Exploring the Impact of E-learning Initiatives on Staff Development in Higher Education: A Quantitative Analysis

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Abstract

The popularity and prevalence of e-learning and distance learning in higher education has increased in recent years. Learning from developments in student education, and based on the experiences of the pandemic, university staff has also started providing and utilising online platforms for self-development. This study examines the use of one such e-learning platform at a transnational higher education provider in Asia. It considers 100 staff members learning initiatives over a two-year period, including teaching and non-teaching staff. This study aims to identify the most popular topics and skills based on enrollments, completions, and learning hours, to explore the impact of these initiatives on staff development, and to provide actionable insights for Learning and Development (L&D) practitioners, administrators and leaders.

Keywords: E-learning, Staff Development, Training Needs Analysis, Higher Education

1. Introduction

E-learning has played an increasingly prominent role in higher education in the past couple of decades. Indeed, in the past five years in particular education has transitioned increasingly towards provision, which is delivered online, either asynchronously or live, and via distance learning. These approaches have also facilitated and promoted the development of communities of practice in many localities (Singh et al., 2024). These approaches have also facilitated and promoted the development of communities of practice in many localities. Despite staff development traditionally relying on in-house training programmes there is now a growing demand for more flexible options, such as online MOOCs (Massive Open Online Courses). These may be delivered in real time or be prerecorded, but the flexibility they provide means that the provision can be accommodated within busy teaching schedules. It is important to note that while MOOCs are typically pre-recorded, some platforms also offer live, interactive sessions to enhance engagement (Wang et al., 2022).

On that note，this paper examines the use of an online studying platform at a transnational higher education university in China, focusing on 100 individual datasets. The staff include both administrative and academic faculty members, and the data has been collected over a two-year period. The study also identifies the specific areas staff find most interesting and spend the most time studying and explores the impact of these e-learning initiatives on staff development. Given the significant shift towards online learning, it is crucial to assess the effectiveness of these initiatives in addressing the developmental needs of both teaching and non-teaching staff. It highlights key areas for staff development to focus on and reveals which areas staff value most for their personal development.

2. Literature Review

Developing staff is a key feature of any enterprise. One way to realise this is through training programmes. Arguably given the emergence of Gen AI，and the legacy of the pandemic，which has led to institutions operating in what is regarded as an increasing VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) world, university staff need to be equipped with the skills which will enable them to thrive and promote agility (Baran & Haley, 2020). Example of essential skills and competencies needed to remain competitive include cultural awareness, leadership, change management and research (Nikolaeva & Savchenko, 2024). To achieve this goal, university policy makers and leaders also need to engage with development initiatives. By doing so, they can effectively advocate for the importance of continuous professional development and serve as role models for their institutions.

Given the influence of leadership, and the appeal it holds, Day (2000) advocates that it is not an innate trait, but rather a skill that can be developed through various competencies such coaching, mentoring, decision making, strategic thinking, stress and team management. These skills are often honed through specialised management courses designed to enhance leadership capabilities. The appeal of these courses is that many academics have reported challenges when they transit into leadership roles, such as being appointed to be the head of a department or school While it is rewarding and indicative of recognition, it is difficult to balance managerial and administrative tasks with research and teaching responsibilities meaning that what led to the promotion in the first instance has to be sidelined in the new capacity. New leadership figures also often report struggling to manage the developments happening in the institutions and to effectively promote the changes among their team members.

In addition to the challenges, historically, the focus of staff development has focused on teaching staff, and non-teaching staff development needs are sometimes overlooked (Antiado et al. 2020). Administrators have expressed concerns about the lack of a clear career development pathway, which contrasts with the more defined trajectories available to academic staff. Other concerns arise from the training often being regarded as generic and lacking a clear developmental goal

which aligns with administrators' specific roles and responsibilities. Despite the differences, non-teaching staff members share the same overarching institutional goals as their academic counterparts. However, the skills they need to develop should be tailored to reflect the unique demands of their positions, even though they work within the same university environment (Matlakala & Bezuidenhout, 2024).

