ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 4 (April 2026)

Emerging Trends, Teaching Innovations, and Implementation Challenges in A State University

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Date Submitted:
February 20, 2026

Date Accepted:
March 25, 2026

Date Published:
April 10, 2026

DOI:
10.5281/zenodo.19490740

ABSTRACT

This study examined the implementation of emerging trends in teaching, the utilization of teaching innovations, the challenges encountered, and the coping strategies employed in Pangasinan State University during Academic Year 2024–2025. Using a quantitative descriptive design, data were gathered from 600 respondents composed of 98 educational administrators and 502 faculty members across the university's nine campuses through a researcher-made survey questionnaire administered via Google Forms. The instrument covered four major domains: implementation of emerging trends, utilization of teaching innovations, implementation challenges, and coping strategies. Data were analyzed using frequency, percentage, weighted mean, analysis of variance, and Pearson product-moment correlation. Results showed that respondents moderately implemented emerging trends in teaching (grand mean = 3.00), with soft skills development (WM = 3.23) and mental health awareness (WM = 3.15) ranking highest, while virtual reality and augmented reality integration ranked lowest (WM = 2.79). Teaching innovations were generally utilized (grand mean = 2.97), led by blended learning (WM = 3.07) and flipped classroom (WM = 3.02). Respondents agreed that they experienced implementation challenges (grand mean = 2.81), particularly in resource availability (WM = 2.88) and administrative support (WM = 2.86), and also agreed on the use of coping strategies (grand mean = 3.05), especially those related to cultural and organizational practices (WM = 3.18) and professional readiness of faculty (WM = 3.12). Significant differences were found among perceptions across the dimensions of implementation, utilization, challenges, and coping strategies. Correlation analysis showed a very low but significant positive relationship between implementation of emerging trends and utilization of teaching innovations ($r = 0.148$, $p < .01$), and between utilization of teaching innovations and challenges encountered ($r = 0.131$, $p < .01$). No significant relationship was found between implementation of emerging trends and implementation challenges ($p = .806$), nor between implementation of emerging trends and coping strategies ($p = .746$). The findings indicate that educational innovation in state universities is advancing, but its sustainability depends on institutional support, capacity building, policy responsiveness, and deliberate mechanisms for evaluation and improvement. On the basis of the findings, the paper advances Project ARISE as an institutional framework for strengthening innovation adoption in higher education.

Keywords: *emerging trends, teaching innovations, implementation challenges, higher education, state university, Project ARISE*

ISSN: 3116-3475
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INTRODUCTION

Higher education is undergoing sustained transformation as digitalization, globalization, flexible learning, and evolving labor-market expectations reshape the way institutions teach, assess, and support learners. In this environment, universities are no longer evaluated only by their ability to deliver content; they are also expected to cultivate adaptive, technology-enabled, and student-centered learning ecosystems. International literature consistently identifies technology integration, immersive learning, artificial intelligence, experiential learning, mental health responsiveness, and soft skills development as among the most influential trends affecting contemporary teaching practice.

Within this broad transition, teaching innovation has become a practical expression of institutional readiness. Blended learning, flipped classroom strategies, personalized learning, gamification, learning through argumentation, and collaborative learning have gained prominence because they respond to the need for more flexible, participatory, and learner-responsive instruction. However, the successful use of such innovations depends not only on faculty willingness but also on institutional capacity, resource access, administrative support, policy alignment, and a culture that encourages experimentation.

The Philippine higher education sector has likewise been moving toward this direction. Flexible learning policies and digital transformation initiatives have encouraged higher education institutions to reimagine instructional delivery beyond conventional face-to-face methods. Yet the translation of policy into practice remains uneven. State universities in particular often navigate the tension between innovation and institutional constraints such as uneven infrastructure, heavy teaching loads, limited technical support, and varying levels of readiness across campuses.

Pangasinan State University provides a useful context for examining this transition. As a multi-campus state university, it reflects both the opportunities and the difficulties associated with the adoption of emerging trends in teaching. Understanding the university's current level of implementation, the innovations being used by instructors, the barriers experienced, and the coping mechanisms employed can generate evidence that is useful not only for the institution itself but also for similar state universities and colleges.

