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Exploring the Factors Influencing Institutional Adoption and Successful Implementation of Paid MOOC Platforms: Perspectives from a Case-Study at an Institution in a Tier-2 City in India

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Abstract
MooC platforms aggregating world-class content delivered by global experts have revolutionized self-learning for learners of all age groups across diverse domains. The micro-credentials offered by these platforms are rapidly gaining recognition and acceptance by industry. Institutions across the world have thus had to formally adopt these platforms and also recognize the credits earned on these platforms. However, many of the paid platforms remain outside the purview of the vast majority of institutions and students. This research paper examines the early results from the implementation of a paid globally recognized MooC platform at a higher educational institution in a tier-2 city in India. The results focus on determining factors which influence institutional leadership in adopting paid MooC platforms. Student perceptions are also determined based on prolonged usage of the platform. Finally, the paper provides a MooC platform implementation blueprint for administrators of tier-2/3 institutions for ensuring seamless adoption and deriving benefits including enhanced student perception on institutional support and significant improvement in brand strengthening.

Keywords: MooC platform adoption by students, institutional implementation of MooC platforms, blueprint for implementation of MooC platforms

1. Introduction

India is a vast country with significant socio-economic and demographic variations. This has resulted in a varied development of the Indian Higher Education landscape, ranging from practically free education at Government funded institutions, to regulated private university-affiliated institutions catering to mid-income groups and finally the high-end private universities targeting the upwardly mobile Indian youth. This varied landscape introduces its own challenges, most noticeably the stark difference in the quality of education on offer. Several mid-sized institutions which were primarily under the control of the State Governments and Affiliating Universities have either ceased to exist or are facing existential concerns. Institutions which are thriving have been able to clearly articulate and execute a value accretive student-centric strategy, built around providing a supportive learning experience and exposure at par with the bigger counterparts. If the mid-sized institutions can be equipped with a blueprint to enhance student learning outcomes, it is likely that such institutions will remain relevant within the larger ecosystem and continue to meet the educational needs of low to mid-income strata of the society while contributing effectively to attaining nationally important objectives.

Self-Learning platforms offering MooCs, industry certifications, micro-credentials, curated learning paths and diverse interdisciplinary courses developed and delivered by credible technology companies and globally recognized Professors from top universities have rapidly gained traction. This adoption and proliferation was undoubtedly fuelled by the COVID pandemic and the prolonged lockdown. What began as a self-development and upskilling use-case for individuals, rapidly transformed into organizations adopting such platforms as an integral part of their learning and development initiatives. Many of these platforms opened their doors to learners worldwide for free during the pandemic as a marketing masterstroke, leading to wide enrolments and adoption. Since the pandemic, the adoption rates of these platforms have been sustained, indicating that learners and organizations have recognized their immense value and benefits. This is true for students as well, especially those students who did not have access to high quality education and could not afford education in top-ranked universities. In many ways these MooC platforms can help bridge the quality divide among the top-ranked universities and lesser ranked institutions in India to some extent and empower the learners. However, the effectiveness of these platforms when implemented at an institutional level need to be studied in diverse contexts, especially in tier 2/3 institutions. Perspectives, perceptions and challenges faced by the implementing institutions and individual learners need to be chronicled and proven, workable strategies formulated for effective implementation by other institutions.

This research paper presents detailed insights from the successful implementation of a paid MooC platform at a self-financing higher education institution in a tier 2 city in India. The institution, at the time of this study, was the only institution to implement a paid MooC platform for the students in the region of Jammu and Kashmir India. The institution was motivated to invest in the MooC platform for its students after observing the enthusiastic adoption of the platform by its students during the pandemic. The MooC platform had made its courses free for institutions under a special initiative during the pandemic, providing the institutions with a dashboard to view the learning analytics. Equipped with these insights, the institution opted to adopt the paid MooC platform after the free access was revoked by the platform. Since

the institution was self-financing with the tuition fee as the only source of income, opting for the paid MooC platform involved major financial provisioning and commitment. Thus, it was imperative for the institution to ensure the success of this initiative. Results from the implementation experience captured through surveys, informal interviews and usage statistics from the platform are collated and presented as part of this paper, which will hopefully serve as a useful blueprint for implementation at other tier 2/3 institutions in the country. It is estimated that India has over 30,000 institutions of higher education in tier 2/3 cities in India, which is a significant number.

The rest of the paper is organized as follows: section 2 discussed related work on adoption of MooC platforms globally and in India, identifying common themes and trends. Section 3 presents the design of the study and the tools used for data collection and analysis, while section 4 discusses the results obtained and their significance. An implementation blueprint for other institutions seeking to implement a paid MooC platform for students and faculty is articulated in Section 5. Finally, section 6 concludes the paper.

