

## Assessment of Faculty Preparedness for Online And Distance E-Learning (Odel)

Ervin T. Dejumio<sup>1</sup>, Leslie U. Dela Cruz<sup>2</sup>, Mark Ryan P. Delos Reyes<sup>3</sup>,  
Emma M. Conejo<sup>4</sup>, Debora B. Sampaga<sup>5</sup>  
<http://orcid.or//ORCID ID: 0009-0009-0304-3392><sup>5</sup>  
Aldersgate College Inc <sup>1,2,3,4,5</sup>  
[deb\\_sampaga@aldersgate-college.com](mailto:deb_sampaga@aldersgate-college.com)<sup>1,2,3,4,5</sup>

### ABSTRACT

*Frequent weather disturbances disrupt instructional continuity, causing substantial lost teaching days that threaten educational recovery. This study evaluated faculty readiness, perceived challenges, and essential support structures for rapid shifts to Online and Distance e-Learning (ODEL) during emergency disruptions. Utilizing a descriptive mixed-methods survey design with faculty participants, data were analyzed using descriptive statistics and thematic analysis. Results showed that while most faculty felt somewhat prepared (54.3%) and somewhat confident (64.2%), significant operational vulnerabilities remain. Unstable internet connectivity emerged as the primary technical barrier (41.98%), directly compromising student attendance (18.52%) and engagement. Pedagogical obstacles were prominent, with online student engagement identified as very challenging alongside increased grading workloads and reduced face-to-face communication cues. Socio-emotional friction and digital divide constraints further impacted transition effectiveness. Statistical validation confirmed a significant relationship between faculty readiness and access to reliable infrastructure, targeted training, and clear guidelines. Key support priorities include technical troubleshooting training (29.73%) and digital classroom management (21.62%). Findings underscore that faculty readiness depends on holistic institutional alignment combining infrastructure enhancement, targeted pedagogical professional development, flexible policy frameworks, and socio-emotional support mechanisms.*

**Keywords:** Online and distance e-learning (ODEL), faculty preparedness, weather disturbances, educational continuity, digital infrastructure

### INTRODUCTION

A report from Philstar.com (2024) estimates that weather disturbances caused a total of 32 teaching days lost. This lost time is likely to impede recovery efforts to mitigate pandemic-related learning gaps and improve the country's performance in international assessments such as the Program for International Student Assessment (PISA). Circumstances like these often necessitate a rapid shift to online and distance learning (ODEL).

### Statement of the Problem

This assessment aimed to evaluate faculty readiness to shift immediately to ODEL when called for due to weather-related disruptions or other emergencies. Specifically, it sought to answer the following questions:

1. What is the level of faculty preparedness and confidence in shifting to ODEL?
2. What are the key technical, pedagogical, and socio-emotional challenges anticipated by faculty?

3. What is the extent of challenges anticipated by the faculty during the transition to ODeL in terms of:
  - 3.1 Technical challenges;
  - 3.2 Pedagogical challenges; and
  - 3.3 Social and emotional challenges
4. What forms of infrastructure, institutional support, tools, and training are needed to build faculty readiness and confidence?
5. There is no significant relationship between faculty readiness for ODeL transitions and their level of access to reliable infrastructure, targeted technical/pedagogical training, and clear institutional guidelines

### Scope and Delimitations

This study evaluates faculty preparedness, confidence levels, perceived challenges, and needed support systems for an immediate shift to ODeL. The scope covers faculty survey responses evaluating technical infrastructure, pedagogical readiness, student support requirements, and teaching plan adjustments.

### Review of Related Literature

Frequent disruptions to learning from extreme weather result in significant instructional time loss, which ultimately impedes national performance in standardized international assessments such as the Program for International Student Assessment (PISA). Compounding this issue is the digital divide; as educators integrate more online tools into their courses, the gap between students with and without sufficient technological access widens, thereby perpetuating existing socioeconomic disparities. Furthermore, virtual classrooms present distinct operational hurdles; Camu (2022) identified internet connectivity, technical difficulties, and external distractions as major challenges that demand holistic institutional solutions.