Moreover, the use of e-learning platforms has become increasingly prevalent in higher education, offering flexible and accessible options for staff development (Shahzad et al., 2023). These platforms provide a wide range of courses and resources that can cater to diverse learning needs and preferences. The flexibility of e-learning allows staff members to engage in professional development activities at their own pace and convenience, which is particularly beneficial given the busy schedules of both academic and administrative staff. E-learning platforms also have the potential to foster communities of practice, enabling staff members to collaborate and share knowledge across different locations (Zamiri & Esmaeili, 2024).

Despite the challenges, identifying developmental needs is important. Training needs analysis (TNA) is often used to determine the focus and training activities. Indeed，learning and development (L&D) teams usually collaborate with different stakeholders and consultants, both internally and externally, to decide upon the training provision. Typically, surveys are sent out to collect individual training needs, and departmental heads and the management board are consulted for the institutional developmental needs aligning with the institutional vision and missions. Though the effectiveness of the traditional methods needs to be assessed, there is a lack of mechanisms to do so comprehensively. E-learning platforms, which offer a wide range of resources and topics can help to shape decision making and determine how effective the training offerings have been and to what extent these align with staff needs and preferences based on the data they generate.

3. Methodology

This study adopts a quantitative research design, focusing on analysing data collected from an e-learning platform. The objective is to identify the trending courses and topics based on enrollment numbers and the learning hours and provide actionable insights for L&D practitioners. The data is collected from the past two years and includes information on: Course Enrollments, Completion, Learning Hours, Course Categories, and Skills. The initial step taken for data analysis involves cleaning the data to handle missing values, duplicates, and inconsistencies.

Basic statistical measures are used to summarise the data. Visualisation techniques, such as histograms are employed to identify trends and patterns in course enrollments, learning hours, and skills involved in the courses. All personal information and the university information are anonymised to ensure the privacy and confidentiality of staff members. The data was not

segmented to compare the developmental needs and preferences of faculty and administrative staff. All data was analysed together, providing a general overview of the most popular courses and skills among the entire staff population. While this approach offers valuable insights into overall trends, it does not allow for a detailed comparison between the two groups. Future research could benefit from segmenting the data to compare the developmental needs and preferences of faculty and administrative staff separately. This would provide a more nuanced understanding of how different types of staff engage with e-learning initiatives and what specific areas they focus on for their professional development.

The chosen methodology allows for a comprehensive analysis of the e-learning platform data, providing clear insights into the topics that university staff focus on the most for self-development. To avoid any commercial conflicts, the specific name of the e-learning platform used in this study has not been mentioned. However, it is a widely used commercial MOOC provider that offers a diverse range of courses on different topics relevant to higher education staff development. By using quantitative data analysis techniques, the study can offer objective and measurable results that are valuable for L&D practitioners. The insights gained can help in designing more effective staff development programmes and optimising the use of e-learning resources, based on real data, supporting evidence-based decision-making in staff development initiatives.

4. Results and Findings

During the two years, a total of 170 courses were completed, accumulating 1,945 learning hours and 3,759 instances of daily learning activities by the 100 participants. These figures underscore the active engagement of staff members in continuous professional development on top of the in-house training programmes being undertaken through highlighting the important role that e-learning is playing. The analysis of the courses enrolled in by the staff members reveals a clear recognition of the importance of specific skills. The top skills identified from the courses include Leadership, Communication, Management, Data Analysis, Research, Data Science, Artificial Intelligence, Python, Writing, and Psychology (See Figure 1). This indicates a broad spectrum of competencies that staff members are actively seeking to develop.
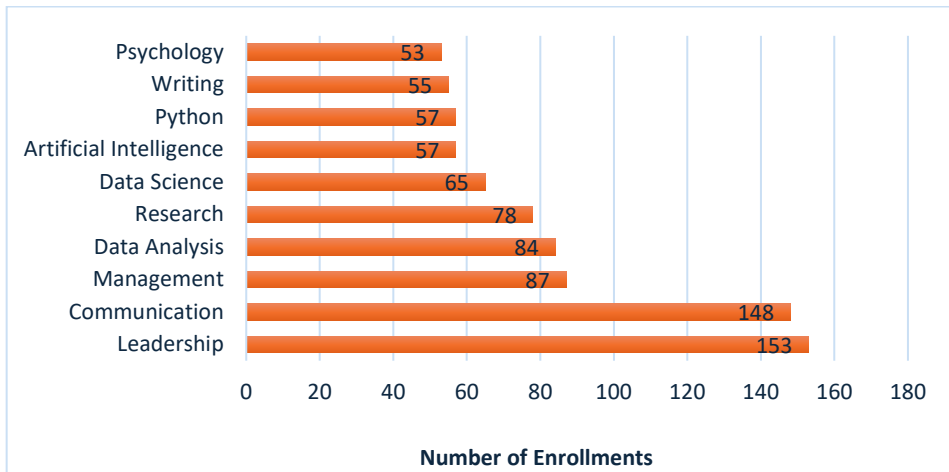
Figure 1. Top Skills by Enrollments

