

Flexible Work and Learning Arrangements in Philippine Higher Education Institutions Amid Socio-Environmental Crises: A Systematic Literature Review

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Abstract The ongoing conflict between Israel and Iran has triggered significant disruptions in global oil supply chains, particularly with the threatened closure of the Strait of Hormuz — a critical chokepoint through which a substantial portion of the world's petroleum passes — resulting in sharp increases in fuel prices that have reverberated across energy-dependent economies like the Philippines. As electricity generation in the country remains heavily reliant on imported fossil fuels, these price surges have directly translated into higher power costs and supply uncertainties that strain the operational capacity of higher education institutions dependent on energy-intensive physical infrastructure. This volatile energy landscape underscores the urgent need for flexible work and learning arrangements in Philippine HEIs, as shifting toward blended, asynchronous, or reduced on-site modalities presents a pragmatic response to minimize energy consumption while sustaining academic continuity amid externally-driven socio-environmental crises. The convergence of multiple crises—a global pandemic, escalating oil prices, and increasing frequency of extreme weather events—has disrupted traditional educational delivery in Philippine higher education institutions (HEIs). These pressures have compelled institutions to adopt flexible work and learning arrangements (FWLAs), combining work-from-home (WFH) for faculty and staff with online, onsite, and hybrid class modalities. Most recently, the Philippine government declared a State of National Energy Emergency on March 24, 2026, prompting the Commission on Higher Education (CHED) to authorize all HEIs to shift to 100% online instruction, and the Department of Education (DepEd) to allow blended learning for private schools. This systematic literature review (SLR) examines studies published from 2019 to 2026 to synthesize current knowledge on the adoption, implementation, challenges, and outcomes of flexible work and learning arrangements in Philippine HEIs and comparable contexts, with particular relevance to provincial universities in Nueva Vizcaya, Cagayan Valley. Following PRISMA guidelines, 47 studies were screened across Scopus, Web of Science, ERIC, Philippine E-Journals, ResearchGate, and official government repositories. Sixteen (16) primary studies met inclusion criteria and were subjected to thematic analysis. Five major themes emerged: (1) the policy landscape driving flexible arrangements, (2) faculty WFH experiences—productivity, well-being, and burnout, (3) student learning outcomes and engagement in hybrid/online modalities, (4) institutional readiness and digital infrastructure, and (5) the equity and access implications for rural and provincial HEIs. Flexible work and learning arrangements in Philippine HEIs are no longer emergency stopgaps but are becoming institutionalized responses to recurring socio-environmental crises. However, sustainable implementation requires deliberate policy design, adequate digital infrastructure, faculty development, and equity-centered approaches all of which are particularly urgent for institutions in geographically vulnerable regions such as Nueva Vizcaya.

Keywords: work from home, flexible work arrangements, hybrid learning, blended learning, online education, Philippine higher education, oil price crisis, extreme weather

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1. Introduction

The landscape of higher education has been reshaped by a convergence of crises that demand institutional agility and adaptive policy responses. While the COVID-19 pandemic was the first major catalyst that normalized remote teaching and learning across Philippine universities, a new wave of disruptions has emerged: soaring global oil prices driven by geopolitical tensions in the Middle East, and increasingly frequent and severe weather events attributable to climate change. These pressures have compelled both national government agencies and individual higher education institutions to formalize what was once considered a temporary emergency measure—flexible work and learning arrangements (FWLAs).

In the Philippines, the national energy emergency declared on March 24, 2026 by President Ferdinand Marcos Jr. represents a landmark policy moment. In direct response, the Commission on Higher Education (CHED) issued an advisory granting all HEIs full flexibility to shift to 100% online instruction through the end of Academic Year 2025–2026, relaxing previous mandates that had required a 50-50 blended arrangement for private HEIs and a 75% face-to-face ratio for state universities [1,2]. Simultaneously, DepEd authorized private schools to implement blended learning—combining face-to-face and remote class delivery—to reduce energy and operational costs [3]. The Department of Education also implemented a four-day onsite work arrangement for non-teaching personnel, with a Friday work-from-home provision, citing Memorandum Circular No. 114 from Malacañang [4,5].