2. Background, Motivation and Related Work

World-class institutions have been developing digital content for their internal consumption for a long time. Paid MooC-aggregating platforms such as Coursera and EdX have built entire platforms around the world-class content available from the top-notch universities and professors. Many believe that this has democratized access to quality content for learners at a fraction of the cost of in-person education at these Universities. While these platforms initially targeted individual learners, post the pandemic they have increasingly focused their attention on institutions across the world who might look at these platforms as a way of empowering their learners with content from diverse domains. For many such institutions, developing, continuously updating and distributing their own e-learning content is prohibitively expensive, both in terms of resources and institutional bandwidth. Further, with increased focus on interdisciplinarity and innovation, institutions might lack the capacity and capability to build learning resources for courses which may not be offered by them. Hence, relying on proven platforms delivering the latest and continuously upgraded learning material for students seems to be a logical alternative. The Indian Higher Education landscape is huge with 45983 higher education institutions and 1183 Universities catering to over 10.07 million learners (AISHE, 2022). Quality improvement has become a major priority for policy makers and regulatory agencies with institutions also facing increased competition for a share of this large student pie. This enhanced competition is also forcing institutions to innovate and adopt new offerings to clearly articulate their value proposition for existing and prospective students. Thus, it is intuitive to believe that adoption of paid MooC platforms would accelerate in India. MOOCs have a great influence in higher education as it improves the education outcomes (Alhazzani, 2020). However, it is estimated that less than 1% of higher education institutions have currently adopted paid MooC platforms. This can be attributed to many factors including cost, lack of perceived benefits, access to many free Indian Government backed and promoted portals, lack of institutional confidence in successfully assimilating and implementing these platforms, lack of autonomy in curricular reforms among others. Hence, there is a need to examine the factors involved in the adoption of paid MooC platforms by institutions, the experiences from the early adopters and key learnings from these experiences which can help future adopters gain the maximum benefit from such platforms. Thus, the present study attempts to answer the following questions:

a. What factors motivate institutions in tier-2 cities to adopt paid MooC platforms?
b. What are the perceptions and experiences of students around adoption of these paid MooC platforms?
c. What are the effective interventions in ensuring successful implementation of MooC platforms in tier-2 institutions?

The present study has far-reaching consequences as it aims to consolidate the impact and experiences around MooC adoption in higher education globally, help institutions in tier 2 cities and towns in India devise informed strategies around MooC platform adoption for enhancing learning experiences and student value perception, and finally have viable action plans in place to ensure success and Return-on-Investment (RoI) from these platforms.

Much of the research around adoption of paid MooC platforms has focused on learner motivation, factors influencing learner's adoption of these platforms, learner experiences and challenges etc. Research around institutional adoption of paid MooC platforms, institutional experiences, learnings and best-practices and perceptions of institutional leadership remains non-existent. This is a major research gap in the field, which the present study addresses.

Researchers have also explored early experiences from implementation of MooCs in different countries and institutions. Len-Urritia et al (2018) focused on the influence of MOOCs on higher education institutions from the perspective of insiders. It concluded that MOOCs are reshaping educational strategies and pose challenges for traditional institutions which might lack the agility to transform rapidly. The study provided insights into how higher education is adapting to the MOOC phenomenon and the impact on educational practices and policies in the western world. Research by Ho, N. T. T., et al. (2023) examined the acceptance of Coursera MOOCs blended learning in Vietnamese higher education. It employed a mixed-methods approach to explore stakeholders' perspectives and the factors influencing their acceptance of this learning model. The study concluded that while the opportunities for leveraging the Coursera platform were widely appreciated by the stakeholders, implementation challenges persisted in seamlessly integrating MOOCs in a blended learning environment in the context of Vietnamese higher education. A similar study by Jansen, D., et al. (2015) compared MOOC adoption strategies in Europe, presenting results from the HOME project survey. It provided a comparative analysis of how different European countries are approaching MOOC integration in their educational systems, offering a

broad perspective on MOOC adoption across the continent. It concluded that MooC adoption is here to stay, but many countries are devoting time and energy in developing their own platforms and the speed of adoption is varying significantly from country to country. In India, Chaudhary & Sharma (2021) investigated the implementation of digital strategies in higher educational institutions in India, concluding that MOOCs adoption and integration into the formal curriculum is gaining traction after adequate regulatory push and supporting policy changes. However, a majority of the institutions are adopting Government backed and promoted platforms such as SWAYAM. In the Chinese context, Liu, M., et al. (2019) examined the challenges of digital transformation in the context of MOOC development and operations at higher education institutions in China. It explored how institutions are navigating the shift to digital learning environments, with a focus on the unique challenges presented by MOOCs, including loss of confidence in traditional educational delivery in some instances, requiring significant faculty capability enhancement initiatives by these institutions.

A comprehensive review of MooC adoption by higher education institutions is provided in Anthony, B., et al. (2022). It synthesized existing research to understand the factors influencing the successful integration of blended learning approaches, including MOOCs, in educational settings, concluding that accessing validated, high quality content for its learners and allowing them to become life-long learners is the single most critical factor for adoption of digital learning by institutions. Further, adoption of such platforms frees up institutional bandwidth and resources in the long run.