Further examination of the courses completed by the staff members highlights the following top skills: Leadership, Communication, Management, Research, Data Analysis, Artificial Intelligence, Psychology, Data Science, Machine Learning, Social Sciences (See Figure 2). These findings suggest a strong emphasis on both traditional management skills and emerging technological competencies, reflecting the evolving demands of the higher education landscape. Notably, there is a noticeable gap between Number of enrollments and completions. This indicates that though some participants are interested and actively seek out resources to improve certain skills, the commitments to completing the course are lacking. Potential reasons for this gap could include time constraints, difficulty levels of the courses, or competing professional responsibilities.
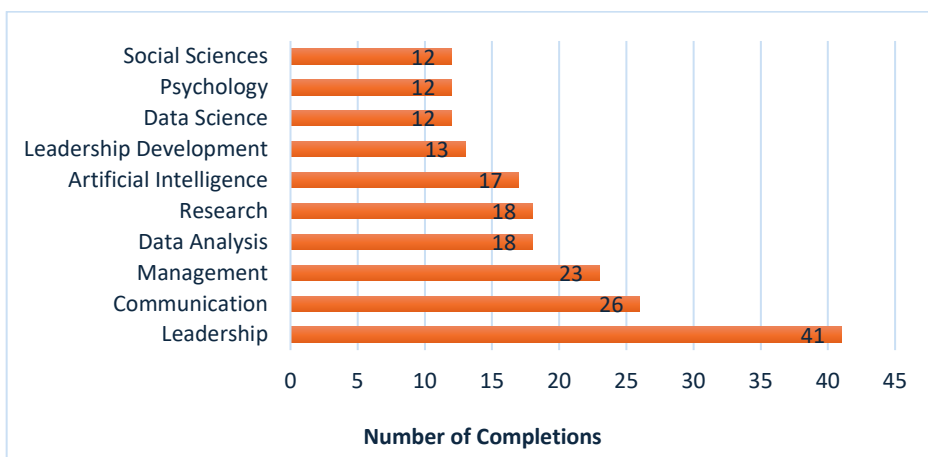
Figure 2. Top Skills by Completions

The top subjects by learning hours are Business Management, Data Analysis & Statistics, Social Sciences, Computer Science, Communication, Education & Teacher Training, Humanities, Engineering, Math, and Language (See Figure 3). This distribution of learning hours across various subjects highlights the diverse interests and developmental needs of the staff.
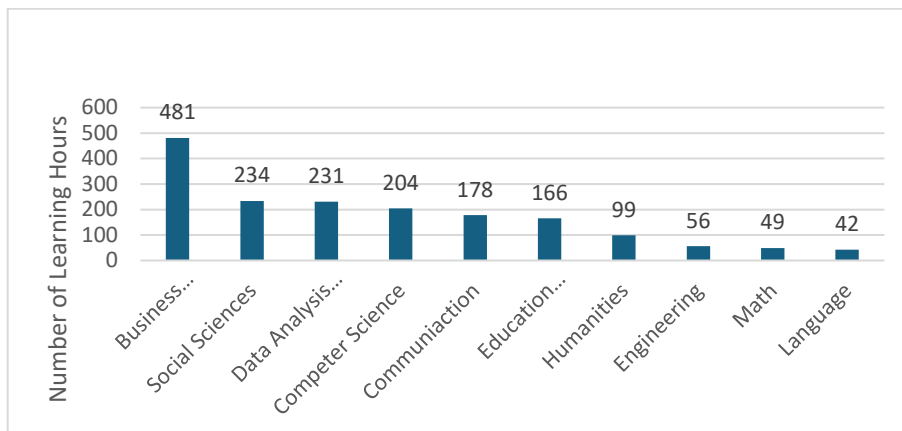
Figure 3. Top Subjects by Learning Hours