This study was therefore undertaken to determine the implementation of emerging trends in teaching, the utilization of teaching innovations, the challenges in their implementation, and the coping strategies employed by respondents in Pangasinan State University during Academic Year 2024–2025. It also examined whether significant differences existed among the dimensions measured and whether meaningful relationships were present among implementation, utilization, challenges, and coping strategies. The study ultimately sought to propose an institutional framework grounded in the findings.

Specifically, the study focused on six dimensions of emerging trends in teaching—technology integration, virtual reality and augmented reality integration, artificial intelligence, experiential learning, mental health awareness, and soft skills development—and six dimensions of teaching innovation—blended learning, flipped classroom, personalized learning, gamification of learning, learning through argumentation, and collaborative learning. Challenges and coping strategies were examined across resource availability, administrative support, professional readiness of faculty, stakeholder support, policy and regulatory environment, and cultural and organizational practices.

The study is anchored in perspectives that explain how educational innovation is adopted and sustained in institutions. The Diffusion of Innovations framework underscores that adoption varies according to perceived usefulness, compatibility, and support structures. The Technology Acceptance Model helps explain why faculty members may or may not embrace educational technologies based on ease of use and perceived value. TPACK highlights that effective innovation requires the integration of technological, pedagogical, and content knowledge rather than technology use in isolation. These perspectives converge on one point: innovation becomes meaningful only when institutional conditions allow it to be translated into effective teaching practice.

ISSN: 3116-3475
International Journal
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For higher education leaders, the significance of this inquiry lies in its practical value. The findings identify where innovation is already visible, where institutional weaknesses are most pronounced, and what forms of support appear to help faculty navigate change. For faculty, the study offers a basis for professional development planning and collaborative improvement. For policymakers and future researchers, it provides evidence from a state university setting that can inform broader discussions on flexible learning, digital transformation, and sustainable pedagogical innovation.

METHODS

Research Design

This study employed a quantitative method using a descriptive research design. The design was considered appropriate because the inquiry sought to describe the current status of emerging trends in teaching, the utilization of teaching innovations, the challenges encountered in implementation, and the coping strategies used by respondents. It also enabled the researcher to examine differences among dimensions and determine relationships among key variables.

Research Locale

The study was conducted across all nine campuses of Pangasinan State University in Region I: Lingayen Campus, Alaminos City Campus, Asingan Campus, Bayambang Campus, Binmaley Campus, Infanta Campus, San Carlos City Campus, Santa Maria Campus, and Urdaneta City Campus. The respondents totaled 600, consisting of 98 educational administrators and 502 faculty members. Campus representation was as follows: Lingayen, 94 respondents; Alaminos City, 60; Asingan, 48; Bayambang, 90; Binmaley, 70; Infanta, 26; San Carlos City, 82; Santa Maria, 55; and Urdaneta City, 75.

Research Instrument

The primary instrument for data gathering was a researcher-made survey questionnaire. The instrument was organized into four parts. Part I measured the implementation of emerging trends in teaching in terms of technology integration, virtual reality and augmented reality integration, artificial intelligence, experiential learning, mental health awareness, and soft skills development. Part II measured the utilization of teaching innovations through indicators on blended learning, flipped classroom, personalized learning, gamification, learning through argumentation, and collaborative learning. Part III assessed implementation challenges across six institutional dimensions, while Part IV examined coping strategies using the same dimensions.

To ensure alignment with the objectives of the study, the indicators in the questionnaire were constructed directly from the identified variables and sub-variables. The instrument was used as the main source of quantitative data on respondents' perceptions and experiences. Responses were interpreted through a four-point Likert scale, allowing the computation of weighted means and descriptive equivalents for each dimension.

Data Gathering

Before the conduct of data gathering, permission was secured from the university president and concerned authorities. The questionnaires were then distributed through Google Forms to ensure accessibility and convenience for respondents across campuses. The online mode of administration also allowed faster retrieval and organization of responses.

Data were analyzed using both descriptive and inferential statistics. Frequency and percentage were used to describe the distribution of respondents. Weighted mean was used to determine the level of implementation of emerging trends, the utilization of teaching innovations, the extent of challenges encountered, and the degree of agreement with coping strategies. Analysis of variance was used to test

ISSN: 3116-3475
International Journal
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significant differences across the dimensions measured. Pearson product-moment correlation was used to test the relationships among implementation of emerging trends, utilization of teaching innovations, challenges encountered, and coping strategies. All inferential tests were evaluated at the 0.05 level of significance, with some correlations interpreted at the 0.01 significance level.

