

ORIGINAL

The University Substantive Processes: Quality or Quantity

Los procesos sustantivos universitarios: calidad o cantidad

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ABSTRACT

This study aimed to analyze the core university processes in Ecuador—teaching, research, and community engagement—highlighting the tensions between expanding access and maintaining quality. With the growing demand for higher education, universities face challenges in balancing massification with the need to ensure meaningful learning experiences, relevant research, and impactful social contributions. A qualitative design was employed, combining semi-structured interviews, focus groups, and document review. Participants included faculty, students, administrators, and community members, whose perspectives were examined to understand the dynamics, strengths, and limitations of the three university processes. Thematic analysis was conducted to identify convergences and divergences across stakeholders. The findings reveal that while enrollment has expanded, the pressure on limited resources has negatively affected educational quality, particularly in terms of personalized student support and academic follow-up. In research, a notable increase in scientific production was identified, yet a persistent disconnection remains between research topics and the concrete needs of Ecuadorian society. In community engagement, universities have made progress in initiating collaborative projects with local actors, but problems of sustainability, continuity, and systematic evaluation limit their long-term impact. These tensions illustrate the need to strengthen the articulation of the three processes rather than addressing them in isolation. Ecuadorian universities must critically review current evaluation models, promote policies that balance student numbers with educational quality, and reinforce long-term, community-based strategies. Only through stronger integration of teaching, research, and engagement can universities ensure effective contributions to sustainable development and meaningful improvements in educational quality.

Keywords: Core Processes; Educational Quality; University-Community Engagement; Scientific Research.

RESUMEN

El objetivo de este estudio fue analizar los procesos universitarios fundamentales en Ecuador la enseñanza, la investigación y la participación comunitaria poniendo de relieve las tensiones entre la ampliación del acceso y el mantenimiento de la calidad. Con la creciente demanda de educación superior, las universidades se enfrentan al reto de equilibrar la masificación con la necesidad de garantizar experiencias de aprendizaje significativas, investigaciones relevantes y contribuciones sociales impactantes. Se empleó un diseño cualitativo, combinando entrevistas semiestructuradas, grupos focales y revisión de documentos. Entre los participantes se encontraban profesores, estudiantes, administradores y miembros de la comunidad,

cuyas perspectivas se examinaron para comprender la dinámica, las fortalezas y las limitaciones de los tres procesos universitarios. Se realizó un análisis temático para identificar las convergencias y divergencias entre las partes interesadas. Los resultados revelan que, si bien la matriculación ha aumentado, la presión sobre los recursos limitados ha afectado negativamente a la calidad educativa, especialmente en lo que se refiere al apoyo personalizado a los estudiantes y al seguimiento académico. En materia de investigación, se ha observado un notable aumento de la producción científica, pero sigue existiendo una desconexión persistente entre los temas de investigación y las necesidades concretas de la sociedad ecuatoriana. En cuanto a la participación comunitaria, las universidades han avanzado en la puesta en marcha de proyectos de colaboración con actores locales, pero los problemas de sostenibilidad, continuidad y evaluación sistemática limitan su impacto a largo plazo. Estas tensiones ilustran la necesidad de fortalecer la articulación de los tres procesos en lugar de abordarlos de forma aislada. Las universidades ecuatorianas deben revisar críticamente los modelos de evaluación actuales, promover políticas que equilibren el número de estudiantes con la calidad educativa y reforzar las estrategias a largo plazo basadas en la comunidad. Solo mediante una mayor integración de la enseñanza, la investigación y la participación pueden las universidades garantizar contribuciones efectivas al desarrollo sostenible y mejoras significativas en la calidad educativa.

Palabras clave: Procesos Sustantivos; Calidad Educativa; Comunidad Universitaria; Investigación Científica.

INTRODUCTION

Universities are key social institutions that contribute to the economic, social, and cultural development of nations. Their mission is materialized through three core processes: teaching, research, and community outreach, which reflect the integration of higher education functions and their capacity to form proactive and transformative citizens. According to UNESCO, higher education plays a central role in fostering sustainable development, democratizing knowledge, and preparing societies for the challenges of globalization.⁽¹⁾ Similarly, the World Declaration on Higher Education emphasizes that universities are responsible for creating inclusive learning environments, generating knowledge relevant to society, and strengthening human rights, democracy, and peace.⁽²⁾

Globally, higher education has experienced a rapid expansion in recent decades. The World Bank reports that enrollment in tertiary education increased from 19 % of the global population in 2000 to more than 40 % in 2019, reflecting unprecedented access opportunities. However, this growth has also raised concerns about educational quality, with challenges such as high dropout rates, limited faculty preparation, and insufficient resources to support student learning.⁽³⁾ In Latin America, massification has been accompanied by persistent inequalities in access and outcomes, as well as tensions between quantitative indicators and qualitative achievements.⁽⁴⁾

