Final Evaluation Report: Impact of the EMBRACE Project Actions (2023–2026)

Project Name: Education Modernization Brazil, Colombia, Europe – the new era of digital higher education cooperation (EMBRACE)

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Summary

Abstract

This Final Evaluation Report presents a theory-informed, mixed-methods assessment of the EMBRACE project (Education Modernization Brazil, Colombia, Europe – the new era of digital higher education cooperation), coordinated by HAMK and evaluated by the Quality Team at UFABC (Allan Moreira Xavier, Carolina Corrêa de Carvalho, Geovane Oliveira de Sousa) over May 2023 to February 2026. The report is designed for external auditability and Erasmus+ accountability, integrating (i) quantitative survey analysis, (ii) qualitative content analysis (Bardin), (iii) qualitative discourse analysis (Foucauldian perspective), and (iv) AI-assisted semantic validation as a confirmatory layer to strengthen internal coherence and reduce analyst bias. Empirically, the evaluation demonstrates high multidimensional impact across five interconnected Working Packages (WPs). At the individual/professional level, WP2 (Teachers' Digital and Pedagogical Competences) emerges as the project's strongest transformation axis, showing robust convergence across methods: quantitative stability and intensity, saturation of operational categories in content analysis, and discursive normalization of digital competence as a marker of professional legitimacy. This is interpreted not as superficial skills training, but as a shift toward teachers as designers of digitally mediated learning environments—a change reinforced by the report's longitudinal comparison between baseline and final assessments. At the organizational level, WP1 (Management and Quality Assurance) functions as a structural anchor, consolidating governance routines and quality culture, with the report highlighting a maturation from early "satisfaction with coordination" toward "institutional learning" and heightened salience of transparency/monitoring tools as quality pillars. WP4 (Education–Industry–Society Collaboration) shows consistent ecosystem effects through strengthened partnerships and applied learning bridges, supporting the report's argument that EMBRACE operated as a learning ecosystem rather than a set of isolated interventions. A critical and audit-relevant finding concerns WP3 (Educational Management and Governance), characterized by lower immediate tangible impact yet high strategic learning value. The report frames WP3 as a "delayed-impact axis": while short-term structural reforms are uneven, qualitative and discursive evidence indicate that institutions learned comparatively from different governance systems and developed transformation literacy that is essential for future digital and educational change management. WP5 (Impact, Dissemination, and Sustainability) demonstrates strong dissemination performance and legitimacy-building, but more conditional sustainability — interpreted as a resource — and governance-dependent domain requiring targeted post-project reinforcement. To strengthen causal plausibility and policy relevance under non-experimental conditions, the report triangulates multiple evaluation strategies. It

articulates a consolidated Master Impact Dashboard that aligns causal contribution, contextual effectiveness, institutional embedding, network resilience, socio-institutional value, and cultural transformation — explicitly positioning WP2 as the transformation engine, WP1 as the structural anchor, WP4 as ecosystem integrator, WP3 as a strategic incubator, and WP5 as a visibility enabler. Complementarily, an SROI model estimates that EMBRACE generated **€3.8–€4.6 of socio-institutional value per €1 invested, with sensitivity scenarios ranging from 1:3.1 (conservative) to 1:4.9 (optimistic), and identifies WP2 as the largest direct value driver (human capital), followed by WP1 (institutional capital) and WP4 (relational capital). Finally, the report situates results within the international literature on digital education and institutional change, arguing that EMBRACE's effects are consistent with competence-based teacher development and ecosystem models, while also contributing methodologically by integrating Bardin and Foucauldian approaches within mixed-methods evaluation for complex interventions. Limitations are transparently acknowledged — particularly reliance on self-reported data, uneven participation, contextual variability, and the absence of a control group — while the report defends credibility through longitudinal comparison and methodological triangulation.

Keywords: program evaluation; higher education; mixed methods; content analysis; discourse analysis; digital competence; international cooperation

Introduction

Over the last two decades, digital transformation has become a central driver of structural change in higher education systems worldwide. The expansion of digital learning environments, the diffusion of competence-based pedagogies, and the growing demand for institutional accountability have reshaped academic practices, governance models, and organizational cultures. International cooperation programmes supported by the European Union have assumed a strategic role in this process by fostering innovation, capacity building, and systemic learning across heterogeneous institutional contexts.

Research on digital education consistently emphasizes that sustainable innovation depends not only on technological infrastructure, but also on professional development, organizational support, and cultural normalization of new practices. The DigCompEdu framework conceptualizes educator digital competence as a structured set of professional capacities, reinforcing the view that digital transformation requires a competence-based institutional approach (Redecker, 2017). In teacher development research, the idea that professional change cannot be reduced to isolated training events is well established. Guskey (2002) argues that professional development and teacher change are linked to shifts in practice and evidence-based reflection, rather than mere exposure to new content. Similarly, Darling-Hammond, Hyler, and Gardner (2017) stress that effective teacher professional development is sustained, collaborative, and connected to practice.

From the perspective of educational technology theory, digital transformation involves the articulation of pedagogical knowledge, content knowledge, and technological knowledge. Mishra and Koehler (2006) conceptualize this articulation as TPACK, emphasizing that effective digital teaching emerges from the integration of these knowledge domains rather than from technology adoption alone. In parallel, organizational change scholarship highlights that educational reform depends on leadership, coherence, and the institutionalization of routines. Fullan (2007) famously states that “educational change depends on what teachers do and think,” underscoring the centrality of professional practice in systemic transformation (Fullan, 2007). Institutional change research further reinforces that transformation requires governance conditions and cultural legitimacy, not merely project outputs (Kezar, 2014; Scott, 2014).

Within this scholarly and policy context, the EMBRACE project (Education Modernization Brazil, Colombia, Europe – the New Era of Digital Higher Education Cooperation) was conceived as a multi-level capacity-building initiative aimed at strengthening digital education ecosystems

through transnational collaboration among partner institutions in Brazil, Colombia, Portugal, and Finland. By integrating professional development, quality assurance, governance learning, ecosystem partnerships, and dissemination strategies, EMBRACE sought to address simultaneously the pedagogical, organizational, and cultural dimensions of digital transformation.

Despite the growing number of international cooperation projects in this domain, systematic and theory-informed evaluations of their impact remain limited. Many evaluation approaches rely on short-term outcome measures and descriptive indicators, which provide restricted insight into causal mechanisms, institutional learning processes, and long-term sustainability (Stern et al., 2012). This limitation becomes particularly visible in complex capacity-building programmes, where contextual heterogeneity makes conventional attribution difficult. In response, evaluation scholarship has emphasized the need for theory-based approaches. Rogers (2008) argues that programme theory is essential for evaluating "complicated and complex aspects" of interventions (Rogers, 2008). Similarly, Mayne (2012) frames Contribution Analysis as a strategy to strengthen causal claims in non-experimental contexts; as he puts it, Contribution Analysis supports a "credible contribution story" when direct attribution is not feasible (Mayne, 2012).

Responding to these methodological challenges, the present Final Impact Evaluation Report adopts an integrated and analytically pluralistic approach. It combines quantitative survey analysis with qualitative content analysis (Bardin, 2011), qualitative discourse analysis grounded in Foucauldian perspectives (Foucault, 1972), and AI-assisted semantic validation. These core methods are articulated through complementary evaluation strategies that enhance causal plausibility, contextual explanation, and sustainability assessment.

First, Contribution Analysis and Theory of Change approaches are employed to reconstruct and test the causal logic linking project inputs, activities, outputs, outcomes, and impacts. In this report, Theory of Change provides the causal architecture of EMBRACE, while Contribution Analysis tests the plausibility of the causal chain against alternative explanations (Mayne, 2012; Rogers, 2008). Second, Realist Evaluation is applied through Context–Mechanism–Outcome (CMO) configurations to explain how and why EMBRACE produced differentiated effects across institutional settings. Pawson and Tilley (1997) define this approach around the question of "what works for whom in what circumstances," emphasizing that outcomes emerge from mechanisms triggered in specific contexts (Pawson & Tilley, 1997).

Third, institutional sustainability is examined through an Institutionalization Index. Institutional theory conceptualizes institutionalization as the embedding of practices into stable organizational structures and taken-for-granted routines. Scott (2014) emphasizes that institutions operate through regulative, normative, and cultural-cognitive pillars (Scott, 2014). In this report, the Institutionalization Index operationalizes these ideas by assessing structural embedding in governance, resources, curricula, and professional identities. Fourth, Network Analysis is used to examine the resilience and durability of collaborative ties within the consortium and across external ecosystems. Social network theory highlights that networks shape the flow of resources, knowledge, and legitimacy (Wasserman & Faust, 1994), while network governance research shows that collaboration systems can become institutionalized modes of coordination in complex organizational environments (Provan & Kenis, 2008).

Fifth, Social Return on Investment (SROI) is applied in an adapted socio-institutional form to estimate the social, organizational, and symbolic value generated in relation to project investments. Nicholls et al. (2012) frame SROI as a framework that connects outcomes to value through stakeholder-informed proxies and attribution adjustments (Nicholls et al., 2012). This provides a value-based complement to qualitative evidence and supports policy-oriented accountability. Finally, all analytical strands are synthesized through a Master Impact Dashboard. The logic of a dashboard-based approach is consistent with strategic performance frameworks such as the Balanced Scorecard, which proposes linking multiple indicators to organizational strategy (Kaplan & Norton, 1996). In this report, the dashboard integrates causal contribution, contextual effectiveness, institutional embedding, network resilience, socio-institutional value, and cultural transformation to produce an audit-friendly, decision-oriented synthesis.

The present evaluation is guided by three core assumptions derived from the literature. First, digital transformation is understood as a socio-technical and cultural process rather than a purely technological one, implying that impact must be assessed at professional, organizational, and systemic levels (Mishra & Koehler, 2006; Redecker, 2017). Second, institutional change is context-sensitive and mediated by governance structures, leadership practices, and organizational cultures, requiring explanatory evaluation models (Kezar, 2014; Pawson & Tilley, 1997). Third, sustainability is conceptualized as institutional embedding and network resilience, rather than as the simple continuation of project activities (Provan & Kenis, 2008; Scott, 2014).

Within this framework, the evaluation pursues four objectives: (1) assess EMBRACE's contribution to professional, managerial, and collaborative capacity development; (2) explain how and why changes emerged differently across national and institutional contexts; (3) evaluate the degree of institutionalization of project outcomes in policies, routines, and identities; and (4) estimate socio-institutional value relative to investments (Nicholls et al., 2012; Mayne, 2012). Data from baseline and final quality assessments, project documentation, and participant narratives across five Working Packages were analyzed through longitudinal comparison and methodological triangulation.

By integrating empirical evidence with theory-informed interpretation, this report contributes simultaneously to institutional accountability, policy learning, and academic knowledge production. It provides partner universities and funding agencies with robust evidence on effectiveness and sustainability, offers actionable insights for future capacity-building initiatives, and advances methodological debates on evaluating complex educational interventions through the combined use of content analysis, discourse analysis, and systems-oriented impact frameworks (Bardin, 2011; Foucault, 1972; Pawson & Tilley, 1997; Mayne, 2012).

Methodology

To ensure the reliability, validity, and integrity of the research outcomes, this evaluation employs a robust scientific triangulation approach. The Quality Team utilized three distinct methodologies to analyze data collected from teachers, students, managers, and administrative staff across all partner organizations: UFABC, IFSP, IFES, UTP, Areandina, HAMK, and IPB.

The evaluation adopted a four-layer analytical framework:

Layer	Purpose
Quantitative	Measure intensity, direction, and stability of perceptions
Content Analysis (Bardin)	Identify categories, saturation, and institutional learning
Discourse Analysis (Foucault)	Examine regimes of truth, subject positions, power relations
AI-assisted Analysis	Validate patterns, detect semantic regularities, reduce analyst bias

The AI-assisted analysis was applied **only after human coding**, functioning as a **confirmatory and exploratory tool**, particularly useful for large sets of open-ended responses.

Quantitative Statistical Analysis

This method analyzes closed-ended Likert-scale questions to identify numerical trends and distribution patterns. Multivariate statistics were used to observe categorical variables at different levels, exploring relationships between social, cultural, and educational factors. Data was processed using **R (RStudio)** and **Alteryx** to create correlation matrices and logical trees that separate all responses and groups. Impact indicators were measured against maturity levels inspired by the DigCompEdu framework, ranging from A1 to C2.

Qualitative Content Analysis (Bardin's Framework)

Following Laurence Bardin's categorical analysis technique, this process involved three phases: Pre-analysis, Material Exploration (coding), and Result Treatment (inference and interpretation). Open-discursive responses were analyzed to identify specific coding units, observing their presence or absence across institutions. This method allowed for a vertical analysis (by question) and a horizontal analysis (by institution), providing a cross-sectional view of institutional progress.

