

EXPERIENTIAL LEARNING RESULTS

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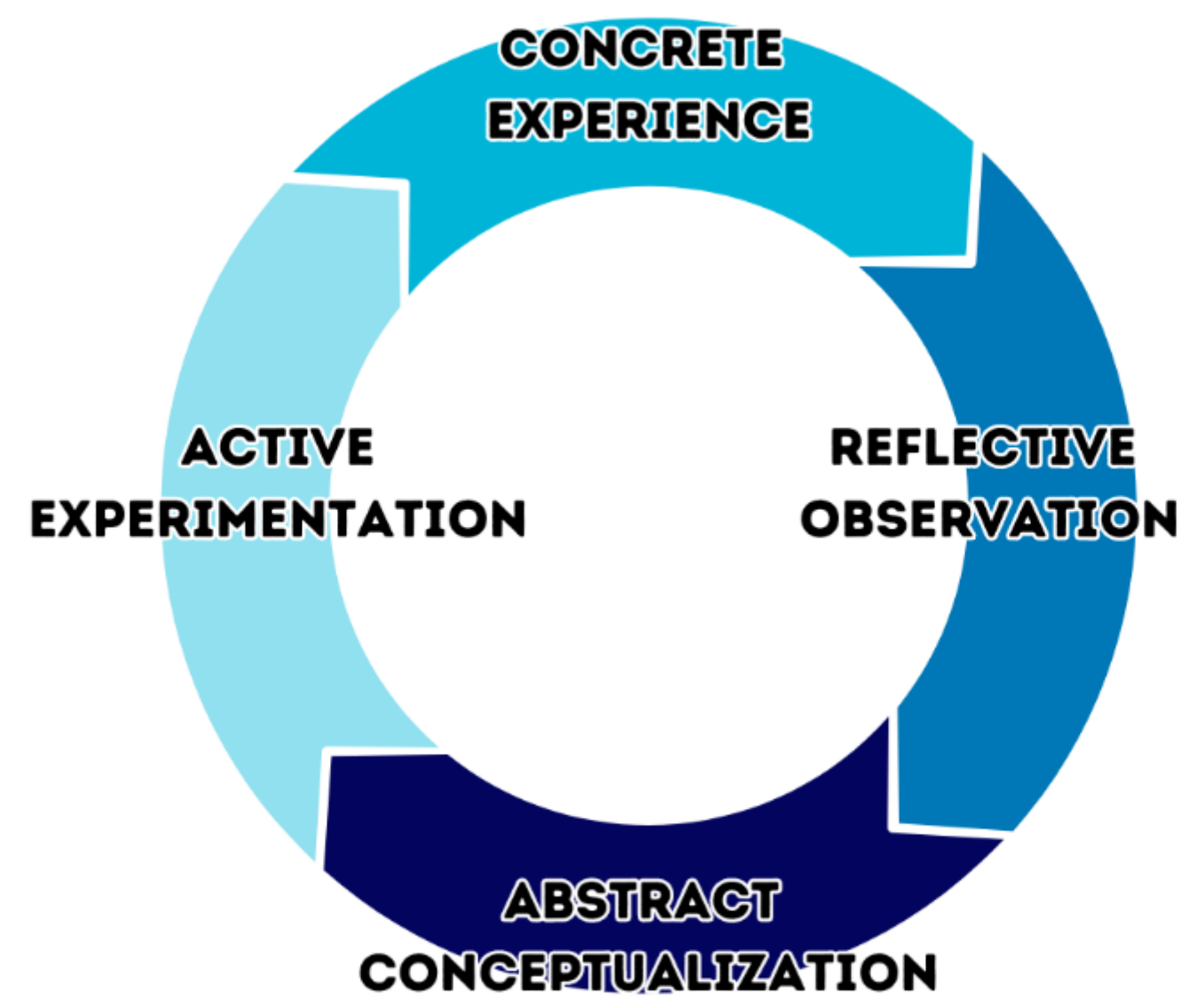
EXPERIENTIAL LEARNING AS A SUCCESSFUL MODEL FOR UNIVERSITY TEACHING

Experiential Learning (EL), perfected and promoted by the American psychologist David A. Kolb, is based on the idea that the key to the learning process is experience itself. Thus, just as everyone is different, so is the experience and the way of integrating knowledge and transforming it into something meaningful and useful, through reflection.