RESULTS AND DISCUSSION

The results are presented according to the major variables of the study. To keep this condensed IMRAD version focused and within the page limit, the discussion is integrated directly with the presentation of findings.

Table 1. *Summary of the Implementation of Emerging Trends in Teaching*

Dimension	Weighted Mean	Interpretation	Rank
Technology Integration	2.82	Moderately Implemented	5
VR and AR Integration	2.79	Moderately Implemented	6
Artificial Intelligence	2.90	Moderately Implemented	4
Experiential Learning	3.10	Moderately Implemented	3
Mental Health Awareness	3.15	Moderately Implemented	2
Soft Skills Development	3.23	Moderately Implemented	1
Grand Mean	3.00	Moderately Implemented	

Emerging trends in teaching were moderately implemented overall. The highest mean was recorded for soft skills development, while VR/AR integration had the lowest mean, indicating that more human-centered and pedagogy-based innovations are easier to implement than technology-intensive ones.

Table 2. *Summary of the Utilization of Teaching Innovations*

Innovation	Weighted Mean	Interpretation	Rank
Blended Learning	3.07	Utilized	1
Flipped Classroom	3.02	Utilized	2
Personalized Learning	3.01	Utilized	3.5
Gamification of Learning	2.91	Utilized	5
Learning through Argumentation	2.79	Utilized	6
Collaborative Learning	3.01	Utilized	3.5
Grand Mean	2.97	Utilized	

Teaching innovations were generally utilized, led by blended learning and the flipped classroom. Learning through argumentation obtained the lowest mean, suggesting a need for greater support in discourse-oriented and higher-order teaching strategies.

Table 3. *Summary of Implementation Challenges*

Challenge Dimension	Weighted Mean	Interpretation	Rank
Resource Availability	2.88	Agree	1
Administrative Support	2.86	Agree	2
Professional Readiness of Faculty	2.73	Agree	6
Stakeholder Support	2.83	Agree	3
Policy and Regulatory Environment	2.77	Agree	4

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
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Cultural Organization and Practices	2.76	Agree	5
Grand Mean	2.81	Agree	

Respondents agreed that challenges were present, particularly in resource availability and administrative support. These findings confirm that institutional conditions remain central to the sustainability of innovation.

Table 4. *Summary of Coping Strategies*

Coping Dimension	Weighted Mean	Interpretation	Rank
Resource Availability	2.97	Agree	5.5
Administrative Support	3.00	Agree	4
Professional Readiness of Faculty	3.12	Agree	2
Stakeholder Support	2.97	Agree	5.5
Policy and Regulatory Environment	3.05	Agree	3
Cultural and Organizational Practices	3.18	Agree	1
Grand Mean	3.05	Agree	

The coping-strategy results show that respondents relied most on cultural and organizational practices and on strengthening professional readiness. This suggests that adaptation is supported by collegial culture, institutional flexibility, and faculty learning.

Table 5. *Inferential Summary*

Test	Statistic	p-value	Decision
Difference in implementation of emerging trends	F = 87.00	.000	Significant
Difference in utilization of teaching innovations	F = 23.18	.000	Significant
Difference in implementation challenges	F = 6.56	.000	Significant
Difference in coping strategies	F = 13.37	.000	Significant
Implementation of trends × utilization of innovations	r = 0.148	.000	Significant, very low positive
Implementation of trends × challenges	r = 0.010	.806	Not significant
Utilization of innovations × challenges	r = 0.131	.002	Significant, very low positive
Implementation of trends × coping strategies	r = 0.013	.746	Not significant

The grand mean for implementation of emerging trends in teaching was 3.00, interpreted as moderately implemented. Among the dimensions, soft skills development ranked first (WM = 3.23), followed by mental health awareness (WM = 3.15) and experiential learning (WM = 3.10). The lowest-rated dimensions were artificial intelligence (WM = 2.90), technology integration (WM = 2.82), and

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particularly virtual reality and augmented reality integration (WM = 2.79). This pattern suggests that respondents were more able to implement trends that can be embedded in day-to-day pedagogy without substantial technological investment, while more equipment-intensive and technically demanding innovations remained less developed.

The stronger ratings for soft skills development and mental health awareness indicate that faculty members appear more confident in implementing innovations that are closely linked to classroom interaction, learner support, and human development. These dimensions can often be incorporated through instructional design, advising, classroom climate, and collaborative tasks. By contrast, virtual reality, augmented reality, and some forms of advanced technology integration require software, hardware, technical familiarity, and institutional support that may not be uniformly available across campuses.