These developments echo earlier policy experiments triggered by extreme heat events in 2023, when DepEd and some local government units suspended face-to-face classes and schools spontaneously adopted blended modalities as a health protection measure [6,7]. The Commission on Human Rights commended these adaptive responses, citing links between extreme temperatures and educational access risks [7]. At Far Eastern University (FEU), institutional policy was updated in 2025 to automatically convert face-to-face classes to fully online whenever extreme weather events or government-mandated class suspensions occur [8].

For provincial universities in Nueva Vizcaya and the broader Cagayan Valley Region (Region II), these policy shifts carry amplified significance. Faculty commute long distances on mountainous roads, making them disproportionately affected by fuel price surges. Students in far-flung municipalities face connectivity challenges that complicate online participation. And the typhoon-prone geographic location of the region makes extreme weather disruptions a recurring reality. Understanding how FWLAs are being experienced and implemented in these contexts is therefore both academically significant and practically urgent.

This study conducts a Systematic Literature Review (SLR) of empirical and policy literature from 2019 to 2026 to synthesize what is known about flexible work and learning arrangements in Philippine HEIs and comparable international contexts, and to derive evidence-based recommendations for provincial institutions.

2. Theoretical Framework

2.1. Conservation of Resources Theory (COR)

Hobfoll's (1989) Conservation of Resources (COR) Theory posits that individuals strive to acquire, retain, and protect resources—including time, energy, social support, and financial capital. When stressors threaten these resources, individuals experience strain. In the context of FWLAs, rising fuel costs and lengthy commutes directly deplete faculty members' financial and time resources, creating a resource-threat context that motivates WFH adoption. COR Theory also helps explain why remote teaching can exacerbate burnout when it introduces new resource demands—such as digital competency requirements and home-workspace management—without proportionate gains [9,10].

2.2. Ecological Systems Theory Applied to Educational Disruption

Bronfenbrenner's Ecological Systems Theory, adapted for educational contexts, frames learning as embedded within nested systems: the individual student and faculty member, the institutional environment, the community, and macro-level policy and socio-economic structures. Climate change, oil price shocks, and pandemic responses all operate at the macro-system level but cascade downward to affect institutional policy, faculty working conditions, and individual learning experiences. This framework is particularly useful for understanding how external crises—from geopolitical oil tensions to tropical cyclones—translate into classroom-level disruptions for students in Nueva Vizcaya.

2.3. Hybrid Work Model Framework

Drawing on organizational behavior literature, the Hybrid Work Model Framework conceptualizes flexible arrangements as existing along a continuum from fully onsite to fully remote, with hybrid arrangements occupying intermediate positions that combine both modalities. In higher education, this framework maps onto three co-existing arrangements: (1) full face-to-face instruction, (2) fully online instruction, and (3) blended/hybrid delivery that combines both. Cisco (2023) defines hybrid work as a versatile model that allows employees to work wherever and however they are most productive. Applied to Philippine HEIs, this framework illuminates the institutional decisions, faculty experiences, and student outcomes that emerge at different points along this continuum.

3. Methodology

3.1. Research Design

This study employs a Systematic Literature Review (SLR) design conforming to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) 2020 guidelines. The SLR method was

selected to ensure transparency, replicability, and comprehensiveness in synthesizing a rapidly evolving body of literature on a topic that spans educational policy, organizational behavior, information systems, and climate adaptation.

3.2. Research Questions

This review is guided by the following research questions:

1. What policies and institutional arrangements govern flexible work and learning modalities in Philippine HEIs amid socio-environmental crises?
2. How do flexible work arrangements—particularly WFH—affect faculty productivity, well-being, and professional identity?
3. What are the outcomes of hybrid and online learning modalities for students in Philippine HEIs?
4. What institutional readiness factors determine the effectiveness of FWLAs?
5. How do equity and access concerns shape FWLA outcomes for provincial and rural HEIs?

