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Evaluating the role of communities of practice in advancing faculty development at Arab open university

Hamed Hilal Nasser Al Yahmadi¹,  Yousuf Nasser Al Husaini^{2*},  Noura Ali Said Al Sinani¹

¹Faculty of Education Studies, Arab Open University, Muscat, Oman.

²Faculty of Computer Studies, Arab Open University, Muscat, Oman.

Corresponding author: Yousuf Nasser Al Husaini (Email: yousufnaser@aou.edu.om)

Abstract

Faculty development has become a cornerstone for quality assurance and innovation in higher education. Communities of Practice (CoPs) offer a collaborative framework to enhance professional learning, yet their integration in Arab open and blended learning institutions remains underexplored. This research assesses how CoPs contribute to faculty development progress at the Arab Open University (AOU), Oman. It examines the extent of CoP member participation, their evaluations of teaching and collaboration improvement, and the contextual factors that shape their success. A mixed-methods design was employed. Quantitative data were collected via a structured Likert-scale survey targeting academic staff, students, and policymakers. Qualitative insights were gathered through semi-structured interviews and institutional document analysis. Data were analyzed using SPSS and NVivo software to identify patterns, correlations, and emergent themes. Findings revealed high institutional support for professional development and positive perceptions of CoP participation. Key themes included shared leadership, peer support, reflective practice, and institutional trust. However, barriers such as time constraints, centralized decision-making, and lack of formal recognition limited sustained engagement. CoPs demonstrate strong capabilities to establish collaborative academic environments that boost development activities for professors within university programs that operate as open institutions. Institutions should implement CoP structures within policy frameworks, workload models, and leadership strategies to achieve lasting results, specifically within blended learning spaces that contain cultural diversity.

Keywords: Arab open university, Blended learning, Collaborative Professional learning, Communities of practice (CoPs), Faculty development, Higher education, Social learning theory.

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1. Introduction

Higher education today faces increasing demands for quality, accountability, and innovation. This rising pressure has made faculty development a strategic priority in academic institutions worldwide. Higher demands for quality, accountability, and innovation in higher education have led to academic staff members' professional development as a primary response. Modern approaches view faculty development as a mandatory instrument that drives better results across teaching methods, research activities, and learner achievement [1]. Academic institutions view Communities of Practice (CoPs) as an effective approach to support professional growth in this context. According to Wenger [2] CoP frameworks bring together groups of people devoted to shared interests while collaborating to enhance their performance [3]. Academic environments benefit from CoPs, which allow members to exchange experiences while developing new knowledge through practice reflection [4]. However, there remains limited clarity on how such frameworks function within the Arab higher education context, especially in open and blended learning models. University and regional institutions continue to build their implementation stance regarding CoPs in the Arab region, including Oman. Universities worldwide have started acknowledging the benefits of CoPs; however, systematic deployment remains incomplete [5]. The CoP approaches at Arab Open University (AOU), Oman, demonstrate opportunities to link teaching quality improvements with innovative teaching methods and foster academic support between different departments and campuses that use blended learning systems. Researchers have assessed how CoPs contribute to improving faculty development at AOU Oman. Despite these opportunities, the institution faces systemic challenges in integrating CoPs into its academic culture, revealing a need to understand both enablers and barriers. The research addresses a regional evidence shortage by generating insights that support the development of effective institutional approaches for establishing professional learning communities. The implementation of CoPs in higher education is not consistent among institutions throughout Arab countries. Multiple educational institutions use individual faculty development approaches with limited connection depth or team involvement [6, 7]. Short-term training and workshops represent most efforts made for professional development, yet they produce no substantial growth in teaching or research abilities [8]. AOU Oman faces specific obstacles since it operates through multiple campuses, combines classroom learning and virtual education, and employs faculty members from different educational fields. Each faculty member operates within isolated academic units without established mechanisms for teamwork development and collective evaluation sessions. The lack of professional growth and institutional learning potential exists because of this situation [9]. The study of CoPs in Gulf nations remains underdeveloped because few research projects provide evidence-based data showing how CoPs improve faculty development across the system [10]. Higher education institutions presently lack well-defined methods to include CoPs as part of their cultural fabric and their academic frameworks [11]. This reflects a clear research gap, with limited empirical understanding of CoPs' impact on faculty development in the Arab open and blended education environment. The study examines CoP operations within AOU Oman, their contribution to faculty development, and studies factors that strengthen or obstruct their effectiveness. Accordingly, the problem addressed in this research is the insufficient integration and evaluation of CoPs within faculty development strategies in open universities in the Gulf region. Research results will assist in the development of academic policies that sustain a collaborative professional learning model. The main objective of this study is to evaluate the role of CoPs in promoting faculty development at AOU, Oman. Faculty development is essential for enhancing teaching quality, research output, and student learning, yet many professional development efforts lack long-term impact and collaborative depth. This study sets out to:

- To assess the current state of awareness and engagement with CoPs among AOU academic staff and administrators.
- To examine how CoPs contribute to faculty learning, reflection, and sharing of teaching practices.
- To identify challenges and enabling factors in implementing effective CoPs within the institutional structure of AOU.
- To explore the relationship between CoPs and professional growth, especially regarding confidence, collaboration, and instructional innovation.
- To offer practical recommendations for integrating CoPs into the faculty development framework at AOU and similar regional institutions.

By addressing these objectives, the study contributes to a better understanding of how collaborative learning environments can strengthen academic professionalism and institutional effectiveness. This study explores how CoPs contribute to faculty development at AOU, Oman. Although prior research highlights the benefits of collaborative professional learning in higher education, limited empirical evidence exists from the Arab Gulf context, particularly in open and blended learning institutions. To fill this gap, this study applies an exploratory research design and uses a mixed-methods approach to collect and analyze data from faculty, students, and policymakers. To address this gap, the study is guided by the following research questions:

- RQ1: What is the awareness, willingness, and readiness level of AOU faculty and policymakers to engage with CoPs to enhance professional development?
- RQ2: What challenges and barriers emerge in designing, developing, implementing, and evaluating effective CoPs within the university?
- RQ3: How do CoPs influence faculty teaching practices, reflective learning, and collaboration, and their impact on professional growth?
- RQ4: What institutional strategies and conditions support or hinder the successful integration of CoPs in AOU's academic culture?