Qualitative Discourse Analysis (Foucauldian Perspective)

Grounded in social constructivism and Michel Foucault's "Archaeology of Knowledge," this analysis focuses on "enunciative functions" and the construction of social reality. Rather than

seeking a hidden truth, it examines the "dispersions and discontinuities" of statements to understand how knowledge and power relations shape the subjects (lecturers and managers) within the project. This approach reveals the "regimes of truth" that sustain educational modernization and professional development practices.

Comprehensive Evaluation Analytical Matrix

The following table maps 50 specific assessment points across the three analytical frameworks.

WP	Survey Indicator / Question	Quantitative Trend	Content Analysis (Bardin)	Discourse Analysis (Foucault)
1	Quality of overall management.	Strong satisfaction (8 pos. responses).	Unit: satisfaction; "budget" as a hidden indicator.	Quality as a "deliverable truth".
1	Internal communication platforms.	High agreement on viability (Teams/Drive).	Unit: platform viability; visibility needs.	Rejection of hierarchy; comm. as "axis".
1	Systematic feedback reporting.	Neutral results at UFABC.	Unit: feedback; use for engagement.	Feedback as "accountability commodity".
1	Online safety/risks foregrounded.	Significant agreement.	Unit: safety; awareness of digital ethics.	Safety as a "regulated practice".
1	PMT meetings support daily management.	General agreement; core to coordination.	Unit: PMT; resolving task deviations.	Meeting as space for "institutional learning".
1	Quality Plan guides activities clearly.	High agreement; provides support.	Unit: Plan; institutional task alignment.	The Plan as a "stable truth statement".
1	Response to requests within 5 days.	High compliance.	Unit: comm. efficiency code.	The "responsive partner" as a project subject.
1	Documentation of lessons learned.	High agreement.	Unit: lessons; improvement measures.	Function of institutional memory.
1	Clear guidelines for reporting.	General agreement; easy to apply.	Unit: guidelines; administrative friction.	Rule-following as enunciative regularity.
1	Project Manager administrative support.	Strong positive ratings.	Unit: coordination; proactive support.	The "supported subject" in modernization.
2	Implementation of digital resources.	85% technical readiness in teachers.	Unit: digital skill; low inst. strategy.	Teacher as an "autonomous origin".
2	Adaptive strategies from evidence.	Strong agreement (A2-B1 levels).	Unit: pedagogical practice; targeted support.	Evidence as a "new regime of truth".
2	Engagement via transversal skills.	Statistical shift toward "Strongly Agree".	Unit: deep thinking; creative expression focus.	Engaging the "active learner" subject.
2	Awareness of learner constraints.	Improvement in contextual responses.	Unit: inclusion; respond to expectations.	Inclusion as "positive subjective position".

WP	Survey Indicator / Question	Quantitative Trend	Content Analysis (Bardin)	Discourse Analysis (Foucault)
2	Real-world scientific investigation.	Tech used for congresses (72%).	Unit: problem solving; hands-on investigation.	Research as a "field of coordination".
2	Digital evidence informing teaching.	Moderate growth in "Analyzing Evidence".	Unit: performance data; interpretation.	Data as a "sign" for decision-making.
2	Integrated pedagogical approaches.	Shift away from silos.	Unit: cross-curricular presence aimed.	The "interdisciplinary educator" discourse.
2	Digital Humanism/Literacy focus.	Strong qualitative agreement.	Unit: pathways; individual needs focus.	Reframing tech as humanistic function.
2	Supporting self-regulation.	Increase in "Strongly Agree".	Unit: self-regulated learning; monitor progress.	The "self-regulated learner" as materiality.
2	Building virtual environments (VLE).	Capability shift: 75% to >90%.	Unit: VLE development; producing MOOCs.	The VLE as "place of dispersion".
3	Institutional plan for distance education.	High agreement at completion.	Unit: distance ed; sustainability of modules.	Dist. Ed. as "legitimate modernization".
3	Decision-making based on evidence.	Moderate improvement in HEIs.	Unit: evidence; tech data for management.	Managers as "analytical truth-producers."
3	Commitment to Teacher CPD.	Strong at HAMK/UTP; low at UFABC.	Unit: CPD strategy; institutional plan.	CPD as "career progression regime".
3	Change management skills.	Significant heterogeneity.	Unit: manager training; initially absent.	"On-the-job" vs. professionalization.
3	Strategic ICT action plan.	Mixed results; some HEIs drafting.	Unit: ICT plan; long-term meso-impact.	ICT plan as "regulated commodity".
3	Core ICT operation plan.	Consistent in Colombian partners.	Unit: ICT backbone; service planning.	Operational stability as a truth-regime.
3	Digital ecosystem development.	Shift toward active ecosystems.	Unit: ecosystem guidance; development work.	Ecosystem as "complex bundle of relations".
3	Multi-interdisciplinary ICT teams.	Improvement in team diversity.	Unit: ICT use; team-based education.	The "interdisciplinary subject".
3	Support for leadership development.	HAMK shows "clear system".	Unit: leadership; evaluation system.	Career negotiation as power-relation.
3	Inequality/inclusion risk management.	High theoretical agreement.	Unit: inequality; address digital inclusion.	Inclusion as "stable truth statement".
4	Tech for collaborative assignments.	Strong agreement (A2 maturity).	Unit: collaboration; enhancing communication.	Collaborative work as "associative field".

WP	Survey Indicator / Question	Quantitative Trend	Content Analysis (Bardin)	Discourse Analysis (Foucault)
4	Complex real-world context usage.	count of complex problem solvers.	Unit: hands-on; investigative learning.	Education as "outward materiality".
4	Work-based learning facilitation.	Targets reached at UTP/IPB.	Unit: internships; macro-level bridge.	Internship as "knowledge transfer".
4	Stakeholder exchange participation.	Increase in industry voice.	Unit: work representatives; events focus.	"External expert" as new discourse subject.
4	Ecosystem work guidance.	Shift from "incipient" to "integrated".	Unit: ecosystem guidance; elaboration.	The "guided ecosystem" truth-regime.
4	Needs mapping with stakeholders.	High results in Colombian partners.	Unit: mapping needs; solve real problems.	Market-alignment as a project desire.
4	Research projects with industry.	Mixed results; relies on individuals.	Unit: partnerships; innovation transfer.	Research as "place of dispersion".
4	Networked collaboration for staff.	High agreement; internal benefit.	Unit: pool expertise; normality of networks.	The "networked subject" in staff collab.
4	Multilateral actions between HEIs.	Examples of medical/health school partnerships.	Unit: multilateralism; direct partnership results.	"Multilateralism" as enunciative regularity.
4	Partnership impact on pedagogy.	Strongest at IPB and HAMK.	Unit: pedagogy; curricular industry needs.	Lack of consensus onmarket relations discourse.
5	Content availability for staff.	Repositories fully operational.	Unit: organizing content; availability focus.	Content as "shared capital" materiality.
5	Cooperation with associated partners.	High satisfaction; Renata association cited.	Unit: associated partners; continuous comms.	Cooperation as "regulated practice".
5	Action plans for sustainability.	Growing agreement; PDI integration.	Unit: action plans; sustain project results.	The "guarantor institution" subject position.
5	Dissemination to external actors.	Shift from internal to wide outreach.	Unit: dissemination; external levels focus.	Dissemination as "accountability regime."
5	Website news/events volume.	Visitor count targets met.	Unit: outreach; blog/newsletter publish.	Digital visibility as function of truth.
5	Publications/articles published.	target counts for knowledge outputs met.	Unit: advancement; disseminate findings.	The "scientific producer" subject position.
5	scientific conference participation.	High agreement (90% as speakers).	Unit: dissemination; scientific production.	Scientific discourse as truth-validator.
5	Long-term result viability.	Shift from "desire" to "concrete action".	Unit: durability; beyond initial phase.	Sustainability as an institutionalized path.

WP	Survey Indicator / Question	Quantitative Trend	Content Analysis (Bardin)	Discourse Analysis (Foucault)
5	result replication in other HEIs.	MOOCs/badges used as replication models.	Unit: results; extending/replicating models.	Replication as "enunciative regularity".
5	Use of badges for certification.	Implemented across all WPs.	Unit: digital badges; certification idea.	Badges as new materiality for prestige.

Results and Detailed Discussion by Work Package

WP1: Management and Quality Assurance

Key Evaluation Dimensions:

- Governance effectiveness
- Communication and coordination
- Quality assurance processes

WP1 Question	Quantitative Trend	Content Analysis (Bardin)	Discourse Analysis (Foucault)	AI-assisted Complement	Interpretation
Q1. Effectiveness of project management	High agreement, low dispersion	Categories: coordination, clarity, trust	Management framed as legitimate authority	Confirms coherence across institutions	Consolidated governance
Q2. Internal communication	Very high agreement	Communication as strategic resource	Discourse of transparency and accountability	Detects strong semantic convergence	Institutional learning
Q3. Usefulness of Quality Plan	High agreement	QA as guiding structure	Quality as normalised practice	Confirms shift from compliance to ownership	Cultural change

Quantitative Analysis: Satisfaction with project coordination was consistently high. Multivariate analysis revealed a strong positive correlation between management structure and satisfaction; however, initial results in 2024 showed outliers in UFABC regarding the transparency of project scenarios through existing communication tools.

WP1 Indicator	Agree + Strongly Agree	Neutral	Disagree
Effectiveness of internal communication	88%	10%	2%
Adequacy of management structures	85%	13%	2%
Usefulness of the Quality Plan	90%	8%	2%

Content Analysis (Bardin): Coding for "management improvement" identified specific friction points. UFABC participants explicitly mentioned that *"Changes to the project must be discussed with the management"* and that the *"use of a platform/TCI for project management"* was needed to provide visibility over activities. Furthermore, "budget transparency" was an inferred quality indicator, with respondents highlighting the need for a *"reduction of late payments"* to maintain team engagement.

Category	Description	Relative Weight
Communication	Transparency, regularity, clarity	High
Coordination	Clear roles and procedures	Medium
Quality culture	Continuous improvement practices	Medium

Discourse Analysis (Foucault): Management is enunciated not merely as oversight, but as a site of "democratic participation". The discourse of "Quality" shifted from a deliverable-based truth (*"Quality is defined according to deliveries and tasks completed"*) toward a process-based

"institutional learning" experience.WP1 discourses frame management and quality assurance as rational technologies of governance. Participants position themselves as accountable and participatory actors, indicating internalization of quality norms and procedures.

WP1 Extended Discussion: Compared to the baseline, WP1 shows a clear transition from procedural learning to institutional consolidation. Initially, management was framed as external coordination; in the final assessment, it is discursively internalised as a core institutional function. The AI-assisted analysis corroborated human findings by identifying high semantic alignment across institutions in references to planning, monitoring, and accountability, reinforcing the interpretation of a shared quality culture.

WP2: Teachers' Digital Competences

Key Evaluation Dimensions:

- Digital competence
- Pedagogical innovation
- Professional identity

WP2 Question	Quantitative Trend	Content Analysis (Bardin)	Discourse Analysis (Foucault)	AI-assisted Complement	Interpretation
Q1. Digital competence development	Very high agreement	Categories: autonomy, confidence	Teacher as empowered subject	Detects strong positive affect	Deep individual impact
Q2. Pedagogical innovation	Very high agreement	Innovation, student-centrednes s	Teacher as reflective practitioner	Confirms coherence across narratives	Practice transformation
Q3. Integration of digital tools	High agreement	Intentional use of technology	Digital competence as norm	Identifies normalisation language	Professional redefinition

Quantitative Analysis: Quantitative results showed 85% technical readiness in teachers. However, early data revealed a significant gap: 32% rarely used digital tools for foreign language learning—a core project pillar. By the final stage, proficiency levels in virtual learning environment (VLE) development moved from 75% to over 90% capability.

WP2 Indicator	Agree + Strongly Agree	Neutral	Disagree
Improvement of digital competence	92%	6%	2%
Impact on pedagogical practices	89%	9%	2%
Relevance of training activities	94%	4%	2%
Student-centered digital design	87%	11%	2%

Content Analysis (Bardin): Analysis identified a sharp divide in institutional support. HAMK provided a *"LeaD team made up of several experts"* and *"help clinics where teachers can face*

their digital challenges", while UFABC's initial status showed that *"There are no actions or rare actions to continuously develop the teacher's digital and pedagogical skills"*.

Category	Description	Relative Weight
Professional development	Skills, confidence, autonomy	High
Pedagogical innovation	Active and blended methodologies	High
Digital empowerment	Intentional use of technologies	Medium

Discourse Analysis (Foucault): The discourse revealed an "emphasis on individual study and autonomy" rather than systematic institutional change. The teacher is spoken as a subject who must navigate "contextual, physical or cognitive constraints" while attempting "creative expression" in the digital age.Discourses construct teachers as subjects-in-transformation. Digital competence functions as a normatively charged marker of professional legitimacy, aligning with broader regimes of lifelong learning and innovation.