MooC adoption has also resulted in improved student experience and sentiment, especially since students prefer watching shorter videos over reading text as a preferred mode of learning (Rizvi et al., 2023). Integrating MOOCs has garnered positive student perceptions, with studies focusing on learner engagement, interactions, and feedback (Turan and Yilmaz, 2024). MOOC learners had positive attitudes towards school support, especially with periodic mentoring, which proved more effective than pure self-paced learning (Tang et al., 2023). Randomized controlled trial revealed tangible rewards superiority over intangible ones in boosting student's intrinsic motivation, engagement, and learning performance in an online gamified class (Xiao and Hew, 2024). However, not all learners experience overwhelming benefits from MooCs. Deng et al. (2023) identified three groups of MOOC learners: "Individually Engaged," "Least Engaged," and "Wholly Engaged" based on student surveys and contended that these groups require different strategies and interventions to maximize their learning experience.

Bijaniaram et.al (2023) has conducted a study on what it takes for institutions to adopt MOOCs and the results of the study have indicated that technical support, training and content curation experts are the three main factors influencing its successful adoption. Zaremohzzabieh et.al (2022) in their study explored factors influencing the adoption and acceptance of MOOCs in higher education institutions and also proposed a model which was tested using a Meta-analytic Structural Equation Modelling (MASEM). The findings of the study indicated that a combined proposed model consisting of Theory of Planned behaviour, Task Technology Fit and Unified theory of acceptance and use of technology can explain the MOOC Adoption in the context of Higher Education using behavioural intention. Further, the results of the MASEM showed that the user's perception viz. performance expectancy, effort expectancy, attitude towards MOOC, task characteristics and technology characteristics can positively influence behavioural intention to use MOOCs.

The perceived benefits of online MooC platforms has been endorsed by Li, K. (2019). The author explored the relationship between MOOC learners' demographics, self-regulated learning strategies, perceived learning, and satisfaction and concluded that the learner experience in consuming short videos followed immediately by quizzes and non-threatening evaluation mechanisms was largely satisfactory. However, some learners expressed the need for real-world support from teachers to leverage the platforms effectively. Kuo, T. M., et al. (2021) linked web-based learning self-efficacy and learning engagement in MOOCs, examining the role of online academic hardiness, indicating that MooCs are perceived as extremely useful for driven learners and those with good academic credentials. These learners perceive MooCs as acquiring learning credentials beyond the usual curriculum and differentiating themselves. The study provided insights into the importance of supporting learners leading to course completion and success. Another study by Albelbisi, N. A., et al. (2023) performed qualitative analysis to determine the factors influencing the adoption of MOOCs in higher education. It identified integrated curriculum design, learner support and formal recognition of equivalent credits earned through MooCs as the major barriers in MooC adoption by institutions, notwithstanding leaner propensity towards MooCs.

In the Indian context most of the research in adoption of MooC platforms is focussed on factors influencing adoption by learners with very few studies focusing on institutional adoption. Paul et al (2018) discuss the adoption status of SWAYAM, India's MooC platform backed by the Government which is largely free. Even with the Government push it took years for SWAYAM usage to be broad-based. The regulatory provisions allowing learners flexibility to acquire 40% credits through MooCs has accelerated adoption nonetheless. Factors affecting faculty adoption of E-Learning are explored in Choudhury & Khataniar (2018). They conclude that perceived usefulness, ease of use, and job relevance are the major factors influencing faculty adoption. Sangole et al (2022) conclude that digital learning has accelerated in India driven by the New Education Policy and requirements of Industry 4.0 and offers effectiveness, personalized experience, ease of use, and user-friendliness to the end learners. Similar findings were reported by Bagdi & Bulsara (2023) who identified factors like perceived enjoyment, self-efficacy, and personal development which influence higher education students' intentions to engage in online learning. The adoption of primarily free MooC platforms in India is thus

influenced by a variety of factors including government initiatives, faculty and student perceptions, technological accessibility, and the shifting needs of modern education systems.

Thus, existing works collectively address the MooC platform adoption landscape, highlighting various aspects such as hybrid models, adoption challenges, pedagogical innovations, and the impact of MOOCs on traditional educational institutions. They underscore the complexity of integrating MOOCs into existing educational frameworks and the need for real-world personalized approaches to enhance the learner support and experience. However, case studies which highlight adoption of paid MooC platforms for learner support and advancement remain few and far between, more so in the Indian context. Thus, the present study has immense practical implications and can serve to inform institutional strategy related to learning and development, student empowerment, student value creation and effectively leveraging world class learning resources.

3. Design of the Study

a. Research Objectives

i. To understand the motivating factors for institutions in tier-2 cities to adopt paid MooC platforms.
ii. To assess the perceptions and experiences of students towards these platforms.
iii. To identify the challenges and effective interventions for successful implementation of paid MooC platforms in tier-2 institutions.
iv. To propose a blueprint for adoption and assimilation of paid MooC platforms for prospective higher education institutions.

b. Research Methodology

Mixed-Methods Approach: Combining qualitative data (from interviews) and quantitative data (from platform analytics) to provide a comprehensive understanding.