Kolb proposes a four-stage learning cycle: concrete experience, reflective observation, abstract conceptualization and active experimentation.

Experiential learning methodologies contribute to the transition from educational models focused on the transfer of knowledge to models that promote the construction of knowledge and student participation in this process. In addition, experiential learning is better adapted to a complex and changing world, since students relate to real problems and can generate solutions adapted to these different realities.

These methodologies allow the development of multiple competencies in students, since they not only receive knowledge, but also participate, experiment, reflect, analyze, relate new information with what they know and theoretical knowledge, there is an integration between theory and practice. Therefore, it is a more effective methodology in the development of the characteristics sought for an ethical leader and an agent of change.



Kolb learning cycle

- **Role of the teacher:**

In an experiential learning model, the role of the teacher changes from the traditional transmitter of knowledge to a facilitator of the learning process. The focus is on students learning through direct experience and reflection on those experiences. The key responsibilities of the teacher in this model are:

1. Learning facilitator: The teacher guides students in creating meaningful experiences and provides the appropriate context for them to learn by doing. The teacher does not simply give information but creates an enabling environment for students to discover knowledge for themselves.
2. Experience designer: The teacher organizes practical activities and projects that allow students to apply what they have learned in real or simulated situations, such as case studies, fieldwork, simulations, experiments, or group projects.
3. Coach and mentor: The teacher offers constant guidance and feedback throughout the process. He or she helps students reflect on what they have experienced, identify their strengths and areas for improvement, and apply that knowledge in new contexts.
4. Promoter of critical reflection: In experiential learning, reflection is essential. The teacher encourages students to think critically about their experiences, relate them to theoretical knowledge and understand how to apply what they have learned in the future.
5. Formative evaluator: Rather than focusing on traditional exams, the teacher assesses learning by observing the process, participating in reflective discussions and reviewing projects or products generated by students.



This approach encourages active and autonomous learning, where the teacher has a supporting role, encouraging curiosity and the development of practical and analytical skills in students.

The teacher is not the center of the educational process, and his role is mobile depending on the circumstances. They know how to design the right questions, rather than the answers, and they're open to change and see that as opportunities.

According to Julieta Mazzola, professor of Rural Development and Sustainable Communities / Opportunities for Development and Equity at EARTH University, among the benefits of giving students a leading role in their learning process is that it promotes an active attitude, which is established from their relationship with the content from the perspective that awakens the greatest interest. This favors greater motivation during the learning process and assimilation of what has been learned; the skills learned will be applied and improved in future practices.

- **How is experiential learning assessed?**

There are several methods for assessing experiential activities. Some of these methods promote reflection and help students focus on their learning while generating a product for assessment. It is suggested not to assess the contents of the reflection, but rather to use these as an inspiration for proposals or reports, since EL it's nor something you can score. Some of the methods are student journals, learning portfolios (individual and group), presentations, analysis of strengths and weaknesses, self-assessment, short questions, articles, informed discussions, interviews, reports, narratives or written stories, among others.

The pilot universities implement activities that promote experiential learning through field days, professional internships, entrepreneurship, social service, work groups, among others; all supported by the Five Elements of Success.

For this newsletter, we want to highlight an EL activity for each of the educational institutions that are part of the Transforming Higher Education project.

"EL activities promote the formulation of questions, the search for answers and solutions, research, experimentation, curiosity, critical thinking, student initiative, decision-making and creativity, emphasizing the development of skills to observe, collect information, prioritize, and then move towards the general and abstract."

- Julieta Mazzola, professor of Rural Development and Sustainable Communities / Opportunities for Development and Equity at EARTH University.

