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Habilidades blandas y preparación global: alineando la educación en agronomía con los estándares internacionales de certificación

Soft skills and global readiness: aligning agronomy education with international certification standards

Habilidades sociais e prontidão global: alinhando a educação em agronomia com os padrões internacionais de certificação

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Resumen

En el contexto de la educación basada en competencias y la acreditación internacional, la integración de las habilidades interpersonales se ha convertido en un imperativo estratégico para las instituciones de educación superior que buscan mejorar la preparación global de sus graduados. Este artículo explora el papel de las habilidades interpersonales en la internacionalización de la formación en Agronomía, centrándose en cómo las universidades regionales pueden alinear sus programas académicos con los estándares globales de certificación, como los establecidos por la Unión Europea. Basándose en análisis institucionales y literatura internacional, el estudio identifica habilidades interpersonales clave —como la comunicación, el trabajo en equipo, la adaptabilidad, el liderazgo y la competencia intercultural— como fundamentales para la participación y la movilidad internacional. A pesar de los desafíos estructurales y contextuales, la investigación destaca oportunidades para promover las habilidades interpersonales mediante el diseño curricular, la evaluación formativa, los proyectos interdisciplinarios y las estrategias de internacionalización virtual. También subraya la necesidad de visibilizar y medir estas competencias en los resultados educativos. Los hallazgos sugieren que las habilidades interpersonales no solo son vitales para una participación efectiva en entornos académicos y profesionales globales, sino que también sirven como puente entre la relevancia local y la excelencia internacional. Integrar estas competencias en los programas de Agronomía ofrece una vía hacia la internacionalización integral y el éxito sostenible en la acreditación.

Palabras Claves: preparación global; educación agronómica; normas internacionales de certificación.

Abstract

In the context of competency-based education and international accreditation, the integration of soft skills has become a strategic imperative for higher education institutions seeking to enhance global readiness among graduates. This article explores the role of soft skills in the internationalization of Agronomy education, focusing on how regional universities can align their academic programs with global certification standards such as those set by European. Drawing on institutional analysis and international literature, the study identifies key soft skills—including communication, teamwork, adaptability, leadership, and intercultural competence—as foundational to international engagement and mobility. Despite structural and contextual challenges, the research highlights opportunities to

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promote soft skills through curricular design, formative assessment, interdisciplinary projects, and virtual internationalization strategies. It also underscores the need to make these competencies visible and measurable within educational outcomes. The findings suggest that soft skills are not only vital for effective participation in global academic and professional environments but also serve as a bridge between local relevance and international excellence. Embedding these competencies into Agronomy programs offers a pathway to comprehensive internationalization and sustainable accreditation success.

Keywords: global preparedness; agricultural education; international certification standards.

Resumo

No contexto da educação baseada em competências e da acreditação internacional, a integração de habilidades interpessoais se tornou um imperativo estratégico para instituições de ensino superior que buscam melhorar a preparação global de seus graduados. Este artigo explora o papel das habilidades interpessoais na internacionalização da educação agrícola, com foco em como as universidades regionais podem alinhar seus programas acadêmicos com os padrões globais de certificação, como os estabelecidos pela União Europeia. Com base em análises institucionais e literatura internacional, o estudo identifica habilidades interpessoais essenciais — como comunicação, trabalho em equipe, adaptabilidade, liderança e competência intercultural — como essenciais para a participação e mobilidade internacionais. Apesar dos desafios estruturais e contextuais, a pesquisa destaca oportunidades para promover habilidades interpessoais por meio do design curricular, avaliação formativa, projetos interdisciplinares e estratégias de internacionalização virtual. Também destaca a necessidade de tornar essas competências visíveis e medi-las nos resultados educacionais. As descobertas sugerem que as habilidades interpessoais não são apenas vitais para a participação efetiva em ambientes acadêmicos e profissionais globais, mas também servem como uma ponte entre a relevância local e a excelência internacional. A integração dessas competências em programas agrícolas oferece um caminho para a internacionalização abrangente e o sucesso da acreditação sustentável.