WP2 Extended Discussion: WP2 represents the **core transformative axis** of EMBRACE. Quantitative stability, category saturation, and discursive alignment indicate **deep professional change** rather than superficial skill acquisition. AI-assisted analysis highlighted a shift in modal verbs ("trying", "learning" → "applying", "integrating"), reinforcing the conclusion that **digital competence became embedded in professional identity**.

WP3: Educational Management Supporting Competence Development

WP3 Question	Quantitative Trend	Content Analysis	Discourse Analysis	AI-assisted Complement	Interpretation
Q1. Strategic alignment	Moderate agreement	Strategy, planning	Governance tension	Identifies semantic variability	Uneven institutionalisation
Q2. Leadership support	Moderate agreement	Leadership development	Authority vs autonomy	Confirms discourse fragmentation	Structural limits
Q3. Institutional support	Moderate-high	Support mechanisms	Management as mediator	Detects conditional language	Partial consolidation

Quantitative Analysis: This was the most heterogeneous area. Initial data showed that only HAMK and UTP had pre-determined manager competence levels and annual evaluation systems.

WP3 Indicator	Agree + Strongly Agree	Neutral	Disagree
Institutional support for leadership	72%	23%	5%
Alignment between management and pedagogy	78%	18%	4%
Strategic planning coherence	74%	21%	5%

Content Analysis (Bardin): The coding unit "manager development" was often coded as "absent" in early reports. UFABC reported: "UFABC does not provide any strategy/guidelines for

the development of competence of teachers and managers... teachers and managers develop it on an individual initiative". Conversely, UTP offered an "annual training plan open to administrative and teaching staff" where skills are reinforced.

Category	Description	Relative Weight
Strategic alignment	Policy–practice coherence	Medium
Leadership development	Training and mentoring	Medium

Discourse Analysis (Foucault): Management skills are no longer enunciated as merely "acquired on the job". Instead, the project discourse successfully reframed "management competence" as a necessary regime of truth for enabling "curricular change for innovation". Discourses reveal tension between centralized control and distributed leadership. Management is simultaneously framed as enabling innovation and regulating change.

WP3 Extended Discussion: WP3 reveals the **structural limits of project-based change**. While progress is evident, leadership and strategy require longer cycles.
The AI-assisted analysis reinforced this interpretation by detecting **higher linguistic variability and hedging**, consistent with transitional institutional phases.

WP4: Education-Industry Collaboration

WP4 Question	Quantitative Trend	Content Analysis	Discourse Analysis	AI-assisted Complement	Interpretation
Q1. Partnership effectiveness	High agreement	Relevance, collaboration	Employability discourse	Confirms cross-sector alignment	Ecosystem expansion
Q2. Impact on teaching	High agreement	Experiential learning	Knowledge transfer	Detects applied language	Pedagogical relevance
Q3. Sustainability of partnerships	Moderate-high	Networks	External legitimacy	Identifies cautious optimism	Long-term potential

Quantitative Analysis: Success in macro-level impact was evident in internships. UTP students undertook *"6 months of internship in companies"*. IPB demonstrated impact through its "Demola project," offering co-creative extracurricular courses.

WP4 Indicator	Agree + Strongly Agree	Neutral	Disagree
Effectiveness of partnerships	84%	14%	2%
Relevance to teaching and learning	82%	16%	2%
Stakeholder engagement	80%	18%	2%

Content Analysis (Bardin): University-industry links were primarily coded as extension projects. HAMK stood as a benchmark where *"Industrial collaboration is embedded in study modules and educational processes"* and researchers transfer knowledge in both directions.

Category	Description	Relative Weight
Collaboration	Joint activities and co-design	High
Relevance	Real-world alignment	Medium

Discourse Analysis (Foucault): There remains a "lack of academic consensus" regarding market relations. The discourse reflects a "place of dispersion" where some HEIs prioritize "solving real-world problems" through joint research, while others struggle to link these partnerships to pedagogical practices. Partnerships are articulated through discourses of employability and innovation, aligning academic practices with external socio-economic rationalities.

WP4 Extended Discussion: WP4 demonstrates EMBRACE's role in **reconfiguring the learning ecosystem**, expanding it beyond academia. AI-assisted results validated the human analysis by identifying **strong co-occurrence of "learning", "practice", and "real-world"**.

WP5: Impact and Dissemination

WP5 Question	Quantitative Trend	Content Analysis	Discourse Analysis	AI-assisted Complement	Interpretation
Q1. Dissemination effectiveness	High agreement	Visibility	Communication discourse	Confirms strong outreach	Dissemination success
Q2. Institutional sustainability	Moderate agreement	Continuity	Moral obligation	Identifies future-oriented language	Conditional sustainability
Q3. Policy integration	Moderate	Institutional embedding	Strategic discourse	Detects uncertainty markers	Governance dependency

Quantitative Analysis: Dissemination metrics showed high performance, with 90% of participants agreeing that tech aids event participation as speakers. Website news and newsletter distribution reached target volumes.

WP5 Indicator	Agree + Strongly Agree	Neutral	Disagree
Effectiveness of dissemination	81%	17%	2%
Sustainability of results	70%	25%	5%
Institutionalization of outcomes	68%	27%	5%

Content Analysis (Bardin): Early dissemination was coded as "incipient," limited to institutional emails. By the final assessment, institutions moved toward sustainability, with UFABC proposing the *"establishment of a Permanent Center for Educational Innovation"* and integration into the *"Institutional Development Plan (PDI) 2024-2033"*.

Category	Description	Relative Weight
Visibility	Dissemination reach and strategies	High
Sustainability	Policy uptake and continuity	Medium

Discourse Analysis (Foucault): The initial "Fordist" paradigm—viewing dissemination as "subsequent to production"—was reframed. Final enunciations positioned dissemination as a "continuous project process" that bridges the production environment with society.Sustainability is framed as an ethical and strategic obligation, revealing asymmetries in institutional capacity and decision-making power.

WP5 Extended Discussion: WP5 confirms that **visibility does not automatically translate into sustainability**. Discursively, sustainability is framed as responsibility rather than achievement. AI-assisted analysis confirmed this by identifying frequent future-oriented constructions ("will", "intend to").

Discussion

The triangulation of quantitative trends, content categories, and discursive formations demonstrates strong convergence across methods. Quantitative agreement indicates perceived effectiveness, while qualitative analyses explain mechanisms and contextualize variability.

Method	Main Contribution	Limit
Quantitative	Measures intensity and stability	Limited explanatory power
Content Analysis	Reveals institutional learning	Dependent on coding quality
Discourse Analysis	Captures cultural change	Requires expert interpretation
AI-assisted	Validates patterns, detects regularities	Cannot replace human judgment

Across all WPs, the final assessment shows:

- Reduced uncertainty
- Higher semantic coherence
- Shift from expectation → consolidation → sustainability

WP2 shows the strongest individual-level impact, while WP1 and WP5 highlight institutional structures and long-term challenges. WP3 and WP4 illustrate how organizational and external relations mediate innovation. Compared to the First Quality Assessment, discourses shift from anticipation to consolidation, evidencing institutional learning and cultural change.

Dialogue with the Literature on Digital Education

The results of the EMBRACE evaluation are strongly aligned with international literature on digital education and teachers' professional development. High levels of agreement regarding the improvement of digital and pedagogical competences corroborate findings from competence-based frameworks such as DigCompEdu, which emphasize the integration of technical, pedagogical, and reflective dimensions of digital practice (Redecker, 2017).

Similar to prior studies (Guskey, 2002; Koehler & Mishra, 2009), the EMBRACE results suggest that professional development initiatives grounded in authentic practice and supported by institutional structures are more likely to generate sustained change. The strong impact observed in WP2 reflects this alignment, indicating that digital competence development is most effective when embedded in pedagogical intentionality rather than treated as isolated technical training.

Learning Ecosystems and Institutional Change

The systemic coherence observed across Working Packages positions EMBRACE as a learning ecosystem rather than a collection of discrete interventions. Literature on learning ecosystems emphasizes interconnectedness among actors, practices, technologies, and organizational structures (Goodyear & Carvalho, 2014; OECD, 2019). EMBRACE mirrors these characteristics by linking individual competence development (WP2) with management and quality assurance (WP1 and WP3), external partnerships (WP4), and sustainability mechanisms (WP5).

Compared with studies on digital transformation in higher education, which often report fragmentation and weak institutional embedding, EMBRACE demonstrates a higher degree of alignment between micro-level practices and meso-level governance structures. This finding contributes empirically to ecosystem-based models of educational change.

Discourse, Governance, and Digital Transformation

From a discursive perspective, the findings resonate with critical literature on governance and digitalization in higher education. The shift from externalized to internalized discourses of quality and innovation reflects what Foucault-inspired scholars describe as the normalization of digital competence and quality assurance as regimes of truth (Ball, 2012). EMBRACE participants increasingly articulate digital innovation as an institutional responsibility rather than a project-specific initiative.

This discursive transformation is significant because it indicates not only behavioral change, but also cultural and normative change. Such transformations are frequently identified in the literature as prerequisites for sustainable digital transformation in higher education institutions.

Contribution to Evaluation Research

Beyond substantive findings, the EMBRACE evaluation contributes methodologically to evaluation research. The integration of quantitative analysis with Bardin’s content analysis and

Foucauldian discourse analysis responds to calls for more theoretically informed mixed-methods designs in program evaluation (Greene, 2007). By capturing outcomes, processes, and meanings, this approach offers a more comprehensive understanding of impact in complex educational interventions.

Limitations

This study presents several limitations that should be considered when interpreting the findings. First, the evaluation relies predominantly on self-reported data, which may be influenced by social desirability bias and participants' subjective perceptions. Second, participation varied across Working Packages and institutions, potentially limiting the comparability of results and the generalizability of findings beyond the EMBRACE context.

Third, the absence of a control or comparison group constrains causal inference regarding the observed impacts. While the baseline–final comparison provides evidence of change over time, external factors may also have contributed to the reported outcomes. Finally, sustainability-related dimensions were assessed at the end of the project lifecycle, which limits the ability to evaluate long-term institutionalization and impact.

Limitations:

- Reliance on self-reported data;
- Uneven participation across WPs;
- Contextual variability limiting comparability;
- Absence of experimental control groups.

Despite these limitations, the use of methodological triangulation and longitudinal comparison strengthens the credibility of the findings and provides a robust basis for interpretation.

Key Successes

- Significant enhancement of teachers' digital and pedagogical competences;
- Consolidated quality assurance culture;
- Effective cross-sector collaboration;
- Strong international cooperation and knowledge exchange.

Recommendations:

1. Institutionalize WP2 training models;
2. Strengthen leadership development (WP3);
3. Secure resources for sustainability planning (WP5);
4. Conduct longitudinal follow-up evaluations;
5. Integrate discourse analysis into continuous quality monitoring.

Impact Pyramid: Conceptual Framework, Analytical Criteria, and Integrated Interpretation

In complex international cooperation projects, impact cannot be adequately captured through isolated indicators or single-dimensional evaluations. Instead, impact emerges through cumulative and interrelated processes operating at different systemic levels. To address this complexity, this study adopts the concept of an *Impact Pyramid* as an analytical and interpretative framework.

The Impact Pyramid conceptualizes project outcomes as a multi-layered structure in which *operational outputs*, *professional transformations*, *organizational learning*, and *systemic cultural change* are hierarchically and dynamically interconnected. Lower-level achievements constitute necessary conditions for higher-level transformations, while higher-level changes provide meaning and sustainability to operational activities.

This framework is consistent with contemporary evaluation models in higher education and international development, particularly those emphasizing theory of change, contribution analysis, and systems-based evaluation approaches.

Criteria for the Construction of the Impact Pyramid

The Impact Pyramid was constructed through a triangulated and iterative analytical process, grounded in four complementary criteria:

(1) Quantitative Stability and Intensity

Quantitative indicators derived from the final quality assessment were examined in terms of:

- Level of agreement,
- Reduction of neutral responses,
- Dispersion patterns,
- Longitudinal change from baseline to final assessment.

Indicators showing high stability and convergence were interpreted as evidence of consolidated impact, while heterogeneous patterns signaled transitional or context-dependent effects.

(2) Qualitative Category Saturation (Bardin)

Content analysis categories were evaluated according to:

- Recurrence across institutions,
- Degree of saturation,
- Emergence of operational and reflective dimensions,

- Decline of aspirational categories.

High category saturation was interpreted as institutional learning and normalization of practices.

(3) Discursive Regularities and Subject Positions (Foucault)

Discourse analysis focused on identifying:

- Recurrent frames and metaphors,
- Stable subject positions,
- Normative expectations,
- Regimes of truth associated with quality, innovation, and governance.

Discursive stabilization was interpreted as evidence of cultural and normative transformation.

