# Teacher Support Plan: Facilitating the Transition to Competency-Based Education

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## Abstract

The study adopts a quantitative and descriptive methodology, aims to evaluate the adoption of the *Plan de Seguimiento y Acompañamiento en Competencias* (SAC Plan) which was structured in five connected phases to support the faculty during their implementation process migrating to a competency-based model. In Phase 1. Teacher Preparation: 770 teachers completed the self-diagnosis instrument that measured their level of understanding of the competency-based approach, identifying key areas for improvement. Phase 2. Ongoing Support: 3,168 courses on competencies were accredited and 116 personalized advising sessions were provided throughout the three periods, which increased teachers' confidence in the application of the new approach. During Phase 3. FOCUS: Peer-to-Peer Strengthening: 1,668 teachers made peer to peer visits and participated in their respective feedback session. At the same time, 360 teachers carried out a self-evaluation of their class through a recording and under the same criteria as the peer visit. These activities promoted collaborative learning and the strengthening of good practices. In Phase 4. Sharing in Academia: during the end-of-term sessions by academies, 70 records of agreements on good practices and agreements for improvement for the following academic period were made, belonging to 26 departments. Finally, in Phase 5. Results Report: the results obtained from each phase were integrated into a report for each academic period, detailed by department. The above allowed making decisions on teacher training, at the same time it was an input to make improvement adjustments to the SAC Plan, consolidating a culture of permanent improvement.

*Keywords*: academic excellence, competency-based education, continuous improvement, faculty collaboration, peer observation

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## Introduction

In recent decades, competency-based education has been a central axis in the transformation of educational models in higher education. The Organization for Economic Co-operation and Development (OECD) has emphasized the importance of developing skills and competencies as a key factor for individual well-being and economic growth in 21st century societies (OECD, 2017). In this context, the competency-based approach seeks not only the transmission of knowledge, but also the development of cognitive, technical and socioemotional skills that enable students to perform effectively in their professional and personal lives (OECD, 2012) (OECD, 2018).

The concept of competency has been widely analyzed in the academic literature. Tobón (2017), points out that the design of programs with didactic planning based on competencies is an essential process in teaching and a key element in curricular concretion. Similarly, Cerna (2021), argues that quality education implies not only the acquisition of knowledge, but also the development of skills and attitudes necessary for adult life. Along these lines, the Programme for International Student Assessment (PISA) has shown that educational success depends not only on the mastery of traditional content, but also on the development of transversal competencies applicable in various contexts (OECD, 2018).

Several studies have addressed the implementation of the competency-based approach in higher education. The transition from an educational model based on objectives to one based on competencies responds to the need to train professionals with skills applicable in different work contexts (Villa & Poblete, 2008; Zabalza, 2006), this means that it seeks to ensure that students acquire skills, knowledge and attitudes applicable in real contexts, allowing them a better integration in the labor market and a greater ability to adapt in dynamic and changing environments (González & Wagenaar, 2003). Thus, the competency-based model has been shown to improve the significant learning and professional performance of graduates (Zabalza, 2006).

As part of the main challenges of this process, Fullan and Quinn (2016), emphasizes the need for strategic planning to ensure proper implementation and evaluation. Salazar-Morales et al. (2020) identified the resistance to change by the faculty and the lack of alignment with institutional policies. Chulde-Zhirve et al. (2024), highlights the relevance of active methodologies and the need for teacher training for their effective implementation in Latin America. Vargas et al. (2021), supports peer observation as an effective strategy for improving teacher implementation. Along the same lines, Pavié-Nova et al. (2022), highlights the importance of having adequate tools to measure learning effectively.

Similar initiatives have been developed in other institutions, such as the National Autonomous University of Mexico and the University of Sherbrooke in Quebec, where teacher training programs have been designed to guide teachers in the development and implementation of competency-based curricula. These experiences have demonstrated the importance of offering structured support to teachers, to ensure the coherence and effectiveness of the new educational model (Coiduras et al., 2009; Organización de Estados Iberoamericanos para la Educación, la Ciencia y la Cultura, 2013).