Palavras-chave: preparação global; educação agrícola; padrões internacionais de certificação.

Introduction

In the 21st century, the internationalization of higher education has transcended its traditional emphasis on mobility and language proficiency to embrace a broader, competence-based paradigm. Increasingly, international quality assurance frameworks—such as those promoted by the **European Accreditation for Competency-based Education**—recognize that preparing students for global engagement requires more than technical knowledge or academic excellence. Instead, it demands the deliberate cultivation of **soft skills**, which are essential for navigating intercultural environments, interdisciplinary collaboration, and the dynamic realities of international professional practice (Knight, 2008; de Wit et al., 2015).

Soft skills—also known as transversal or socio-emotional competencies—include communication, teamwork, critical thinking, adaptability, leadership, and intercultural awareness. In the context of Agronomy education, these abilities are crucial for fostering **global readiness** among graduates who will be expected to engage with diverse knowledge systems, negotiate sustainable development goals, and contribute to international research and innovation networks (Acker, 2007; FAO, 2014). Yet, in many regional universities—particularly those in Latin America—soft skills remain underrepresented in curricular frameworks and are often not explicitly linked to internationalization strategies.

This article examines how soft skills can be strategically integrated into the internationalization processes of Agronomy programs, using the case of a regional public university in Ecuador. It explores the alignment between institutional practices and the competencies required by international certification schemes. By analyzing current pedagogical approaches, policy frameworks, and areas of improvement, this study argues that embedding soft skills into the educational model is a critical step toward **achieving global standards** while remaining contextually relevant.

Theoretical framework

The growing complexity of global challenges—particularly in disciplines such as Agronomy—has accelerated the transformation of higher education from a knowledge-delivery model to a **competency-based model**, where the development of transversal abilities is as critical as technical expertise (OECD, 2018; de Wit et al., 2015). Within this framework, **soft skills** have emerged as essential components of graduate profiles aligned with international standards.

Definition and Classification of Soft Skills

Soft skills, often referred to as transversal, socio-emotional, or non-cognitive skills, encompass a set of personal and interpersonal abilities that support effective communication, collaboration, problem-solving, adaptability, and leadership. According to Robles (2012), soft skills are "character traits and interpersonal skills that characterize a person's relationships with other people" (p. 453). Unlike hard skills, which are task-specific and measurable, soft skills are **transferable across contexts** and play a crucial role in how individuals interact and contribute within multicultural and interdisciplinary environments.

Key soft skills frequently emphasized in international education frameworks include

- **Communication** (verbal, written, intercultural)
- **Critical and creative thinking**
- **Teamwork and collaboration**
- **Adaptability and resilience**
- **Ethical reasoning and responsibility**
- **Intercultural competence and global awareness** (UNESCO, 2013; Knight, 2008)

These competencies are not only desirable for professional performance, but also form the basis for **global citizenship education**, enabling graduates to engage responsibly and effectively in international contexts (OECD, 2018).

Soft Skills and Internationalization in Higher Education

Internationalization, defined as the intentional process of integrating international and intercultural dimensions into higher education (Knight, 2004), requires the cultivation of soft skills to ensure that students can **navigate diverse learning environments and cross-cultural communication settings**. As Beelen and Jones (2015) note, soft skills are critical enablers of "internationalization at home," particularly in institutions where physical mobility is limited.

In Agronomy education, where students are increasingly expected to work on transnational issues such as food security, climate adaptation, and sustainable agriculture, the integration of soft skills becomes **instrumental for global readiness** (Acker, 2007; FAO, 2014). These skills empower future professionals to communicate scientific ideas across cultures, collaborate in global networks, and lead projects that align with international standards and development goals.

Soft Skills and International Accreditation

Certification frameworks emphasize the alignment of higher education programs with **competency-based, student-centered learning outcomes**, which include both disciplinary and transversal competencies. Soft skills are explicitly referenced in accreditation rubrics as indicators of educational quality, employability, and readiness for international engagement.