These questions are rooted in the theoretical lens of social learning, emphasizing that professional knowledge is constructed through interaction, shared practices, and collaborative reflection. They also reflect institutional concerns

regarding sustainability, innovation, and academic quality in faculty development initiatives. This study contributes to the limited body of empirical research on CoPs in the context of Arab higher education, particularly within open and blended learning environments. By applying a mixed-methods approach at AOU Oman, the research offers a nuanced understanding of how CoPs influence faculty development, collaborative teaching, and institutional culture. It identifies key enablers such as shared leadership and trust while highlighting structural and cultural barriers impacting CoP sustainability. The findings provide practical recommendations for embedding CoPs into faculty development frameworks and inform policy strategies to foster long-term, peer-driven professional learning in similar regional institutions.

The rest of the paper is organized as follows: Section 2 presents a literature review that defines CoPs and explores their relevance to faculty development in higher education. Section 3 outlines the study's mixed-methods research design, including data collection tools and participant sampling. Section 4 reports the quantitative and qualitative findings. Section 5 discusses these results in light of existing theory and institutional context. Finally, Section 6 concludes with key takeaways, policy recommendations, limitations, and directions for future research.

2. Literature Review

The concept of CoPs was first introduced by Lave and Wenger [12] and later expanded by Wenger [2] to describe how people learn socially through shared experiences and collaboration. A CoP contains three essential elements: a shared area of interest between members and a community of practitioners who work together through a practice that evolves as the members interact. The educational sector uses CoPs as a dynamic learning mechanism that assists faculty members in transitioning from individual work to collaborative development. Through CoPs, members gain skills related to teaching alongside research collaboration and time-tested practices for reflection. Educational staff achieve enhanced results through practitioner exchanges, problem-solving, and solution development through a supportive teamwork environment. Research demonstrates CoPs play an important role in strengthening instructional design while furnishing peer mentoring programs that promote innovative pedagogical practices [9, 13]. Enhancing faculty capabilities has emerged as the core operational area of academic improvement and quality maintenance practices. Academic professionalism requires professionals to continuously learn while working together with students in their pursuit of success [6]. The traditional professional development approaches, including single workshops and top-down training, produce minimal enduring effects on teaching practice [14]. The faculty benefits most from peer-directed learning opportunities specific to their context, and these opportunities fit well within CoPs [15]. Academic professionalism receives considerable improvement through CoPs, according to scholarly research, because CoPs encourage reflective teaching, critical inquiry, and evidence-informed decision-making processes [11]. The network supports teaching staff to create institutional values that match the organization's objectives [16]. The research is based on social learning theory, which explains that knowledge is co-created through social and contextual interactions among people [17]. According to Wenger's situated learning theory, learning combines an organization's social and cultural work activities [18]. Teachers participating in CoPs build their professional identities through group work and collaborative interpretation of teaching approaches and research methodologies. Learning among faculty members becomes an active method that requires active participation [19]. Academics become active participants who build knowledge alongside practice instead of passively accepting training information [20]. Building collaborative learning practices at the AOU will lead to academic excellence and innovative outcomes due to the essential importance of such a culture for institutions. The extensive research on CoPs in Western higher education systems fails to address their application in the Arab region, especially in Gulf countries. AOU, along with other institutes, runs its operations in an environment that combines cultural differences with blended learning systems and complex organizational frameworks. The execution of CoPs faces challenges as well as advantages from these existing conditions. Al-Yahmadi and Al-Shammakhi [5] emphasize the necessity of time, trust, and leadership backing to support the effective growth of CoPs in Omani schools.

Universities require both institutional endorsements and policy synchronization to establish durable CoPs [21]. Without proper structures and incentives, CoPs risk becoming informal or short-lived initiatives. The review demonstrates why it is essential to investigate how knowledge communities achieve adoption and sustainment in the Arab Open University context. The research findings will boost knowledge about Community of Practice models within Arab higher education institutions while providing tested strategies to enhance teaching faculty.

3. Methodology

This study collected data through semi-structured interviews and analyzed it using SPSS and NVivo software. To gain a comprehensive understanding of CoP-related dynamics, a mixed-methods design was adopted. The data analysis incorporated both quantitative and qualitative techniques. SPSS was employed for statistical analysis of survey responses, providing measurable insights into trends and group differences. NVivo software was used for thematic analysis of interview transcripts and institutional documents, enabling a deeper contextual interpretation of faculty experiences and institutional factors. This dual analytical strategy provided both breadth and depth in examining CoPs. Unlike prior studies that often relied solely on perception-based surveys or general case descriptions, this research employed a more integrative approach by combining inferential statistics with grounded theory-based qualitative coding. This allows for evidence triangulation and a more nuanced understanding of the institutional culture shaping CoP success.

3.1. Research Design and Approach

The research design employs mixed methods, integrating quantitative and qualitative methodologies to provide a comprehensive evaluation of CoPs within Oman's AOU faculty development program. A mixed-methods approach was chosen because it offers both statistical data and contextual insights, aiding in a thorough understanding of CoP operations in real institutional settings. Academic staff, policymakers, and students complete a structured survey to analyze quantitative data. The survey includes 30 Likert-scale statements distributed across six dimensions of CoPs, including shared leadership and vision, collective learning, and supportive conditions. Responses are analyzed using descriptive and inferential statistics to identify trends, perceptions, and correlations. The qualitative phase complements the survey data through semi-structured interviews and document analysis. Interview participants are purposively selected based on their involvement in CoP-related activities. The goal is to explore how CoPs are experienced in daily academic practice and how institutional culture, leadership, and resources influence their impact, as shown in Figure 1. Qualitative data are coded thematically using NVivo software.

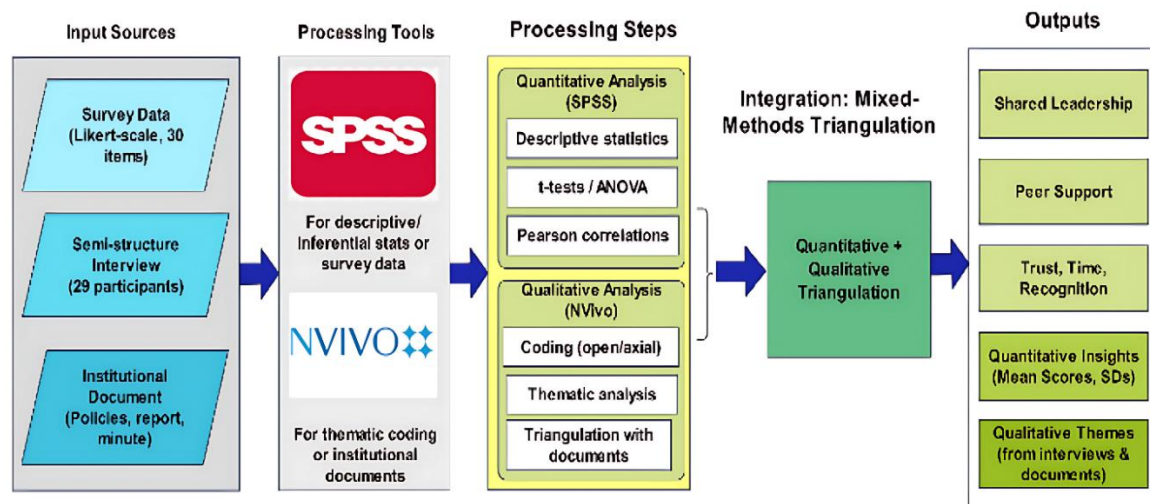


Figure 1.
Proposed Data Flow Diagram.