In Ecuador, the expansion of higher education has been particularly significant since the approval of the 2008 Constitution and the Organic Law of Higher Education,⁽⁵⁾ which established free access to public universities and strengthened quality assurance systems. Enrollment rates doubled between 2007 and 2019,⁽⁶⁾ increasing educational democratization. Nevertheless, various studies reveal ongoing challenges such as resource limitations, insufficient infrastructure, and difficulties in ensuring effective student support.⁽⁷⁾ Research policies have promoted greater scientific production, with indexed publications increasing tenfold between 2008 and 2018.⁽⁸⁾ Yet, critics argue that this emphasis on quantity often disconnects research from local development needs.⁽⁹⁾ Outreach processes have also expanded, but they face difficulties in evaluating long-term social impact and ensuring sustainability of community projects.⁽¹⁰⁾

These dynamics demonstrate the tensions between quality and quantity that characterize Ecuadorian higher education. On the one hand, democratization and productivity indicators show remarkable advances. On the other hand, the overemphasis on numerical goals risks overshadowing the true purpose of higher education: to provide meaningful learning experiences, generate socially relevant knowledge, and strengthen the university-community relationship. This situation justifies the need for a deeper analysis of the core processes of universities in Ecuador, in order to understand how they are responding to contemporary social demands and national development goals.

Based on this context, the present study addresses the following research question: How do tensions between quality and quantity manifest in the teaching, research, and outreach processes of Ecuadorian universities?

Accordingly, the objective of this research is: To analyze the core processes of Ecuadorian higher education institutions, examining the balance between quality and quantity, in order to identify challenges and propose strategies that strengthen their contribution to sustainable development.

By focusing on this problem, the study seeks to contribute to the debate on higher education reforms in Ecuador and in the region. The results are expected to provide insights not only for institutional improvement

but also for public policies aimed at ensuring that the expansion of access is matched by improvements in quality, relevance, and social impact.

METHOD

Research Approach

This study employed a qualitative approach aimed at understanding the perceptions, experiences, and dynamics of key actors in Ecuadorian universities. This approach allowed exploration of the tensions between quality and quantity in teaching, research, and outreach. Research Design, an exploratory-descriptive and cross-sectional design was adopted. This design facilitated the analysis of complex and little-explored phenomena while providing a current snapshot of institutional realities.

Population and Sample

The population included university faculty, undergraduate and graduate students, and academic authorities. A purposive, non-probabilistic sampling strategy was applied to select participants with relevant knowledge and experience regarding core university processes. The final sample comprised 12 faculty, 18 students, and 4 authorities. Selection criteria included academic role, experience in teaching or research, and involvement in outreach projects.

Data Collection Techniques

Three techniques were used:

1. Semi-structured interviews with faculty, administrators, and academic authorities, guided by open-ended questions to elicit perceptions of challenges and opportunities.
2. Focus groups with students and community members to capture collective views on teaching quality, research relevance, and outreach impact.
3. Document analysis of accreditation reports, outreach reports, and institutional strategic plans, which provided a normative and organizational framework for interpreting findings.

Data Analysis

Qualitative content analysis was conducted in four stages:

1. Initial coding: Transcripts of interviews and focus groups were reviewed to identify recurring themes.
2. Category development: Codes were grouped into categories such as “tensions between quality and quantity,” “teaching challenges,” “research relevance,” and “impact of outreach projects.”
3. Thematic analysis: Themes were extracted to explain how participants perceived and related to the three core processes.
4. Triangulation: Findings were cross-validated by comparing data from interviews, focus groups, and documents, thereby enhancing credibility and validity.

Variables

Given the qualitative and exploratory nature of this study, variables were not defined in the same way as in quantitative research. Instead, the analysis focused on thematic categories derived from participant perspectives and institutional documents. The core categories were:

- Teaching quality: perceptions of student support, academic resources, and learning outcomes.
- Research relevance and productivity: views on the alignment between scientific production and societal needs.
- Community outreach impact: evaluation of the effectiveness and sustainability of outreach initiatives.
- Tensions between quality and quantity: cross-cutting category examining how expansion of access and productivity requirements affect the core university processes.

These categories guided the coding, analysis, and interpretation of the data.