## Teacher Support Plan: Facilitating the Transition to Competency-Based Education

In the fall of 2023, with the objective of training professionals with a profile adaptable to current demands, the University of Monterrey (UDEM) defined as a Strategic Objective the transition from a model based on objectives to one based on competencies, highlighting the need for an agile, effective and sustainable transformation process. Thus, along with the work in the adaptation and updating of the curricula by each department of the Schools and Faculties, an agile team belonging to the Vice Rector's Office of Strategic Evolution and Administration (VEEA) was appointed to create a plan to support teachers due to the high importance of their participation in the implementation of the new model.

The agile team is a multidisciplinary team of 6 members, whose objective is to find solutions to complex problems of the university, adding value in an iterative way. It is based on the SCRUM framework that provides flexibility in the choice of methods, tools, techniques and instruments. Its focus is centered on the user, in this case, the teachers. The first activities of the agile team consisted of carrying out a Design Thinking process, that is, the identification of user needs through empathy and mapping of available resources in the institution. Subsequently, ideation sessions were carried out in the search for alternatives for the creation of prototypes, which were taken back to the teachers and Stakeholders to obtain valuable feedback and make the necessary adjustments.

The final result was the *Plan de Seguimiento y Acompañamiento en Competencias* (SAC Plan), consisting of a five-phase cycle. Its objective is to be an integrating and enabling system that accompanies the faculty to strengthen the implementation of competency-based courses aligned with UDEM's commitment to academic excellence.

**Figure 1**
*SAC Plan Description of Each of the Phases*


*Note.* Prepared by the authors

**Phase 1. Teacher Preparation**

Objective: Self-assessment instrument of knowledge about the UDEM Competency Model with the purpose of identifying training needs to continue teacher development. The topics included are:

- UDEM Competency Model
- Transversal Competencies
- Disciplinary Competencies
- Instructional Design
- Evaluation

To ensure content validity, the questionnaire was submitted to the judgement of experts with doctoral degrees in the field of education, who evaluated the relevance, clarity and coherence of the items.

Area responsible: Center for Academic Development (CDA). Center responsible for the pedagogical training of teachers.

Application:

- Each teacher must answer on a single occasion
- During the first 4 weeks of the semester
- The instrument is developed in QuestionPro and is sent by personalized e-mail

Procedure: The CDA identifies teachers who have not completed the Teacher Preparation Instrument, sends them an e-mail with the personalized link and the deadline for their response. New teachers are added each academic period. Follow up on the results individually as well as in the department.

**Phase 2. Ongoing Support**

Objective: To provide academic support to teachers by offering training courses published by the CDA and/or the Organizational Development Management of the Department of Human Capital (DICH), so that each teacher can choose the courses he/she needs according to the results of the Teacher Preparation Competency Model instrument or his/her particular needs. The above in order to strengthen the implementation of the competency-based model.

Area responsible: CDA

Implementation:

- Directed to all teachers
- During the entire academic period, on a continuous basis

Procedure: Each teacher reviews the training courses published in the institutional portal to choose the course or courses according to the needs detected, as well as the personal interests of the teachers. In addition to the above, each Department Director (DDA) may ask the CDA for a course(s) according to the needs detected in the teachers of his/her department in phase 1. The topics include academic, pedagogical, technological, training, administrative and welfare issues. Likewise, the CDA offers personalized counseling to resolve any doubts regarding the training path of each teacher and the most convenient courses to take.

**Phase 3. FOCUS: Peer-to-Peer Strengthening**

Objective: Promote the exchange of ideas, through peer classroom visits, to enhance teaching strengths.

The topics included in the instrument are:
- Principles
- Values
- Classroom organization
- Didactic resources
- Technological resources
- Active learning strategies
- Evaluation system
- Feedback

To ensure content validity, the instrument was submitted to the judgement of experts with doctoral degrees in the field of education, who evaluated the relevance, clarity and coherence of the items.

Area responsible: Department of Academic Effectiveness (DEAC) and the DDA.