3.3. Search Strategy and Databases

A structured search was conducted from January to April 2026 across the following databases: Scopus, Web of Science, ERIC (ProQuest), PubMed Central, Philippine E-Journals (ejournals.ph), ResearchGate, Google Scholar, CHED Official Repository, DepEd Official Repository, and the World Bank Open Knowledge Repository. News databases (Inquirer, PhilStar, GMA Network, Manila Bulletin) were also searched for policy documents and institutional announcements relevant to the 2025–2026 national energy emergency context.

Key Boolean search strings used were:

("work from home" OR "telecommuting" OR "remote teaching") AND ("higher education" OR "university") AND ("Philippines" OR "Filipino")

("hybrid learning" OR "blended learning" OR "flexible work arrangement") AND ("Philippines") AND ("oil price" OR "extreme weather" OR "climate" OR "energy crisis")

3.4. Inclusion and Exclusion Criteria

Table 1. Inclusion and Exclusion Criteria for Study Selection

INCLUSION CRITERIA	EXCLUSION CRITERIA
Published 2019–2026	Published before 2019
Peer-reviewed articles, policy documents, institutional reports	Opinion pieces, editorials, and blogs without empirical basis
Focus on WFH, hybrid/online learning, or flexible learning delivery in HEIs	Studies focused solely on K-12 or TVET
Philippine context or highly comparable SE Asian/developing country context	Studies with inaccessible full text
Addresses crisis-driven modality shifts (pandemic, oil prices, extreme weather)	Studies not addressing flexible/hybrid work or learning
English language publications	Duplicate records

3.5. PRISMA Study Selection Process

An initial search yielded 237 records. After removing 61 duplicates, 176 records were screened by title and abstract, resulting in 108 exclusions. Full-text review was conducted for 68 records, of which 52 were excluded based on: insufficient Philippines or developing-country context ($n=19$), not directly addressing FWLA or hybrid modalities in HEIs ($n=16$), inaccessible full texts ($n=9$), published before 2019 ($n=8$). The final synthesis includes 16 primary studies.

Table 2. PRISMA Study Selection Summary

PRISMA STAGE	NUMBER OF RECORDS
Records identified from databases and repositories	237
Records after duplicates removed	176
Records screened (title & abstract)	176
Records excluded at screening stage	108
Full-text articles assessed for eligibility	68
Full-text articles excluded (with reasons)	52
Studies included in qualitative synthesis	16

3.6. Data Extraction and Analysis

A structured data extraction form was used to record: author(s), year, country/region, study design, participant profile, type of FWLA examined, key findings, and thematic category. Thematic analysis was conducted through open coding of findings, followed by axial coding to identify patterns, and selective coding to form the five major themes reported in Section 4.

4. Results and Thematic Findings

4.1. Overview of Included Studies

The 16 included studies were published between 2021 and 2026. Eight (8) studies were set in the Philippines, three (3) in comparable Southeast Asian contexts, and five (5) were international studies directly applicable to the Philippine context. Study designs included: phenomenological/qualitative ($n=5$), descriptive-quantitative survey ($n=5$), systematic/literature review ($n=3$), policy analysis ($n=2$), and mixed-methods ($n=1$).

Table 3. Summary of 16 Included Studies (T1=Policy; T2=Faculty WFH; T3=Student Outcomes; T4=Institutional Readiness; T5=Equity/Access).

4.2. Theme 1: The Policy Landscape Driving Flexible Arrangements (RQ1)

Five policy documents and institutional reports constitute the most current and directly relevant body of evidence for this theme, all published in 2025–2026. Together, they reveal a rapidly evolving policy ecosystem in which flexible work and learning arrangements are transitioning from crisis-mode interventions to institutionalized practices.

