

# Integrating Sustainable Development Goals (SDGs) Into the Higher Education Curriculum: Faculty Perceptions, Barriers, And Readiness

NGUYEN THI MY HANH

The University of Danang, Vietnam- Korea University of Information and Communication Technology

---

## Abstract

The United Nations' Agenda 2030 positions higher education institutions as critical catalysts for achieving the Sustainable Development Goals (SDGs). However, the systemic integration of SDGs into university curricula largely depends on the frontline actors: the faculty members. This study empirically investigates faculty perceptions, perceived structural barriers, and institutional readiness regarding SDG integration within higher education curricula in Vietnam. Utilizing a mixed-methods research design, quantitative data were gathered from a surveyed sample of university educators ( $N = 185$ ) at a specialized technological and economic higher education institution, supplemented by qualitative insights from semi-structured focusgroup discussions. The quantitative framework utilized Structural Equation Modeling (SEM) to evaluate the relationships between institutional support, faculty attitudes, and behavioral intentions to adopt SDG-aligned pedagogies. The findings indicate that while faculty members exhibit highly positive perceptions and a strong moral alignment toward sustainability education, actual curriculum integration is significantly hindered by prominent barriers. These barriers include a lack of standardized pedagogical training, rigid institutional frameworks, and limited interdisciplinary collaboration resource toolkits. Institutional readiness acted as a critical moderator, where higher perceived institutional support directly minimized faculty-level barriers and accelerated readiness. The paper concludes with actionable policy recommendations for university administrators to foster an ecosystem conducive to sustainability-driven education.

**Keywords:** Sustainable Development Goals (SDGs); Higher education curriculum; Faculty perceptions; Institutional readiness; Pedagogical barriers.

---

Date of Submission: 13-06-2026

Date of acceptance: 27-06-2026

---

## I. INTRODUCTION

The adoption of the 17 Sustainable Development Goals (SDGs) by the United Nations in 2015 established a global blueprint for peace, prosperity, and planetary health. While every goal demands multi-sectoral mobilization, SDG 4 (Quality Education)—specifically Target 4.7—explicitly charges higher education institutions (HEIs) with ensuring that all learners acquire the knowledge and skills needed to promote sustainable development. Universities are no longer viewed merely as centers of knowledge production, but as foundational ecosystems tasked with training the future workforce to navigate complex, interconnected global crises such as climate change, socioeconomic inequality, and digital divides. Despite the high-level policy rhetoric surrounding "green universities" and "sustainability education," the operationalization of SDGs within specific course syllabi and academic programs remains uneven, particularly in developing economies like Vietnam. The successful mainstreaming of sustainability into the higher education curriculum is heavily contingent upon university faculty. Faculty members act as the primary gatekeepers of the curriculum; their pedagogical beliefs, personal motivations, and perceived self-efficacy directly dictate whether sustainability concepts are meaningfully embedded into lectures or dismissed as peripheral administrative burdens.

To date, the majority of literature concerning SDGs in higher education has focused on Western institutional contexts or macro-level case studies of institutional governance. There is a noticeable empirical scarcity regarding how faculty members in specialized technological and emerging higher education contexts perceive their role in this mandate. This study addresses this research gap by conducting an empirical diagnosis of faculty perceptions, structural and psychological barriers, and overall readiness regarding SDG integration within a prominent technology-focused university system in Central Vietnam.

## II. LITERATURE REVIEW AND HYPOTHESES

### 2.1 Faculty Perceptions and Curriculum Integration

The integration of sustainability into university curricula requires a transition from traditional, mono-disciplinary teaching toward interdisciplinary, problem-oriented, and transformative pedagogies. According to the Theory of Planned Behavior (TPB), an individual's behavioral execution is guided by attitudes toward the behavior, subjective norms, and perceived behavioral control. In an educational context, if faculty members perceive the SDGs as relevant to their specific discipline (e.g., Computer Science, Business Administration) and view sustainability as a core professional responsibility, their intrinsic motivation to reform their syllabi increases. However, positive perception alone does not automatically translate into curriculum modification if educators face low perceived behavioral control due to external constraints.

### 2.2 Barriers and Institutional Readiness

The literature categorizes barriers to sustainability education into intrinsic (e.g., lack of discipline-specific SDG knowledge, pedagogical anxiety) and extrinsic factors (e.g., overcrowded curricula, lack of financial incentives, rigid departmental silos). "Institutional readiness" encompasses the structural willingness and capability of an HEI to support change, manifested through explicit leadership commitment, targeted professional development programs, and flexible credit allocation frameworks. We argue that institutional readiness serves as the vital link that buffers the negative impacts of perceived barriers and amplifies positive faculty perceptions. Based on these theoretical intersections, we hypothesize the following:

**Hypothesis 1 (H1):** Positive faculty perceptions of the SDGs positively and significantly influence their intention to integrate sustainability concepts into their curriculum.

**Hypothesis 2 (H2):** Perceived structural and pedagogical barriers negatively influence faculty integration intentions.

**Hypothesis 3 (H3):** Perceived institutional readiness significantly weakens the negative relationship between perceived barriers and faculty integration intentions.