Notably, the top courses people spend most time learning is related to managing happiness, highlighting the significance of staff mental well-being, especially in the context of the challenges posed by and since the pandemic potentially representing a shift in mentality. The focus on mental health and well-being reflects a growing awareness of the importance of holistic development in higher education institutions and amongst community members.

5. Discussion

5.1. Alignment with Literature

The study's findings highlight the significance of internal talent development through e-learning initiatives among staff members, a key sustainable goal in higher education institutions. The identified skills, such as leadership, communication, management, and data analysis, align with the competencies necessary for preparing staff and students for the VUCA world (Nikolaeva & Savchenko, 2024). This highlights the relevance of the study's findings to the broader objectives of equipping staff with the skills needed to stay competitive in the labour market. The prominence of interests in leadership skills in the study's findings is particularly noteworthy. The study's results support Day's (2000) perspective by demonstrating a clear recognition among staff of the importance of these leadership skills. This finding is consistent with the challenges reported by academics transitioning into leadership roles, such as attempting to balance managerial tasks with research and teaching responsibilities (Antiado et al., 2020). The

active engagement also supports the effectiveness of e-learning initiatives as advocated by Shahzad et al. (2023).

5.2. Implications for Practice

The study's findings suggest several practical implications for higher education institutions. First, the use of e-learning platforms to gather data on staff development needs provides a valuable tool for assessing the effectiveness of training offerings. By analysing the courses completed and the time spent on various topics, institutions can better align the onsite training programmes with staff needs. This approach can help address the lack of comprehensive assessment mechanisms for traditional training methods. Second, the findings highlight the importance of mental well-being, particularly in the context of the pandemic. The popularity of courses related to managing happiness underscores the need for institutions to prioritise staff wellbeing. This aligns with the broader goal of fostering a supportive and resilient workforce capable of navigating the challenges of the VUCA world.

Furthermore, the significant gap between the number of enrollments and completions provides critical insights for improving e-learning initiatives. While many participants enroll in courses related to high-demand skills such as Data Analysis and Artificial Intelligence, the completion rates for these courses are relatively low. This indicates that despite the interests in self-development, employees may face challenges in committing to and completing the courses. Potential reasons for this gap could include time constraints, difficulty levels of the courses, or competing professional responsibilities. L&D practitioner and policymakers could investigate these factors in more detail to develop strategies that enhance course completion rates to promote the learning environment.

5.3. Limitations and Future Research

While the study provides valuable insights into the developmental needs and preferences of staff members in higher education institutions, there are several limitations to consider. Future research could benefit from such segmentation to provide a more nuanced understanding of how different types of staff engage with e-learning initiatives and what specific areas they focus on for their professional development. Specific staff roles or responsibilities should be considered as well.

Moreover, the study relied primarily on quantitative data from the e-learning platform without incorporating qualitative feedback from staff members. Future research could include surveys or focus groups to gather qualitative insights into staff experiences and perceptions of e-learning initiatives. This would provide a more comprehensive understanding of the impact of these initiatives on staff development.

6. Conclusion

In conclusion, the study's results provide a comprehensive overview of the developmental needs and preferences of staff members in higher education institutions. These findings align with the broader literature on staff development and leadership, emphasising the importance of cultivating effective leaders and addressing the unique needs of both teaching and non-teaching staff. By leveraging e-learning platforms and prioritising mental health and well-being, institutions can enhance their staff development initiatives and better prepare their workforce for the complexities of the modern academic environment.

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