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# FOSTERING SUSTAINABLE LEADERSHIP IN HIGHER EDUCATION: A TRANSFORMATIVE LEARNING APPROACH FOR THAI UNDERGRADUATES

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## Abstract

In an era where global challenges demand ethical and resilient decision-makers, higher education institutions bear the responsibility of cultivating sustainable leadership competencies. This study evaluates the efficacy of a novel training program designed to foster sustainable leadership attributes among undergraduate students in Bangkok, Thailand. Theoretically grounded in Transformative Learning Theory, the intervention integrates six contemporary leadership models through a structured process involving disorienting dilemmas, critical reflection, and meaning transformation. Employing a rigorous quasi-experimental design, the research involved 40 participants, equally divided into experimental and control groups. Quantitative data were analyzed using independent-samples t-tests and repeated measures ANOVA to capture longitudinal developmental changes. The empirical results reveal that the experimental group demonstrated statistically significant improvements in key leadership dimensions compared to the control group, confirming the program's effectiveness. Specifically, the transformative approach successfully enhanced participants' self-awareness, ethical reasoning, and social responsibility. These findings validate the utility of experiential and reflective pedagogies in bridging the gap between theoretical leadership concepts and practical application. Consequently, this study offers an evidence-based framework for educators and policymakers aiming to embed sustainable leadership into university curricula, aligning higher education outcomes with global sustainability goals.

**Keywords:** Sustainable Leadership, Transformative Learning, Higher Education, Quasi-Experimental Design, Curriculum Development

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## Introduction

The intersection of economic development, social equity, and environmental protection creates unique leadership challenges across Asia. The region faces distinct sustainability challenges, including rapid urbanization, climate vulnerability, resource scarcity, and inequality, requiring leaders who can navigate complex systems with cultural sensitivity. Thailand's developing economy, balancing traditions with modernization, provides an ideal setting for examining sustainability-focused leadership development (Suriyankietkaew et al., 2022; Organisation for Economic Co-operation and Development, 2024). As Phakamach et al. (2025) note, leadership development in Thailand must address both global technological shifts and local cultural contexts, integrating traditional Asian values with modern governance approaches. The UN Sustainable Development Goals emphasize the role of education in promoting equity and sustainability. SDG 4 targets quality education and youth skill development, while SDG 16 focuses on governance and institutions (United Nations, 2015). These goals align with Asian leadership philosophies emphasizing collective welfare (Fry & Egel, 2021; Nayyar et al., 2025). Contemporary leadership theories, though Western in origin, are adaptable to Asian cultural settings when they incorporate collectivism and relational harmony (Neubert et al., 2022). They emphasize communication, adaptability, and ethical reasoning (Castellano et al., 2021; Benmira & Agboola, 2021), aligning with SDGs by preparing undergraduates for responsible engagement in Asian contexts (Ghasemy et al., 2024). While traditional theories emphasize singular aspects, contemporary approaches focus on leader-follower dynamics (Lord et al., 2020). Research on leadership development in Thailand highlights digital dimensions. Suksai et al. (2021) identified six components of digital leadership: vision, technology in teaching, management applications, educational support, assessment integration, and ethical technology use. Lee et al. (2020) conducted a bibliometric review of contemporary leadership literature, analyzing 696 articles and identifying five dominant theoretical strands, revealing gaps in understanding Asian applications (Altynbassov et al., 2024). Adolescent leadership development presents challenges due to developmental transitions (Sherif, 2019). Research highlights that family, peers, and structured activities shape leadership capacity (Liu et al., 2019; Smith et al., 2020; Durlak et al., 2022). Emerging models emphasize agility, emotional intelligence, inclusion, and ethical responsibility (Megheirkouni & Mejheirkouni, 2020). Day et al. (2021) recommend experiential learning, reflective practice, and feedback, while Cottafova et al. (2019) advocate for transformative learning environments. Samul (2020) and Fox et al. (2020) emphasize self-awareness, emotional regulation, and moral grounding. Thai studies confirm the positive impact of leadership programs (Sangsrijan et al., 2016; Khammawapee et al., 2020), consistent with international findings (Cohrs et al., 2020; Konuk & Posner, 2021). This study contributes by developing an empirically grounded leadership program integrating six contemporary theories within a transformative framework; employing a quasi-experimental design to evaluate effectiveness; and situating leadership development within Bangkok's specific sustainability challenges. By bridging Western leadership theories with Asian values and sustainability imperatives, this study advances theoretical understanding and practical applications in leadership education.