In order to explore the motivating factors for the adoption of paid MOOC platforms by higher education institutions in tier-2 cities and assess the perception of students and faculty towards these platforms, this study employed a Grounded Theory approach. Interviews were conducted with a diverse group of stakeholders, including senior faculty, leadership teams, and students. This qualitative inquiry was aimed at generating a substantive theory directly from the data collected. Through iterative rounds of data collection and analysis, the study seeks to uncover the underlying processes and motivations driving institutions to integrate paid MOOC platforms as part of their Learning and Development efforts.

c. Data Collection

i. Interviews with Senior Faculty and Leadership Teams

- Participants: Senior faculty members and leadership teams from the institution.
- Method: Semi-structured interviews to allow for in-depth exploration of opinions and experiences.
- Focus Areas: Motivation for platform adoption, perceived benefits and challenges, decision-making processes, and institutional strategies.

ii. Interviews with Students

- Participants: Students using the MooC platforms.
- Method: Semi-structured interviews with both closed and open-ended questions.
- Focus Areas: User experience, perceived effectiveness of learning, engagement levels, preferences for learning styles and content, and suggestions for improvement.

iii. Learner Analytics from Platform

- Data Points: Engagement metrics (time spent, course completion rates), performance metrics (quiz/test scores), participation in discussions, and frequency of platform use.
- Analysis: Identify patterns and correlations between usage statistics and learning outcomes.

d. Sampling

- Stratified Sampling: To ensure representation from diverse student populations.
- Sample Size: 20 institutional leaders and senior faculty, 30 students representing top 2% academic achievers of institutional student population and 30 students who were identified as weak learners.

e. Data Analysis

Qualitative Analysis: Thematic analysis of interview transcripts to identify common themes and patterns.

This research design aims to provide in-depth insights into the adoption and effectiveness of paid MooC platforms in tier-2 cities in India, contributing valuable knowledge for educators, policymakers, and platform developers.

4. Results

4.1 Faculty Interviews

The semi-structured interviews with the 45 senior faculty members and leadership team to explore the factors influencing the adoption of paid MooC platforms were transcribed, coded and subjected to qualitative analysis using NVIVO 12 software. The five broader themes which emerged during the interviews are described below:

- **Competitive Landscape** was mentioned 32 times, focusing on sustainability, admissions, placements, and survival.
- **Skill Gap** was a major focus, with 45 mentions, highlighting the need for emerging skills like AI, ML, Blockchain, IoT, Industry 4.0, Soft Skills and others.
- **Learner Preferences** had approximately 25 mentions discussing adaptability to MOOC platforms, non-threatening assessment, credibility of certification, access to world-class content/courses and self-paced learning.
- **Student Support** also saw significant mentions with 32 people highlighting subscription availability, accessibility, academic support, assimilation and success.
- **Brand Perception** was quantified at around 22 mentions involving elements like LinkedIn showcase, positive student perception, student profiles and institutional recognition.

Figure 1 below illustrates the various themes and their corresponding frequencies identified during the interviews:

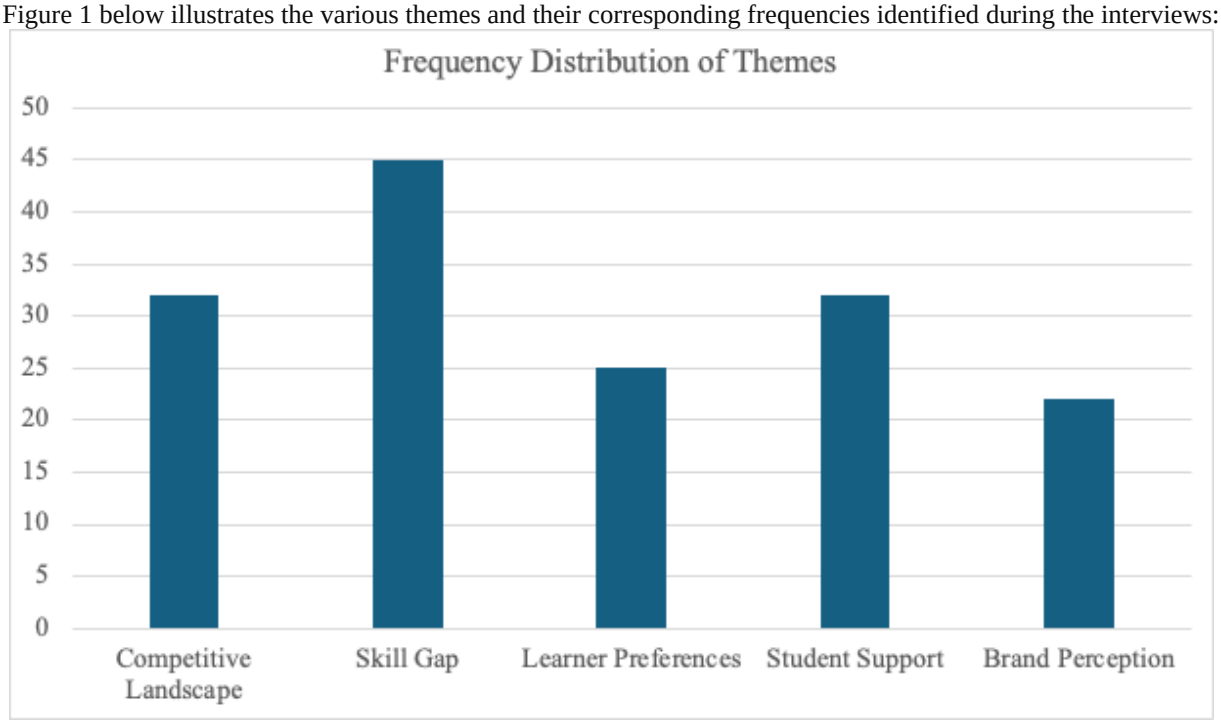

Figure 1. Prominent emergent themes from senior faculty/leadership team interviews