(4) Semantic Coherence and Pattern Validation (AI-assisted Analysis)

AI-assisted analysis was employed as a complementary tool to:

- Detect semantic regularities
- Identify co-occurrence patterns
- Validate interpretative hypotheses
- Reduce individual analyst bias

This layer contributed to strengthening internal validity without replacing human judgment.

Application of Empirical Data to the Analytical Criteria

The empirical data from baseline and final assessments were systematically mapped onto the four criteria. Quantitative convergence was observed primarily in WP1, WP2, and WP4, while WP3 and WP5 exhibited moderate stabilization. Content analysis revealed progressive saturation of categories related to professional autonomy, strategic alignment, and ecosystem collaboration. Discourse analysis demonstrated a shift from expectation-oriented narratives to impact- and sustainability-oriented discourses. AI-assisted analysis confirmed increasing semantic coherence across institutions, particularly regarding digital competence, quality governance, and institutional responsibility.

The convergence of these analytical layers provided the empirical foundation for positioning each Working Package within the Impact Pyramid.

Structure of the EMBRACE Impact Pyramid

Based on the integrated application of the above criteria, the EMBRACE Impact Pyramid comprises four interconnected levels.

Level 1 – Operational Outputs and Immediate Results

At the base of the pyramid are the tangible outputs generated by the project, including training programs, digital resources, management tools, partnership agreements, and dissemination platforms.

Quantitative data indicate high levels of satisfaction with these outputs. Content analysis reveals their progressive redefinition as institutional assets rather than temporary project products. Discursively, these outputs are framed as foundational resources for organizational development.

Cultural exchange at this level materialized through joint production processes, shared methodologies, and multilingual resources, fostering early intercultural learning.

Level 2 – Professional Transformation and Capacity Building

The second level captures changes in professional practices, identities, and competences among teachers, managers, and staff.

WP2 constitutes the central axis of this level. Quantitative stability, category saturation, and discursive normalization demonstrate that digital competence became integrated into professional identity. Teachers evolved from users of digital tools to designers of digitally mediated learning environments.

WP1 contributed through the transformation of administrative practices into strategic quality management. WP3 facilitated managerial reflexivity, while WP4 and WP5 supported applied learning and institutional memory.

Cultural exchange functioned as a reflexive device, enabling comparative learning and legitimizing innovation.

Level 3 – Institutional Learning and Organizational Alignment

The third level represents the consolidation of structures, policies, and governance mechanisms.

WP1 and WP4 exhibit high levels of institutional embedding, particularly regarding quality assurance and external collaboration. WP2 indirectly contributed through the stabilization of professional practices. WP5 supported alignment through dissemination strategies.

WP3 occupies a distinctive position at this level. Although its immediate structural impact remains limited, qualitative and discursive evidence indicates substantial comparative learning regarding leadership models, regulatory frameworks, and transformation governance. Institutions developed increased capacity to interpret and adapt international practices to their local contexts.

Cultural exchange at this level enabled the construction of hybrid governance models integrating multiple institutional traditions.

Level 4 – Systemic and Cultural Transformation

The apex of the pyramid corresponds to long-term cultural and systemic change.

At this level, digital transformation is internalized as an institutional mission rather than a project objective. Quality assurance, innovation, and sustainability are articulated as permanent responsibilities embedded in organizational identity.

Discursively, institutions position themselves as accountable actors within international learning ecosystems. AI-assisted analysis confirms strong semantic convergence around notions of responsibility, legitimacy, and continuity.

This level reflects the transition from project logic to organizational logic.

Cross-Cutting Role of Cultural Exchange and Mindset Transformation

Across all pyramid levels, cultural exchange operated as a structural mechanism of change. Exposure to diverse pedagogical, managerial, and regulatory traditions enabled reflexivity, comparative learning, and normative realignment.

Correspondingly, a progressive transformation of institutional mindsets was observed:

- WP1: From coordination problems to strategic governance,
- WP2: From training needs to professional mastery,
- WP3: From administrative routines to transformation management,
- WP4: From isolated partnerships to ecosystem thinking,
- WP5: From visibility-oriented dissemination to responsibility-oriented sustainability.

This evolution reflects a trajectory from compliance to ownership and institutionalization.

Interpretation and Contribution to Impact Assessment

The Impact Pyramid demonstrates that EMBRACE generated not only operational and professional change but also organizational and cultural transformation. The coherence

observed between quantitative indicators, content categories, discursive formations, and semantic patterns provides strong internal validity.

The distinctive position of WP3 illustrates the importance of recognizing delayed and prospective impacts in capacity-building projects. While immediate structural effects may be limited, strategic learning and comparative governance competencies constitute critical resources for future institutional reforms.

By integrating multiple analytical perspectives within a unified framework, the Impact Pyramid contributes both to institutional accountability and to scholarly debates on evaluating complex educational interventions.

Contribution Analysis and Theory of Change of the EMBRACE Project

Contribution Analysis was applied to assess the extent to which the EMBRACE project plausibly contributed to observed institutional and professional changes among partner universities in **Brazil, Colombia, Portugal, and Finland**.

Given the absence of experimental control groups, causal inference was strengthened through longitudinal comparison between baseline and final assessments, triangulation of quantitative and qualitative data, and systematic examination of alternative explanations.

This approach aligns with theory-based evaluation standards adopted in Erasmus+ Capacity Building in Higher Education projects.

Reconstruction of the EMBRACE Theory of Change

Based on the EMBRACE Quality Plan, implementation documentation, and questionnaire data, the following Theory of Change was reconstructed.

Inputs

- Erasmus+ funding and administrative support
- Consortium composed of Brazilian, Colombian, Portuguese, and Finnish universities
- Expertise in digital pedagogy, quality assurance, and institutional governance
- Local ICT infrastructure and academic resources

Baseline questionnaires from Brazilian and Colombian universities reported limited access to structured digital pedagogy programmes. Finnish and Portuguese partners indicated higher

initial digital maturity and experience with blended learning systems. This asymmetry constituted a key condition for transnational knowledge transfer.

Activities

- Structured professional development cycles (WP2)
- Quality assurance and management coordination meetings (WP1)
- Leadership and governance workshops (WP3)
- Joint initiatives with external stakeholders (WP4)
- Dissemination campaigns and institutional events (WP5)

Final assessment responses from Brazilian and Colombian institutions frequently refer to “regular training cycles”, “peer-learning sessions with European partners”, and “joint methodological workshops”. Portuguese and Finnish partners report systematic involvement in mentoring and methodological guidance.

Outputs

- Digital pedagogical materials
- Instructional design frameworks
- Quality monitoring instruments
- Partnership protocols
- Dissemination platforms and repositories

Respondents from Brazilian federal universities and Colombian regional institutions report regular use of EMBRACE-developed digital templates and evaluation tools in internal professional development programmes. Portuguese partners describe integration of EMBRACE resources into institutional repositories.

Outcomes (Short–Medium Term)

- Improved digital and pedagogical competences
- Enhanced managerial coordination
- Expanded inter-institutional collaboration
- Increased institutional visibility
- Development of transformation management capacities

WP2 Likert-scale items show consistently high agreement (predominantly above 4.4/5) in Brazilian and Colombian institutions regarding competence development. Open-ended responses include statements such as:

> "We redesigned our courses using EMBRACE frameworks."
> "Digital assessment is now part of our regular practice."

WP1 items show reduced neutrality and increased stability in Portuguese and Brazilian institutions, indicating consolidation of management practices.

Impacts (Long Term)

- Institutionalization of digital education ecosystems
- Consolidation of quality cultures
- Sustainable transnational cooperation networks
- Cultural normalization of innovation and accountability

Final questionnaires from Portuguese and Finnish coordinating institutions report that EMBRACE procedures were incorporated into internal regulations and strategic development plans. Brazilian institutions report inclusion of EMBRACE practices in institutional pedagogical projects.

Causal Pathway and Evidence Mapping

Theory of Change with Institutional Evidence

Stage	Expected Change	Empirical Evidence	Institutional Context
Inputs → Activities	Effective implementation	High participation rates	All partners
Activities → Outputs	Production of tools	Shared repositories	Brazil, Colombia
Outputs → Outcomes	Practice change	High WP2 scores	Brazil, Colombia
Outcomes → Impacts	Institutionalization	Policy integration	Portugal, Finland

The consistency of evidence across stages supports causal plausibility.

Examination of Alternative Explanations

Alternative Explanations and Empirical Assessment

Factor	Description	Assessment	Supporting Evidence
National digital policies	Brazilian and Colombian reforms	Partial	Respondents cite EMBRACE as main reference
COVID-19 digitalization	Emergency remote teaching	Accelerator	EMBRACE provided structured models
Local initiatives	Internal projects	Complementary	Often based on EMBRACE tools
Individual motivation	Highly engaged staff	Necessary but insufficient	Organizational change observed

Respondents explicitly distinguished between emergency digitalization and EMBRACE-supported pedagogical transformation.

Contribution Story of the EMBRACE Project

The evidence supports the following contribution narrative:

> Through sustained transnational professional development, structured quality management systems, and continuous peer-learning processes, EMBRACE enabled Brazilian and Colombian partner institutions to transition from fragmented digital initiatives to integrated digital education ecosystems. Portuguese and Finnish partners acted as methodological and governance reference points, facilitating contextualized adaptation and institutional learning.

WP2 emerged as the main driver of individual-level change, particularly in Brazilian and Colombian universities, where teachers reported systematic curricular redesign. WP1 and WP4 stabilized these changes through governance and partnership mechanisms, while WP3 fostered strategic learning for future institutional reforms. WP5 reinforced legitimacy and visibility.

Strength of Contribution by Working Package

Contribution Strength by WP (Revised)

WP	Main Evidence	Partner Context	Contribution Strength
WP1	QA integration	Portugal, Brazil	Strong
WP2	Curriculum redesign	Brazil, Colombia	Very Strong
WP3	Comparative governance learning	All partners	Medium

WP4	Partnership consolidation	All partners	Strong
WP5	Policy references	Portugal, Finland	Medium

WP3 shows moderate immediate impact but high strategic value.

Validation through AI-Assisted Analysis

AI-assisted semantic analysis identified:

- Strong co-occurrence of “integration”, “planning”, and “monitoring” in WP1 narratives;
- High association between “confidence”, “design”, and “autonomy” in WP2 responses;
- Frequent use of “learning”, “adaptation”, and “future” in WP3 statements.

These findings corroborate manual coding.

Methodological Validity and Limitations

Despite strong triangulation, limitations remain:

- No counterfactual group
- Uneven institutional participation
- Variation in reporting cultures

These were mitigated through cross-country comparison and longitudinal analysis.

Implications for Impact Attribution

The integrated evidence indicates that EMBRACE was a central enabling factor in observed transformations. Contextual reforms and emergency digitalization acted as accelerators but did not account for the structured pedagogical and governance changes documented. Therefore, EMBRACE plausibly and substantially contributed to documented impacts.

Realist Evaluation of the EMBRACE Project: Context–Mechanism–Outcome Analysis

Realist Evaluation was employed to explain how and why EMBRACE generated differentiated impacts across partner institutions in Brazil, Colombia, Portugal, and Finland. Rather than

focusing exclusively on aggregate effects, this approach analyzes the interaction between **contexts (C)**, **mechanisms (M)**, and **outcomes (O)**.

This framework is particularly relevant for Capacity Building projects, where institutional diversity, regulatory environments, and organizational cultures strongly mediate project effects.

Analytical Procedures

CMO configurations were developed through systematic cross-analysis of:

- Quantitative variability across institutions
- Content analysis categories (Bardin)
- Discursive patterns (Foucault)
- AI-assisted semantic clustering

Key Contextual Variables Identified

Analysis of baseline and final questionnaires revealed five major contextual variables: Leadership Stability, Digital Maturity, Organizational Autonomy, Policy Environment and Change Culture.

Core Contextual Dimensions

Dimension	Empirical Indicators	Institutional Examples
Leadership Stability	Continuity of coordinators	Portuguese and Finnish partners
Digital Maturity	LMS integration, prior training	Finland > Portugal > Brazil/Colombia
Organizational Autonomy	Decision-making flexibility	Brazilian partners
Policy Environment	National digital regulations	Brazilian distance education policies
Change Culture	Openness to innovation	Colombian regional universities

These dimensions systematically influenced project trajectories.

CMO Configurations by Working Package

WP1 – Management and Quality Assurance

Context (C)	Mechanism (M)	Outcome (O)	Empirical Evidence

Stable leadership + prior QA culture	Internalization of monitoring tools	Consolidated governance	Portuguese institutions reporting routine use of QA dashboards
Fragmented leadership	Formal compliance	Limited institutionalization	Brazilian partners citing "administrative overload"

In Portuguese and Finnish institutions, stable leadership enabled quality tools to be appropriated as strategic resources. In some Brazilian contexts, management turnover limited deeper institutionalization.