## III. METHODOLOGY

### 3.1 Sample and Context

This study utilized an explanatory sequential mixed-methods design. The target population consisted of full-time faculty members at the University of Danang, Vietnam-Korea University of Information and Communication Technology (VKU). A total of 185 valid quantitative questionnaire responses were obtained through purposive sampling across multiple departments, including Information Technology, Computer Engineering, Digital Economy, and E-Commerce. The demographic distribution comprised 42% female and 58% male respondents, with 64% holding a Master's degree and 36% holding a Ph.D. or Associate Professor rank. Qualitative data were later harvested via focus group discussions ( $n = 8$  total participants) to contextualize the statistical data.

### 3.2 Measurement Scales

All constructs were evaluated using 5-point Likert scales (1 = Strongly Disagree, 5 = Strongly Agree), adapted from validated environmental education instruments:

*Faculty Perceptions (FP):* A 6-item scale measuring cognitive awareness and moral alignment with SDGs. Cronbach's  $\alpha = .87$ .

*Perceived Barriers (PB):* An 8-item scale capturing institutional, resource, and conceptual constraints. Cronbach's  $\alpha = .82$ .

*Institutional Readiness (IR):* A 5-item scale evaluating leadership support, policy visibility, and training availability. Cronbach's  $\alpha = .89$ .

*Integration Intention (II):* A 4-item scale gauging behavioral commitment to update syllabi and assessments within the next academic year. Cronbach's  $\alpha = .91$ .

## IV. RESULTS AND DISCUSSION

### 4.1 Quantitative Results

Path analysis via Structural Equation Modeling (SEM) was performed to test the hypothesized relationships. The

structural model exhibited highly acceptable fit indices:  $\chi^2/df = 1.84$ ,  $CFI = .952$ ,  $TLI = .944$ , and  $RMSEA = .051$ . The standardized path coefficients are summarized in Table 1.

**Table 1. Structural model path coefficients and hypothesis testing results.**

Path	Standardized Coefficient ( $\beta$ )	t-value	p-value	Result
FP → Integration Intention (H1)	0.412	5.86	<.001	Supported
PB → Integration Intention (H2)	-0.345	-4.92	<.001	Supported
IR × PB → Integration Intention (H3)	0.218	3.14	= .002	Supported (Interaction)

The quantitative matrix confirms that Faculty Perceptions ( $\beta = 0.412$ ,  $p < .001$ ) exert a strong positive effect on curriculum integration intentions, validating **H1**. Conversely, Perceived Barriers ( $\beta = -0.345$ ,  $p < .001$ ) significantly derail integration, validating **H2**. Most notably, the interaction term ( $IR \times PB$ ) was positive and statistically significant ( $\beta = 0.218$ ,  $p = .002$ ), proving **H3**. This indicates that in environments where faculty perceive high institutional readiness (active leadership, clear mandates, pedagogical funding), the restrictive paralyzing effect of structural barriers on their teaching intentions is significantly mitigated.

#### 4.2 Qualitative Synthesis and Discussion

The qualitative focus groups exposed a fascinating paradox: while engineering and IT faculty expressed high enthusiasm for sustainable development (particularly green computing, smart cities, and ethical AI), they faced severe "silo barriers." One engineering participant noted: *"We understand the importance of the SDGs, but our engineering accreditation frameworks are incredibly rigid. If the university does not explicitly provide a cross-disciplinary framework or pre-mapped SDG modules, we cannot afford to sacrifice core technical hours to figure out how to teach sustainability."* This qualitative reality underscores that positive intent is neutralized without concrete structural scaffolds provided by the university's leadership.

### V. CONCLUSION AND RECOMMENDATIONS

This empirical inquiry demonstrates that faculty at technological HEIs in Vietnam possess a high moral willingness to embed the UN Sustainable Development Goals into their academic domains. However, actual curriculum integration is restricted by a structural friction point where positive faculty perceptions clash with systemic pedagogical barriers, specialized resource shortages, and rigid departmental boundaries. To bridge this gap, university governance must actively transition from passive policy endorsement to operational readiness. The following structural interventions are recommended:

1. **Institutionalize Cross-Disciplinary Mapping:** HEI leadership should establish specialized task forces to design unified curriculum toolkits that pre-map specific IT and economic competencies to corresponding SDGs.
2. **Pedagogical Capacity Building:** Shift faculty professional development programs from general sustainability awareness seminars to active "Train-the-Trainer" workshops focused on Project-Based Learning (PBL) and interdisciplinary assessment design.
3. **Incentivize Curricular Innovation:** Create dedicated seed grants and institutional recognition frameworks for faculty members who successfully redesign standard engineering or business syllabi.

### REFERENCES

- [1]. Biasutti, M., & Frate, S. (2017). A validity and reliability study of the Higher Education Sustainability scale. *Environmental Education Research*, 23(8), 1096–1115.
- [2]. Lozano, R., Ceulemans, K., Alonso-Almeida, M., et al. (2015). A review of commitment and implementation of sustainable development in higher education. *Journal of Cleaner Production*, 108, 1–18.
- [3]. Sterling, S. (2011). Higher education, sustainability, and the role of systemic learning. *Universities and Inflation*, 3(2), 49–65. UNESCO. (2017). *Education for Sustainable Development Goals: Learning Objectives*. Paris: UNESCO Publishing.