Some of the sample representative responses from the interviews are tabulated in Table 1 below:

Table 1. Representative responses from the interviewee's during semi-structured interviews

S.No	Themes	Representative Responses
1.	Competitive Landscape	*"...the education landscape is changing rapidly and it is tough for the institution to keep pace with policy changes and the market expectations. Students also demand the latest courses and specializations in emerging areas. There is increased pressure being felt by the management and the leadership team..."* *"...we need the right talent to drive changes across the institution and unfortunately it is difficult to get readymade talent in higher education in smaller cities..."* *"...the criteria on which institutions are being assessed are broad-based. It is extremely tough to show outcomes in research, start-ups, UN SDGs, consultancy, societal impact etc. Our faculty is not equipped to handle these challenges..."* *"...hiring consultants might be the only way for smaller institutions to show outcomes and remain relevant. The big universities are*

		getting bigger and there is rapid consolidation in the higher education space. We are facing challenges in attracting quality students and affiliated colleges have a bleak future…" *"…faculty is expressing reluctance in taking courses in emerging technologies in spite of attending FDPs. We need to train the faculty members rigorously and also depend on external trainers and expert resource persons which entails a high cost…"*
2.	Skill Gap	*"…curriculum revision is a challenge for smaller institutions, to align with NEP, to provide flexible options for learning paths, to provide latest courses in generative AI, quantum computing, Industry 4.0, Electric Vehicles etc.…"* *"…continuous upskilling of faculty members requires effort and planning. We do not have access to experts in the region for emerging areas and hence online skill development and learning is the only feasible mechanism…"* *"…traditional Faculty Development Programs are not delivering the desired results as faculty members indicate that more training is needed even after getting certificates of proficiency after attending the FDPs. They need structured content which is readily available and can be used in the preparation of course material…"*
3.	Learner Preferences	*"…we were pleasantly surprised at the pace at which students took to online learning during and after the pandemic, with a majority of the students enrolling on their own. The course completion rates were also encouraging…"* *"…students are actively posting their learning credentials and certificates from the online learning platform on their social media handles. It clearly gives them peer recognition and satisfaction. This trend is here to stay…"* *"…students are very happy with access to the paid online MooC platform and feel happy that they are the only ones in the region getting access to high quality content. The breadth of courses available is a major draw for the students and they can find courses from top universities and the industry in one location with unlimited access…"*
4.	Student Support	*"…we are actively showcasing the subscription to the paid online MooC platform to all our stakeholders as it demonstrates our commitment to providing access to high quality content to the students, besides resource provisioning and student engagement…"* *"…we have been able to establish the perception among the students that the institute will provide them resources which will help them improve their career prospects. The level of student engagement on the platform is really high with over 20,000 cumulative hours of MooC over the year…"* *"…the shortcomings in terms of faculty availability for niche courses and multi-disciplinary courses which are not offered by the institution have been addressed to a large extent. Students require learning support and the platform provides them access to more courses and material that they can possibly consume…"*
5.	Brand Perception Enhancement	*"…subscription to the platform has definitely resulted in a competitive advantage for the institution and a real value-add for the students and faculty…"* *"…the institution is getting a lot of organic traction on social media due to students posting their certifications. This is extremely useful to enhance the image and brand perception of the institution. There is more weight in the message when it comes from a satisfied student…"* *"…we strongly believe that the institution's image and brand has been strengthened since the adoption of the platform which also*

		indicates the progressive mindset of the institution and its focus on value delivery for the students and faculty…"

The thematic analysis is summarized below:

a. Theme 1: Competitive Landscape

Definition: The competitive landscape refers to the perception of increased pressure on institutions to differentiate themselves and attract prospective students in the Indian Higher Education space.

Findings: Under the Competitive Landscape theme, the leadership team felt increased pressure on the institution due to enhanced stakeholder expectations, including industry, regulatory agencies, students, parents and society. Academic pressure was felt around introducing the latest programs, courses, specializations, minor degrees and academic flexibility. Industry-recognized certifications for students was another area which the institution felt would be challenging to achieve. Even in a tier-2 institution, a lot of prospective students were enquiring about the placement opportunities, curriculum, labs, facilities and faculty quality. A majority of the students from the city were also contemplating studying outside due to a higher perceived exposure and learning experience. Moreover, many peer institutions were launching new initiatives for students centred around delivering unique learning experiences. Thus, the institution felt pressured to act and invest in a high-quality learning platform as a differentiating strategy in its region and to articulate its value proposition for its stakeholders.

b. Theme 2: Skill Gap

Definition: Skill gap refers to the perceived lack of faculty readiness in delivering high quality instructions and outcomes in emerging domains, by the institutional leadership.