## Literature Review

### Contemporary Leadership Theory

Contemporary leadership theory reflects a shift from traditional leader-centered views to a relational, adaptive, and value-driven understanding of leadership within specific contexts. Avolio (2005) described modern leadership as interactive and distributed, requiring flexibility, collaboration, and ethical engagement (Lord et al., 2020). In the Asian context, leadership navigates tensions between globalized practices and cultural traditions. von Feigenblatt et al. (2022) observed that effective leadership in ASEAN integrates indigenous values such as

consensus-building and communal harmony. Thailand's Sufficiency Economy Philosophy illustrates this through benevolence and middle-way principles. Zhanbayev et al. (2023) stressed that sustainable development leadership in Asia combines traditional wisdom with innovation to confront complex challenges.

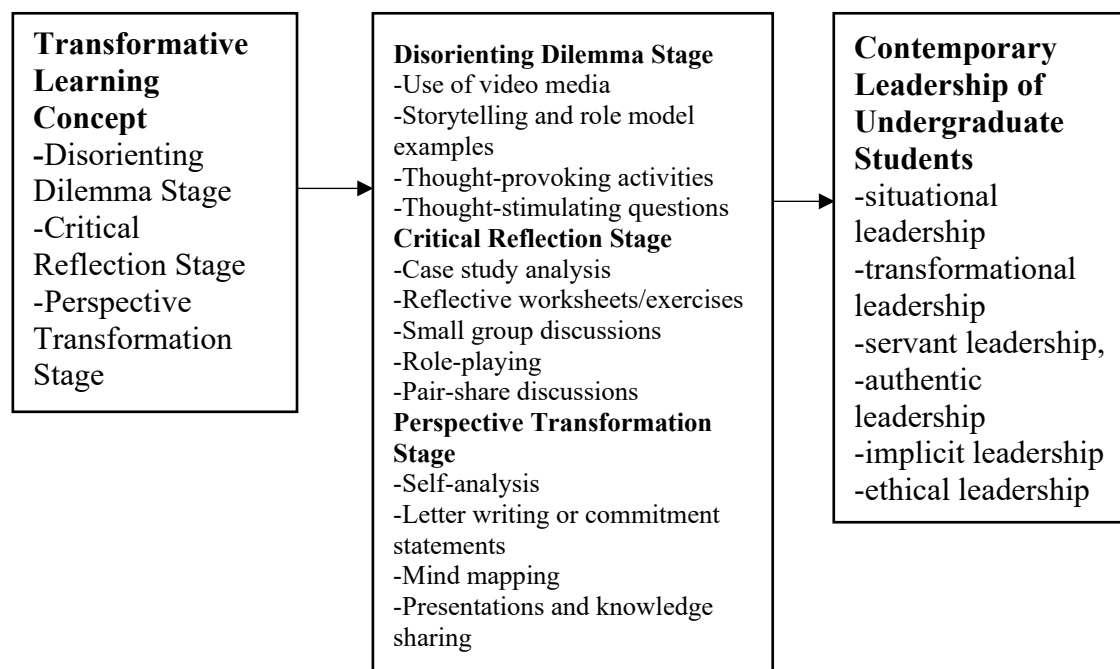
Core models include Transformational Leadership, inspiring vision (Bass & Avolio, 1989); Situational Leadership, adapting to readiness (Hersey et al., 1979); Servant Leadership, emphasizing follower growth (Greenleaf, 1977); Authentic Leadership, building self-awareness (Walumbwa et al., 2008); Implicit Leadership Theory, linking to cultural prototypes (Lord et al., 2020); and Ethical Leadership, rooted in moral modeling. In Southeast Asia, servant leadership stresses spiritual stewardship and communal welfare, echoing Ubuntu traditions in Africa (Okecha et al., 2024). These perspectives highlight the need to embed local values into leadership development aligned with SDGs. Digital competence is also essential. Phakamach et al. (2025) identified five dimensions of digital leadership for Thai education: visionary leadership, digital communication, system integration, innovative management, and digital learning ecosystems. Their study emphasized varied learning modalities, including self-directed and AI-supported approaches. The six models together form a holistic framework: transformational provides vision, situational builds adaptability, servant aligns with collectivist values, authentic strengthens value-based decisions, implicit reflects cultural variation, and ethical ensures moral grounding. Collectively, they address competencies and ethics for sustainability leadership in Asia.