3.2. Study Context: AOU Oman

AOU is a regional higher education institution that operates across several Arab countries. Established in Muscat, the Oman branch serves a diverse student population through blended learning models, combining face-to-face instruction with digital platforms. The university offers undergraduate and postgraduate programs across disciplines, including education, business, IT, and language studies. AOU Oman is characterized by a multicultural academic workforce, a semi-flexible academic calendar, and centralized policies regulated by the AOU headquarters and Omani higher education authorities. The university emphasizes teaching and learning quality, but like many open universities, it faces challenges related to faculty isolation, administrative centralization, and uneven professional development practices. In this environment, implementing CoPs presents a promising strategy to strengthen collaborative learning among academic staff, foster innovation, and improve student outcomes. However, institutional readiness, resource allocation, and cultural attitudes toward shared leadership and peer review vary across departments. The study collected data from academics, policymakers, and students through a structured survey and qualitative interviews to examine these dynamics. The focus was on exploring how CoPs are perceived, supported, and practiced within AOU Oman's organizational culture, presented in Table 1.

Table 1.
Study Variables and Attributes.

Variable	Type	Measurement Scale	Description
Role in the University	Categorical	Nominal	Respondent's role: Academic, Policy Maker, or Student
Awareness of CoPs	Categorical	Ordinal (1–5)	Level of awareness regarding CoPs (1 = Very Low, 5 = Very High)
Engagement in CoPs	Quantitative	Ordinal (1–5)	Frequency of participation in CoP-related activities
Supportive Leadership	Quantitative	Composite (Likert) Score	Perceptions of shared and supportive leadership practices
Shared Vision and Values	Quantitative	Composite (Likert) Score	Agreement on institutional goals and professional standards
Collective Learning Practices	Quantitative	Composite (Likert) Score	Frequency and quality of knowledge-sharing and collaborative learning
Peer Feedback and Shared Practice	Quantitative	Composite (Likert) Score	Opportunities for peer review and feedback among faculty
Institutional Support and Structure	Quantitative	Composite (Likert) Score	Availability of time, resources, and policies enabling CoPs
Academic Performance Perception	Quantitative	Ordinal (1–5)	Perceived improvement in teaching or research due to CoP involvement
Barriers to CoP Implementation	Qualitative	Thematic Codes	Reported challenges from interviews and open-ended responses
Enablers of CoP Implementation	Qualitative	Thematic Codes	Institutional or cultural factors that support CoPs
Variable	Type	Measurement Scale	Description
Role in the University	Categorical	Nominal	Respondent's role: Academic, Policy Maker, or Student

Combined with these key variables, this study context allows for a detailed examination of how communities of practice function in a blended learning institution in the Arab region. Respondents' diverse roles and perspectives offer a multi-layered view of faculty development.

3.3. Participants and Sampling Strategy

Three essential groups participated in the research at AOU Oman, including academic staff, policymakers, and students. The study's participants were chosen to show different views about CoPs across organizational levels. The survey and qualitative interview procedures applied purposive sampling, allowing researchers to enlist participants directly involved in CoP activities or knowing them. All participants in the study received equal attention, including those teaching collaboratively and decision-making officials for academic policy, as well as students working across various learning formats. Twenty-nine participants formed the qualitative research sample from seven faculty members, five policymakers, and 17 students who participated in the research. A broader survey with faculty and staff members from different departments was conducted during the quantitative phase through stratified sampling to maintain departmental diversity. Table 1 describes participant variables categorized into role, engagement level, and perception of CoP impact. The research design enabled specific trend detection for participant clusters, including policymakers, faculty members, and students.

3.4. Data Collection Instruments and Procedures

The research employed both quantitative and qualitative methods to gather comprehensive information about the impact of Communities of Practice (CoPs) on faculty development at AOU Oman. The quantitative data collection involved an established survey utilizing validated CoP models from higher education literature to formulate research-specific questions. The survey included thirty Likert-scale statements across six core parameters: supportive and shared leadership, shared values and vision, collective learning and applications, shared personal practice, supportive conditions related to relationships, and supportive conditions related to structure. Respondents rated their agreement on a five-point Likert scale from strongly disagree to strongly agree. The university's internal electronic platform facilitated survey administration, providing convenient and anonymous access to all participants. Qualitative data were collected through document analysis and semi-structured interviews to complement the quantitative data. Participants for interviews were selected based on their academic roles as staff members, policymakers, and students. The interviews explored participants' personal experiences, understanding of CoPs, perspectives on institutional procedures affecting collaboration, and encounters with co-engagement. Prior to recording, researchers obtained consent from participants, and verbatim transcripts were used for analysis. Institutional documents such as development policies and academic guidelines, along with internal reports, supported and validated the findings. A pretest of each instrument was conducted during a preliminary stage to ensure content accuracy and appropriate wording. All participants provided informed consent and institutional review board approval before data collection activities commenced.

Researchers applied descriptive statistics and inferential approaches for the quantitative analysis and thematic coding systems for qualitative research data assessment. The mixed research approach enabled the combination of multiple findings, which enhanced the understanding of CoP's effects on faculty development at AOU Oman.

For the quantitative survey data, responses were first coded numerically, with each Likert-scale item assigned a value from 1 (Strongly Disagree) to 5 (Strongly Agree). Descriptive statistics, including mean (μ), standard deviation (σ), and frequency distributions, were computed to summarize central tendencies and variation within the six CoP dimensions. The general formula used for calculating the mean score of each dimension was:

$$\mu = \frac{1}{n} \sum_{i=1}^n x_i \quad (1)$$

where x_i is the individual response score, and n is the total number of respondents. Standard deviation was computed using:

$$\sigma = \sqrt{\frac{1}{n} \sum_{i=1}^n (x_i - \mu)^2} \quad (2)$$

Independent-sample t-tests and one-way ANOVA were applied to test for statistically significant differences between groups (e.g., faculty vs. policymakers). Where appropriate, Pearson's correlation coefficient (r) was calculated to assess relationships between CoP dimensions and perceived improvements in professional development. The Pearson correlation formula used was:

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}} \quad (3)$$

All quantitative analyses were conducted using IBM SPSS Statistics software (version 26), with a significance level set at $\alpha = 0.05$.