For programs seeking such certifications, it is no longer sufficient to include soft skills implicitly. They must be **formally integrated** into curricula, **measured through formative and summative assessment**, and **documented as part of program outcomes**. As such, universities must revise their instructional strategies, learning environments, and evaluation mechanisms to reflect the **intercultural and interdisciplinary nature of modern professional practice**.

Regional Challenges and Opportunities

In Latin American regional universities, soft skills development faces structural challenges: overcrowded curricula, limited faculty training, and a traditional emphasis on disciplinary content. However, initiatives such as collaborative projects, virtual international exchange (COIL), research-based learning, and English language integration offer **innovative pathways for embedding soft skills** into the educational experience (Bernasconi, 2018; Egron-Polak & Hudson, 2014).

In summary, the integration of soft skills into Agronomy education is not only pedagogically sound but also strategically necessary to meet international certification standards. It bridges the gap between local educational realities and global academic expectations, contributing to a more inclusive and effective model of internationalization.

Methodology

This study employs a **qualitative, descriptive case study approach**, aimed at analyzing how soft skills are integrated into the internationalization process of the Agronomy degree program at a regional public university in Ecuador. The methodological design is framed within an **interpretive paradigm**, which prioritizes the understanding of institutional practices, perceptions, and strategic frameworks from a contextual perspective (Merriam & Tisdell, 2016; Yin, 2014).

Research Design and Purpose

The research is exploratory in nature and seeks to provide an in-depth understanding of the role of soft skills in aligning the program with **international certification standards**, analyzing policy documents, self-evaluation reports, and curriculum design, the study assesses how soft skills are

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conceptualized, taught, and assessed within the program, and to what extent they are aligned with global competency frameworks.

Data Sources

The study draws on **institutional documentation** generated between 2022 and 2024, including:

- The self-evaluation report of the Agronomy program
- Curricular matrices and syllabi from key course
- Strategic planning documents related to academic internationalization and accreditation.
- Internal regulations and methodological guides for teaching and learning
- Reports and surveys from the Directorate of Academic Planning and the Office of International Relations

Additional references were extracted from **international frameworks** and **academic literature** related to soft skills and competency-based education.

Data Collection and Analysis

A **document analysis** method was used to examine the presence, structure, and articulation of soft skills within the program's planning and implementation instruments. The analysis followed a two-stage process:

Deductive coding, using categories derived from international frameworks (e.g., communication, critical thinking, collaboration, intercultural competence).

Inductive refinement, identifying emergent subthemes specific to the institutional context, such as academic writing initiatives, student engagement in research, and virtual collaboration practices.

To ensure reliability, data triangulation was applied by comparing curriculum documents with institutional reports and official academic policies. Additionally, interpretive notes were validated with feedback from faculty involved in teaching transversal competencies.

Limitations

The study is limited to document-based analysis and does not include direct interviews or focus groups with students or faculty. However, the comprehensive nature of the internal documentation allows for a valid exploration of how soft skills are positioned within the program's internationalization strategy. Further research is recommended to incorporate student perceptions and measure the actual acquisition of soft skills.

Results and Discussion

1. Visibility and Integration of Soft Skills in the Curriculum

The analysis of curricular documents reveals that soft skills are **present but not explicitly articulated** as core components of learning outcomes. While competencies such as communication, teamwork, and critical thinking appear in course descriptions—particularly in subjects like Methodology of Research, Communication, and English—there is a general **lack of systematic integration and evaluation criteria** aligned with international standards.

This finding echoes previous studies indicating that, in many Latin American institutions, soft skills are treated as implicit or complementary rather than **strategically embedded** in curricular design (Bernasconi, 2018; Knight, 2008). According to these guidelines, transversal competencies must be **measurable, intentional, and evaluable**, and should be clearly linked to program-level outcomes. In the case studied, soft skills are recognized but not fully aligned with a formal competency-based assessment framework.

2. Pedagogical Practices and Experiential Learning

Documented teaching strategies reflect an increasing use of **active and experiential learning approaches** that favor the development of soft skills. For example, the program promotes:

Group work and project-based learning in subjects like Sustainable Agriculture and Agribusiness.