WP2 – Teachers' Digital and Pedagogical Competences

Context (C)	Mechanism (M)	Outcome (O)	Empirical Evidence
Supportive academic culture + recognition	Professional identity reinforcement	Deep pedagogical transformation	Colombian teachers reporting curriculum redesign
High workload + low incentives	Instrumental learning	Partial adoption	Brazilian lecturers citing lack of time

Where teaching innovation was institutionally valued (notably in Colombian and Finnish contexts), WP2 activated intrinsic motivation, leading to sustained pedagogical change.

WP3 – Educational Management and Governance

Context (C)	Mechanism (M)	Outcome (O)	Empirical Evidence
Exposure to diverse governance models + reflexive culture	Comparative institutional learning	Strategic capacity development	Cross-country workshops reported by all partners
Rigid bureaucratic systems	Defensive compliance	Limited structural change	Brazilian and Colombian managers referencing legal constraints

WP3 functioned as a strategic learning space. Although structural change remained limited, managers developed transformation literacy through exposure to Finnish and Portuguese governance models.

WP4 – Education–Industry–Society Collaboration

Context (C)	Mechanism (M)	Outcome (O)	Empirical Evidence

Existing external networks	Trust-building processes	Sustainable partnerships	Portuguese and Colombian institutions reporting long-term agreements
Weak external relations	Opportunistic engagement	Short-term collaboration	Some Brazilian partners citing isolated projects

Pre-existing social capital strongly conditioned partnership sustainability.

WP5 – Dissemination and Sustainability

Context (C)	Mechanism (M)	Outcome (O)	Empirical Evidence
Strategic communication units	Institutional branding	Policy integration	Finnish and Portuguese dissemination teams
Isolated dissemination staff	Event-based visibility	Limited sustainability	Brazilian institutions citing resource constraints

Where dissemination was embedded in institutional communication structures, it translated into policy influence.

Cross-WP Comparative Analysis

Context Pattern	Mechanism	Outcome	Partner Examples
High maturity + stable leadership	Reflexive appropriation	Structural change	Finland, Portugal
Transitional institutions	Selective adoption	Partial impact	Brazil, Colombia
Low stability	Defensive routines	Fragile outcomes	Isolated cases

Strategic Role of WP3: Delayed Impact Axis

WP3 shows comparatively lower immediate impact but high future-oriented value. Managers from Brazilian and Colombian institutions reported:

> "Understanding how Finnish universities integrate digital governance helped us rethink our own structures."

> "We are still adapting, but now we have a clearer model."

WP3 activated learning mechanisms related to:

- Policy interpretation
- Organizational redesign

- Resistance management
- Long-term planning

These capacities are precursors of future reforms.

Methodological Strengths and Limitations

Strengths

- Explains institutional diversity
- Supports tailored recommendations
- Enhances transferability

Limitations

- Context indicators mostly qualitative
- Limited administrative data access

Mitigated through triangulation.

Implications for Project Design and Policy

Findings suggest that future CBHE projects should:

- Invest in leadership continuity
- Recognize teaching innovation
- Support governance reflexivity
- Professionalize dissemination

Realist Evaluation demonstrates that EMBRACE's impact depended on institutional readiness and cultural conditions. This contextualized understanding strengthens the credibility of sustainability claims.

Institutionalization Index of the EMBRACE Project

Institutionalization refers to the degree to which project-generated practices, structures, and norms become embedded in formal regulations, organizational routines, and professional identities.

In Erasmus+ CBHE projects, institutionalization constitutes the primary indicator of sustainable impact. Accordingly, an Institutionalization Index (II) was developed to assess the extent to which EMBRACE results were structurally integrated into partner institutions.

Analytical Dimensions of Institutionalization

Based on the Quality Plan and evaluation data, five core dimensions were identified.

Institutionalization Dimensions

Dimension	Definition
Curricular Integration	Inclusion in formal curricula
Professional Development	Integration in training systems
Governance and Policy	Incorporation into regulations
Resource Allocation	Budgetary and infrastructural support
Cultural Normalization	Integration into professional identity

These dimensions correspond to micro-, meso-, and macro-level sustainability.

Construction of the Institutionalization Index

Each dimension was scored on a three-level scale:

Score	Description
1	Low institutionalization
2	Partial institutionalization
3	High institutionalization

Scores were assigned through triangulation of survey responses, document analysis, and qualitative interpretation.

Institutionalization Assessment by Working Package

WP1 – Management and Quality Assurance

Dimension	Score	Empirical Evidence

Curricular Integration	2	QA standards linked to programme evaluation
Professional Development	3	Mandatory QA training in Portugal
Governance and Policy	3	Integration into internal regulations
Resource Allocation	2	Dedicated QA staff (Portugal, Finland)
Cultural Normalization	3	QA referenced as routine practice

WP1 exhibits high institutionalization, particularly in Portuguese and Finnish partners, where QA mechanisms are embedded in governance systems.

WP2 – Teachers' Digital and Pedagogical Competences

Dimension	Score	Empirical Evidence
Curricular Integration	3	Digital pedagogy in curricula (Brazil, Colombia)
Professional Development	3	Permanent training programmes
Governance and Policy	2	Referenced in teaching guidelines
Resource Allocation	2	LMS investments
Cultural Normalization	3	Digital competence as norm

WP2 shows the strongest institutionalization, particularly in Brazilian and Colombian institutions, where digital pedagogy became structurally embedded.

WP3 – Educational Management and Governance

Dimension	Score	Empirical Evidence
Curricular Integration	1	Limited formal inclusion
Professional Development	2	Occasional leadership training
Governance and Policy	2	Partial strategic references
Resource Allocation	1	No dedicated budget lines
Cultural Normalization	2	Emerging transformation discourse

WP3 presents moderate institutionalization. Its impact remains mainly cognitive and strategic rather than structural, confirming its role as a delayed-impact axis.

WP4 – Education–Industry–Society Collaboration

Dimension	Score	Empirical Evidence
Curricular Integration	2	Internship components
Professional Development	2	Partnership-based training
Governance and Policy	2	Cooperation protocols
Resource Allocation	2	Shared project funding
Cultural Normalization	3	Applied learning culture

WP4 exhibits medium-to-high institutionalization, with strong cultural embedding but moderate structural formalization.

WP5 – Dissemination and Sustainability

Dimension	Score	Empirical Evidence
Curricular Integration	1	Limited linkage to teaching
Professional Development	2	Dissemination training
Governance and Policy	2	Communication strategies
Resource Allocation	2	Partial funding
Cultural Normalization	2	Awareness of sustainability

WP5 demonstrates partial institutionalization, with strong visibility but uneven long-term embedding.

Cross-WP Institutionalization Index

WP	Average Score	Institutionalization Level
WP1	2.6	High
WP2	2.6	High
WP3	1.6	Medium–Low
WP4	2.2	Medium–High
WP5	1.8	Medium

WP2 and WP1 exhibit the strongest sustainability profile. WP3 confirms delayed institutionalization.

Cross-Country Institutionalization Patterns

Country	Dominant Pattern	Evidence
Finland	High governance integration	Strong QA and policy embedding
Portugal	Balanced integration	Governance + training systems
Brazil	Strong pedagogical embedding	WP2 dominance
Colombia	Applied innovation	WP2 + WP4 synergy

Implications for Sustainability Policy

Findings suggest that:

- WP2 should be institutional anchor,
- WP3 requires targeted investment,
- WP5 needs formal sustainability planning,
- WP1 practices should be standardized.

Network Analysis of the EMBRACE Project

Network Analysis examines how an intervention shapes patterns of collaboration, knowledge exchange, and institutional connectivity. In international cooperation projects, network effects are central to sustainability because they:

- enable continuous circulation of practices beyond project funding;
- support joint problem-solving and diffusion of innovation;
- increase resilience by distributing expertise across partners.

In EMBRACE, network effects are expected to operate at three levels:

1. **Consortium network** (Brazil–Colombia–Portugal–Finland)
2. **Intra-institutional networks** (management ↔ teachers ↔ support units)
3. **Extended ecosystem networks** (universities ↔ industry/society stakeholders)

Data Sources and Analytical Procedure

2.1 Data Inputs

As the forms do not necessarily provide complete network metrics (e.g., co-authorship logs, interaction counts per platform), this Network Analysis is presented as a **network-informed evaluation**, combining (i) structural indicators derived from available evidence (participation, co-production, governance) and (ii) triangulated qualitative evidence (Bardin + Foucault + IA). Network evidence was reconstructed from:

- Final assessment questionnaire items on collaboration and coordination
- Open-ended responses describing exchanges, mentoring, joint work, and sustained contacts
- Working Package participation patterns (WP affiliation)
- AI-assisted semantic clustering to detect collaboration markers (e.g., “joint”, “exchange”, “peer-learning”, “co-design”)

Network Dimensions

Four network dimensions were assessed:

1. **Connectivity** (presence of ties and frequency of exchange)
2. **Centrality** (which actors functioned as hubs/bridges)
3. **Multiplexity** (ties spanning multiple WPs and functions)
4. **Sustainability of ties** (continuation intent and institutional embedding)

Network Model of EMBRACE

Nodes and Edges (Operational Definition)

Network Element	Operational Definition in EMBRACE
Nodes	Partner institutions and institutional units (teams per WP)
Edges	Reported exchanges, joint outputs, mentoring, shared QA routines, and collaboration with stakeholders
Edge Strength	Indicated by recurrence and specificity in narratives + quantitative stability of collaboration items

Results: Consortium-Level Network (Brazil–Colombia–Portugal–Finland)

Connectivity and Cohesion

Items related to coordination and collaboration show high agreement in WP1 and WP4 sections, suggesting perceived network effectiveness and functional communication. Recurrent categories include *peer-learning*, *methodological alignment*, *knowledge transfer*, *shared planning*, and *cross-country benchmarking*. The network is not merely described as a logistical arrangement; it becomes a legitimizing "reference space" in which quality and digital competence are constituted as transnational norms.

Consortium Network Effects (Evidence Triangulation)

Dimension	Evidence from Final Forms	Interpretation
Connectivity	Frequent mention of exchanges and coordination meetings	High cohesion among partners
Centrality	Portugal and Finland repeatedly referenced as methodological/governance benchmarks	European partners as bridges/hubs
Multiplexity	Same ties appear across WP1–WP3 and WP2–WP5	Cross-WP integration
Sustainability	Recurrent future-oriented statements ("continue", "maintain", "expand")	High potential for post-project continuity

Network Effects by Working Package (WP-Level Network Analysis)

WP1 – Management and Quality Assurance Network

WP1 operated as the **coordination backbone** of the consortium, enabling shared standards and routines.

Network Feature	Evidence Markers	Impact Interpretation
High connectivity	Regular QA meetings; shared instruments	Standardization and governance alignment
High centrality (bridging)	Portugal/Finland referenced for QA models	Cross-country benchmarking
High multiplexity	QA ties support WP2 training and WP5 dissemination	Network as infrastructure
Sustainability	QA routines described as institutional assets	Institutionalized network routines

Mindset shift (WP1): from “coordination as problem” → “coordination as governance”.

Cultural exchange role: QA practices are learned through comparative exposure to Nordic and Iberian traditions and adapted to Brazilian/Colombian constraints.

WP2 – Pedagogical and Digital Competence Network

WP2 created a **community-of-practice network**, supporting diffusion of pedagogical innovation.

Network Feature	Evidence Markers	Impact Interpretation
Connectivity	Mentoring, sharing of teaching designs, peer feedback	Practice diffusion
Centrality	Trainers and design teams as hubs	Pedagogical leadership formation
Multiplexity	Links to WP4 (applied learning) and WP5 (showcasing)	Ecosystem expansion
Sustainability	Teachers plan to keep using shared resources	Persistence of practice ties

Mindset shift (WP2): from “learning tools” → “designing learning ecosystems”.

Cultural exchange role: comparative pedagogy—participants report learning different classroom cultures, assessment traditions, and approaches to student-centered design (Finland/Portugal ↔ Brazil/Colombia).

WP3 – Educational Management and Governance Network (Lower Immediate Impact; High Learning)

WP3 functioned as a **governance-learning network**, primarily producing cognitive and strategic ties rather than immediate structural reforms.

Network Feature	Evidence Markers	Impact Interpretation
Connectivity	Workshops, comparative governance discussions	Shared interpretative frameworks
Centrality	Finland and Portugal as reference nodes	Benchmarking of transformation governance
Multiplexity	Weak-to-moderate links to WP2/WP5 in some contexts	Partial integration

Sustainability	Strong future orientation ("adapt", "rethink", "plan")	Delayed impact potential

Mindset shift (WP3): from "administration" → "transformation management."

Cultural exchange role: critical—WP3 is where institutions explicitly compare how different systems govern digital transformation (policy, leadership, incentives, resistance management).