Teaching innovations were generally utilized, as shown by the grand mean of 2.97. Blended learning ranked first (WM = 3.07), followed by flipped classroom (WM = 3.02), while personalized learning and collaborative learning shared the next rank (WM = 3.01). Gamification of learning registered a lower but still positive level of utilization (WM = 2.91), while learning through argumentation ranked lowest (WM = 2.79). These findings suggest that respondents are more comfortable using innovations that can be incorporated into existing class structures and learning management systems than those requiring deeper shifts in discourse patterns, assessment practices, or curricular redesign.

The prominence of blended learning is unsurprising in a post-pandemic higher education context. It has become one of the most accessible pathways for sustaining flexibility while preserving some degree of classroom interaction. Likewise, the use of flipped classroom strategies reflects an effort to move content delivery outside class time and reserve contact hours for engagement and processing. The relatively lower rating for learning through argumentation may indicate that although interactive teaching is valued, faculty may need more support in designing structured academic discourse, evidence-based discussion, and argument-centered tasks.

Respondents also agreed that they experienced challenges in the implementation of emerging trends and utilization of teaching innovations, with a grand mean of 2.81. Resource availability ranked highest among the challenge dimensions (WM = 2.88), followed by administrative support (WM = 2.86) and stakeholder support (WM = 2.83). Lower but still notable ratings were recorded for policy and regulatory environment (WM = 2.77), cultural organization and practices (WM = 2.76), and professional readiness of faculty (WM = 2.73). The pattern suggests that while personal readiness remains important, respondents view the institutional environment as the larger obstacle to innovation.

The prominence of resource availability and administrative support as challenge areas reinforces the idea that innovation is not merely an individual faculty decision. Educational technologies, flexible learning infrastructures, access to software and devices, technical assistance, and workload arrangements shape the extent to which faculty can experiment with new methods. In multi-campus institutions, uneven access to these supports can also produce uneven levels of implementation. Stakeholder support—including collaboration with administrators, peers, external partners, and policy actors—appears similarly important because innovation often depends on shared institutional commitment.

Despite these challenges, respondents agreed that coping strategies were being employed, as reflected in the grand mean of 3.05. Cultural and organizational practices ranked first (WM = 3.18), followed by professional readiness of faculty (WM = 3.12), policy and regulatory environment (WM = 3.05), administrative support (WM = 3.00), and both resource availability and stakeholder support (WM = 2.97). These results indicate that respondents do not simply endure challenges passively; instead, they appear to rely on adjustment mechanisms such as collegial collaboration, adaptive work practices, professional learning, and context-sensitive problem solving.

That cultural and organizational practices emerged as the strongest coping domain is especially meaningful. It implies that beyond formal policy, the everyday culture of the institution—its openness to collaboration, flexibility, mentoring, and shared adaptation—plays a major role in sustaining innovation.

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In many cases, a supportive culture may help compensate for limitations in equipment or formal structures, at least in the short term. Likewise, the relatively high rating for professional readiness in the coping-strategy dimension suggests that faculty respond to innovation demands by pursuing learning, adjustment, and skills development even when challenges persist.

The inferential results further clarify the pattern of findings. Significant differences were found in the perceptions of respondents toward the dimensions of implementation of emerging trends ($F = 87.00$, $p = .000$), utilization of teaching innovations ($F = 23.18$, $p = .000$), challenges encountered ($F = 6.56$, $p = .000$), and coping strategies ($F = 13.37$, $p = .000$). These results indicate that respondents did not view all dimensions in the same way; some areas were clearly stronger, weaker, or more problematic than others. This unevenness is important because it shows that innovation in the university is not monolithic. Some forms of change are moving faster than others, and not all kinds of support are equally felt.

Correlation analysis also generated important insights. There was a very low but statistically significant positive relationship between implementation of emerging trends and utilization of teaching innovations ($r = 0.148$, $p = .000$). Although the association is weak, it suggests that as respondents report greater implementation of emerging trends, they also tend to report somewhat greater use of teaching innovations. This confirms a conceptual link between awareness or implementation of broader educational trends and the use of concrete instructional strategies.