Findings: In the Skill Gap theme, the institutional leadership recognized that their faculty members were not fully equipped to undertake large scale reforms in the curriculum, develop content for courses in emerging domains and offer specializations which meet market expectations, quality standards and benchmarks in a short period of time. While the institution did have a learning and development plan in place, it would have taken time for the identified skills and competencies to be acquired by the faculty members. Hence, it was felt that a platform offering high-quality and internationally benchmarked content should be made available to bolster institutional capability in the short-term. The acquired platform would also become a critical enabler for the implementation of the learning and development plan at the institutional level allowing for a mix of courses and industry certification for both the faculty and the students.

c. Theme 3: Learner Preferences

Definition: Learner preferences indicate an acceptance of student propensity in learning from online platforms and social media channels by the institutional leadership and faculty members.

Findings: Learner Preferences emerged as a major theme, recognizing the shift of learners through online platforms such as Coursera, EdX, YouTube, Online Forums among others. This trend was accelerated through the pandemic and now seems firmly entrenched as a matter of learner preference. Some of the factors in widespread adoption of online learning platforms by the students are short videos and ease of assimilation, non-threatening evaluation based on small assessments, micro-credentials which can be shared on social media among others. Hence, the institution wanted to leverage this trend and provide students a credible platform which they would be able to leverage effectively. Learning analytics from the pandemic when the paid platforms offered courses for free help firm up the institutional belief that the platform would be well received by the student community.

d. Theme 4: Student Support

Definition: Student support refers to the need of the institutions to be perceived as sensitive to student needs, providing them access to the best resources and supporting them in attaining mutually beneficial objectives and outcomes.

Findings: Institutions need to constantly showcase the initiatives that they are taking for student support. Access to world-class learning resources from top universities and industries of the world in the form of courses to certifications to guided projects is perceived as a major initiative for student development. Many of the accreditation agencies identify lifelong learning as a critical graduate attribute. Hence, availability of such platforms offering credible learning tie in nicely to the self-learning and development theme. Further, institutions can work on building favourable student perception around the availability of unlimited learning opportunities on such platforms, especially when the prices of individual licenses can be prohibitively expensive for individual students in tier-2/3 cities of India. Thus, the institute felt compelled to adopt the paid MooC platform to offer high quality student support on academic knowledge and skill development leading to favourable student perceptions.

e. Theme 5: Brand Perception Enhancement

Definition: It refers to the acknowledgement by institutions that investing in world-class resources for learning can lead to favourable brand perception by all stakeholders and create a USP for the institution.

Findings: The final emergent theme was Brand Perception Enhancement where the institution leadership team felt that the institution shall be viewed favourably by the regulatory agencies, ranking agencies, accreditation agencies, parents, students, faculty and the larger community. A by-product of this initiative was that students regularly posted their course completion certificates and industry certifications on LinkedIn and other social media platforms, leading to organic brand endorsement for the institution. It further helped reiterate a perception of the institutional commitment towards the learning and development of its students. The institution also leveraged its investment in the MooC platform by publishing learning analytics and reports related to course completion, hours of learning, industry certifications etc. at various forums further strengthening its brand.

Critical Analysis:
The adoption of technology, high-end learning resources leading to student engagement and support is a resultant of the convergence of multiple factors. The confluence of increased competition, increasing stakeholder satisfaction, lack of trained and experienced faculty, student satisfaction, brand differentiation and rapidly changing technology landscape has resulted in institutions adopting new initiatives at a record pace. Proactive institutions are realizing this and trying to address their own shortcomings by leveraging credible platforms, frameworks and tools to stay relevant and strengthen their value articulation for the students. This has resulted in the bigger institutions getting bigger. If the smaller institutions need to remain relevant and thrive, they will need to leverage such platforms and build strong supporting processes to ensure adequate return-on-investment.

4.2 Student Interviews

Similar interviews with open-ended questions were conducted with 250 final and pre-final year students to gauge their experience on using the platform, perceptions on their own development and knowledge acquisition, quality of learning resources, their confidence in their abilities and their sentiments towards the institution etc. After transcribing the interviews and analyzing the responses, the following themes emerged:

- **Empowerment**: Mentioned 102 times, focusing on the quality of courses, access to courses by professors from global universities, and international industry certifications.
- **Recognition**: mentioned by 163 respondents, emphasizing peer recognition, recognition from LinkedIn, visibility, profile strengthening and resume enrichment.
- **Academic Support**: Mentioned 44 times, highlighting need for real-world support in completing online courses and successfully clearing the certification.
- **Difficulty in Understanding**: 31 mentions, focusing on communication barriers, difficulties in assimilation, and lack of real-time support.
- **Acknowledgment of Institutional Support**: 133 mentions, relating to recognition of credit for online courses, minor degree specializations, designated success managers, and cost-free services by the institution.