3.6. Ethical Considerations

The research adhered to ethical requirements within an educational study to uphold participant rights and ensure their safety. Prior to data collection, the AOU Oman Research Ethics Committee approved the ethical conduct. Study participants were informed about the research objectives, including their right to freely choose to participate or withdraw at any time without facing any repercussions.

The investigators obtained signed consent documents as a prerequisite to conducting either interviews or surveys. Research participants experienced complete privacy protection and an anonymous position during all stages of this study. All surveys and transcripts included no identifying details, whereas data storage took place securely for academic research only. The researchers encrypted their interview audio files before erasing them after analysts finished transcribing them and conducting their examination. Research methods focused on cultural sensitivity and institutional respect that matched local and regional standards while interacting with students and academic leaders. The established measures worked toward maintaining open disclosure and building trust while preserving academic uprightness throughout the research process. For the qualitative data, thematic analysis was conducted using NVivo software. Interview transcripts and institutional documents were imported and coded line-by-line. Initial codes were grouped into categories aligned with the study's research questions and the six dimensions of CoPs. Themes were developed inductively and refined iteratively through constant comparison, following Corbin and Strauss's approach to grounded theory. This process enabled the researchers to extract deeper patterns and insights related to institutional culture, leadership practices, and barriers to collaboration. By integrating statistical and narrative analysis, this approach ensured both the reliability of results and the richness of interpretation needed to understand CoPs within the unique context of AOU Oman.

4. Results

4.1. Quantitative Findings from Survey Data

The survey results provided insights into how faculty members, policymakers, and students at AOU Oman perceive various dimensions of CoPs. Descriptive statistics were calculated for all 30 Likert-scale items, each representing a statement aligned with one of six CoP dimensions.

Table 2.
Descriptive Statistics of Selected CoP Survey Items.

Survey Item	Mean	Standard Deviation	Minimum	Maximum
Faculty members are regularly involved in discussions and decision-making regarding university policies and initiatives	3.74	0.81	2.0	5.0
The administration proactively provides support for teaching, research, and professional development	4.42	0.61	3.0	5.0
Faculty members have the opportunity to initiate and implement innovative projects	4.11	0.81	2.0	5.0
Responsibilities are delegated effectively, and innovative contributions are recognized and rewarded	4.00	0.67	2.0	5.0
The administration fosters leadership qualities among faculty members	4.00	0.94	1.0	5.0
The community and industry stakeholders are actively involved in supporting university activities and student learning	4.26	0.83	2.0	5.0
Data is used systematically to inform decisions about teaching, learning, and research	4.16	0.69	3.0	5.0
Collaborative efforts are made to foster shared values among faculty and students	4.11	0.76	3.0	5.0
Shared values guide decisions and behaviors in teaching, research, and community engagement	4.11	0.83	2.0	5.0
Faculty members share a unified vision for enhancing academic and institutional performance	4.00	0.83	3.0	5.0

As shown in Table 2 most items received moderately high scores, suggesting generally positive perceptions across the institution. Items related to administrative support, leadership development, and access to collaborative infrastructure scored the highest. For example, “The administration proactively provides support for teaching, research, and professional development” received a mean score of 4.42, indicating strong institutional backing. In contrast, items tied to shared vision and cross-stakeholder engagement showed more neutral or variable responses, with means closer to the scale's midpoint.

The variability of responses, captured through standard deviation, was highest in items concerning shared leadership and external collaboration. This suggests a degree of inconsistency in how participants experience or perceive these practices across departments.

Pearson correlation coefficients were calculated to explore the relationships between survey items. The resulting matrix, visualized in Figure 2, highlights strong associations between specific CoP practices. Exceptionally high correlations were observed between mutual trust, collegial collaboration, and peer review items.

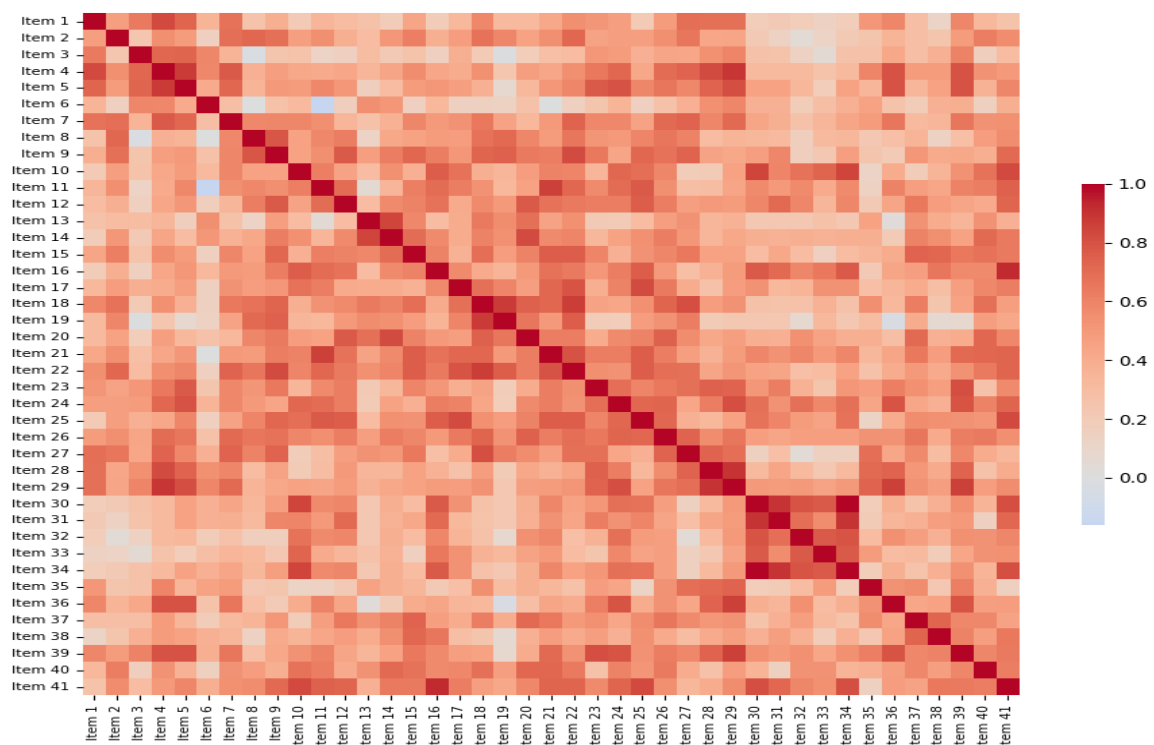


Figure 2.
Correlation Heatmap of CoP Survey Items.