Implementation:
- 60% of the faculty in each department must visit a peer faculty member
- Assignment of visits is determined by the DDA
- It is carried out during the 16 weeks of the academic period
- An optional self-evaluation may be carried out
- Each teacher must be visited, visit a peer and perform a self-evaluation at least once a year
- The instrument is developed in QuestionPro
- A guide was created with instructions for the observation and for filling out the instrument

Procedure: The DDA assigns visits to peer teachers, prioritizing them to be from the same subject or academy in order to have more and better elements of dialogue. Each teacher reads the FOCO Guide where the instructions are detailed, makes the peer visit, records his/her observations in the instrument and agrees with the visited teacher on a session to discuss and offer constructive feedback. The target percentage is met through the peer visits.

At the same time, all teachers in the department, optionally as a means of reflection for the continuous improvement of their teaching practice, can perform a self-evaluation by recording a class of their own and using the FOCO Guide as a reference point. The results are recorded in QuestionPro. Self-assessments are not taken into account for the achievement of the target percentage.

**Phase 4. Sharing in Academia**

Objective: To record good practices and improvement agreements for the implementation of the courses for the following semester.

The topics included are:
- Strengths
- Areas for improvement
- Good practices
- Agreements to be implemented in the following academic period

Area responsible: DEAC and the DDA.

Implementation:
- Each DDA convenes a meeting of all its teachers
- At the end of the academic period
- Dialogue is promoted among teachers on the topics indicated
- The information is recorded in the QuestionPro instrument

This space functions as a collaborative retrospective, which allows systematizing the information and follow-up by the DDA.

Procedure: At the end of the academic period, the DDA convenes a department meeting. The teaching dialogue between academies is promoted with the objective of sharing strengths, good practices, areas for improvement and recording them together with the agreements for the implementation of the courses of the following academic period.

**Phase 5. Results Report**

Objective: To summarize and make visible the results for continuous improvement.
The results of each phase of the SAC Plan are integrated by department.

Area responsible: DEAC

Implementation:
- CDA shares results of Phases 1 and 2 with DEAC
- DEAC obtains concentrated results of Phases 3 and 4
- DEAC integrates the results of each phase by department using graphs, tables and indicators
- Sends the report of results to Faculty or School Deans and DDA
- DDA makes pertinent decisions according to the results obtained by its teachers

Procedure: DEAC's Curriculum Development and Administration Management integrates the results of each phase of the SAC Plan through tables, graphs and indicators that allow the identification of progress, as well as the topics or areas in which each department needs to be strengthened with respect to the implementation of the competency-based model.

**SAC Plan Communication Plan**

A communication plan was designed and implemented in a strategic and coordinated manner, specifically aimed at DDA, CDA and teachers. This communication plan consisted of brief and concrete e-mails, personalized in some cases, describing the objective, the dates and an e-card with the call to action to the instrument, as a reinforcement of its relevance within the process of integration to the competency-based educational model.

## Methodology

### Research Question

To what extent have teachers adopted the SAC Plan as a support system, in the different phases and academic periods during the transition to the UDEM Competency-Based Model?

### Objectives

General: To measure teachers' adoption of the SAC Plan as a support system during the process of transition to the competency-based model.

Specific:
- Identify teacher adoption in each phase by period
- To compare teacher adoption in each phase by period
- Identify findings and points for improvement

### Type of Research

Positivist paradigm, quantitative approach, longitudinal descriptive type.

### Method: Survey Method

Teaching adoption of the SAC Plan will be measured according to the objective and indicator of each phase (Objective Key Result, OKR).

### Instruments and Indicators

- Phase 1. Teacher Preparation Competency Model (QuestionPro)
  - Number of teachers who completed the instrument per period
- Phase 2. Record of accredited courses and personalized counseling from CDA
  - Number of teachers who accredited course(s) by period
  - Number of accredited courses per period
  - Number of personal advising sessions carried out by CDA per period
- Phase 3. FOCUS: Peer-to-Peer Strengthening (QuestionPro)
  - Number of teachers who completed the instrument per period (peer-to-peer visit) out of the target 60% per department
  - Number of teachers who completed the instrument per period (self-evaluation)
- Phase 4. Sharing in Academia (QuestionPro)
  - Number of agreements recorded in the Academy per department per period
- Phase 5. Results Report
  - Integrated report of results of each phase per period

### Population

For each period, all undergraduate teachers who taught competency-based classes were considered:
- Fall 2023: 835 teachers
- Spring 2024: 904 teachers
- Fall 2024: 986 teachers

## Statistical Analysis Plan

Descriptive statistics were used, focusing on:

- Participation records by phase
- Comparison of participation between academic periods
- Identification of adoption by phases

For phases 1 and 3, a real-time results viewer was developed in Power BI, which allowed the DDA to take the pertinent actions.