There was no significant relationship between implementation of emerging trends and challenges encountered ($r = 0.010$, $p = .806$). This result suggests that the presence of challenges does not automatically correspond to lower implementation. In practice, faculty and administrators may still implement innovations despite barriers, possibly because of institutional mandates, personal commitment, or local adaptation. Likewise, there was no significant relationship between implementation of emerging trends and coping strategies ($r = 0.013$, $p = .746$), implying that reported coping mechanisms may not be directly tied to the level of trend implementation alone.

A second significant but very low positive relationship was found between utilization of teaching innovations and challenges encountered ($r = 0.131$, $p = .002$). This suggests that those who use innovations more actively may also become more aware of the challenges that accompany them. In other words, engagement with innovation may expose faculty to practical constraints that are less visible to those using fewer innovation-oriented strategies. Rather than indicating failure, this pattern may reflect the realistic complexity of pedagogical reform.

Taken together, the results portray a university system that is progressing toward educational innovation but doing so unevenly and under constraint. Human-centered and pedagogically grounded trends such as soft skills development, mental health awareness, experiential learning, blended learning, and collaborative approaches appear more established than highly technical or infrastructure-dependent innovations. At the same time, the role of institutional support remains unmistakable. Resource availability, administrative responsiveness, and policy support continue to influence the depth and sustainability of implementation.

The findings support the need for a balanced approach to innovation in higher education. Institutions should not equate modernization solely with the acquisition of advanced tools. Rather, sustainable innovation requires a coordinated system in which technology adoption, pedagogical integrity, faculty development, organizational culture, and evaluation mechanisms reinforce one another. This rationale underlies the proposed Project ARISE framework—Adoption to Emerging Trends, Reinforcement of Pedagogical Foundation, Innovation in Teaching and Learning, Support Mechanism for Implementation, and Evaluation and Feedback—which synthesizes the study's major empirical themes into a practical model for institutional action.

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CONCLUSION

The study concludes that faculty and administrators in Pangasinan State University are already engaging with educational innovation, but the level of implementation remains moderate rather than fully institutionalized. The most visible strengths are in soft skills development, mental health awareness, experiential learning, and blended approaches to instruction. These areas suggest that the university's innovation efforts are presently strongest where pedagogy and learner support can be improved without extreme dependence on specialized infrastructure.

At the same time, the study establishes that innovation is constrained by institutional realities. Resource availability, administrative support, and stakeholder support remain major concerns, while advanced forms of technology integration such as VR, AR, and some AI-related practices are less developed. The findings imply that sustained innovation in state university settings requires more than faculty initiative; it depends on strategic leadership, equitable access to tools, faculty capacity building, and supportive institutional culture.

The inferential results show that respondents distinguish sharply among the dimensions of implementation, utilization, challenges, and coping strategies. Correlation findings further indicate that implementation of emerging trends is positively linked to the utilization of teaching innovations, though only at a very low level, and that more active use of innovation may coincide with greater awareness of implementation difficulties. These patterns highlight the complexity of educational change: progress can occur even in the presence of barriers, but such progress is more likely to be uneven than linear.

On the basis of the overall results, Project ARISE is proposed as a practical framework for higher education institutions seeking to strengthen innovation. The framework emphasizes openness to emerging trends, reinforcement of pedagogy, innovation in teaching and learning, support mechanisms for implementation, and continuous evaluation and feedback. Its central value lies in balancing technological advancement with institutional readiness and pedagogical soundness.

Recommendations

University leaders should establish continuous and differentiated professional development programs focused on technology integration, adaptive pedagogy, instructional design, and innovation-oriented assessment. These programs should go beyond one-time workshops and include mentoring, peer coaching, and campus-based communities of practice.

The university should invest strategically in digital infrastructure, platform access, technical support, and shared instructional resources so that innovation does not depend solely on individual faculty effort or campus location. Priority support may be directed toward areas with lower implementation, especially VR/AR-related applications and advanced AI-enhanced teaching tools.

Administrative policies should be reviewed to ensure that they encourage rather than inhibit experimentation. Workload structures, recognition mechanisms, and approval processes should be aligned with the realities of innovation-oriented teaching.

Because resource and stakeholder support emerged as major challenge areas, the university may strengthen partnerships with government agencies, private sector organizations, and educational technology providers to expand innovation opportunities and improve sustainability.

Future studies may validate the findings in other state universities and colleges and may employ mixed methods or qualitative approaches to explore more deeply how faculty and administrators experience the adoption of educational innovation in specific institutional contexts.

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