### **Transformative Learning Theory**

Transformative Learning Theory, developed by Mezirow, describes a process leading to shifts in frames of reference. Drawing on Kuhn, Freire, and Habermas, it stresses the emancipatory role of learning through reflection and critical consciousness (Mezirow, 2000). This theory is especially relevant to sustainability leadership, where emerging leaders must reassess assumptions about economic growth, social equity, and environmental responsibility. Baumber (2022) shows how transformative learning in higher education fosters systems thinking, reflexivity, and openness to diverse worldviews, capacities vital for adaptive and ethical leadership in changing Asian contexts. Mezirow (2003) defined it as revising meaning perspectives to become more inclusive (Aboytes & Barth, 2020; Savicki, 2023; Desmet, 2024). The model comprises three phases. First, the disorienting dilemma occurs when experiences disrupt prior beliefs. Educators create these through case studies, readings, storytelling, or provocative questions (Brock, 2009). Edelman (2023) illustrated how students in Bangkok, Jakarta, and Manila engaged with urban sustainability dilemmas to generate context-specific solutions. Second, critical reflection analyzes beliefs via journaling, dialogue, and guided discussion (Keen & Woods, 2015). In Asia, this phase can incorporate indigenous traditions emphasizing holistic and intergenerational responsibility (Pandey, 2024). Finally, meaning transformation converts perspectives into action through SMART goals, role-play, and writing, consistent with Environmental Leadership Education (Miao & Nduneseokwu, 2025). Kim (2018) found that administrators developed self-awareness, while Sweet (2022) showed that reflection encouraged attitude shifts. Homer et al. (2025) demonstrated that integrating Education for Sustainable Development enhanced learning engagement.

This study applies Mezirow's three-phase model to a leadership program for Thai undergraduates, aiming to strengthen six contemporary leadership competencies as dependent variables.

### Independent Variable Process/Tools Dependent Variable



**Figure 1:** Conceptual Framework

### Research Methodology

The study was conducted in Bangkok, Thailand's capital, offering a relevant context for examining leadership development for sustainability. As a rapidly developing urban center in Southeast Asia, Bangkok faces environmental degradation, social inequality, traffic congestion, and tensions between economic growth and ecological preservation. Its cultural context, blending Buddhist values, hierarchical structures, and growing Western influences, creates a distinctive environment where leadership development must navigate both traditional Thai values and global challenges. A self-report questionnaire measured six contemporary leadership dimensions, developed from the researcher's Phase 1 study. Structural validity was assessed using confirmatory factor analysis (CFA), which showed excellent fit ( $\chi^2 = 510.09$ ,  $df = 467$ ,  $p = 0.08$ ; CFI = 1.00; RMSEA = 0.01). Factor loadings ranged from 0.96 to 0.99 ( $p < .01$ ), confirming strong alignment between items and latent constructs. Reliability was high ( $\alpha = .94$ ), with subscales ranging from 0.75 to 0.86. Composite reliability values ranged from 0.79 to 0.90, and AVE from 0.50 to 0.53, meeting accepted thresholds (Poedloknimit, 2025). Semi-structured interviews were conducted with 20 participants from the experimental group, both before and after the intervention. The protocol explored understandings of sustainability leadership, perceived challenges in the Thai context, and self-assessed capacity to address them. Following ethical approval (WTU 2567-0123), informed consent was obtained from all participants. Quantitative analysis employed descriptive statistics, independent-samples t-tests for between-group posttest differences, and repeated measures ANOVA for within-group changes across pretest, posttest, and follow-up. Outliers were screened using Mahalanobis distance with a conservative  $p < .001$ ; none were detected ( $p = .081$ ). Univariate z-scores ( $>3.29$ ) also flagged no cases ( $z = 2.30$ ). Thus, all observations were retained (Magyar et al., 2022). Qualitative data were examined through content analysis, focusing on sustainability leadership themes in the Thai context. To maintain equity and control for contact time, the control group received three two-hour academic sessions on general leadership, communication, and coordination theory.