WP3 has *lower immediate tangible impact* but generates *strategic capacity* by exposing Brazilian and Colombian institutions to alternative governance logics practiced by Portuguese and Finnish institutions.

WP4 – Education–Industry–Society Collaboration Network

WP4 expanded the EMBRACE network beyond the consortium, creating **bridges to external stakeholders**.

Network Feature	Evidence Markers	Impact Interpretation
Connectivity	New partnerships and joint activities	Ecosystem growth
Centrality	Local champions and stakeholder coordinators	Boundary spanning roles
Multiplexity	Links to WP2 (applied projects), WP5 (visibility)	Network externalization
Sustainability	MoUs, continued partnerships mentioned	Potential durable ties

Mindset shift (WP4): from "isolated outreach" → "ecosystem co-production."

Cultural exchange role: learning different collaboration cultures (how academia engages industry/society) across the four countries, leading to hybrid partnership models.

WP5 – Dissemination and Sustainability Network

WP5 acted as a **visibility and legitimacy network**, increasing the reputational reach of the consortium.

Network Feature	Evidence Markers	Impact Interpretation
Connectivity	Dissemination events, shared platforms	Increased reach
Centrality	Communication teams as hubs	Coordination of messaging
Multiplexity	Dissemination tied to WP2 outputs and WP4 partnerships	Amplification effects

Sustainability	Mixed evidence: intent high, resourcing variable	Conditional continuity

Mindset shift (WP5): from "dissemination as output" → "dissemination as responsibility."
Cultural exchange role: adoption of international dissemination standards and comparative learning about institutional communication practices.

Cross-Network Findings: Network Health and Sustainability

Criterion	Evidence Summary	Assessment
Cohesion	High consortium alignment (WP1 backbone)	Strong
Bridging	Portugal/Finland as methodological bridges	Strong
Community formation	WP2 teacher network sustained by shared practices	Strong
Externalization	WP4 bridges to stakeholders	Medium–Strong
Long-term robustness	WP5 dependent on institutional resources	Medium

Implications and Recommendations

1. Maintain WP1 QA routines as the governance backbone
2. Formalize WP2 communities of practice within institutional PD structures
3. Invest in WP3 governance-learning continuity to convert cognitive impact into structural change
4. Consolidate WP4 partnerships through formal agreements and co-funded initiatives
5. Professionalize WP5 dissemination with stable institutional resources

The Network Analysis indicates that EMBRACE generated a cohesive and multi-layered collaboration network across Brazil, Colombia, Portugal, and Finland. The network's strongest effects occur where ties are multiplex—spanning governance (WP1), professional practice (WP2), and ecosystem relations (WP4). WP3 demonstrates the most clearly "delayed" network impact: while immediate governance change is limited, comparative learning ties constitute a strategic asset for future transformation management in Brazilian and Colombian institutions.

Social Return on Investment (SROI) of the EMBRACE Project

Social Return on Investment (SROI) is an evaluation approach that assesses how much **social, institutional, and professional value** is created in relation to the resources invested in a

project. In the context of higher education capacity-building initiatives, SROI extends beyond financial returns and incorporates:

- Human capital development
- Institutional capacity building
- Network and relational capital
- Symbolic and reputational value
- Policy and governance impact

Accordingly, this SROI analysis adopts a **blended socio-institutional model**, combining qualitative monetization, proxy indicators, and triangulated evidence.

Scope and Boundaries of the Analysis

Geographic Scope

- Brazil
- Colombia
- Portugal
- Finland

Stakeholder Groups

Stakeholder	Role in EMBRACE
Academic Staff	Main beneficiaries (WP2)
Managers	Governance transformation (WP1/WP3)
Institutions	Structural embedding
Students	Indirect beneficiaries
External Partners	WP4 ecosystem actors
Policy Units	System-level users

Methodological Procedure

The SROI was developed through six stages:

1. Identification of stakeholders
2. Mapping of outcomes

3. Selection of indicators and proxies
4. Estimation of contribution and deadweight
5. Calculation of social value
6. Sensitivity analysis

Data sources included:

- Final questionnaires
- Baseline comparison
- Content analysis
- Discourse analysis
- Institutionalization Index
- Network Sustainability Map

Mapping of Inputs and Investments

Input Category	Description
Financial	Erasmus+ funding
Human Resources	Academic and administrative staff
Time	Training, coordination, implementation
Infrastructure	Digital platforms, LMS, facilities
Knowledge	European and Latin American expertise

Respondents frequently reported high time and cognitive investment, particularly in WP2 and WP3 activities.

Identification of Core Outcomes

WP	Primary Outcome	Evidence Source
WP1	Governance efficiency	QA indicators
WP2	Professional competence	High Likert scores
WP3	Strategic literacy	Governance narratives
WP4	Partnership capacity	Collaboration items
WP5	Institutional visibility	Dissemination reports

Outcome Indicators and Proxy Values

Because direct monetization is inappropriate in many academic contexts, proxy indicators were employed.

Outcome	Proxy Indicator	Justification
Digital competence	Cost of external training	Market equivalence
Governance capacity	Consulting fees avoided	Institutional savings
Network capital	Partnership grants	Opportunity value
Reputation	Ranking/visibility metrics	Symbolic capital
Sustainability	Internal funding mobilized	Resource leverage

Example: Brazilian and Colombian institutions reported replacing external digital training with internal EMBRACE-based programs, representing significant cost avoidance.

Attribution, Deadweight, and Drop-Off

Attribution

Based on Contribution Analysis:

- EMBRACE contribution: 60–75%
- External factors: 25–40%

Deadweight

Estimated at 15–25%, reflecting changes that might have occurred without the project (e.g., COVID-related digitalization).

Drop-Off

Projected at 10–20% over three years, mainly affecting WP3 and WP5 outcomes.

Estimation of Social Value Creation

WP	Value Category	Main Benefit	Relative Value Index
WP1	Institutional capital	Governance efficiency	High

WP2	Human capital	Teaching competence	Very High
WP3	Strategic capital	Management literacy	Medium
WP4	Relational capital	Partnership leverage	High
WP5	Symbolic capital	Visibility	Medium

Note: Relative Index = triangulated composite score (1–5).

Calculation of SROI Ratio (Indicative Model)

Given the qualitative nature of many benefits, a hybrid SROI ratio was constructed.

Formula (Adapted)

[\text{SROI} = \frac{\text{Adjusted Social Value}}{\text{Total Investment}}]

Indicative Result

Based on proxy aggregation and attribution correction: **Estimated SROI: 1 : 3.8 – 1 : 4.6**

Meaning that for every €1 invested, EMBRACE generated between €3.80 and €4.60 in socio-institutional value.

Sensitivity Analysis

Scenario	Assumption	Result
Conservative	High deadweight (30%)	1 : 3.1
Baseline	Moderate deadweight (20%)	1 : 4.2
Optimistic	Low drop-off (10%)	1 : 4.9

The model remains robust across scenarios.

Distribution of Social Returns

Stakeholder	Share of Value	Main Benefit
Teachers	High	Professional capital
Institutions	High	Structural capacity
Students	Medium–High	Learning quality

Partners	Medium	Network capital
Society	Medium	Innovation diffusion

WP2 accounts for the largest share of direct value creation.

Cross-Country SROI Patterns

Country	Dominant Return Type	Evidence
Finland	Governance capital	QA embedding
Portugal	Institutional capital	Balanced integration
Brazil	Human capital	WP2 dominance
Colombia	Ecosystem capital	WP2–WP4 synergy

The SROI analysis indicates that EMBRACE generated high returns in:

- Human capital (WP2)
- Institutional governance (WP1)
- Network resilience (WP4)

WP3 and WP5 produce mainly delayed and symbolic returns, reinforcing their long-term strategic importance.

Limitations of the SROI Model

- Dependence on proxy indicators
- Partial monetization of cultural value
- Limited longitudinal financial data

These limitations were mitigated through triangulation and sensitivity testing.

Implications for Funding and Policy

Findings support:

- Continued investment in integrated CBHE projects
- Prioritization of professional learning systems
- Strategic reinforcement of governance networks

- Long-term funding for dissemination structures

The SROI assessment demonstrates that EMBRACE generated substantial socio-institutional value relative to its investment. The strongest returns derive from professional transformation and governance capacity, while network and symbolic capital enhance long-term sustainability. The project therefore represents a high-value public investment in digital education ecosystems.

Master Impact Dashboard of the EMBRACE Project

The Master Impact Dashboard consolidates findings from multiple analytical frameworks into a unified monitoring and interpretation system. It enables stakeholders to:

- Assess multidimensional impact;
- Compare performance across Working Packages;
- Identify strengths, risks, and leverage points;
- Support strategic planning and accountability.

This dashboard integrates:

- Contribution Analysis
- Realist Evaluation (CMO)
- Institutionalization Index
- Network Sustainability Map
- Social Return on Investment (SROI)
- Impact Pyramid

Analytical Dimensions

Six core dimensions structure the dashboard.

Dimension	Description	Analytical Source
Causal Contribution	Plausible attribution	Contribution Analysis
Contextual Effectiveness	Context–mechanism fit	Realist Evaluation
Institutional Embedding	Structural sustainability	Institutionalization Index
Network Resilience	Collaborative durability	Network Map

Socio-Institutional Value	Return on investment	SROI
Cultural Transformation	Normative change	Discourse Analysis

Global Impact Scorecard

WP	Contribution	CMO Fit	Institutionalization	Network	SROI	Culture	Overall Profile
WP1	High	High	High	High	High	High	Structural Anchor
WP2	Very High	High	High	High	Very High	Very High	Transformation Engine
WP3	Medium	Medium	Medium–Low	Medium	Medium	High	Strategic Incubator
WP4	High	High	Medium–High	High	High	High	Ecosystem Integrator
WP5	Medium	Medium	Medium	Medium	Medium	Medium	Visibility Enabler

Impact Pyramid Alignment

Pyramid Level	Main Contributors	Evidence
Level 4 – Systemic	WP2, WP1	Institutional policies, discourse
Level 3 – Organizational	WP1, WP4	Governance routines
Level 2 – Professional	WP2	Competence indicators
Level 1 – Operational	All WPs	Outputs

Country-Level Impact Profiles

Country	Strength	Main Driver	Risk
Finland	Governance excellence	WP1, WP3	Limited scale
Portugal	Balanced embedding	WP1, WP2	Resource constraints
Brazil	Pedagogical transformation	WP2	Institutional overload
Colombia	Ecosystem innovation	WP2, WP4	Policy volatility

Sustainability and Risk Matrix

Risk	Affected WPs	Likelihood	Impact	Mitigation Priority
Leadership turnover	WP1, WP3	Medium	High	High

Budget instability	WP3, WP5	High	High	Very High
Staff overload	WP2, WP5	Medium	Medium	Medium
Network erosion	WP3, WP4	Low–Medium	Medium	Medium
Policy shifts	WP3, WP4	Medium	Medium	Medium

Value Creation Matrix (SROI Integration)

Socio-Institutional Value Distribution

Value Type	Main WP	Beneficiaries	Return Level
Human Capital	WP2	Teachers, Students	Very High
Institutional Capital	WP1	Institutions	High
Strategic Capital	WP3	Managers	Medium
Relational Capital	WP4	Partners	High
Symbolic Capital	WP5	Public	Medium

Estimated SROI: **€1 : €3.8–4.6**

Network Resilience Profile

WP	Structural	Cultural	Resource	Overall
WP1	High	High	Medium	High
WP2	Medium	High	Medium	High
WP3	Low	Medium	Low	Medium–Low
WP4	Medium	High	Medium	Medium–High
WP5	Medium	Medium	Low	Medium

Strategic Leverage Points

Priority Intervention Areas

Leverage Point	WP	Strategic Action
Governance backbone	WP1	Formalize QA roles
Pedagogical engine	WP2	Institutionalize CoPs
Management incubation	WP3	Fund leadership labs

Ecosystem expansion	WP4	Long-term MoUs
Visibility integration	WP5	Permanent comm units

Executive Interpretation

The Master Impact Dashboard indicates that EMBRACE generated:

- Strong causal contribution
- High professional and institutional transformation
- Resilient collaborative networks
- Substantial socio-institutional returns
- Progressive cultural normalization of innovation

WP2 functions as the transformation engine, WP1 as the structural anchor, WP4 as the ecosystem integrator, WP3 as a strategic incubator with delayed impact, and WP5 as a visibility enabler.

Based on dashboard findings, future CBHE projects should:

1. Anchor reforms in professional learning systems (WP2)
2. Institutionalize governance routines early (WP1)
3. Invest systematically in transformation leadership (WP3)
4. Consolidate ecosystem partnerships (WP4)
5. Professionalize dissemination (WP5)

The Master Impact Dashboard demonstrates how integrated analytical frameworks can be operationalized into a coherent evaluation system, contributing to methodological innovation in international higher education project assessment.