Research Ethics

This study adhered to fundamental ethical principles. Participants were fully informed about the purpose of the research, the voluntary nature of their involvement, and the confidentiality measures applied to the collected data, providing their written or verbal consent prior to participation. Their identities were protected through the anonymization of transcripts, ensuring that no personal information could be traced back to individuals or institutions. In addition, participants were informed of their right to withdraw from the study

at any stage without consequences. Finally, all data were handled with transparency and used exclusively for academic purposes, guaranteeing that the interpretations remained faithful to the accounts provided by the participants.

RESULTS

Table 1. Application of instrument to Ecuadorian university students

Question	Category	Subcategory	Results
How do you consider the teaching process at your university?	University Education	Quality of the teaching process	Divided opinions: some consider it aligned with the professional profile, others note deficiencies in teaching methodologies.
Do you think quality or quantity of students in the classroom is prioritized?	Educational Management	Focus on quality vs. quantity	Quantity of students predominates over quality, affecting individual attention and meaningful learning.
Have you ever participated in university research projects?	University Research	Student Participation	Insufficient participation due to lack of information, limiting access to research projects.
Do you think the core processes (teaching, research, and outreach) have improved the community?	University Outreach	Community Impact	Improvements are acknowledged in communities; however, there is a perception of lack of long-term sustainability.
Do you believe the research conducted at your university is relevant to local community issues?	University Research	Social Relevance	Mixed opinions: some believe research addresses local problems, others feel it does not align with real community needs.

The findings show divided perceptions of the teaching process, with some students considering it aligned with professional profiles while others identified methodological deficiencies. With respect to classroom management, participants indicated that quantity tends to prevail over quality, limiting personalized attention. Student involvement in research projects was reported as insufficient due to lack of information and access. Regarding outreach, students acknowledged improvements in community engagement but expressed concerns about sustainability. Finally, opinions were mixed on the social relevance of university research, with some perceiving alignment with local needs and others highlighting a disconnect.

Table 2. Administrative staff survey results

Question	Category	Subcategory	Possible Answers / Analysis
How does your university define the quality of the core processes: teaching, research, and outreach?	Institutional Concept	Quality	Definition of quality in teaching, research, outreach
What is the main challenge in the processes of teaching, research, and outreach in Ecuadorian universities?	Challenges in Processes	Core	Challenges in teaching, research, outreach
How does the increase in university enrollment influence the quality of educational processes?	Enrollment Impact	Effects of massification, quality management	Insufficient resource allocation per student affects the quality of education.
How does the university integrate outreach with teaching and research processes?	Outreach Integration in Education	Integration of outreach, social impact	Projects are connected with societal needs and demonstrate relevance to the community.

The results indicate that the definition of quality in teaching, research, and outreach is primarily reflected in universities' mission statements, strategic planning, and institutional objectives. Participants highlighted that the main challenge in core processes relates to budget allocations, which are often misaligned with institutional

needs and hinder improvements in quality. Regarding the impact of enrollment growth, students noted that insufficient resources per capita negatively affect the quality of education. Finally, outreach integration was recognized as a strength, as projects demonstrate relevance to community needs and establish connections between teaching, research, and social impact.

Table 3. Survey of Teachers at Public Universities in Ecuador

Question	Category	Subcategory	Responses
How does your university define the quality of the core processes: teaching, research, and outreach?	Quality in Core Processes	Definition of Quality	Varies by institution; generally aims to ensure comprehensive training based on equity, relevance, and academic excellence, promoting research and outreach.
What is the main challenge in the processes of teaching, research, and outreach in Ecuadorian universities?	Challenges in Core Processes	Challenges in Teaching	Increased enrollment without sufficient resources affects educational quality. Lack of knowledge about active methodologies limits student learning.
In your opinion, how does the increase in university enrollment influence the quality of educational processes?	Enrollment Impact	Enrollment Increase and Quality	Increased enrollment contributes to democratization but creates challenges for infrastructure and quality maintenance.
How do you view the relationship between the number of scientific publications and their relevance to national development?	Relationship Between Quantity and Quality	Quality vs. Quantity	Although scientific publications have increased, they are not always aligned with national and social needs, affecting research relevance.
How does the university integrate outreach with teaching and research processes?	Integration of Outreach with Society	Outreach in Teaching and Research	Integrated mainly through projects that address local and national needs, although evaluation still lacks relevance-based research.
How do you assess the relationship between the quality of core processes and international standards in higher education?	Relation to International Standards	Quality vs. International Benchmarks	Universities strive to align with international standards, but face limitations in resources, infrastructure, and faculty training.
What should be the priority approach to improve educational quality in Ecuador's public universities?	Approach to Improve Educational Quality	Priorities in Educational Quality	Priority should be given to improving infrastructure and continuous faculty training, aligning research with national needs, and strengthening outreach.