ASSIGNMENT OF PRODUCTIVE AREAS AND FIELD DAY TECNOLÓGICO NACIONAL DE MÉXICO CAMPUS CONKAL

IT Conkal defines experiential learning as any practice that allows the student to do an activity and reflect on what they do to promote learning. For this, scenarios are created where students can learn by doing and reflect on the actions.

One of the main examples is the field day, which consists of establishing a full day to carry out field practices in addition to the practical hours of each of the subjects. The students of the Agronomy Engineering degree are assigned from the first to the fourth semester in productive areas of IT Conkal, where they must cover two semesters in agricultural areas and two semesters in livestock areas with the accompaniment of a professor assigned as responsible.

These field days mean 80 practical hours per semester; therefore, they have significantly increased the number of hours of experiential learning in the degree and allow students to learn more about the areas in which they want to specialize.

Students may form work groups of no more than five members, and must establish positions, obligations and responsibilities for each of the members. Monitoring and evaluating the student performance process is a collaborative effort between the members of the project support group (Facilitator and technical assistant), the Advisory Committee and the Ethics and Values Committee.

The university grades through reports, visits and photographic evidence, which add value to the results that students obtain either in the areas established by the university or in spaces assigned within their community.

RESULTS:

The field day, due to its relevance and diversity, stands out as a key activity that allows our students to be placed in various scenarios, where the applicability of their knowledge acquired in the classroom allows them to attend to and solve the requirements of current crops. "This allows students to learn about the various activities linked to the field of agronomy, as well as to identify their area of knowledge or productive sector in which they wish to specialize in subsequent semesters," says Jorge Gamboa, facilitator of the Transforming Higher Education project at the National Technological Institute of Mexico Conkal campus.

The dissemination of the activities linked to the project through the comments of the students themselves, either by word of mouth or through their social networks, has led to generating good recommendations towards the institution, and, therefore, in an increase in enrollment and places of origin of the students. The table emphasizes the history of students enrolled, and where the positive impact can be observed in numerical and percentage values.

Class	Agronomy
2019	155
2020	126
2021	140
2022	161
2023	205
2024	273
Increase 2021 vs 2024	133
% increase 2021 vs 2024	95



INSTITUTO TECNOLÓGICO SUPERIOR DE CALKINÍ IN THE STATE OF CAMPECHE'S EXTRACURRICULAR ACTIVITIES IN THE COUNTRYSIDE

These types of activities are not part of the official curriculum, but the education system of the National Institute of Technology of Mexico gives the guidelines to each Campus to design activities according to the needs of each Educational Program, with the objective of encouraging students to develop in an integral way; in the case of the experiential program of the Sustainable Agricultural Innovation Engineering degree, it is voluntary and applies to all academic semesters.

In this case, the EL is based on the agroecological practices of horticultural crops and family gardens and aims to understand the importance of these practices in sustainable agriculture and their impact on the environment and human health. In addition, it seeks to analyze the benefits of family gardens to promote food security, self-management and the strengthening of local communities.

Through a methodology based on direct experience, it seeks to involve participants in different production processes, thus promoting their learning and empowerment. The teacher is responsible for designing the project together with the collaborators (teachers, students), then registering it. Once approved, agreeing with the interested students on the work schedule and distributing the corresponding activities. During the development and implementation, teachers and students share the activities of the project, as well as monitoring the achievement of the objectives. At the end of the project, the committed reports and academic products are generated.

RESULTS:

"For us, students have acquired practical knowledge about corn cultivation, from soil preparation to harvesting and how to innovate in different agricultural production systems. They understand biological, agronomic and environmental processes, as well as develop skills for problem solving, teamwork, decision making, responsibility and adaptation to different situations, they learn to work collaboratively and to value the importance of the community," explains Mario BenHur Chuc Armendáriz, facilitator of the Transforming Higher Education Project at the Instituto Tecnológico Superior De Calkiní In The State Of Campeche.