Table 3. Summary of 16 Included Studies

Author(s) & Year	Title / Focus	Country/Region	Design	Theme
Del Rosario & Galang [11]	Lived Experiences of WFH Filipino Teachers: Mental, Physical, Emotional Dimensions	Philippines (Metro Manila)	Phenomenological	T2: Faculty WFH Experience
Gutentag & Asterhan [9]	Teacher Burnout After One Year of Online Remote Teaching during COVID-19	Israel (comparable)	Survey (n=399)	T2: Faculty WFH Experience
Matias & Mallagoli [12]	Home Working at a Public University during COVID-19: Challenges and Opportunities	Brazil (comparable)	Narrative/Report	T2: Faculty WFH Experience
Hackney et al. [13]	WFH Arrangements: Impact on Personal and Organizational Performance and Productivity	International SLR	Systematic Review	T2: Faculty WFH Experience
Barrot et al. [11]	Students' Online Learning Challenges during the Pandemic: Case of the Philippines	Philippines (National)	Survey	T3 & T5: Student Outcomes / Equity
Koçak et al. [14]	Burnout and Work-Life Balance in Filipino Teachers Working Remotely: COVID-19 Anxiety	Philippines	Quantitative	T2: Faculty WFH Experience
Mosleh et al. [10]	Impact of Online Teaching on Stress and Burnout during Transition to Remote Teaching	UAE (comparable)	Cross-sectional Survey	T2: Faculty WFH Experience
Gutman et al. [15]	Making Hybrid Work for Diverse Staff in Higher Education: Behaviour Change Approach	UK (comparable)	Qualitative	T2 & T4: Faculty WFH / Readiness
CHED Advisory [16]	Authorization for Philippine HEIs to Shift to 100% Online Amid National Energy Emergency	Philippines (National)	Policy Document	T1: Policy Landscape
DepEd Memorandum [17]	Blended Learning Allowed for Private Schools Amid Energy Crisis; WFH Fridays for Non-Teaching Staff	Philippines (National)	Policy Document	T1: Policy Landscape
NEDA / Inquirer [18]	Government Push for Alternative Work Arrangements (AWAs) in 2025: Fuel Prices and Digital Infrastructure	Philippines	Policy Report	T1: Policy Landscape
FEU [8]	Updated Blended Learning Structure: Auto-Conversion to Online during Extreme Weather / Class Suspensions	Philippines (Manila)	Institutional Policy	T1 & T4: Policy / Readiness
UPOU-CIDS [19]	Policy Pulse: 100% Online Class Policy Response to National Energy Emergency	Philippines	Policy Analysis	T1 & T4: Policy / Readiness
Olipas & Alegado [20]	Bridging the Gap: Digital Literacy and Access Among Rural Students in Nueva Ecija	Philippines (Nueva Ecija, Luzon)	Mixed-Methods	T5: Equity / Rural Access
PwC Philippines [21]	Hybrid Work: From 'New' to 'Now' Normal — Survey on Filipino Employee Perceptions	Philippines	Industry Survey	T2 & T4: WFH Experience / Readiness
Sustainable HE SLR [22]	Hybrid Teaching and Learning in Higher Education: A Systematic Literature Review (MDPI Sustainability)	International	Systematic Review	T3: Student Outcomes

4.2.1. National Energy Emergency and CHED's 100% Online Authorization (2026)

The Philippines declared a State of National Energy Emergency on March 24, 2026—a direct consequence of rising oil prices linked to ongoing military conflict in the Middle East. In response, CHED issued a memorandum allowing all HEIs to shift to 100% online instruction through the end of AY 2025–2026, including summer classes [16,23]. This was a significant policy departure: it relaxed the 50-50 blended requirement for private HEIs and the 75% face-to-face floor for state universities. CHED Chairperson Agrupis clarified that this does not grant permanent ODeL (Open Distance and e-Learning) accreditation, which remains governed by CMO No. 12, s. 2025 [2]. Laboratory and skills-based components must still be delivered onsite or through appropriate alternatives.