The results reveal that the definition of quality in teaching, research, and outreach varies by institution but is generally understood as comprehensive training based on equity, relevance, and academic excellence. The main challenges identified include the effects of increased enrollment without sufficient resources and the limited use of active teaching methodologies. While mass enrollment was recognized as a democratizing factor, it was also associated with difficulties in maintaining infrastructure and educational quality. With regard to research, participants observed that the growth in scientific publications has not always translated into alignment with national development needs. Outreach was described as largely integrated into teaching and research through projects addressing local issues, although concerns remain about the lack of relevance-based evaluation. In relation to international standards, universities were seen as striving for alignment but facing resource and training limitations. Finally, students emphasized that improving infrastructure, promoting continuous faculty training, aligning research with national needs, and strengthening outreach should be prioritized to enhance educational quality in Ecuador's public universities.

DISCUSSION

The findings of this study highlight persistent tensions between quality and quantity in Ecuadorian higher education. The results confirm that while students recognize institutional efforts to align teaching, research, and outreach with mission statements and international benchmarks, significant challenges remain regarding

resources, methodologies, and relevance.

With respect to teaching, students expressed divided opinions regarding the quality of instructional processes, noting both alignment with professional profiles and deficiencies in teaching methodologies. The identification of insufficient use of active learning strategies resonates with the observations of Tello et al.^(7,8), who argued that massification in Ecuador has not necessarily translated into improvements in learning outcomes. Similar dynamics have been described in Latin America more broadly, where rapid enrollment growth has increased access but also strained educational quality.⁽⁴⁾

The results also emphasize the predominance of quantity over quality in classroom management. Students reported that mass enrollment contributes to democratization but creates challenges for infrastructure, individualized attention, and meaningful learning. This aligns with international reports such as UNESCO,⁽¹⁾ which warn that educational expansion without sufficient investment in quality threatens to undermine higher education's transformative role.

In terms of research, the results revealed two key issues: limited student participation and a disconnect between scientific production and societal needs. While government policies have significantly increased the number of publications,⁽⁹⁾ participants perceived that these outputs are not always relevant to national development. This criticism is consistent with Ruiz et al.^(10,11), who caution against overemphasis on quantity-driven indicators that may diminish the social impact of research. Furthermore, limited access to research opportunities for students suggests barriers to cultivating future researchers, undermining the sustainability of academic development.^(12,13,14,15,16)

Outreach was recognized as a positive yet fragile component of core university processes. Students acknowledged improvements and relevance in community projects, but concerns regarding long-term sustainability and evaluation persist.^(17,18,19,20) This finding mirrors the analysis of CACES⁽²¹⁾, which highlights that outreach is often measured by the number of activities rather than their social impact, risking a reductionist view of university-community relations.

Another relevant aspect raised by students relates to the internationalization of higher education. While universities strive to meet international standards, resource and training limitations hinder full alignment.^(22,23,24) This reflects the broader challenge noted by Altbach et al.⁽³⁾, who argue that institutions in developing contexts often face structural barriers to global competitiveness.

Finally, participants suggested clear priorities for improving educational quality: strengthening infrastructure, continuous faculty training, aligning research with national needs, and reinforcing outreach. These proposals are consistent with the objectives outlined in the Organic Law of Higher Education⁽⁵⁾ and echo the World Declaration on Higher Education,⁽²⁾ which emphasizes the integration of teaching, research, and outreach to promote sustainable development.

In summary, the discussion underscores that the challenge for Ecuadorian universities is not choosing between quality and quantity, but integrating both dimensions. Achieving this balance requires policies that go beyond numerical goals and instead strengthen processes in teaching, research, and outreach, ensuring their relevance, sustainability, and social impact.

CONCLUSIONS

The study demonstrated that Ecuadorian universities face persistent tensions between quality and quantity across their core processes of teaching, research, and outreach. While enrollment expansion has democratized access to higher education, it has also strained institutional resources, limiting personalized learning and the effective use of innovative methodologies. In research, although scientific production has increased, limited student participation and the disconnect between publications and national priorities reveal a pressing need to align academic work with social development. Outreach initiatives were acknowledged as relevant, but their long-term sustainability and evaluation remain insufficient.

Addressing these challenges requires policies and institutional strategies that balance quantity with quality. Priority should be given to strengthening infrastructure, promoting continuous faculty training, and developing evaluation models that integrate teaching, research, and outreach. Universities must reinforce their social relevance by producing knowledge connected to local and national needs, while also striving to meet international benchmarks. By doing so, higher education institutions in Ecuador can contribute more effectively to sustainable development and social transformation.

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