## Results

The main results by phase are presented below:

### Phase 1. Teacher Preparation

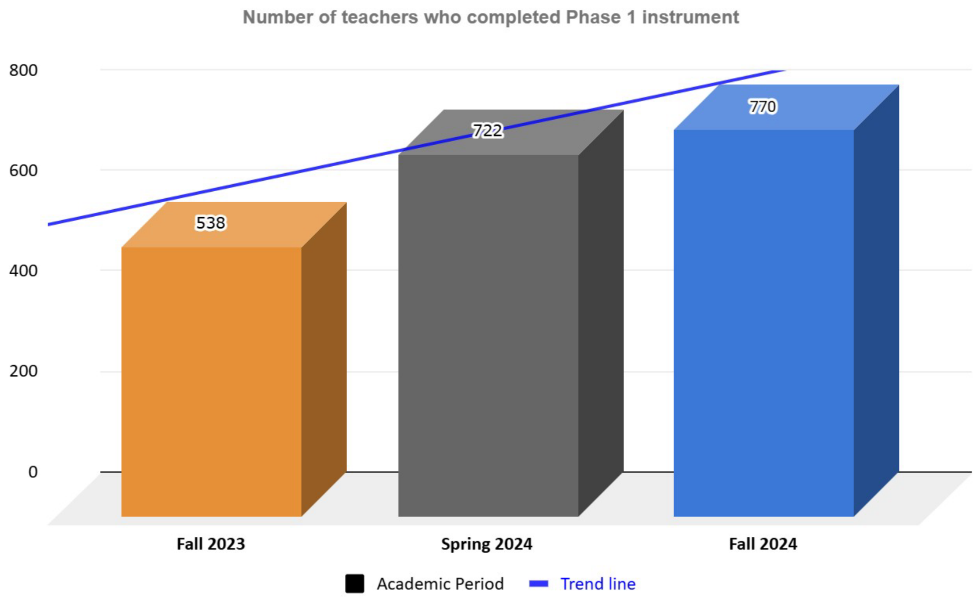
Table 1 shows the number and percentage of teachers who answered the instrument.

**Table 1**
*Phase 1. Teacher Preparation Number of Responses by Period*

| | Phase 1 Teacher Preparation | | |
|---|---|---|---|
| Period | Number of emails sent to teachers | Teachers responded to the instrument | Teachers did not respond |
| Fall 2023 | 835 | 538 | 297 |
| Spring 2024 | 366 | 184 | 182 |
| Fall 2024 | 264 | 48 | 216 |

*Note.* Prepared by the authors with institutional information.

**Figure 2**
*Phase 1. Teacher Preparation Accumulated Number of Teachers Who Completed the Phase 1 Instrument at the End of Each Academic Period*




*Note.* Prepared by the authors with institutional information.

At the end of fall 2024 there were 986 active teachers of which 770 (78%) responded to the instrument. This data made it possible to prioritize courses and counseling during Phase 2.

**Phase 2. Ongoing Support**

Table 2 shows the number and type of accredited courses per period based on the institutional teacher training records (2023-2024).

**Table 2**
*Phase 2. Ongoing Support Number and Type of Courses Accredited per Period*

| Type of course | | Courses accredited by academic period | | | Total by course type |
|---|---|---|---|---|---|
| | | OT'23 | PR'24 | OT'24 | |
| Competency-based education model | | 150 | 162 | 140 | 452 |
| Principles and values | | 43 | 200 | 130 | 373 |
| Instructional Design | Technological resources | 290 | 406 | 266 | 962 |
| | Active learning strategies | 96 | 281 | 104 | 481 |
| | Classroom organization | 35 | 85 | 54 | 174 |
| | Teaching resources | 41 | 86 | 43 | 170 |
| Evaluation and feedback system | | 175 | 150 | 231 | 556 |
| Accredited courses per period | | **830** | **1370** | **968** | **3168** |

*Note.* Prepared by the authors with institutional information.

