

RESILIENCE IN TIMES OF ADVERSITY

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SUCCESSFUL STUDENT FARM MANAGEMENT IN THE AMERICAN MIDWEST

The AGEDS 450 farm is a 625-acre land owned by Iowa State University, which stands out as one of the successful models of transformation of higher education with the goal of functioning as a student-run farm management laboratory.

Its story goes all the way back to 1943. The *Farm Management and Operation* course has evolved to modern trends in experiential education, applying the Team-Based Learning or TBL method since 2015, emphasizing teamwork, planning, problem solving, communication, critical thinking, decision making and implementation of all of these in class.

Currently, the AGEDS 450 farm is a 100% student-run agricultural operation consisting of corn, soybean, and swine production. The class is separated into six committees that cover the entire farm management.

During the semester, all students are required to identify a 4-hour activity related to farm management and operations. Once their activity is identified, students then plan the activity, physically complete the activity, and finally, reflect on their experience. In addition, specific objectives established in state legislation must be met such as the Natural Resource Conservation Service and the Iowa Crop and Livestock Reporting Service, to ensure that both crops and animal production are carried out under competitive standards.

The university aim is that by the end of the course students have the ability to evaluate, update, and alter the production and marketing goals of the farm as the landscape of agriculture evolves.

To find more information about the AGEDS 450 farm learning experience visit the Knowledge Sharing section of www.transforminghighereducation.com and the Iowa State University website <https://www.ag450farm.iastate.edu/>.

ONE MONTH TO SEND YOUR NOMINATION TO THE WORLD AGRICULTURE PRIZE

Nominations for **the World Agriculture Prize 2021** are open until June 30 at 17.00 GMT / UTC. We are recognizing Lifetime Achievements for their contribution to agriculture and life science education, research and innovation, while making an impact on their institutions and communities locally, nationally, or even globally.

For more information, visit: www.gchera.com/world-agriculture-prize/, two prizes of \$100,000 USD will be awarded!

REDESIGN AND REBUILD BUT NEVER GIVE IN

Theoretically speaking, the implementation of our change agenda as part of the transformation of higher education is straightforward. We have endless ideas that we plan to do to improve student learning in agriculture through experiential learning, entrepreneurship, and community engagement. However, in practice we face many unforeseen challenges along the way that require us to be flexible and to adjust our original plans.

The Technological Institute of Conkal, in Mexico, has been implementing their plan since April 2019 and through their experiences and reflections they have identified a list of attitudes and practices among teachers and the administration that are key to success of the transformation process despite the complicated scenario posed by the COVID 19 pandemic among other challenges.



Teachers must:

- Be infused with a spirit of commitment to student learning.
- Be proactive and innovative in the implementation of changes to courses, curriculum and pedagogy as well as be involved in proposing changes.
- Seek to understand and empathize with the heterogeneous environment from which their students come.
- Implement activities that engage and excite their students and motivate them to work with perseverance and commitment.



The institutional leadership needs to:

- Strengthen and promote the work between all the areas involved: project managers, administrators, students, faculty, etc.
- Create incentives that value the efforts of the project collaborators.
- Provide spaces for student to market products or share activities as part of their experiential learning efforts to motivate students
- Empower students to become active learners.
- Share responsibility for student learning among all members of the university community.

In the next page, read more about their successful management of experiential learning during COVID-19 times.



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EXPERIENTIAL LEARNING AMIDST A PANDEMIC

Since early 2020, the world has been experiencing an unprecedented situation due to the pandemic caused by COVID-19. With approximately 138 million infected worldwide (April 2021), all sectors of society had to adjust to implement the corresponding security measures while humanity continued to learn about the virus and try to get "back to normal".

Universities had to find ways to continue educational processes while their campuses were closed to students and they turned to using other innovative educational tools. From virtual classes, hybrid models, digital guides, and adjustments in communication systems, teachers, institutions and the student community sought ways to work synergistically and collaboratively to achieve their common educational goals.

In Mexico, specifically the state of Yucatán, we find the Technological Institute of Conkal (ITC Conkal or ITC), an institution where its 250 agronomy students are participating in the changes effected by the faculty and administrative team that, along with the components of the Transforming Higher Education project, have helped weather the challenges presented by the pandemic.