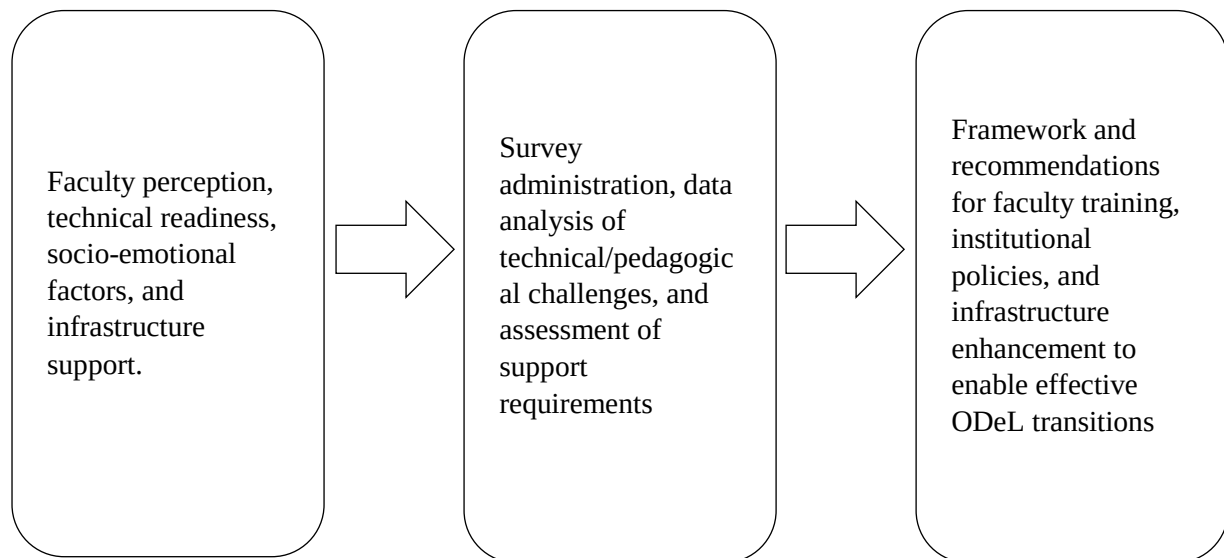
Beyond infrastructure, student engagement and social interaction play a pivotal role in distance learning success. A lack of meaningful interaction in online settings hinders academic achievement and contributes to physical and psychological stress among learners (Azmat & Ahmad, 2022), whereas active student involvement is essential to sustaining ongoing participation in course activities (Meyer & Meyer, 2014). To reduce instructional delays during the transition to online learning, Mavridi (2020) emphasizes that faculty readiness in basic technical troubleshooting is critical to saving valuable instructional time. Finally, the pedagogical delivery in digital environments is enhanced through the integration of interactive multimedia tools, which Noor et al. (2022) found positively influence the overall learning process.

### Theoretical Framework

This study is framed around distance learning theories, digital readiness models, and pedagogical adaptation frameworks, addressing how emergency remote teaching requires alignment among technological infrastructure, pedagogical skills, and institutional/socio-emotional support systems.

## Conceptual Framework

The conceptual model follows an Input-Process-Output (IPO) system:



**Figure 1: Conceptual Framework**

## METHODOLOGY

### Research Design

This study employs a descriptive quantitative and qualitative survey research design to assess faculty readiness, perceived challenges, and support requirements for transitioning to ODeL.

### Research Steps

The study began by developing a comprehensive survey instrument to cover faculty preparedness, perceived technical, pedagogical, and socio-emotional challenges, support needs, and necessary teaching adjustments. The survey was subsequently distributed to faculty members to gather primary data. After distribution, the team collected, aggregated, and systematically categorized the feedback. The dataset was then evaluated using quantitative percentage analysis alongside qualitative thematic analysis of open-ended responses. Finally, the analyzed data informed the formulation of findings, conclusions, and actionable institutional recommendations.

### Data Collection and Sample Selection

Data were collected through a structured questionnaire administered to faculty members (sample sizes ranging up to 97 responses across different survey sections). Open-ended survey fields captured qualitative data on specific challenges and tool/training needs.