## Research Finding

The study examined participant characteristics across five variables: gender, age, cumulative GPA, prior participation in a leadership development program, and prior leadership experience. The experimental group ( $n = 20$ ) showed equal gender distribution (45% male, 45% female). Half the participants were 22-24 years old, and 45% maintained GPAs between 3.00 and 3.49. While no participants had completed formal leadership development programs, all reported previous leadership experience in various activities. The control group ( $n = 20$ ) was primarily male (60%), and most participants were aged 18-21 (90%). Academic performance was distributed across GPA ranges of 3.00-3.49 (35%) and 3.50-4.00 (30%). Like the experimental group, none had formal leadership training, yet all possessed prior leadership experience. Both groups shared similar profiles regarding participation in leadership development programs and prior leadership roles (100%), suggesting comparable baseline leadership exposure despite differences in age and gender distribution.

### Contemporary Leadership Training Program for Undergraduate Students

A six-day leadership training program was developed to cultivate contemporary leadership competencies in Thai undergraduate students. The program integrated six leadership approaches through a transformative learning framework. Each model was selected to address different aspects of leadership effectiveness, providing students with a comprehensive foundation for leadership development. The program incorporated three transformative learning phases: disorienting dilemma, critical reflection, and perspective transformation, with each session lasting two hours over six days. The curriculum included varied learning activities such as role-playing exercises, case study analyses, reflective journaling, and self-assessment. The program incorporated relevant scenarios from student life and Thai cultural contexts, with discussions on leadership challenges in academic environments, student organizations, and community projects. Five experts reviewed the program, yielding content validity scores ranging from 0.60 to 1.00. A pilot test with ten students confirmed high satisfaction across content quality, instructor performance, logistics, and knowledge application. Participants particularly valued the program's focus on personal development and practical leadership scenarios relevant to their student experiences.

### Effectiveness of the Contemporary Leadership Training Program for Undergraduate Students

Independent-samples t-test results showed that the experimental group scored higher than the control group following training. This difference was statistically significant, confirming the program's effectiveness in developing contemporary leadership skills among participants, as shown in Table 1.

**Table 1** The comparison of contemporary leadership scores between the experimental and control groups

Time Point	Experimental Group ( $n = 20$ )		Control Group ( $n = 20$ )		t	p-value
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Post-intervention	4.56	.114	3.35	.587	9.390**	.001

Note: \* $M$  = Mean;  $SD$  = Standard Deviation; \* $p < .01$ .

Post-intervention analysis comparing contemporary leadership mean scores between the experimental and control groups revealed significant differences in four of six dimensions (Table 3). No significant differences were found in situational leadership and transformational leadership between groups. However, the experimental group scored significantly higher than the control group on servant leadership, authentic leadership, implicit leadership, and ethical leadership.

**Table 2** Post-Intervention Comparison of Contemporary Leadership Components between Experimental and Control Groups

Contemporary Leadership Dimension	Group	<i>M</i>	<i>SD</i>	<i>t</i>	p-value
Situational Leadership	Experimental	4.37	0.231	0.174	.864
	Control	4.36	0.379		
Transformational Leadership	Experimental	4.38	0.364	0.762	.456
	Control	4.29	0.552		
Servant Leadership	Experimental	4.38	0.364	12.565**	.001
	Control	2.70	0.426		
Authentic Leadership	Experimental	3.86	0.410	8.984**	.001
	Control	2.90	0.562		
Implicit Leadership	Experimental	3.90	0.391	8.468**	.001
	Control	3.07	0.604		
Ethical Leadership	Experimental	3.91	0.430	7.922**	.001
	Control	2.76	0.477		

Note: \**M* = Mean; *SD* = Standard Deviation; \**p* < .01.

A one-way repeated measures ANOVA examined contemporary leadership scores in the experimental group across three time points. With the Huynh-Feldt correction applied, results showed significant differences across time points,  $F = 392.174$ ,  $p < .01$ . Mean scores increased from pre-intervention to post-intervention to three-week follow-up. Bonferroni-adjusted pairwise comparisons revealed significant increases from pre-intervention to post-intervention and from pre-intervention to follow-up. The increase from post-intervention to follow-up was not statistically significant (see Table 4).

