevistascientificas.cuc.edu.co%2Fculturaeducacionysociedad%2Farticle%2Fview%2F2223&usq=AOvVaw1GiC03S\\_oBb1Yn8](https://www.google.com.mx/url?sa=t&trct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiO6dumztuDaxWfIEQIHW0ED0IQFnoECCEQAQ&url=https%3A%2F%2Frevistascientificas.cuc.edu.co%2Fculturaeducacionysociedad%2Farticle%2Fview%2F2223&usq=AOvVaw1GiC03S_oBb1Yn8)
- Fundación EDEX. (s.f.). Habilidades para la vida. Obtenido de <https://habilidadesparalavida.net/manejo-de-tensiones-y-estres.php#:~:text=Esta%20habilidad%20permite%20identificar%20las,menos%2C%20contrarrestarlas%20de%20manera%20saludable>
- Gil-Montelongo, MD, López-Orozco, G., Molina-García, C. & Bolio-Yris, CA (2011). La gestión de la información como base de una iniciativa de gestión del conocimiento. *Ingeniería Industrial*, XXXII (3), 231-237.
- Goleman, D. (1998). *La Práctica de la Inteligencia Emocional*. Barcelona España: Kairos S.A. file:///C:/Users/pc/Downloads/DialnetIntervencionEducativaParaElDesarrolloDeLaInteligencia-2476406.pdf.

- González, G. E., Lugo, D. I., & Pérez, A. L. (2021). La lúdica como estrategia para afianzar el seguimiento de instrucciones y el mejoramiento de la atención en los estudiantes del grado segundo de las Instituciones Educativas Nueva Delhi IED y LITECOM. Fundación Universitaria Los Libertadores. Obtenido de <http://hdl.handle.net/11371/4104>.
- Rogers, EM, Singhal, A., y Quinlan, MM (2014). Difusión de innovaciones. En *Un enfoque integrado de la teoría y la investigación de la comunicación* (pp. 432-448). Routledge. Hernández, Norma. (2020). Influencia de las habilidades blandas en el desempeño laboral de los trabajadores del Programa Nacional de Asistencia Solidaria Pensión 65, para la elaboración de la relación bimestral de usuarios – RBU. <https://repositorio.urp.edu.pe/handle/20.500.14138/3967>
- Rosquez, A. (n.d.). Gestión del Bienestar Social y la Salud: Un Enfoque Integral para una Sociedad Saludable. CEUPE. Retrieved January 9, 2024, from <https://www.ceupe.pe/blog/gestion-del-bienestar-social-y-la-salud-un-enfoque-integral-para-una-sociedad-saludable.html>
- Janis, I. L., & Mann, L. (1977). "Decision Making: A Psychological Analysis of Conflict, Choice, and Commitment."
- Martínez-López, F. J. (2020). "La importancia de la investigación documental en el ámbito profesional". *Journal of Professional Development*, 10(2), 45-60.
- Matovich, I., & Cardini, A. (04 de Agosto de 2021). Educación en América Latina: un futuro que se escribe desde hoy. Obtenido de CIPPEC: <https://www.cippec.org/textual/educacion-en-america-latina-un-futuro-que-se-escribe-desde-hoy/>
- Mayer, J. D., & Salovey, R. (1997). What is Emotional Intelligence? *Emotional Development and Emotional Intelligence*.
- Moreno M. (2022). Formación en habilidades blandas en instituciones de educación superior: reflexiones educativas, sociales y políticas (1.a ed., Vol. 100) [Pdf]. Corporación Universitaria Minuto de Dios – Uniminuto. [https://repository.uniminuto.edu/bitstream/10656/14369/1/Libro\\_Formaci%C3%B3n%20en%20habilidades%20blandas%20en%20instituciones%20de%20educacion%20superior\\_2022.pdf](https://repository.uniminuto.edu/bitstream/10656/14369/1/Libro_Formaci%C3%B3n%20en%20habilidades%20blandas%20en%20instituciones%20de%20educacion%20superior_2022.pdf)
- Mintzberg, H., Ahlstrand, B., & Lampel, J. (1998). "Strategy Safari: A Guided Tour Through The Wilds of Strategic Management."
- Mujica, L. (2015). ¿Que son las habilidades blandas y como se aprenden? <https://educrea.cl/wp-content/uploads/2016/02/DOChabilidades-blandas.pdf>
- Northouse, P. G. (2018). "Leadership: Theory and Practice." Sage Publications.
- Ortega, C. (2017). Desarrollo de habilidades blandas desde edades tempranas. Guayaquil-Ecuador: Universidad ECOTEC.
- Osborn, A. F. (1957). "Applied Imagination: Principles and Procedures of Creative Problem-Solving." Charles Scribner's Sons.
- Paris, C., Salas, E., & Cannon-Bowers, J. A. (2000). Teamwork in multi-person systems: a review and analysis (43 ed., Vol. 8). *Ergonomics*.
- Rifkin, J. (2010). La civilización empática. Barcelona: Paidós.
- Robbins, S. P., Coulter, M., & DeCenzo, D. A. (2017). *Fundamentals of management: Management myths debunked*. Pearson.
- Román, J. (2010). El poder de la perseverancia. *Motivando*, 106. Obtenido de [https://www.galenusrevista.com/IMG/pdf/perseverancia\\_1.pdf](https://www.galenusrevista.com/IMG/pdf/perseverancia_1.pdf).
- UNESCO, (2021). Habilidades socioemocionales en América Latina y el Caribe. Estudio regional comparativo y explicativo (ERCE 2019). Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación. <https://unesdoc.unesco.org/ark:/48223/pf0000380240>
- UNICEF. (s.f.). Misión #9 - Respeto a la diversidad. Obtenido de <https://www.unicef.org/lac/misi%C3%B3n-9-respeto-la-diversidad>
- Youth Business International, [YBI]. (2019). Formación de Formadores: Programa GPS (Growth & Performance Skills) para emprendedores. <https://youthbusiness.org/events/formacion-de-formadores-programa-gps-growth-performance-skills-para-emprendedores/>
- Zepeda, M., Cardozo, E., & Cortés, J. (2019). El aprendizaje orientado en proyectos para el desarrollo de habilidades blandas en el nivel medio superior del IPN. *Revista Iberoamericana para la Investigación y el Desarrollo Educativo*. *RIDE* 10(19), 1-28 <https://doi.org/10.23913/ride.v10i19.530>
- Zuleta, O. (2005). La pedagogía de la pregunta.: Una contribución para el aprendizaje. *Educere*, 9(28). Obtenido de [http://ve.scielo.org/scielo.php?script=sci\\_arttext&pid=S1316-49102005000100022](http://ve.scielo.org/scielo.php?script=sci_arttext&pid=S1316-49102005000100022)