The Technological Institute of Conkal has integrated experiential learning as an integral focus of its educational system, including **"field practices"** where students apply the theoretical concepts in agricultural fields on campus. With the pandemic, the campus is closed to students therefore the staff needed to make adjustment to continue their field activities. Therefore, they studied each case, and advised and organized the students to integrate agricultural projects to be developed in their communities, with private enterprises, on public lands, and in some cases, with their own families, executing innovative production strategies and processes or supporting local producers.

This has implied significant changes in the teaching model; and has enhanced community engagement as part of their experiential learning, however, it has generated important benefits. Here are some of the strategies that the Institute has implemented:

Communication: Without a doubt, the virtual environment is the main ally of teachers in this context. Although there are limitations in remote communities such as internet access, ownership of smart communication devices by students, among others have been key to communication between the professors and the students.

With the aim of strengthening the relationship between the student and teaching staff, new communication and dissemination channels were created, such as the opening of an advisory group on cultivation techniques (Agricultural and Livestock) via Microsoft Teams, and the development of the 1st student forum *"Experiences acquired during field practices"*, where feedback, reflection, exchange of experiences and suggestions are some of the areas of interaction between the student and faculty.

"Many students go to great lengths to continue studying. In this case, the collaborative teamwork done by the students, as well as the monitoring and advice by the institute, has contributed to their motivation to continue working. Sometimes they even travel to other communities where they can connect to the internet, just to keep us updated and we value and appreciate that", says Jorge Gamboa, Facilitator of the Transforming Higher Education project at ITC.

Additionally, meticulous control of the projects is carried out, as the students are asked for monthly reports. Plus, other means of communication such as WhatsApp and social networks were implemented.

Visits: Given that most of the projects are carried out in the communities, the institution's staff implemented an on-site visit plan that complements all the digital monitoring that is performed. For this, they randomly select projects and coordinate a session of guided visits in person. This is complicated especially because the students are in different areas of influence, which includes 35 of the 106 municipalities which make up the Yucatán State.

"Even the students jokingly complain about why we haven't gone to visit them. Which shows the level of commitment they have. We work to be able to go to as many communities as possible", says Jorge Gamboa.

Teaching coordination: The professor's attitude towards the plan has been essential for the execution of this tactic. Without their support or disposition, the accompaniment would be incomplete.

Additionally, one of the benefits that ITC has had, has been the direct participation of the academic programs' directors, something that has even been very important for the last two promotions, who have not had the possibility of having the face-to-face experience of university life and therefore, they lack some of that sense of institutional belonging.

"Our team has understood that this project is 24/7, and is oriented to the support of the students, we try to visit as many as possible. The pandemic brought changes in everyone's social dynamics and they themselves are no exception. Their parents lost their jobs and they had to financially support their families. Therefore, to keep them studying, we have even adapted classes at night, on weekends, in individual schedules, etc. This, without the support and willingness of teachers, would be impossible to achieve", clarifies Jorge Gamboa.

Their biggest achievement is the training of better professionals and human beings, through community responsibility, conflict resolution and more. In conjunction with the elements of success of Transforming Higher Education, students' leadership skills have been strengthened as well as their confidence.

Also, the impact of the work not only affects the students or the institution, but also includes other small producers, families, the public and private sectors, among others.



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Photos:

1. Josué Alejandro C., from first semester of the engineering degree in agronomy, transplanting chrysanthemum seedlings (*chrysanthemum*) at the Xux Garden nursery, one of the companies where students do their field day practices.
2. Products and derivatives of honey such as shampoo, soaps and scented candles, from the course "Preparation of Honey By-products", from the apiary of the Institute.
3. Pig production in the state of Yucatán. Swine is one of most important food industries in the region. Miguel Ángel M., applies iron to one of the weaned pups.
4. Juan Antonio P., is one of the students that couldn't attend classes due to the pandemic. This wasn't an obstacle for him to implement his habanero pepper (*Capsicum chinense*) crops and thus demonstrate his entrepreneurship.