As detailed in Table 3, the strongest correlation ($r = 1.00$) was found between the items “Relationships between faculty, staff, and students are built on mutual trust and respect” and “Collegial relationships among faculty support honest and constructive evaluation of data and practices.” Other top correlations (ranging from 0.90 to 0.92) included items related to communication systems, peer review, and innovation support.

Table 3.
Top 5 Correlated CoP Survey Items.

Item 1	Item 2	Correlation
Relationships between faculty, staff, and students are built on mutual trust and respect	Collegial relationships among faculty support honest and constructive evaluation of data and practices	1.00
Faculty members collaborate to explore and apply innovative teaching and research strategies	Communication systems ensure seamless information sharing among faculty, administration, and external stakeholders	0.92
Relationships between faculty, staff, and students are built on mutual trust and respect	A culture of trust and respect supports innovation and experimentation at the university	0.90
Faculty members have opportunities to apply their knowledge and share outcomes with the university community	Peer review of academic work is encouraged to enhance institutional performance	0.90
A culture of trust and respect supports innovation and experimentation at the university	Collegial relationships among faculty support honest and constructive evaluation of data and practices	0.90

Figure 3 presents the top ten survey items by mean score, reaffirming that faculty perceived institutional leadership and infrastructure support as strengths.

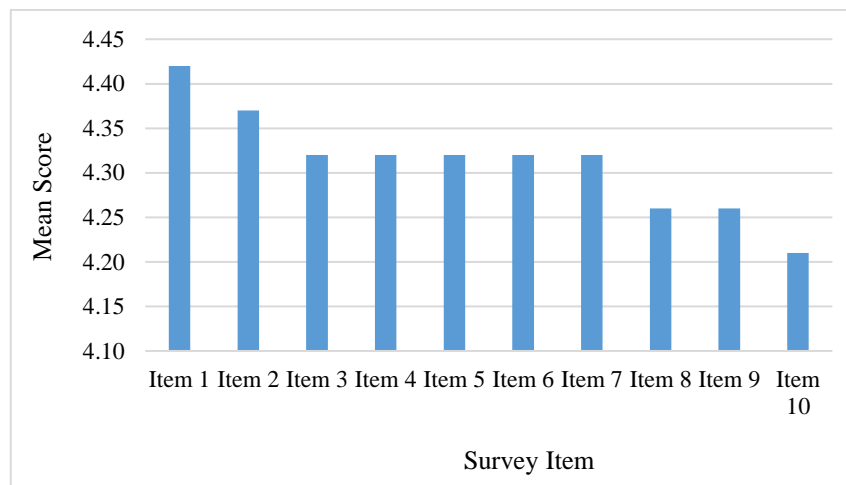


Figure 1.
Top 10 Survey Items by Mean Score (Simplified).

Meanwhile, Figure 4 shows the ten items with the highest standard deviations, pointing to divergent experiences in areas such as shared vision, community involvement, and feedback culture.

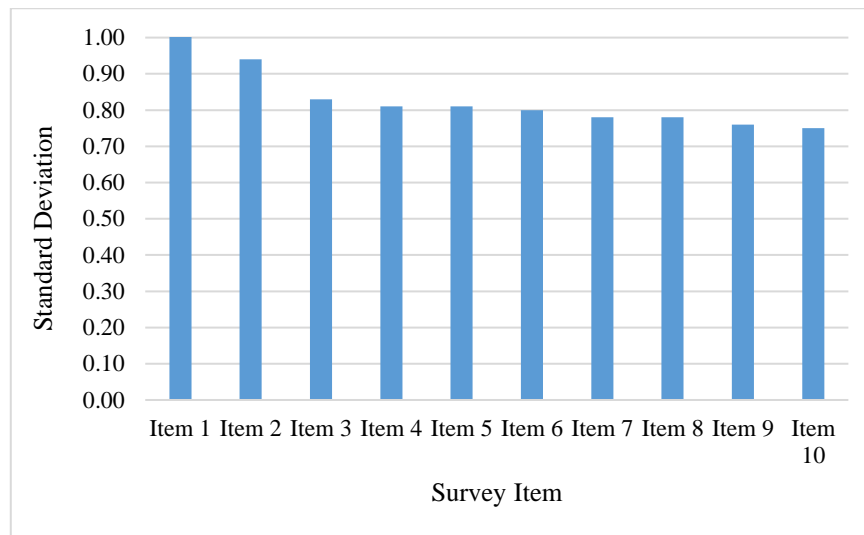


Figure 2.
Survey Item with Highest Response Variability (Simplified).

The quantitative findings indicate that while faculty view CoPs positively, there is uneven implementation across dimensions. Leadership support and physical resources are well-established, but deeper cultural elements such as shared values, trust, and long-term collaboration require further institutional attention.

4.2. Qualitative Insights from Interviews and Documents

Semi-structured interviews and institutional documents were analyzed to explore the lived experiences behind the survey responses. The interviews involved 29 participants, including faculty, students, and policymakers. Institutional records such as strategic plans, faculty handbooks, and internal memos were also reviewed to triangulate the themes that emerged during coding.

4.3. Emerging Themes

Thematic analysis revealed five core themes across participant responses: shared leadership, reflective practice, peer support, institutional trust, and resource allocation. They are summarized in Table 4. Figure 5 visually presents the frequency with which these themes were mentioned, highlighting shared leadership and peer support as the most commonly cited.

Table 4.
Emerging Themes from Qualitative Data.

Item 1	Item 2
Shared Leadership	Faculty expressed involvement in decision-making, though the extent varied across departments.
Reflective Practice	Participants valued peer discussions and informal workshops as key to personal and professional growth.
Peer Support	Informal mentoring and mutual assistance were critical to building confidence and sharing knowledge.
Institutional Trust	Trust between faculty and administration was identified as a foundation for effective collaboration.
Resource Allocation	Access to time, funding, and infrastructure was described as both an enabler and a challenge for CoPs.