Figure 2 below illustrates the various themes and their corresponding frequencies identified during the interviews:

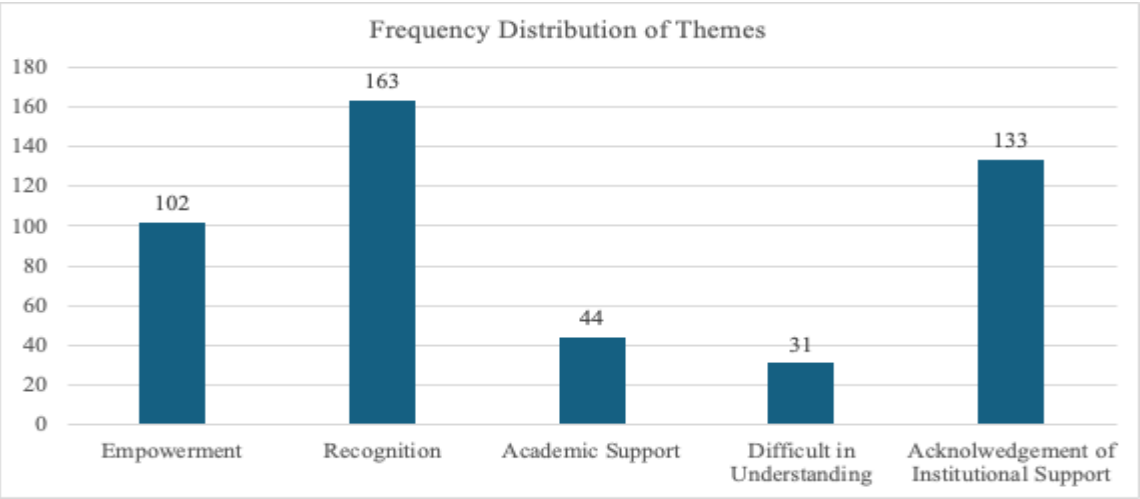

Figure 2. Emergent themes from student interviews and their frequency distribution (mentions during interviews)
While a few of the themes were overlapping among the two student groups, themes such as academic support and difficulty in understanding came entirely from the group of students who were identified as weak learners.

Some of the sample representative responses from the students are tabulated in Table 2 below:

S.No	Themes	Representative Responses
1.	Empowerment	*"...the quality of courses available on the platform is quite high and the variety is very impressive. I can learn anything of my choice after completing the prescribed courses..."* *"...I am happy that I can complete courses as per my convenience..."* *"...completion of courses on the platform and getting an international certification gives me confidence that I am creating a good profile for myself..."* *"...I have completed seven courses on the platform and am pursuing a specialization in UI/UX design which is not in my curriculum..."*
2.	Recognition	*"...I was recognized as a top learner on the platform and within my department. It felt good...."* *"...when I post my course completion certificate or an industry certification on LinkedIn, I get lot of good comments from my peers and my teachers, which is satisfying..."* *"...I can see that industry certifications are valued in the industry and I feel that I can improve my job prospects by obtaining the right mix of certifications from top companies..."*
3.	Academic Support	*"...I am not able to focus in online learning. I think there should be regular classes to clear doubts even for online courses..."* *"...I complete the quizzes and after a few days I forget the subject matter, so I am not confident of my skills. I want that regular teaching should also be carried out side-by-side..."* *"...Everybody is getting certificates from online platforms, so there are no differentiating factors in high achievers and low achievers. A proper examination should be conducted at the end..."*
4.	Difficulty in Understanding	*"...I am not able to follow the accent of the foreign teachers and instructors in the courses, so I do not use the platform regularly..."* *"...The video lectures are too short and sometimes I have difficulty in understanding the big picture and it does not give me satisfaction in learning. I am just completing the courses for the sake of it..."* *"...It is difficult to pick up the pieces if you resume a course after a break. It is best to do the course in regular sessions else the learning effectiveness is reduced..."*
5.	Institutional Support	*"...I like that the institution has taken the initiative to provide us with the platform and also provide credit for courses completed online. It is in line with what is offered at top colleges outside the region..."* *"...I am getting the platform license for free which is available at a high cost if I were to procure it individually. It is a great benefit for me..."* *"...our institution is always providing learning resources for the benefit of the students. This platform is not available to my friends in other institutions in the region..."*

The thematic analysis is provided below:

a. Theme 1: Empowerment

Definition: Empowerment refers to the increased confidence felt by the high achiever student group after successfully completing several courses on the MooC platform.

Findings: The high achieving group's prominent theme was Empowerment to pursue diverse courses beyond the curriculum and complete industry certifications at their own pace. The access to the learning platform accelerated their learning and they felt more confident of their own knowledge and skills compared to their friends/peers in other institutions. Hence, the perception of value proposition from the availability of the learning platform was high among this set of students. There was widespread concurrence among the interviewed students on the efficacy and usefulness of the learning platform.

b. Theme 2: Recognition

Definition: It is the feeling of satisfaction experienced by the advanced learners upon their recognition by their peers, friends and families.

Findings: Recognition was another major theme which emerged. This reflected the kudos and compliments received from the students when they showcased their learning credentials on social media platforms. The institutional best-practice of the director, deans and faculty member complimenting students on social media to recognize their learning credentials came to the fore and was much appreciated by the students. Their recognition among family, friends and the peer group led to enhanced satisfaction among the interviewed students and motivated them to continue leveraging the platform.

c. Theme 3: Academic Support

Definition: It is the requirement of face-to-face learning and needed support from faculty, expressed by weak learners to support self-paced learning on the MooC platform.