### Data Analysis Methods

Descriptive statistics (frequency counts and percentages) were used to analyze quantitative Likert-scale responses and multiple-choice selections. Response themes from open-ended questions were categorized into structured tables reflecting specific challenge categories, tool requirements, and training needs.

## Research Hypothesis and Validation

The research hypothesis posits a significant relationship between faculty readiness for ODeL transitions and access to reliable infrastructure, targeted technical/pedagogical training, and clear institutional guidelines. This hypothesis was validated by evaluating response distributions across faculty preparedness levels, confidence metrics, and identified support priorities.

## Study Limitations and Ethical Considerations

The assessment relies on faculty self-reported survey data. Ethical considerations ensured voluntary participation, confidentiality of responses, and accurate aggregation of participant feedback.

## RESULTS AND DISCUSSION

### ***SOP 1. What is the level of faculty preparedness and confidence in shifting to ODeL?***

The survey revealed that a substantial majority of faculty (54.3%) feel “somewhat prepared” for the transition to Online and Distance e-Learning (ODeL), indicating a need for further preparation. While this reflects baseline familiarity with digital tools, it also highlights a clear vulnerability: feeling partially prepared means educators may still struggle with seamless execution, online engagement, and technical troubleshooting during sudden weather-related disruptions. This majority signals a compelling institutional need for continuous, proactive capacity building rather than relying on reactive measures.

Equally critical is the 5.3% minority of faculty members who report feeling “not at all prepared, requiring immediate targeted training and support. Without this, these educators face severe challenges in delivering course content, managing virtual classrooms, and supporting their students effectively during sudden shifts in teaching modalities.

### ***SOP 2. What are the key technical, pedagogical, and socio-emotional challenges anticipated by faculty?***

The data highlights that internet connectivity is the primary challenge for faculty, cited by 41.98% of respondents as the main barrier during an immediate shift to ODeL. In a distance learning setup, stable connectivity serves as the fundamental pipeline for all academic interactions. When weather disturbances or regional infrastructure limitations interrupt internet access, live lectures are disrupted, instructional time is lost, and the flow of teaching is severely compromised.

This technical barrier directly influences the second most prominent challenge: student attendance and participation, which accounts for 18.52% of faculty concerns. When students experience slow or intermittent connectivity, attending synchronous online sessions becomes difficult or impossible, particularly for those relying on limited mobile data packages or residing in rural areas. Beyond physical attendance, connectivity issues erode active engagement; frequent disconnections break learning focus, lower motivation, and make it difficult for educators to maintain collaborative, interactive class dynamics.

Additionally, access to resources accounts for 11.11% of anticipated challenges, highlighting the broader digital divide. This includes shortages of suitable gadgets (such as laptops or dedicated smartphones), restricted access to digital libraries, and the absence of physical learning materials or hands-on manipulatives at home. Together, these interconnected challenges demonstrate that technological inequality and infrastructural constraints remain the primary obstacles to achieving equitable and effective distance learning during emergency transitions.

### ***SOP 3. What is the extent of challenges anticipated by the faculty during the transition to ODeL in terms of technical challenges, pedagogical challenges, and social and emotional challenges?***

Most respondents rated reliable internet connectivity as very challenging, noting that unstable connections disrupt classes and reduce instructional time. Technical difficulties, such as issues with learning management systems and video conferencing tools, were perceived as somewhat challenging. Meanwhile, digital literacy was considered slightly challenging, pointing to a need for targeted skills enhancement among both faculty and students

In terms of pedagogical challenges, engaging students online was rated as very challenging, mainly because virtual environments offer limited opportunities for direct interaction and collaboration. Meanwhile, providing effective feedback, assessing student learning, and managing student behavior were perceived as somewhat challenging. Consolidating multiple class programs into a single Google Classroom significantly increases grading workloads, file sharing creates submission friction when technical difficulties arise, and the absence of face-to-face cues hinders effective communication and behavior management.

Regarding social and emotional challenges, respondents viewed the lack of social interaction and managing student behavior as somewhat challenging during the transition to online learning. The restricted social interaction inherent in online setups acts as a barrier to learning and often leads to physical and psychological stress among students.