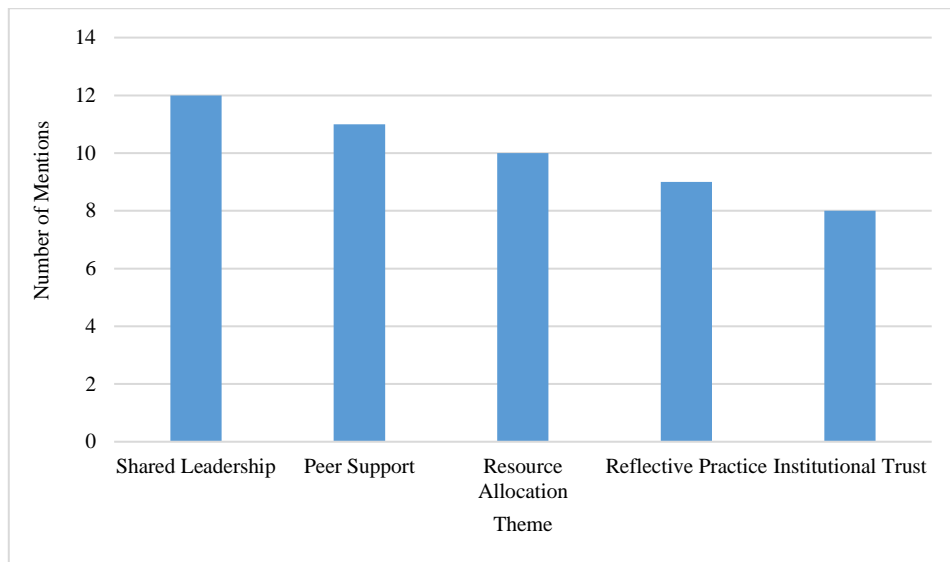


Figure 3.
Frequency of Emerging Themes in Interviews.

Participants consistently mentioned that effective CoPs rely on structural conditions and interpersonal dynamics. For instance, informal peer observation and collaborative reflection were seen as more impactful than formal evaluation mechanisms. The importance of time, administrative support, and recognition also featured heavily in interview narratives.

Additionally, Figure 6 shows the most frequent qualitative codes extracted from the data. Leadership, trust, and feedback emerged as foundational, while time constraints and recognition challenges were coded as recurring barriers.

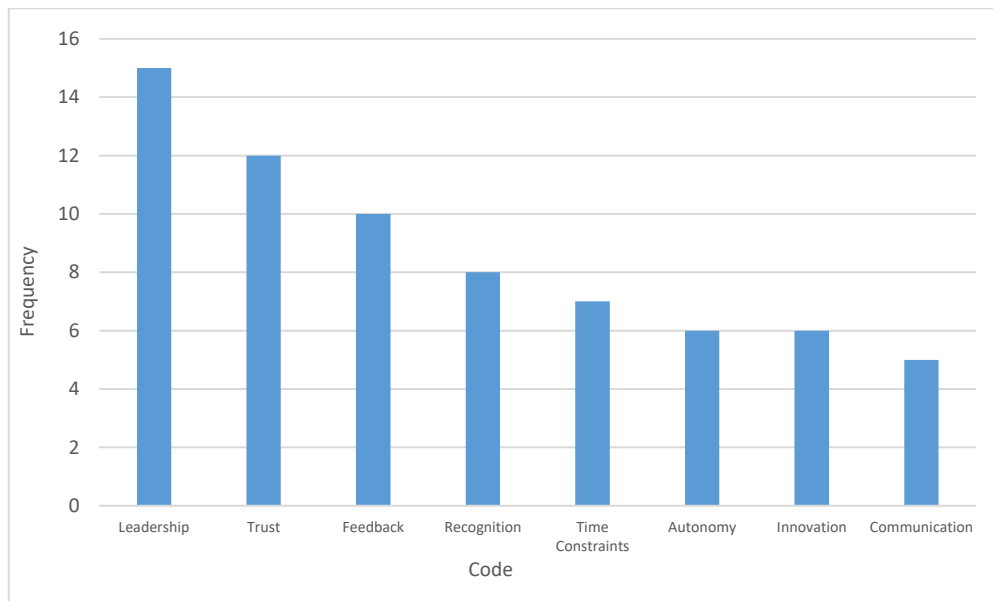


Figure 4.
Most Common Codes in Interview Analysis.

Figure 7 presents the most frequently referenced themes identified through qualitative coding of semi-structured interviews. Shared leadership, peer support, and reflective practice emerged as dominant themes, indicating a strong reliance on collegial collaboration and community learning. Barriers such as time constraints and lack of recognition were noted frequently, highlighting structural and cultural challenges to CoP sustainability.

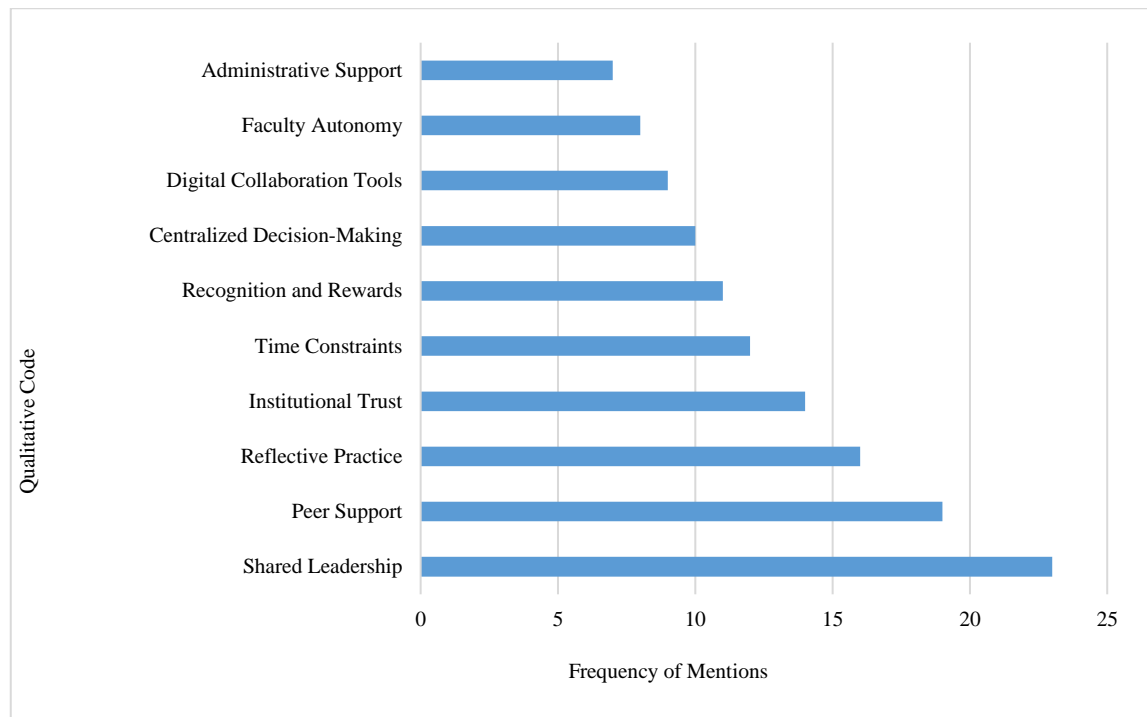


Figure 5.
Most Common Codes in Interview Analysis.