**Table 3** Repeated Measures ANOVA Results and Mean Scores of Contemporary Leadership in the Experimental Group ( $n = 20$ )

Time Point	<i>M</i>	<i>SD</i>	<i>F</i>	p-value
Pre-intervention	2.00	0.458	392.174**	.001
Post-intervention	4.56	0.114		
3-week Follow-up	4.80	0.410		
Huynh-Feldt Correction				

Note: \**M* = Mean; *SD* = Standard Deviation; \**p* < .01. Huynh-Feldt correction applied:  $SS = 96.470$ ,  $df = 1.659$ ,  $MS = 58.152$ .

**Table 4** Pairwise Mean Differences in Contemporary Leadership Scores across Time Points (Experimental Group)

Time Point	Pre-intervention ( <i>M</i> = 2.00, <i>SD</i> = 0.458)	Post-intervention ( <i>M</i> = 4.56, <i>SD</i> = 0.114)	3-week Follow-up ( <i>M</i> = 4.80, <i>SD</i> = 0.410)
Pre-intervention	-	-2.564** (SE = 0.095)	-2.800** (SE = 0.138)
Post-intervention	2.564** (SE = 0.095)	-	-0.240 (0.143)
3-week Follow-up	2.800** (SE = 0.138)	0.240 (SE = 0.143)	-

Note: \*Pairwise comparisons were Bonferroni-adjusted. \**p* < .01.

The qualitative findings reinforced the statistical results, showing that the program fostered more profound, more enduring transformations in how students understood and practiced leadership. Participants described moving away from viewing leadership solely as positional authority toward a more relational, ethical, and adaptive orientation. They also highlighted the

value of self-reflection, emotional intelligence, and social responsibility in shaping their leadership identity. As one participant reflected, “Before the program, when I heard the word leader I always pictured someone with a title... But now I see that leadership is not about position, it is about influence, about inspiring others to grow” (Participant 1). Another emphasized adaptability, noting, “The program showed me that leadership is not one-size-fits-all... What matters is knowing which approach fits the moment” (Participant 8). Overall, the program not only enhanced immediate leadership skills but also encouraged lasting changes in mindset and practice, equipping students with the capacity to lead ethically and responsibly within diverse Asian contexts. (*Participant 2*).

## Conclusion and Discussion

The program enhanced servant, authentic, implicit, and ethical leadership, underscoring the importance of reflective practice, moral reasoning, and cultural adaptation. Universities should combine instruction with immersive experiences, community projects, simulations, ethical case analyses, and mentoring, embedding sustainability themes to strengthen readiness for regional challenges. The six-day leadership training program synthesized theoretical frameworks and empirical research, integrating Transformative Learning Theory with contemporary leadership models. It followed three transformative learning phases, aligning with frameworks validated by Ueda & Kezar (2024), who found that experiential learning with structured reflection outperformed traditional approaches. Reflective practices were embedded throughout, prompting participants to examine leadership assumptions. The emphasis on servant and ethical leadership reflects evidence that values-based leadership benefits emerging adults. Costa et al. (2025) reported that undergraduates respond well to moral reasoning and service orientation, particularly when linked to practice. Our findings on cultural context align with Phakamach et al. (2025), who showed that leadership programs must adapt to local contexts. Their emphasis on visionary leadership corresponds with our results: stronger servant, authentic, implicit, and ethical leadership when Thai values were integrated with contemporary models. Similarly, Suksai et al. (2021) stressed the need to contextualize leadership while connecting it to global paradigms. The experimental group’s significant gains in servant and ethical leadership parallel those of Robinson & Magnusen (2024), whose participants improved through real-world service. Zhu & Shek (2021) also showed that ethical reflection and application enhanced leadership, whereas lecture-based formats did not. The absence of significant gains in situational and transformational leadership warrants attention. These competencies demand extended practice in authentic contexts. Day et al. (2021) emphasized that leadership growth requires experiential learning, reflection, and sustained feedback. While intensive, our six-day program may not have allowed sufficient time for participants to internalize diagnostic skills or establish transformational influence. High baseline scores also suggest ceiling effects.

## Limitations and Future Directions

Limitations include a small sample ( $n = 40$ ), a short three-week follow-up, a single-institution focus, and reliance on self-report measures. Future studies should use multi-site, longitudinal designs with behavioral observations and peer ratings, and test varied program formats.

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**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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