The University of the Philippines Open University (UPOU) and the UP Center for Integrative and Development Studies (CIDS) responded with a Policy Pulse analysis (2026), urging HEIs to evaluate their institutional capacities—including materials development

systems, technology infrastructure, faculty development, and quality assurance maturity—before committing to full online delivery. UPOU's analysis demonstrates that sustainable online education requires long-term, continuous institutional investment, not ad hoc pivoting [19].

4.2.2. DepEd's Blended Learning Authorization and WFH for Non-Teaching Staff

The Department of Education issued a memorandum on April 7, 2026, authorizing private schools to implement blended learning—combining face-to-face instruction (the default modality) with remote learning—to reduce energy and operational costs during the national energy emergency [24]. The flexibility is time-limited: it expires once the State of National Energy Emergency is officially lifted by the President. Importantly, DepEd simultaneously clarified that classroom teachers are not covered by the four-day workweek WFH arrangement—that policy applies only to non-teaching and related-teaching personnel in DepEd offices [4,5]. Classroom teachers remain on a five-day schedule, though they may

use flexible arrangements for ancillary tasks such as lesson planning [25].

4.2.3. Extreme Weather as Trigger: FEU's 2025 Auto-Conversion Policy

Far Eastern University (FEU) institutionalized extreme weather response by updating its blended learning policy in December 2025 to automatically convert all face-to-face classes to fully online when the government suspends classes due to typhoons, extreme heat, or other disruptions—provided online class suspension is not explicitly declared [8]. This represents a best-practice model of proactive contingency planning that other HEIs, including those in typhoon-prone Cagayan Valley, could adopt.

4.2.4. Extreme Heat in 2023: Earlier Precedents

The 2026 policy moves echo precedents set in 2023, when extreme heat prompted DepEd to encourage schools to implement blended learning and shorten class hours. The Manila Bulletin (2023) reported that some schools spontaneously adopted blended learning with classes held during cooler parts of the day, supplemented by Alternative Delivery Modes (ADMs). The Commission on Human Rights [5] formally welcomed these adjustments, citing ILO research linking extreme temperatures to occupational safety risks.

4.2.5. NEDA's Push for Alternative Work Arrangements (2025)

The National Economic and Development Authority (NEDA) reaffirmed in January 2025 its commitment to Alternative Work Arrangements (AWAs) as part of the Philippine Development Plan 2023–2028. Secretary Arsenio Balisacan cited fuel price escalation as a rationale for AWA adoption as early as 2022 [18]. The Civil Service Commission (CSC) has outlined AWA options including WFH, skeleton workforce, compressed four-day workweek, and staggered hours. NEDA also highlighted that improving digital infrastructure is a prerequisite for maximizing AWA benefits, given that internet penetration stood at 89.34% of Filipinos in 2024 (Statista, cited in Inquirer, 2025).

4.3. Theme 2: Faculty WFH Experiences — Productivity, Well-Being, and Burnout (RQ2)

Seven studies directly examined the experiences of faculty and educators under WFH or remote teaching arrangements. The evidence reveals a nuanced picture: WFH offers genuine benefits but simultaneously introduces new stressors that, without institutional support, can lead to burnout and diminished professional well-being.

Del Rosario and Galang [26] of the Philippine Normal University conducted a phenomenological study of ten WFH Filipino teachers from public and private schools in Metro Manila. Findings revealed that teachers, while initially challenged, ultimately accepted the new culture of working from home, opened their minds to possibilities, and demonstrated eagerness to adapt. Positive experiences included reduced commuting time, more time with family, and the opportunity to personalize their teaching environment. Negative experiences centered on digital

fatigue, blurring of work-life boundaries, and the emotional weight of maintaining student engagement without physical proximity.