4.4. Institutional and Cultural Factors

Beyond thematic patterns, institutional and cultural variables played a critical role in shaping how CoPs were understood and enacted. Participants highlighted enabling and inhibiting conditions within the university's structure and culture. These are presented in Figure 8.

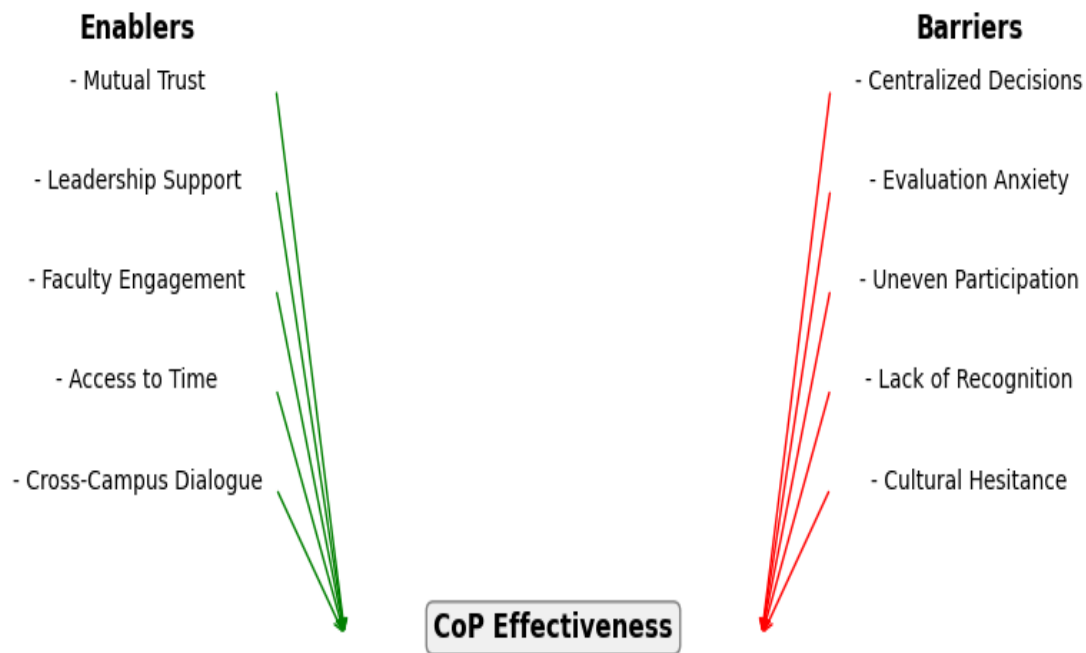


Figure 6.
Enablers and Barriers to CoP Effectiveness.

Enablers included mutual trust between faculty and administration, cross-campus dialogue, and the presence of supportive leadership. Barriers included centralized decision-making, lack of recognition for collaborative efforts, and cultural hesitance to challenge hierarchical norms.

Table 5 Comparative perceptions of CoP dimensions across faculty, students, and policymakers. Metrics include means (M), standard deviations (SD), adaptive trust scores, and innovation/feedback indicators from survey items. Faculty and policymakers show higher ratings in leadership and peer support dimensions.

Table 5.
Comparative Perception Scores Across Stakeholder Groups (Example Metrics).

Dimension	Group	(M)	(SD)	Min
Shared Leadership	Faculty	4.1	0.81	2
	Students	3.85	0.76	2
	Policymakers	4.05	0.83	3
Peer Support	Faculty	4.25	0.74	3
	Students	3.9	0.81	2
	Policymakers	4.12	0.78	3
Dimension	Group	Max	Adp (Trust)	Mean (Innovation)
Shared Leadership	Faculty	5	0.85	4.01
	Students	5	0.79	3.75
	Policymakers	5	0.88	4.25
Peer Support	Faculty	5	0.87	4.18
	Students	5	0.76	3.65
	Policymakers	5	0.83	4.08
Dimension	Group	Max (Innovation)	Adp (Feedback)	Mean (Feedback)
Shared Leadership	Faculty	4.65	0.84	4.02
	Students	4.4	0.78	3.8
	Policymakers	4.8	0.86	4.1
Peer Support	Faculty	4.72	0.86	4.2
	Students	4.25	0.74	3.68
	Policymakers	4.65	0.8	4.05
Dimension	Group	Max (Feedback)		
Shared Leadership	Faculty	4.68		
	Students	4.41		
	Policymakers	4.7		
Peer Support	Faculty	4.74		
	Students	4.28		
	Policymakers	4.62		

Institutional documents were reviewed to contextualize these findings. Table 6 summarizes five key documents and their relevance to CoP development and academic professionalism.

Table 6.
Institutional Documents Reviewed.

Document Type	Purpose / Content Summary
AOU Strategic Plan	Outlines long-term institutional goals; includes indirect references to CoP initiatives and collaborative learning.
Faculty Handbook	Defines roles and responsibilities of academic staff; encourages collegiality and best practices in teaching.
Professional Development Reports	Summarizes past training workshops and development programs; evaluates faculty participation and feedback.
Meeting Minutes	Captures discussions from administrative and departmental meetings; includes proposals for inter-faculty collaboration.
Internal Policy Memos	Provides directives related to teaching standards, faculty evaluation, and academic leadership strategies.

The qualitative analysis confirms that, while the infrastructure for CoPs exists at AOU Oman, sustained success depends on enhancing faculty autonomy, embedding recognition structures, and reinforcing a culture of trust and collaboration.