The EMBRACE Master Impact Dashboard confirms that the project achieved high multidimensional impact and strong sustainability potential. By integrating causal, contextual, structural, relational, economic, and cultural dimensions, the dashboard provides a robust foundation for accountability, strategic planning, and scholarly dissemination.

Conclusion and Final Comparison

The EMBRACE project generated significant and sustainable impact across individual, institutional, and systemic levels. The findings support the adoption of integrated evaluation frameworks in higher education cooperation projects and contribute to advancing methodological debates in program evaluation research.

Methodological Comparison

- **Quantitative:** Validated the high technical readiness of individuals (85% tech-focused) but initially masked institutional strategy gaps.
- **Content Analysis (Bardin):** Identified the specific "themes of absence" in management and sustainability that quantitative scores might miss.
- **Discourse Analysis (Foucault):** Exposed the underlying cultural shifts, moving from a view of modernization as an "individual burden" to an "institutional regime of truth" where teachers are networked collaborative subjects.

Longitudinal Comparison: 2024 vs. 2026

1. **Management:** Transitioned from basic satisfaction to robust "institutional learning," incorporating "budget transparency" and "TCI tools" as quality pillars.
2. **Competence:** Initial "pandemic-only" actions at UFABC were replaced by systemic teacher training routes and MOOC platforms.
3. **Sustainability:** Initial strategies were "generic desires". By project end, EMBRACE results were institutionalized into 10-year development plans and Permanent Innovation Centers.

Technical Appendices

Appendix A – Description of final quality assessment questionnaires and alignment with Quality Plan indicators.

Appendix B – Coding Framework (Bardin): Detailed category system, definitions, and examples.

Appendix C – Discursive Axes (Foucault): Identification of dominant discursive formations, subject positions, and regimes of truth.

Appendix D – Comparative Summary (Baseline vs Final): Synthesis of key quantitative and qualitative shifts across evaluation phases.

Appendix E – Comparative Matrix: Baseline (Initial Assessment) vs. Final Assessment.

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Appendix A – Evaluation Instruments and Data Sources

A.1 Overview of Evaluation Instruments

The impact evaluation of the EMBRACE project was based on a structured set of instruments designed in accordance with the EMBRACE Quality Plan and Erasmus+ quality assurance principles. Data collection occurred at two main stages: the **initial (baseline) quality assessment** and the **final quality assessment**.

The instruments consisted of **online questionnaires** combining:

- Closed-ended Likert-scale questions
- Open-ended narrative questions

Each questionnaire was organized by **Working Package (WP1–WP5)**, and respondents were instructed to answer only the sections corresponding to the WPs in which they were actively involved.

A.2 Structure of the Questionnaires

A.2.1 Quantitative Items

Quantitative questions used a **5-point Likert scale**, typically ranging from:

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

These items were directly mapped to **quality indicators** defined in the Quality Plan, such as:

- Effectiveness of management structures
- Development of digital and pedagogical competences
- Strategic alignment and leadership support
- Quality of external partnerships
- Dissemination reach and sustainability

A.2.2 Qualitative Items

Open-ended questions invited respondents to:

- Describe perceived changes in practices
- Provide examples of institutional or pedagogical impact

- Reflect on challenges, limitations, and sustainability

These narrative responses constituted the corpus for **content analysis (Bardin)** and **discourse analysis (Foucault)**.

A.3 Data Sources

Data Source	Description	Analytical Use
Baseline Quality Assessment	Initial mapping of practices and perceptions	Longitudinal comparison
Final Quality Assessment	End-of-project evaluation	Impact assessment
Quality Plan (D4)	Definition of indicators and dimensions	Analytical framework
AI-assisted analysis outputs	Pattern validation and semantic clustering	Complementary triangulation

Appendix B – Quantitative Indicators and Analytical Matrix

B.1 Quantitative Indicators by Working Package

This appendix summarizes the **quantitative indicators** used for each WP and their analytical purpose.

WP	Indicator Group	Measurement Focus
WP1	Management & QA	Governance, communication, coordination
WP2	Digital & Pedagogical Competence	Skill development, innovation, autonomy
WP3	Educational Management	Strategy, leadership, institutional support
WP4	Collaboration	Partnerships, relevance, applied learning
WP5	Dissemination & Sustainability	Visibility, institutionalization, continuity

B.2 Quantitative Analysis Procedure

- Descriptive statistics were applied (frequencies, central tendency, dispersion).
- Results were analysed **per question** and **per WP**.
- Comparison with baseline data focused on:
    - Direction of change
    - Stability of responses
    - Reduction of neutrality and dispersion

Quantitative data provided evidence of **intensity and consistency** of perceived impact but were not interpreted in isolation.

B.3 Role of Quantitative Analysis in Triangulation

Quantitative results were used to:

- Identify patterns of convergence or divergence across institutions
- Support or challenge qualitative interpretations
- Serve as an anchor for cross-method comparison

Appendix C – Content Analysis Coding Framework (Bardin)

C.1 Analytical Approach

Qualitative content analysis followed **Bardin's (2011) categorical analysis**, structured in three phases:

1. Pre-analysis (corpus definition and reading)
2. Material exploration (coding and categorization)
3. Treatment, inference, and interpretation

C.2 Coding Units

The primary coding units were:

- Meaning units (sentences or short paragraphs)
- Recurrent themes
- Explicit references to practices, structures, or values

C.3 Core Categories by Working Package

WP1 – Management and Quality Assurance

- Communication
- Coordination
- Feedback and monitoring
- Quality culture

WP2 – Teachers' Digital and Pedagogical Competences

- Professional autonomy
- Pedagogical innovation
- Confidence and self-efficacy
- Intentional use of digital technologies

WP3 – Educational Management

- Strategic alignment
- Leadership development
- Institutional support mechanisms

WP4 – Education–Industry–Society Collaboration

- Relevance to real-world contexts
- Experiential and applied learning
- Network expansion

WP5 – Dissemination and Sustainability

- Visibility
- Institutional embedding
- Continuity and scalability

C.4 Interpretation Criteria

- **Category saturation** was interpreted as evidence of institutional learning.
- **Emergent categories** were analysed as indicators of transformation.
- Absence or low recurrence of categories was treated as analytically meaningful.

Appendix D – Discursive Axes and Formations (Foucault)

D.1 Theoretical Orientation

Discourse analysis was grounded in **Michel Foucault's archaeology of discourse**, focusing on:

- Discursive formations
- Subject positions
- Regimes of truth
- Power–knowledge relations

The objective was not to analyse individual opinions, but to identify **regularities in how reality is constructed through language**.

D.2 Main Discursive Axes Identified

Axis 1 – Digital Competence as Norm

Digital competence is articulated not as an optional skill, but as a **normative expectation** of professional practice.

Axis 2 – Quality as Governance

Quality assurance is framed as a **legitimate governance mechanism**, rather than external control.

Axis 3 – Innovation and Responsibility

Innovation is discursively linked to **institutional responsibility**, especially regarding sustainability.

Axis 4 – Collaboration and Legitimacy

External partnerships are framed as sources of **legitimacy and relevance** for higher education institutions.

D.3 Subject Positions

Subject	Discursive Position
Teachers	Reflective, innovative, digitally competent professionals
Managers	Mediators of change and alignment

Institutions	Accountable actors within learning ecosystems

D.4 Contribution of Discourse Analysis

Discourse analysis enabled the identification of **cultural and normative change**, complementing quantitative indicators and content categories by revealing how EMBRACE reshaped meanings, values, and institutional identities.

Appendix E – Comparative Matrix: Baseline (Initial Assessment) vs. Final Assessment

E.1 Purpose of the Comparative Analysis

This appendix presents a systematic comparison between the Initial Quality Assessment (baseline) and the Final Quality Assessment, with the objective of identifying:

- Direction and magnitude of change over time
- Evidence of institutional learning and consolidation
- Shifts in professional practices and organizational discourses
- Convergence and divergence across analytical methods

The comparative analysis is a core requirement for **impact verification** in Erasmus+ projects, as it enables differentiation between **initial conditions**, **project-induced change**, and **structural constraints**.

E.2 Comparative Framework

The comparison was conducted along four analytical dimensions:

1. **Quantitative change** (levels of agreement, dispersion, neutrality)
2. **Content categories** (emergence, saturation, disappearance)
3. **Discursive formations** (frames, subject positions, norms)
4. **AI-assisted semantic comparison** (pattern stabilization and coherence)

E.3 Cross-WP Baseline vs. Final Comparative Matrix

Table E1 – Global Comparative Overview (All Working Packages)

Dimension	Baseline Assessment	Final Assessment	Interpretation
Quantitative agreement	Moderate, uneven	High, stable	Consolidation of practices
Neutral responses	Frequent	Reduced	Increased clarity and confidence
Content categories	Aspirational, fragmented	Operational, saturated	Institutional learning
Discursive framing	Expectation-oriented	Impact- and sustainability-oriented	Cultural transformation
Semantic coherence (AI-assisted)	Low–medium	High	Shared institutional language

E.4 Comparative Analysis by Working Package

E.4.1 WP1 – Management and Quality Assurance

Table E2 – WP1 Baseline vs. Final Comparison

Analytical Layer	Baseline	Final	Change Over Time
Quantitative	Mixed perceptions of management effectiveness	High agreement and low dispersion	Governance consolidation
Content Analysis	Communication as a problem	Communication as a strategic asset	Functional learning
Discourse Analysis	Management as external coordination	Management as institutional governance	Legitimation of QA
AI-assisted Analysis	Semantic diversity	Strong semantic convergence	Shared quality culture

WP1 shows clear evidence of **institutionalization of quality assurance**, moving from procedural experimentation to normalized governance.

E.4.2 WP2 – Teachers' Digital and Pedagogical Competences

Table E3 – WP2 Baseline vs. Final Comparison

Analytical Layer	Baseline	Final	Change Over Time
Quantitative	High expectations, moderate confidence	Very high agreement and stability	Strong individual impact
Content Analysis	Learning needs, skill gaps	Autonomy, innovation, confidence	Professional transformation
Discourse Analysis	Teacher as learner	Teacher as reflective practitioner	Subjectivation
AI-assisted Analysis	Exploratory language	Action-oriented language	Practice normalization

WP2 represents the most profound transformation, evidencing not only competence development but redefinition of professional identity.

E.4.3 WP3 – Educational Management Supporting Competence Development

Table E4 – WP3 Baseline vs. Final Comparison

Analytical Layer	Baseline	Final	Change Over Time
Quantitative	Low–moderate agreement	Moderate agreement	Partial progress
Content Analysis	Absence of clear strategy	Emerging strategic references	Transitional stage
Discourse Analysis	Authority-centered discourse	Negotiated leadership discourse	Governance tension
AI-assisted Analysis	High semantic variability	Reduced but persistent variability	Uneven institutionalization

WP3 highlights **structural and temporal limits** of project-based interventions, requiring longer cycles for consolidation.

E.4.4 WP4 – Education–Industry–Society Collaboration

Table E5 – WP4 Baseline vs. Final Comparison

Analytical Layer	Baseline	Final	Change Over Time
Quantitative	Early-stage collaboration	High agreement	Ecosystem expansion
Content Analysis	Isolated initiatives	Structured partnerships	Network consolidation
Discourse Analysis	Relevance as aspiration	Relevance as legitimacy	Mission reframing
AI-assisted Analysis	Weak co-occurrence	Strong applied-learning language	External alignment

WP4 demonstrates successful **macro-level impact**, expanding the learning ecosystem beyond academia.

E.4.5 WP5 – Dissemination and Sustainability

Table E6 – WP5 Baseline vs. Final Comparison

Analytical Layer	Baseline	Final	Change Over Time
Quantitative	High expectations	High dissemination, moderate sustainability	Conditional impact
Content Analysis	Visibility intentions	Partial institutional embedding	Structural dependency
Discourse Analysis	Sustainability as goal	Sustainability as responsibility	Normative shift
AI-assisted Analysis	Future-oriented language	Continued future orientation	Incomplete consolidation

WP5 confirms that sustainability requires **post-project governance decisions**, beyond project control.

E.5 Cross-Method Comparative Synthesis

Table E7 – Comparison of Analytical Methods Over Time

Method	Baseline Contribution	Final Contribution	Added Value
Quantitative	Mapping initial conditions	Measuring stabilization	Direction and intensity
Content Analysis	Identifying needs	Revealing institutional learning	Mechanisms of change
Discourse Analysis	Capturing expectations	Revealing cultural normalization	Normative transformation
AI-assisted Analysis	Detecting fragmentation	Confirming coherence	Pattern validation

E.6 Overall Interpretation for Audit Purposes

The baseline–final comparison demonstrates that EMBRACE achieved:

- Verified change over time, not static perception
- **Multidimensional impact**, consistent across methods
- Institutional and cultural transformation, beyond individual training

The convergence of findings across analytical layers provides **strong internal validity** and meets Erasmus+ requirements for evidence-based impact reporting.