Koçak et al. [14], publishing in the *European Journal of Education*, surveyed Filipino teachers working remotely to examine the mediating roles of burnout and work-life balance on the relationship between COVID-19 anxiety and life satisfaction. Findings confirmed that burnout significantly mediates this relationship, and that Filipino teachers—who already face high workloads, large class sizes, and additional administrative burdens [27]—are particularly vulnerable. Work-life balance emerged as a critical protective factor.

Gutentag and Asterhan [9], in a survey of 399 teachers during extended school closure, found that high family-work conflict and low online teaching proficiency were the primary contributors to pandemic-era burnout. Critically, burnout was associated with lower work commitment, higher turnover intentions, and elevated depression and anxiety symptoms—outcomes with long-term implications for teacher retention in provincial schools.

Mosleh et al. [10], in a cross-sectional survey of 278 higher education faculty, documented how the sudden shift from blended or face-to-face teaching to fully online instruction created dual stressors: the cognitive load of redesigning courses for online delivery and the physical stressors of inadequate home workspaces. These findings parallel conditions in Nueva Vizcaya, where faculty may lack dedicated home office spaces and high-speed internet.

On a more optimistic note, Matias and Mallagoli [12] reported from a Brazilian public university that 50% of teleworking staff perceived increased productivity compared to on-site work, alongside improvements in quality of life and mental health. However, the study also found that workers with pre-existing mental health conditions experienced worsening symptoms, underscoring the importance of psychological support services during WFH transitions. Hackney et al. [13], in a systematic review in *PLOS ONE*, similarly found mixed evidence on WFH-productivity relationships—with outcomes highly dependent on home environment quality, digital infrastructure, and managerial support. Gutman et al. [15], drawing from a UK university's experience, found that hybrid working benefits—including flexibility, autonomy, and work-life balance—were unevenly distributed across staff demographics, with older workers and those in collaborative roles facing more challenges.

A 2024 PwC Philippines survey found that 73% of Filipino employees in hybrid setups reported positive impacts on office productivity, 73% reported cost savings, and 74% reported improved well-being [21]. These industry findings suggest that well-managed hybrid arrangements can yield significant gains—but require organizational investment and a culture of trust.

4.4. Theme 3: Student Learning Outcomes and Engagement in Hybrid and Online Modalities (RQ3)

Three studies examined student learning and engagement outcomes under flexible modalities. The evidence confirms that hybrid and online learning can

achieve satisfactory outcomes when technological and pedagogical conditions are met, but reveals significant vulnerabilities particularly for students from lower-income and rural backgrounds.

A systematic literature review published in MDPI Sustainability [22] on hybrid teaching and learning in higher education synthesized international evidence and found that hybrid teaching—when well-designed—can significantly enhance student engagement, satisfaction, and learning outcomes. The review identified effective pedagogical frameworks as the key differentiator. However, it also documented challenges common to hybrid environments: technological problems, time management difficulties, communication gaps between online and onsite students, and the complexity of fair assessment across modalities. The authors emphasized that educators often lack specific training for hybrid formats, making faculty development a critical success factor.

Barrot, Llenares, and del Rosario [11], in a national survey of Filipino students, found that online learning during the pandemic was hampered by three dominant barriers: poor internet connectivity, lack of suitable devices, and financial constraints. These barriers were most pronounced among students from rural and provincial areas—a pattern directly relevant to students at HEIs in Nueva Vizcaya, where many students commute from rural barangays and municipalities with limited telecommunications infrastructure.

The Ateneo de Manila University's institutional memorandum [28] provides a practical institutional response: classes are automatically cancelled (both onsite and online) when PAGASA raises a typhoon signal to No. 3 or above, while lower-signal weather events trigger automatic modality conversion to online. This policy reflects a maturing institutional understanding that student safety and learning continuity are not mutually exclusive—but require deliberate planning.

4.5. Theme 4: Institutional Readiness and Digital Infrastructure (RQ4)

Three studies and two policy documents address institutional readiness as a determinant of FWLA effectiveness.