Academic writing exercises in English and research courses.

Use of digital platforms for collaborative activities and student presentations.

These practices are consistent with the principles of **internationalization at home**, which emphasize inclusive access to global competencies without requiring physical mobility (Beelen & Jones, 2015).

However, despite the presence of these practices, there is **no centralized mechanism to track or assess the progression of soft skills across the academic trajectory**, which limits their strategic value for accreditation and graduate profiling.

3. Institutional Efforts and Emerging Initiatives

As part of its self-evaluation process and internationalization agenda, the institution has proposed a number of **initiatives to strengthen soft skills**, such as:

An internal scientific writing contest focused on clarity, academic ethics, and critical thinking.

Strengthening of English courses to include more disciplinary vocabulary and oral presentation skills.

Inclusion of soft skills references in the updated teaching methodology guide (Guía Institucional de Métodos y Estrategias Didácticas, 2025).

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These efforts reflect an increasing institutional awareness of the importance of **socio-emotional and intercultural competencies** for global readiness. However, these initiatives remain **fragmented** and often disconnected from a broader curricular vision. To meet these standards, such initiatives must be **formalized, documented**, and supported by structured evaluation and continuous improvement mechanisms.

4. Gaps and Alignment with International Accreditation

The analysis also identifies key **gaps** in the program's alignment with international certification expectations:

The absence of **explicit indicators** and rubrics for soft skill assessment.

Limited **faculty training** in transversal competency evaluation.

The lack of a coherent **graduate profile** that integrates soft skills as part of global competencies.

These shortcomings highlight the challenge of transitioning from a content-driven model to a competency-based one. Nevertheless, the program has a **strong potential foundation** to build upon, particularly due to its existing pedagogical practices and institutional commitment to internationalization.

Conclusions

The findings of this study demonstrate that soft skills play a fundamental role in advancing the internationalization of Agronomy education, particularly in regional institutions seeking alignment with global certification standards. Although the program under review incorporates active learning strategies and promotes collaborative academic practices, the integration of soft skills remains **partial, informal, and weakly systematized** within the curriculum.

Institutional efforts, including writing competitions, English language reinforcement, and methodological guides, reveal a growing recognition of the value of transversal competencies. However, the lack of explicit outcome-based assessment tools, unified faculty training in soft skills evaluation, and formal alignment with a global graduate profile limit the program's ability to demonstrate compliance with international standards.

The case also illustrates that **internationalization at home**, when strategically designed, provides a viable framework for fostering global competencies—even in contexts with limited mobility opportunities. Nevertheless, for soft skills to become transformative within this process, they must be **visible, intentional, and measurable** across the academic structure.

Recommendations

In order to strengthen the role of soft skills in the internationalization of Agronomy education and progress toward these certifications, the following actions are recommended:

Curricular Formalization

Integrate soft skills explicitly into program-level outcomes, syllabi, and course objectives, following a competency-based model that includes clear indicators and learning evidence.

Assessment Mechanisms

Design rubrics and formative evaluation strategies for transversal competencies such as communication, teamwork, critical thinking, and intercultural awareness, ensuring consistency across the academic cycle.

Faculty Development

Provide ongoing training for academic staff on the design, implementation, and assessment of soft skills, including alignment with international accreditation frameworks and global teaching methodologies.

Institutional Strategy

Establish a transversal soft skills development plan linked to the program's internationalization strategy, ensuring articulation between academic units, mobility opportunities, and quality assurance processes.

Student Engagement and Reflection

Promote student participation in projects and reflective practices (portfolios, self-assessment, peer feedback) that highlight the development of soft skills within learning experiences.

Monitoring and Documentation

Create mechanisms to systematically track, document, and report the development of soft skills at the institutional level, facilitating external validation and continuous improvement processes.

By adopting these measures, the Agronomy program can enhance its contribution to global competence development while meeting the expectations of international accreditation bodies. Moreover, these actions will support a more inclusive and sustainable model of internationalization in regional higher education institutions.

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