***SOP 4. What forms of infrastructure, institutional support, tools, and training are needed to build faculty readiness and confidence?***

Regarding technological infrastructure, reliable internet connectivity was identified as the most essential component, being rated as very helpful for ensuring a smooth transition to ODeL, followed closely by a comprehensive Learning Management System (LMS) and dedicated technical support teams.

In terms of pedagogical support, teacher training was highlighted as very helpful in equipping faculty members with the skills to use online tools effectively, implement collaborative learning strategies, and apply appropriate assessment methods. Additionally, flexible curriculum development aligned with specific learning objectives was noted as crucial for supporting virtual instruction.

For student support, training in digital literacy, time management, and online etiquette was rated as very helpful in promoting positive classroom interactions and focused participation. Technical support services, alongside counseling and mental health services, were also deemed essential to help students cope with the psychological stress and trauma associated with disaster-related disruptions.

Finally, institutional support requires providing adequate resources and funding for technology, establishing clear policies and guidelines on attendance, grading, and assessment to eliminate ambiguity, and conducting continuous evaluation to drive data-driven program improvements.

***SOP 5. Is there a significant relationship between faculty readiness for ODeL transitions and their level of access to reliable infrastructure, targeted technical/pedagogical training, and clear institutional guidelines?***

Based on the study's research hypothesis and validation framework, faculty readiness for ODeL transitions is significantly related to access to reliable infrastructure, targeted technical/pedagogical training, and clear institutional guidelines.

The study's findings validate this relationship through several key points:

- Faculty identify internet connectivity (41.98%) as the single greatest barrier to ODeL delivery. High percentages of faculty rated reliable internet connectivity and robust Learning Management

Systems (LMS) as "very helpful" components for ensuring a smooth transition and building delivery confidence.

- Preparedness and confidence directly correlate with skill capability. Faculty expressed high demand for targeted training in basic technical troubleshooting (29.73%), digital classroom management (21.62%), student engagement strategies (13.51%), and interactive/multimedia tool usage (13.51%) to feel equipped for online delivery.
- Overwhelming feedback across survey indicators shows that clear institutional policies, covering attendance, grading, flexible deadlines, and workload management, provide the essential framework needed to eliminate ambiguity, support teaching plan adjustments, and elevate faculty readiness during sudden shifts.

## SUMMARY

The study evaluated faculty readiness for an immediate shift to Online and Distance Learning (ODEL) prompted by weather-related disturbances and emergency disruptions. Using a descriptive quantitative and qualitative survey design, the study gathered primary data from faculty members to assess their preparedness, confidence, anticipated challenges, and essential institutional supports.

Regarding faculty preparedness and confidence, most respondents reported feeling somewhat prepared (54.3%), while a small portion felt not at all prepared (5.3%). In terms of confidence, a majority felt somewhat confident (64.2%). These metrics demonstrate a functional baseline of digital familiarity while highlighting ongoing operational vulnerabilities during sudden transitions.

In evaluating anticipated challenges, internet connectivity emerged as the primary obstacle for faculty (41.98%), directly influencing difficulties related to student attendance and active participation (18.52%). Constraints surrounding access to digital resources and devices accounted for 11.11% of concerns.

When analyzing specific challenge domains, respondents rated reliable internet connectivity as very challenging in the technical domain because it results in lost instructional time. General technical difficulties were perceived as somewhat challenging, whereas digital literacy was rated as slightly challenging. In the pedagogical domain, engaging students online was considered very challenging, while providing feedback, assessing student learning, managing behavior, and handling heavier grading workloads were deemed somewhat challenging. In the socio-emotional domain, respondents reported that the lack of social interaction and managing student stress or isolation were somewhat challenging.

To address these barriers, respondents identified reliable internet, a robust Learning Management System (LMS), and dedicated technical support as essential infrastructure components. Faculty's primary training priorities included technical troubleshooting (29.73%), digital classroom management (21.62%), student engagement strategies (13.51%), and interactive tool usage (13.51%). Essential student support requirements centered on digital literacy training, time management instruction, and counseling services.

Finally, the statistical test of relationship confirmed a significant relationship between faculty readiness for ODEL transitions and their level of access to reliable infrastructure, targeted technical and pedagogical training, and clear institutional guidelines.