It is important to mention that there were teachers who took and accredited more than one course per academic period. Table 3 shows the number of unique teachers who took and accredited courses per period.

**Table 3**
*Phase 2. Ongoing Support Number of Unique Teachers Who Accredited Courses per Period*

| | **OT'23** | **PR'24** | **OT'24** |
|---|---|---|---|
| **Unique teachers** | 319 | 365 | 391 |

*Note.* Prepared by the authors with institutional information.

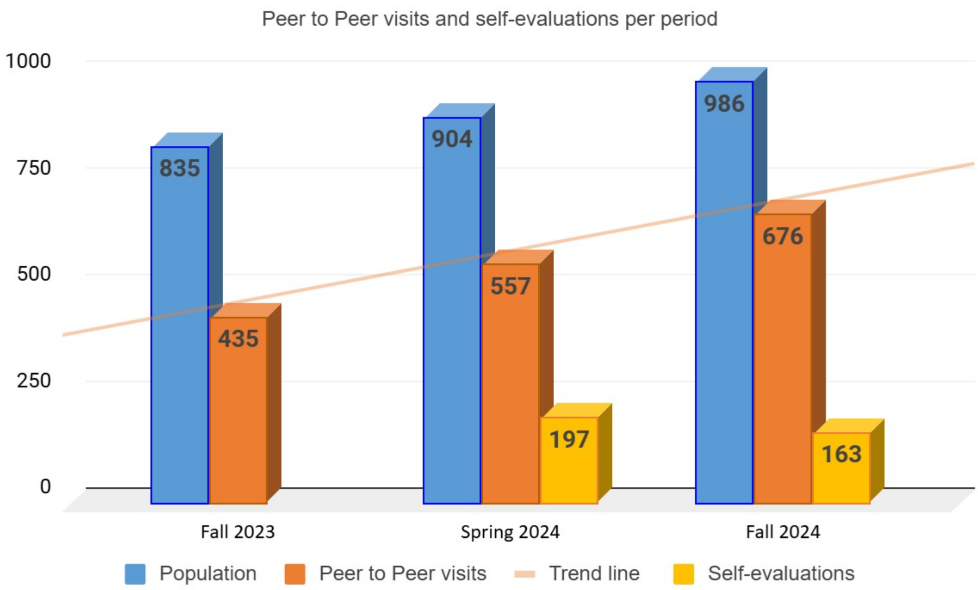
In addition, personalized counseling was provided by expert instructional designers to teachers who requested it.

- Fall 2023: 46
- Spring 2024: 35
- Fall 2024: 35

**Phase 3. FOCUS: Peer-to-Peer Strengthening**

Figure 3 shows the incremental trend in the number of peer to peer visits and self-evaluations performed per period.

**Figure 3**
*Phase 3. FOCUS: Peer-to-Peer Strengthening Visits to Peer and Self-Evaluations per Period*




*Note.* Prepared by the authors with institutional information.

Table 4 shows the number and percentage of peer to peer visits and self-evaluations with respect to the target percentage defined for each academic period.

Institutionally, 60% was determined as the target percentage of peer visits per department.

**Table 4**
*Phase 3. FOCUS: Peer-to-Peer Strengthening Visits and Target Percentage by Academic Period*

| Period | Population | Target 60% of the population | Peer teacher visits n (%) | Self-evaluations |
|---|---|---|---|---|
| Fall 2023 | 835 | 501 | 435 (52%) | N/A |
| Spring 2024 | 904 | 542 | 557 (62%) | 197 |
| Fall 2024 | 986 | 592 | 676 (69%) | 163 |

*In Fall 2023 there were no self-evaluations.
*Note.* Prepared by the authors with institutional information.

At the institutional level, the following percentage was obtained by period:
- Fall 2023: 52%
- Spring 2024: 62%
- Fall 2024: 69%

**Phase 4. Sharing in Academia**

Table 5 shows the number of records of agreements made by Academia in QuestionPro by department and period.