5. Discussion

The findings of this study indicate that CoPs play a meaningful role in enhancing faculty development at AOU Oman. Quantitative data revealed that faculty and staff perceive strong institutional support, especially in administrative leadership, resource availability, and collaborative engagement. High average scores across multiple items confirm the presence of a supportive environment for professional growth. At the same time, qualitative data highlighted important nuances. While participants recognized the value of collaboration and shared learning, they also described challenges in sustaining these practices consistently across departments. Themes such as peer support, trust, and reflective practice emerged as central to effective CoPs, but so did concerns about uneven implementation, limited time, and variable recognition of collaborative efforts. The findings align well with established theories of social learning and professional identity formation, where

collaboration, shared experience, and community are central to knowledge development. Faculty members appeared to learn from formal training, interactions with peers, reflection on shared challenges, and informal mentoring. Research findings validate the theory behind successful CoPs by indicating that trust, leadership participation, and peer independence remain vital institutional factors for success. Some congregated enablers within AOU existed in specific areas without achieving university-wide visibility, thus creating successful points and zones that required development. Cultural context has an essential role because it affects how people join or decide to stay away from collaborative activities. Recent research by Rettler-Pagel [22] underscores the importance of digital infrastructure and equity frameworks in sustaining CoPs in higher education, noting that “equity, digital technologies, and continuous improvement” are critical success factors [22]. Additionally, a systematic review by Beres and Janes [23] identified persistent technological and participation barriers in virtual CoPs, particularly around access, interface usability, and member trust. These findings corroborate our study’s identification of time constraints, low recognition, and inconsistent departmental reach as obstacles. On the supportive side, Emerald’s 2024 study on blended learning among Gulf-region universities found that peer-led communities significantly improved teaching quality, especially when supported by local leadership, an outcome echoed in this research, Beres and Janes [23]. However, some studies present critical caveats. Turner and Snell [24] highlight that without robust cultural and resource support, CoPs may struggle to transition from isolated pockets of excellence to sustainable systems. This aligns with our observation of limited cross-departmental engagement. Furthermore, the playbook by Online Learning Consortium & Every Learner Everywhere [25] suggests that while CoPs are effective, their impact is frequently constrained by the absence of structured evaluation and formal incentives, an issue mirrored in AOU’s lack of institutional recognition mechanisms [24]. The research study provides multiple useful findings for practical application. AOU should transform its faculty training events into prolonged community-based programs instead of organizing single isolated learning sessions. Programs based on sustained peer learning, mentorship support, and cross-field conversations tend to lead to lasting professional development for university staff. Educational institutions must implement formal CoP support systems, including dedicated workload periods, evaluation system acknowledgment, and powerful leadership approaches instead of managerial methods. A collaborative academic culture will become stronger when institutions implement strategies to encourage authentic communication between peers and minimize their concerns about feedback risks. Higher education institutions must use digital resources to connect teaching staff between college campuses. New digital tools will assist in breaking down barriers between locations, thus expanding CoP participation to all interested colleagues. Several persistent obstacles persist along with the promising indications. University teachers worry about insufficient time availability when attempting group work and lack formal acknowledgment for joint projects and centralized implementation processes, which stifle local initiative. The participants mentioned institutional factors that limited their participation in peer assessment or team decision-making. However, there are notable opportunities. The current enthusiasm of faculty members, combined with their department-based achievements and institutional focus on innovative practices, creates positive conditions for CoP expansion. The blended education system at the university makes a distinctive platform for establishing virtual communities of practice, strengthening interaction between students and faculty in diverse departments. This is also supported by Rettler-Pagel’s [22] literature review, which emphasizes how blended and virtual CoPs “build communal repertoires,” fostering resilience in decentralized teams [22]. Investing efforts to solve structural and cultural boundaries recognized during this research will enhance the permanent success of CoPs. The academic success and professional development at AOU would benefit significantly from its commitment to strengthening existing strengths and resolving identified challenges to establish CoPs as a fundamental organizational strategy.

6. Conclusion and Future Work

6.1. Summary of Findings

This study examined the role of CoPs in advancing faculty development at AOU Oman using a mixed-methods approach. Quantitative results from survey responses revealed high levels of institutional support, strong leadership engagement, and widespread appreciation for collaborative teaching and professional learning structures. Qualitative data supported these findings while highlighting key relational and cultural dynamics such as trust, peer mentorship, and shared leadership. The research identified strengths and inconsistencies in implementing CoPs across the institution. While some departments demonstrate active engagement in community-based learning, others face barriers related to time constraints, centralization, and a lack of formal recognition. These insights reflect a university well-positioned to grow its CoP practices, but one that must address systemic and cultural factors to ensure its long-term sustainability.

6.2. Contributions to Knowledge

This study contributes to the growing literature on faculty development and collaborative learning in higher education, particularly within the context of the Arab Gulf. Combining survey data with qualitative insights offers a holistic view of how communities of practice (CoPs) are perceived, supported, and experienced in a blended learning institution. The research also introduces a practical framework for identifying enablers and barriers to CoP effectiveness, which may be adapted by similar institutions seeking to foster professional learning communities. Significantly, this work expands empirical understanding of how regional cultural norms, organizational structures, and leadership styles influence the success of CoPs in higher education settings.

6.3. Limitations of the Study

While the study offers valuable insights, several limitations must be acknowledged. First, the sample size for qualitative interviews was limited to one institutional branch, which may restrict the generalizability of findings across all AOU campuses. Second, the study relied on self-reported perceptions, which could be influenced by social desirability bias or

individual interpretation of survey items. Additionally, although efforts were made to triangulate data through document analysis, the study did not include longitudinal tracking to observe the development of CoPs over time. As a result, the findings reflect a snapshot rather than a dynamic view of professional growth.

6.4. Recommendations for Policy and Practice

The research data suggests four practical suggestions: incorporate CoPs into workload models while adding them to performance evaluation methods and strategic planning processes. A leadership development program must show leaders facilitative methods that enable them to help peers work together rather than direct their activities. Adequate time allocation, together with CoP resource provision, is necessary to achieve genuine participation, which does not burden faculty members. However, teachers should receive institutional recognition when they demonstrate their involvement with peer education mentoring and cross-disciplinary interactions. Digital tools should facilitate the establishment of virtual CoPs, which link faculty members across different campuses while offering collaborative reflection opportunities during hybrid learning scenarios. The implemented policy reforms will support the development of an encouraging environment that actively backs and maintains CoP activities.

6.5. Directions for Future Research

Future research should consider longitudinal studies to track how CoPs evolve and how they impact teaching practices, research productivity, and student outcomes. Comparative studies between AOU branches or other regional institutions would provide broader insights into contextual factors influencing CoP success. Further exploration of virtual CoPs, especially in post-pandemic higher education environments, could reveal scalable models for collaboration in blended and distance learning contexts. Finally, examining student perceptions of faculty collaboration and its impact on their learning experience may offer a more comprehensive understanding of CoP outcomes.

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