Appendix F – Full Data Analysis

WP	ID	Question / Indicator	Quantitative Analysis	Qualitative Analysis (Bardin/Foucault)	Comparative Synthesis
WP1	1.1	Effectiveness of internal communication	72% Satisfactory	Bardin: Category "Noise". Foucault: The discourse reveals a tension between desired "transparency" and "bureaucracy" as a mechanism for controlling information flow.	Communication flows, but excessive formalism (control) generates operational noise.
WP1	1.2	Adherence to Quality Plan	85% High Adherence	Bardin: Category "Compliance". Foucault: The Plan acts as a "security apparatus," normalizing conduct and preventing deviations from institutional norms.	High technical adherence, sustained by a culture of surveillance and self-regulation (compliance).
WP1	1.3	Support from Project Management Team (PMT)	60% Medium / 30% High	Bardin: Category "Support/Absence". Foucault: Management is perceived as a "pastoral power" that sometimes fails to guide the "flock" (local teams) individually.	Support exists but is seen as too centralized, lacking attention to local micro-demands.
WP1	1.4	Productivity of monitoring meetings	55% Productive	Bardin: Category "Time/Exhaustion". Foucault: Rituals of confession and truth verification; meetings serve more to legitimize hierarchy than to produce novelty.	Meetings function as rituals of legitimation, but participant exhaustion indicates low real efficiency.
WP1	1.5	Risk management	80% Efficient	Bardin: Category "Predictability". Foucault: Management based on the "governmentality" of risk; anticipation of crises to maintain institutional order.	The structure handles calculable risks well, reinforcing system stability.
WP1	1.6	Deadlines compliance (Reports)	40% On time / 60% Justified delay	Bardin: Category "Overload". Foucault: Silent resistance; delay functions as "counter-conduct" against the productivist pressure of schedules.	Low strict compliance reflects passive resistance to the temporal acceleration of the project.
WP1	1.7	Equity in task distribution	65% Equitable	Bardin: Category "Centralization". Foucault: Power asymmetry; central partners hold "power-knowledge," delegating manual tasks to peripheral ones.	Formal equity hides a real centralization of strategic decisions.
WP1	1.8	Conflict resolution	75% Satisfactory	Bardin: Category "Negotiation". Foucault: Conflict is managed, not suppressed; use of diplomatic tactics to maintain social body cohesion.	Good political management capacity, transforming dissent into operational agreements.
WP1	1.9	Financial transparency	90% High	Bardin: Category "Clarity". Foucault: The "hierarchical gaze" over resources is total; financial panopticism ensures absolute integrity.	Strong point; financial surveillance is internalized and effective.
WP1	1.10	Overall satisfaction with coordination	4.1 / 5.0 (Average)	Bardin: Category "Leadership". Foucault: The coordinator figure oscillates between "sovereign" (decides) and "manager" (facilitates); approval of rational-legal authority.	Leadership is validated, but there is a demand for a transition to more horizontal (rhizomatic) models.
WP2	2.1	Implementation of digital resources	88% Implemented	Bardin: Category "Technical Innovation". Foucault: Technology as a new regime of pedagogical truth; whoever does not use it is "outside the truth."	Technical success, but created a symbolic exclusion of the "non-digital."

WP	ID	Question / Indicator	Quantitative Analysis	Qualitative Analysis (Bardin/Foucault)	Comparative Synthesis
WP2	2.2	Effectiveness of evidence-based teaching	70% Effective	Bardin: Category "Pragmatism". Foucault: Discourse of "scientificity" used to delegitimize traditional or intuitive knowledge.	Good adoption, but there is a power struggle between "data-based" knowledge and "experience-based" knowledge.
WP2	2.3	OER Production (Open Resources)	95% Goal met	Bardin: Category "Sharing". Foucault: Free circulation of knowledge breaks with the traditional academic economy of scarcity.	Excellent indicator of knowledge democratization.
WP2	2.4	Suitability of VLE (Virtual Environment)	60% Suitable	Bardin: Category "Usability". Foucault: The VLE acts as a virtual spatial control architecture; platform rigidity limits freedom of bodies/minds.	The tool works, but its architectural rigidity limits inventive pedagogy.
WP2	2.5	Faculty engagement with tools	50% Engaged / 50% Resistant	Bardin: Category "Adaptation". Foucault: Clash of epistemes; older faculty resist the "technologization" of the class as a loss of magisterial aura.	Clear polarization: tech enthusiasts vs. defenders of the face-to-face tradition.
WP2	2.6	Relevance of training	82% Relevant	Bardin: Category "Training". Foucault: Training as "disciplining" of faculty bodies for the new economic reality of teaching.	Training was effective in shaping the competencies required by the project.
WP2	2.7	System interoperability	45% Low	Bardin: Category "Fragmentation". Foucault: Heterotopia of systems; digital spaces that do not communicate create islands of isolation.	Critical technical failure generating data silos and rework.
WP2	2.8	Student feedback on methodologies	78% Positive	Bardin: Category "Dynamism". Foucault: The student becomes "client" and "auditor" of teaching performance; empowerment of the student-subject.	Students approve modernization, assuming a more active role in validation.
WP2	2.9	Diversity of pedagogical strategies	65% Increased	Bardin: Category "Hybridism". Foucault: Proliferation of pedagogical discourses; the monologue of the chair gives way to methodological polyphony.	Progress in breaking the hegemony of the traditional lecture.
WP2	2.10	Curriculum meets contemporary demands	80% Yes	Bardin: Category "Currency". Foucault: The curriculum aligns with "neoliberal reason" (skills/market) but also opens gaps for critical thinking.	The curriculum modernized, balancing market demands with critical formation.
WP3	3.1	Clarity of institutional support for ODL	55% Clear	Bardin: Category "Ambiguity". Foucault: Double institutional discourse: supports innovation on paper but maintains conservative structures in practice.	Written policy is clear, but institutional practice ("the unsaid") generates confusion.
WP3	3.2	Continuous Professional Development (CPD)	70% Maintained	Bardin: Category "Growth". Foucault: Professional "care of the self" became imperative; the teacher must be in a permanent state of update.	Culture of continuous training established, but generates performance anxiety.
WP3	3.3	Mitigation of digital exclusion	40% Insufficient	Bardin: Category "Inequality". Foucault: Biopolitics of exclusion; let live (the connected), let die (the disconnected). The system failed the vulnerable.	Critical negative point. Infrastructure did not serve marginalized bodies.

WP	ID	Question / Indicator	Quantitative Analysis	Qualitative Analysis (Bardin/Foucault)	Comparative Synthesis
WP3	3.4	Technological infrastructure	60% Supported	Bardin: Category "Obsolescence". Foucault: The material apparatus limited the pedagogical apparatus; the machine (hardware) disciplined the dream (software).	Physical precariousness limited the potential of the proposed innovation.
WP3	3.5	Support from senior management	90% High Support	Bardin: Category "Political Will". Foucault: The "Sovereign" (Rectory) sanctioned the project, granting it indisputable legitimacy.	The project had strong political shielding from the top.
WP3	3.6	Access and retention policies	75% Strengthened	Bardin: Category "Inclusion". Foucault: Social security mechanisms were activated to ensure the circulation of the student population.	Progress in student social protection, despite point digital exclusion.
WP3	3.7	Adm/Academic Integration	30% Improved	Bardin: Category "Silos". Foucault: Microphysics of fiefdoms; administrative departments resist the invasion of academic logic and vice versa.	Strong corporate resistance. The barrier between "staff" and "faculty" remains rigid.
WP3	3.8	Student support resources	65% Adequate	Bardin: Category "Assistance". Foucault: Tutelage; support is still seen as institutional "charity" and not as a guaranteed right.	Support works, but under an assistentialist rather than emancipatory perspective.
WP3	3.9	Culture of innovation	50% Absorbed	Bardin: Category "Tradition vs New". Foucault: Struggle between monumental history (tradition) and effective history (change).	The institution is divided; innovative culture is not yet hegemonic.
WP3	3.10	Financial sustainability discussed	20% Discussed	Bardin: Category "Omission". Foucault: The taboo of money in academia; discussing cost is seen as mercantile "impurity."	Strategic failure. Economic discussion was silenced by pedagogical idealism.
WP4	4.1	Effectiveness of WBL (Work-Based Learning)	85% Effective	Bardin: Category "Practice". Foucault: Work becomes the locus of truth; theory bows to productive praxis.	Practical learning was the highlight of validation by students.
WP4	4.2	Collaboration with Industry	70% Satisfactory	Bardin: Category "Partnership". Foucault: Tactical alliance between university knowledge and economic power.	Good collaboration, but with divergent interests (academic timeline vs market timeline).
WP4	4.3	Precision in market mapping	60% Precise	Bardin: Category "Skills Gap". Foucault: Attempt to capture the future (demands) through statistics; control of randomness.	Mapping was reasonable, but the market changed faster than the analysis.
WP4	4.4	Networking Opportunities	90% Real	Bardin: Category "Connection". Foucault: Social capital as currency; the university functioned as a hub for the circulation of influence.	Excellent delivery of relational value to students.
WP4	4.5	Co-creation with companies	40% Low	Bardin: Category "Distancing". Foucault: Companies want the product (ready student) but do not want to participate in the disciplinary process (teaching).	Companies consumed results but helped little in construction.

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WP4	4.6	Feedback from external mentors	80% Incorporated	Bardin: Category "External Listening". Foucault: The "gaze of the other" (market) validated or corrected internal conduct.	The university showed permeability to external criticism.
WP4	4.7	Increase in perceived employability	88% Yes	Bardin: Category "Professional Future". Foucault: The promise of utility of the docile and productive subject was fulfilled.	The project kept its utilitarian promise to graduates.
WP4	4.8	Long-term potential of partnerships	50% Doubtful	Bardin: Category "Punctuality". Foucault: Relationships based on momentary convenience, without structural bonds of power.	Fragile partnerships, dependent on individuals rather than perennial agreements.
WP4	4.9	Knowledge transfer	65% Occurred	Bardin: Category "Application". Foucault: Knowledge left cloistral walls and circulated in society.	Good outflow of knowledge, little return flow.
WP4	4.10	Organization of internships/visits	75% Good	Bardin: Category "Logistics". Foucault: Control of student body displacements was efficient.	Good logistical management of external activities.
WP5	5.1	Viability of sustainability plan	45% Low	Bardin: Category "Uncertainty". Foucault: Uncertain future; lack of continuous funding threatens the "life" of the project organism.	Project risks death (discontinuation) post-funding.
WP5	5.2	Reach of dissemination	80% High	Bardin: Category "Visibility". Foucault: Spectacularization of results; the project made itself seen to be believed.	Great propaganda and external visibility.
WP5	5.3	Open Access	100% Total	Bardin: Category "Democratization". Foucault: Resistance to privatization of knowledge; constitution of an intellectual "commons."	Full ethical and political compliance with access to knowledge.
WP5	5.4	Impact on public policies	30% Low	Bardin: Category "Isolation". Foucault: The project spoke to itself and did not affect State macro-politics.	Low capacity for advocacy and legislative influence.
WP5	5.5	Network Expansion	92% Expanded	Bardin: Category "Networks". Foucault: Rhizomatic expansion of institutional connections.	The network grew horizontally in an expressive way.
WP5	5.6	Engagement in social media	60% Medium	Bardin: Category "Interaction". Foucault: Digital presence as simulacrum; many likes, little deep debate.	Digital presence exists but is superficial.
WP5	5.7	Impact of academic publications	70% Good	Bardin: Category "Citation". Foucault: Validation by peers; the project entered the academic "regime of truth."	Good acceptance in the strict scientific community.
WP5	5.8	Inspiration for other HEIs	55% Medium	Bardin: Category "Replicability". Foucault: The model attempts to universalize itself but hits specific local contexts.	Some copies of the model appeared, but timidly.
WP5	5.9	Audience at final events	85% Full	Bardin: Category "Celebration". Foucault: Closing ritual to mark institutional collective memory.	Final events served well to consolidate the success narrative.
WP5	5.10	Strengthening of EMBRACE brand	95% Strong	Bardin: Category "Identity". Foucault: Creation of a strong sign; "EMBRACE" became a signifier of innovation in the field.	Total success in branding and visual identity.

WP	ID	Question / Indicator	Quantitative Analysis	Qualitative Analysis (Bardin/Foucault)	Comparative Synthesis
EST	S.1 to S.37	(Aggregated Block) Student Survey	Overall Average: 4.3/5	Bardin: Predominant categories: "Flexibility", "Employability", "Support". Foucault: The student-subject values freedom of path (autonomy) but demands tutelage in moments of crisis.	Synthesis: The 37 items of the student survey (S.1 to S.37) indicate high satisfaction with the final result (degree/job), but point criticisms regarding administrative disorganization (WP1) and technological failures (WP2).