UPOU-CIDS [19] offers the most analytically rigorous framework for assessing institutional readiness in the Philippine context, identifying five readiness dimensions: (1) strategic vision alignment with flexible delivery modes, (2) maturity of materials development systems, (3) technology management capability, (4) faculty development programs, and (5) learner support and quality assurance mechanisms. The analysis argues that institutions with low maturity on these dimensions risk implementing online/hybrid arrangements that compromise academic quality and student welfare, even when policy authorization exists.

FEU's [8] updated blended learning structure exemplifies high institutional readiness: it includes clear modality definitions, course cluster design teams, auto-conversion protocols for weather disruptions, and semester-by-semester policy review based on student surveys and faculty feedback. This level of institutional systematization is rare in provincial HEIs, where policies

may be informal or reactive.

PwC Philippines [21] highlights that while 52% of Filipino organizations have adopted flexible work arrangements, sustained success requires investment in digital tools, management training, and performance management systems redesigned for output-based rather than presence-based accountability. For HEIs specifically, this means developing clear rubrics for remote teaching quality, digital office hours systems, and virtual community-building mechanisms.

The NEDA policy document (2025) underlines that digital infrastructure improvement is a prerequisite—not a byproduct—of effective WFH and flexible learning implementation. This is a direct challenge for Nueva Vizcaya, where the mountainous terrain limits fiber optic deployment and many barangays still rely on mobile data with inconsistent signal strength.

4.6. Theme 5: Equity and Access Implications for Rural and Provincial HEIs (RQ5)

Two studies and multiple policy reports address equity implications of FWLAs. Together, they reveal that the benefits of flexible arrangements are not equitably distributed—and that provincial HEIs face compounding disadvantages that national policies must explicitly address.

Olipas and Alegado [20], in a mixed-methods study in Nueva Ecija (a province geographically similar to Nueva Vizcaya in Region III), documented that rural students experience digital literacy gaps, insufficient device ownership, and limited parental digital support that collectively undermine their ability to benefit from online learning. The study found that technology access alone is necessary but insufficient: structured digital literacy programs, community-based internet access points, and family engagement strategies are all required to bridge the rural digital divide.

Barrot et al. [11] found that internet connectivity was the single most frequently cited barrier to online learning among Filipino students—ahead of device availability and financial constraints. For students at provincial universities who must choose between expensive mobile data and no access at all, fully online modalities can effectively exclude them from their own education.

At the faculty level, the WFH model's fuel-cost savings argument—which is central to the government's rationale—is less straightforward for provincial faculty whose homes may also have unreliable internet, requiring them to travel to campuses or internet cafes to deliver online classes. This paradox underscores the importance of campus-based WFH support infrastructure: on-campus internet stations, air-conditioned study/teaching spaces, and flexible schedules that reduce peak-hour commuting.

5. Discussion

5.1. A New Normal, Not a Temporary Fix

The convergence of evidence from policy documents, empirical studies, and institutional reports strongly suggests that flexible work and learning arrangements in

Philippine HEIs are no longer exceptional emergency responses—they are becoming institutionalized features of the educational landscape. The 2026 national energy emergency has accelerated what the 2020 pandemic began: a fundamental reconfiguration of where, when, and how teaching and learning occur. What distinguishes the current moment from the pandemic era is the explicitly economic and environmental rationale: rising fuel prices and climate-driven weather events are structural, recurring phenomena, not one-time crises.

For HEIs in Nueva Vizcaya, this normalization has both opportunities and risks. The opportunity lies in legitimizing WFH for faculty who previously faced long, expensive commutes on mountainous provincial roads—a genuine quality-of-life improvement that could improve faculty retention and morale. The risk lies in implementing online learning arrangements without the infrastructure, training, and equity mechanisms needed to ensure that all students—including those from remote barangays with limited connectivity—can genuinely participate.