Teachers can implement new pedagogical strategies based on active and collaborative learning, they leave the traditional classroom and take students to a real learning environment, as well as expand their knowledge about different agricultural production systems, develop skills to facilitate experiential learning. Something very important in this type of community experiential projects is that they establish links with the local community, collaborating with farmers to enrich the learning of their students and ultimately contribute to the formation of citizen leaders and agents of change committed to the development of their community.



INSTITUTO TECNOLÓGICO SUPERIOR HOPELCHÉN INNOVATECNM

The National Summit for Technological Development, Entrepreneurship and Innovation (InnovaTecNM) was created as a response from the Institute to provide solutions to the main needs of strategic sectors for the functioning of society.

Students voluntarily carry out a research process and propose solutions to key problems in the country, create technical documents and present them and defend their proposals before external juries. The InnovaTecNM event offers a significant platform for students from the Instituto Tecnológico Superior de Hopelchén to apply and expand their learning in a practical and competitive context.

The staff assigned to the National Institute of Technology of Mexico (TecNM) advises the participating teams. The teams can be supported by a maximum of two advisors from the Technological Institute or Research Center of origin, and the students have exclusive responsibility for the event; they must propose topics, conduct research, register, prepare documents (such as technical sheets, reports, and business models), upload these documents to the platform, and manage the presentations and defenses. As a benefit, students who participate in the local stage are entitled to a credit for complementary activities, students who access the regional stage can consider this option to accredit their Social Service, while those who participate in the National stage can consider this option to accredit their Professional Residency.

Currently, between 10 and 15% of the ITS Hopelchén students participate in the contest.

RESULTS:

According to the University's Facebook page, innovation is a fundamental element in the development of organizations and one of the great challenges that Mexico faces to increase the country's competitiveness and productivity. One of the pillars of innovation is the formation of qualified human capital that responds to current and future social and economic needs.

The National Institute of Technology of Mexico provides its student and teaching community with a space to generate proposals for solutions to the needs of the country's Strategic Sectors such as: Agri-Food Sector, Electrical and Electronic Industry, Electromobility and Smart Cities, Health Services, Creative Industries and Climate Change; as well as respond to major challenges posed by the social, public and private sectors that impact a global environment. For this reason, TecNM is holding the National Summit for Technological Development, Entrepreneurship and Innovation InnovaTecNM 2024.

A total of 11 teams participated in this project competition, the winners were:

Overall winners

1st Place: Jats'uts ixi'im

2nd Place: Limiel

Health Services

1st Place: Nasalia

Climate Change

1st Place: XuuláCab

Each team presented their respective projects, as well as the display and presentation of the stands, where the jury made up of outstanding professionals and experts in innovation, carefully evaluated all the participation of the student community, identifying the best projects to be recognized according to the specifications and guidelines of this event.



NEXT STEPS

For Mazzola, the universities that have already started these processes have to evaluate their progress and continue looking for ways to improve the teaching-learning processes, the methodologies and the techniques for the design, facilitation and evaluation of learning. The student body is changing; therefore, we have to adapt to the new characteristics of the students, reorganize the process to the new conditions and analyze how to strengthen the experiential learning methodologies in these new contexts.



"I believe that the results that should be found are graduates and professionals with initiative, with critical thinking, analytical capacity, adaptable to changes, agents that promote changes and innovation, leaders in their work areas and in their regions or countries, professionals interested in continuing to learn, with solid professional knowledge, who are not afraid of challenges or of performing in different contexts," Mazzola says.



In the Transforming Higher Education project, the results are very positive. Although some higher education institutions already carried out experiential learning activities, they have now decided to incorporate others and are working and deepening the EL methodology. Therefore, they are strengthening planning, the roles of teachers and students, procedures, elements of innovation, monitoring and evaluation, etc.



Finally, she agrees, "I work mainly with the service-learning strategy, which is a very powerful strategy to generate knowledge, skills and attitudes by working with the community. Classroom-based experiences include role-plays, case studies, simulations, laboratory studies, expert presentations, among others. I mainly use role-plays, case studies and expert presentations and I have always had very good results, students engage, discuss, analyze, question and manage to understand complex concepts from the connection with experiences."