**Table 5**
*Phase 4. Sharing in Academia Number of Agreement Registrations in Academia by Period and by Department*

| Period | Number of records per Academy | Participating departments |
|---|---|---|
| Fall 2023 | 24 | 8 |
| Spring 2024 | 37 | 13 |
| Fall 2024 | 9 | 5 |

*Note.* Prepared by the authors with institutional information.

**Phase 5. Results Report**

DEAC has made two institutional results reports, in Spring 2024 and Fall 2024. In Fall 2023 the DEAC department did not report results in an institutional manner, this was done only as a first report on the implementation of the SAC Plan within the agile team as an input to carry out the pertinent adjustments.

## Conclusion

Technological advances have driven an accelerated transformation of the world, modifying the way in which various activities are carried out and facilitating immediate access to almost any type of information, including that which is naturally considered academic knowledge. Thus, education cannot be limited simply to the transmission of isolated knowledge; it must evolve at the pace of global changes and technological progress, and one way to achieve this is the competency-based educational model. This model promotes in students the comprehensive development of knowledge, skills, attitudes and, some add, values (OECD, 2012, 2018), which will enable future professionals to perform effectively in their personal and professional lives. In turn, this preparation will contribute positively to the economic growth of their country (OECD, 2017), by providing them with the ability to adapt to diverse work contexts (González & Wagenaar, 2003; Villa & Poblete, 2008; Zabalza, 2006).

Because the competency-based educational model has proven to improve the significant learning and professional performance of graduates (Zabalza, 2006), as of 2023, UDEM evolved from an educational model based on objectives to one based on competencies, for which it carried out the adaptation of all its study programs and implemented information and training sessions for all its teachers and academic staff, according to Fullan and Quinn (2016), and Salazar-Morales et al. (2020). In addition to the above, and aware of the importance of teachers' actions, Asunción (2019), highlights the value of empowering teachers through active methodologies, which requires the support of institutional teams committed to their professional development. For this work, with the certainty of the value of applying the agility framework, the Agile Curriculum and Competencies Team was assigned the responsibility of supporting teachers throughout this process.

The SAC Plan was designed with the objective of being the integrating and enabling system that accompanies the faculty to strengthen the implementation of competency-based courses aligned to UDEM's commitment to academic excellence, because as Salazar-Morales et al. (2020), mention, it is natural for faculty to show resistance to change and lack of alignment to institutional policies.

At the end of the third application period, Fall 2024, 78% of the total active faculty completed the Phase 1 Teaching Preparation Instrument. The results obtained provided a diagnosis of how our professors began the implementation of the model, revealing as strengths the knowledge of the Competency-Based Educational Model, disciplinary competencies and transversal competencies, with less mastery of instructional design and the evaluation system. As a result of the application of this instrument, information was obtained on the degree of mastery of each subject, both individually and by department, which made it possible to identify training gaps and feed a *backlog* of professional development needs. This information was key for decision-making at both the individual level (personalized training trajectories) and the institutional level (prioritization of training strategies). The above shows the usefulness of the instrument not only as an individual diagnosis, but also as an input for institutional decision making and to guide efforts in faculty participation in Phase 2 of the SAC Plan.

Regarding Phase 2. Ongoing Support, at the end of the third application period, fall 2024, 3,168 courses were accredited and 116 personalized counseling were attended, which shows the interest and need of teachers to obtain training, especially in the area of instructional design, which accounted for 56% of the accredited courses, including technological resources, active learning strategies, class organization and didactic resources. Likewise, the topics of evaluation and feedback were in great demand.

It was evident that there were teachers who accredited more than one course per academic period, increasing the number of participating teachers in each period. This demonstrates the institutional and professional commitment of teachers to improve their pedagogical practice in light of the new educational approach. The combination of flexible formats and personalized advice worked as an adaptive *onboarding* strategy, facilitating the appropriation of the model from different levels of teaching experience, which reinforces what García and López (2020) pointed out, where personalization and teacher autonomy emerge as key conditions for the sustainable adoption of new methodologies.

With respect to Phase 3. FOCUS: Peer-to-Peer Strengthening, the institutional principles and values described in the academic program were included in the peer teacher observation guide, as it has been evidenced that a quality education should not be limited to the years of academic study, but should enable students to continue learning throughout their adult life (Repetto & Pérez-González, 2003), for this, the development of both disciplinary and transversal competencies is required (OECD, 2018).