## CONCLUSIONS

The findings lead to several key conclusions regarding institutional readiness for distance learning transitions. First, the prevalence of faculty members who feel only somewhat prepared and somewhat confident indicates that emergency remote teaching remains vulnerable to severe disruption without sustained support. Second, infrastructure and connectivity constraints serve as the primary systemic bottlenecks, directly impeding student participation, engagement, and instructional continuity

during weather-related emergencies. Third, transitioning to an online format introduces substantial pedagogical and socio-emotional friction, characterized by increased grading workloads, communication barriers, reduced student focus, and heightened stress for both teachers and learners. Ultimately, faculty readiness cannot be achieved in isolation; it depends on a holistic institutional alignment that integrates targeted skills training, flexible policy frameworks, and continuous technical and socio-emotional support structures.

## RECOMMENDATIONS

To strengthen institutional readiness, several actionable measures are recommended. Institutions need to establish a dedicated technical support helpdesk to assist faculty and students during emergency shifts, while expanding campus internet infrastructure and offering offline-accessible LMS tools. Professional development may be enhanced through hands-on faculty workshops focusing on basic technical troubleshooting, digital classroom management, online assessment design, and active engagement techniques, alongside peer mentorship programs that pair experienced online educators with faculty needing foundational support. Institutions can formalize policies to provide clear guidelines on attendance, workload adjustments, flexible assignment submission deadlines, and simplified modular content delivery. Finally, institutions may implement comprehensive student support initiatives, including orientations on digital literacy and time management, as well as expanded counseling services to help students manage academic disruption and disaster-induced stress.

## ACKNOWLEDGMENT

We extend our sincere gratitude to the faculty members who participated in this assessment and shared their valuable insights to support institutional continuity and academic preparedness.

## AI DECLARATION STATEMENT

This report was prepared and formatted with AI tools for content structuring, table generation, and document formatting based on faculty survey data collected by the researchers.

## REFERENCES

- Azmat, M., & Ahmad, A. (2022). Lack of social interaction in online classes during COVID-19. *Journal of Materials and Environmental Science*.  
[https://www.jmaterenvironsci.com/Document/vol13/vol13\\_N2/JMES-2022-13015-Azmat.pdf](https://www.jmaterenvironsci.com/Document/vol13/vol13_N2/JMES-2022-13015-Azmat.pdf)
- Camu Digital Campus. (2022). Three major challenges of virtual classrooms and how to overcome them. <https://camudigitalcampus.com/virtual-classroom/three-major-challenges-of-virtual-classrooms-and-how-to-overcome-them>
- Chi, C. (2024). The cost of climate disruptions: Philippines loses 32 teaching days to extreme weather. *Philstar.com*. <https://www.philstar.com/headlines/2024/06/24/2365264/cost-climate-disruptions-philippines-loses-32-teaching-days-extreme-weather>
- LinkedIn. (2023). Adapting content for virtual delivery.  
<https://www.linkedin.com/pulse/adapting-content-virtual-delivery-stephen-nagle/>
- Mavridi, S. (2020). Basic tech troubleshooting. *Digital Pedagogy*.  
<https://sophiamavridi.com/troubleshooting/>

- Meyer, K. A. (Ed.). (2014). Student engagement online: What works and why. John Wiley & Sons, Inc. [https://jcu.edu/sites/default/files/2020-07/Student\\_Engagement\\_Online\\_What\\_Works\\_and\\_Why\\_----\\_%28Student\\_Engagement\\_in\\_Online\\_Learning\\_What\\_Works\\_and\\_Why%29.pdf](https://jcu.edu/sites/default/files/2020-07/Student_Engagement_Online_What_Works_and_Why_----_%28Student_Engagement_in_Online_Learning_What_Works_and_Why%29.pdf)
- Noor, S. F. M., Mohamed, H., & Daiman, D. (2022). Use of interactive multimedia e-learning in TVET education. International Journal of Advanced Computer Science and Applications, 13(9). [https://thesai.org/Downloads/Volume13No9/Paper\\_29-Use\\_of\\_Interactive\\_Multimedia\\_E\\_Learning.pdf](https://thesai.org/Downloads/Volume13No9/Paper_29-Use_of_Interactive_Multimedia_E_Learning.pdf)