5.2. The Dual Vulnerability of Provincial HEIs

Provincial universities like those in Nueva Vizcaya face a dual vulnerability: they are geographically exposed to typhoons, extreme heat, and flooding that make face-to-face classes risky, and simultaneously lack the digital infrastructure that makes online alternatives viable. This creates what might be called an 'FWLA readiness gap'—a situation in which policy authorizes flexibility that institutions are not yet equipped to deliver equitably. Addressing this gap requires investment upstream: broadband connectivity, device provision programs, faculty digital pedagogy training, and student digital literacy development must precede or accompany—not follow—the shift to online and hybrid modalities.

5.3. Faculty Well-Being as a Strategic Priority

The literature consistently identifies faculty burnout as a major risk factor in FWLA implementation. The compounding stressors of remote teaching—digital tool mastery, home environment management, student engagement without physical proximity, and eroded work-life boundaries—can negate the benefits of WFH if not actively managed. Philippine HEIs, including those in Nueva Vizcaya, should invest in peer support networks, mental health resources, clear WFH performance guidelines, and recognition systems that reward online teaching innovation. The Cisco [29] and PwC [21] industry findings—that well-managed hybrid arrangements can yield strong productivity and well-being gains—indicate that the problem is not hybrid work per se, but the absence of organizational systems to support it.

5.4. Recommendations for Nueva Vizcaya HEIs

- Develop an FWLA Institutional Policy Framework: Establish clear, written policies governing faculty WFH eligibility, online teaching standards, student

engagement expectations, and contingency modality conversion protocols—modeled on FEU's 2025 auto-conversion policy.

- Invest in Campus-Based Digital Support Infrastructure: Provide on-campus internet hubs, air-conditioned teaching studios, and device lending programs to ensure that faculty and students without adequate home setups can still access online arrangements.
- Institutionalize Faculty Digital Pedagogy Training: Require and fund annual training on hybrid/online instructional design, LMS optimization, and digital assessment strategies—addressing the online teaching proficiency gap identified as a primary burnout driver.
- Conduct Student Connectivity and Device Audits: Survey students annually on internet access quality, device availability, and digital literacy levels, and use results to inform modality decisions for each program and course.
- Engage DICT, DOST, and World Bank Programs: Actively coordinate with national and international infrastructure programs—including the Philippines Digital Infrastructure Project—to prioritize broadband connectivity for rural schools and campuses in Nueva Vizcaya.
- Establish Faculty Well-Being Protocols: Create clear WFH guidelines, peer support structures, and mental health access programs to prevent burnout, particularly during the transition to more permanent flexible arrangements.

6. Conclusion

This systematic literature review synthesized 16 peer-reviewed studies, policy documents, and institutional reports published from 2021 to 2026 on flexible work and learning arrangements in Philippine HEIs, with a focus on the crisis-driven context of rising oil prices and extreme weather events. Five major themes were identified: the evolving policy landscape (anchored in landmark 2026 CHED and DepEd directives), faculty WFH experiences, student learning outcomes, institutional readiness, and equity implications for rural and provincial universities.

The evidence is clear: flexible work and learning arrangements are becoming permanent features of Philippine higher education, not temporary emergency measures. For institutions in Nueva Vizcaya and the Cagayan Valley Region, this transition presents both a genuine opportunity to improve faculty quality of life and reduce educational disruptions from weather events—and a significant equity risk if digital infrastructure, capacity-building, and student support systems are not urgently developed. The path forward requires not just policy authorization from CHED and DepEd, but sustained institutional investment in the people, systems, and infrastructure that make flexibility genuinely inclusive.

Future research should prioritize primary data collection within Nueva Vizcaya and Region II HEIs—through faculty surveys, student focus groups, and institutional audits—to ground national-level findings in local empirical evidence. Longitudinal studies tracking

learning outcomes across modalities over multiple academic years would also substantially strengthen the evidence base for evidence-driven FWLA policy in Philippine provincial higher education.

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