The results evidence incremental participation in peer teacher visits. The 1,668 peer teacher visits favor the exchange of good practices and the iterative development of teaching competencies from actual practice. As mentioned by Biggs and Tang (2011), peer feedback favors the use of active methodologies, group management and technological interaction for professional learning, and Vargas et al. (2021), who highlight peer observation as an effective strategy for teacher improvement in the implementation of the competency-based model. In the spring 2024 and fall 2024 periods, in general, 60% of peer visits were exceeded; in addition, 360 class self-evaluations were carried out, with the same guide observing the recording of a class of their own. It is worth mentioning that self-evaluations are not taken into account for the 60% compliance. However, it is pertinent to take into account that the lack of incentives and the time required for adaptation may generate resistance among the faculty (Ramírez & Torres, 2019).

Phase 4. Sharing in Academia, the lowest participation among the phases of the SAC Plan was observed. The results of these meetings showed that collective learning and the systematization of experiences are key to consolidate an active and evolving professional community. It is important to mention that it is not mandatory to hold the closing meeting of the academic period on a certain date, the meetings are carried out in different ways within each academy of each of the 38 departments of the 9 Schools and 2 Faculties of the university, in the same way, each DDA has documented these agreements as they have considered best, so in this phase there is an area of improvement for the following iterations. Despite the low participation in the Fall 2024 meeting registration, this space remains as an essential meeting point to close cycles, share effective practices and generate agreements aimed at improvement. This strategy is aligned with the principles of agile communities of practice, which foster collective intelligence, co-creation and horizontal learning (Salinas, 2012; Tobón, 2013).

Finally, Phase 5. Results Report. At the end of each academic period, the Curricular Development and Administration Management of DEAC prepares a report with the quantitative and qualitative results of each of the 4 phases of the SAC Plan. The report is made by departments grouped by Schools and Faculties. The DDA analyzes it, detects strengths, weaknesses and opportunities, both individually and as a whole, and makes decisions with concrete data. Of the three periods included in this article, only in fall 2023, the report was made by the agile team because it was still in the operation of the SAC Plan. As of spring 2024, the governance of the entire SAC Plan became the responsibility of DEAC. Comprehensively, the results of the SAC Plan reinforce the importance of sustained and structured support strategies such as the communication plan, as well as the active and coordinated participation of each of the areas involved.

Ethical implications have been considered in this article, mentioning quantities and areas and avoiding mentioning personal names, thus safeguarding personal and institutional information.

Based on the data and results obtained, it can be concluded that the SAC Plan has been fundamental in the agile transition of UDEM towards a competency-based educational model. Through continuous iterations under the user-centered approach, which in this case is the faculty, significant progress has been made in the adoption and implementation of this model. The SAC Plan was designed to offer direct value to the user (faculty), so its objective of being an integrating and enabling system that accompanies faculty to strengthen the implementation of competency-based courses aligned with the UDEM's commitment to academic excellence has been achieved.

The amount of faculty participation in the SAC Plan demonstrates a commitment to continuous improvement and adaptation to the new educational model. Phase 2 Ongoing Support and Phase 3 FOCUS: Peer-to-Peer Strengthening, have facilitated the implementation of active and collaborative methodologies, aligned with the competency-based approach. Phase 3 FOCUS: Peer-to-Peer Strengthening and Phase 4 Sharing in Academia, have promoted the construction of communities of reflection on teaching practice, essential for innovation and educational quality. Phase 5 Results Report, has allowed for more agile and contextualized institutional decision-making based on real data.

Based on the analysis by phases and academic periods, learning and opportunities for improvement were identified. By adopting these strategies, the SAC Plan will be strengthened as a dynamic and effective tool for educational transformation, maintaining an agile and successful adaptation to the competency-based educational model.

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## Declaration of Generative AI and AI-Assisted Technologies in Writing Process

The authors declare that no AI or AI-assisted technologies have been used to generate, refine, or correct the content in the manuscript. The ideas, design, procedures, findings, analyses, and discussion are originally written and derived from careful and systematic conduct of the research.

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