Findings: Academic Support was also an emergent theme, with the weak learners wanting to have in-person teaching and doubt clarification before registering in the online course and during the course. They suggested a hybrid model of face-to-face and online teaching for each course. Thus, mere provisioning of the platform is not a recipe for all round student satisfaction, but real-world interventions shall most definitely be needed to make such initiatives successful and leading to attainment of long-term outcomes.

d. Theme 4: Difficulty in Understanding

Definition: It is the concern of a few students around understanding the foreign accents of instructors on the paid MooC platforms.

Findings: Difficulty in understanding was a significant theme from the student set which was identified as weak learners. Here the course completion rates were 25% lower than institutional average. Students identified the accent of the foreign professors as a stumbling factor in their learning and they found developing interest difficult. Many of the students acknowledged playing the videos on 2X and 4X speeds and completing the quizzes at the end by asking Google or ChatGPT. This group had lower satisfaction levels compared to the high achieving group on the efficacy of the MooC platform and the knowledge gained therefrom.

e. Theme 5: Institutional Support

Definition: It is the perception of institutional intent in supporting student success by the students.

Findings: Finally, both student groups acknowledged the institution for providing access to the learning platform, considering the high cost of the individual learning licences on the platform. There was appreciation and acknowledgement of the progressive approach by the institution towards the learning needs of the students. The fact that such platforms were not available to other students at similar institutions in the region was much appreciated by the students. This indicated an overwhelmingly positive sentiment towards the institution by the students around adopting the learning platform.

Critical Analysis:

Implementing the paid MooC platform has significant benefits in terms of student perception and satisfaction levels, provided that the institution is aware of the potential pitfalls and requirement of a hands-on approach. Students feel more confident about their abilities, are more satisfied and acknowledge institutional support. Thus, it can be considered as an institutional best-practice by a majority of the institutions. Weak learners will still need to be catered to by the institution and mere adoption of the platform will not guarantee their success.

4.3 Implementation barriers and challenges

Based on the interviews with the faculty members and leadership teams, the following barriers and challenges emerged:

a. Broad-basing Adoption

During implementation, it was found that a majority of the students enrolled on their own, but the last 15% of the students did not enroll on the platform despite multiple email reminders. Significant institutional effort and bandwidth was expended to ensure 100% enrolment on the platform and in the courses identified as part of the curated learning paths for specific programs. Still, a lot of orientation programs, overview programs and small demos had to be organized by the implementation team over 2-3 months to ensure that the students knew about the value-add (learning paths with credits, specializations and minor degrees besides unlimited courses) and recognized it as a major initiative from the institution.

b. Tracking Progress

The efforts of the implementation team at the institution did not end post enrollment. The students who were late adopters of the platform, were also majorly the late starters and were at-risk on non-completion of the course. Hence, the implementation team had to track the progress of the learners on the platform and also had to meet students to ensure that they got the required support in ensuring that they started on the courses in the right earnest.

c. Ensuring Completion

Ensuring completion of the enrolled courses also emerged as a major challenge in the first iteration. The assumption that students will finish the course if it was made part of the curriculum and for-credit stood negated. The implementation team along with the faculty members had to conduct remedial programs for 10% of the student population to ensure that they completed the courses and were eligible to earn the associated credits. Hence, tracking of learners through to course completion is a major challenge for tier-2/3 institutions who may not have extended academic support managers and implementation teams. In such scenarios the faculty workload and deliverables may inadvertently increase.

d. Evaluating Outcomes

A major drawback of the MooC platforms is that the learner can watch the videos in enhanced speed and quickly complete courses without devoting the desired time for organic learning and assimilation of the course content. In such cases there is a clear mismatch between the obtained learning credential from the online platform and the actual knowledge and skill levels. To ensure that the learning outcomes are met, emerged as a major challenge. Thus, the academic leadership teams had to devise a comprehensive set of rubrics to evaluate the learning outcomes from online courses, based on off-line assessment methods to quickly assess the learning levels of the learners and differentiate their grades.

Thus, the major insights which emerged from the study are:

i. Implementing a paid MooC platform after careful evaluation and consideration is a major academic initiative for any institution with potentially overwhelming positive impact on learner empowerment, satisfaction, sentiment and perception.
ii. Significant institutional effort is expended in implementing a paid MooC platform at scale for all the students.
iii. Ensuring student progress, course completion rates etc. is non-trivial and requires real-world interventions and support.
iv. Assessment and evaluation schemes post online course completion need to be devised to accurately measure the learning outcomes.
v. A formal, structured approach with a well-staffed and trained implementation team supported by faculty buy-in is central to successful implementation of a paid MooC platform at any institution.

5. Outcomes from the Implementation of Paid MooC Platform

This section outlines the outcomes over one year from deploying a paid MooC platform accessible to students in engineering, management, and computer applications. Students enjoyed a full-access subscription license allowing them to undertake an unlimited number of courses across various disciplines. Furthermore, the platform furnishes the institution with detailed insights on several aspects, including learner activity, feedback, and skill development analytics. These analytics encompass distributions of skill domain proficiency and learner competencies, top courses by skill domain, a skill index, skills benchmarking, and utilization statistics, details of which are discussed below:

a) Learner Feedback : Feedback from learners served as a crucial tool for assessing the usefulness and impact of the MooC platform within the institution. Figure 1 presented below depicts the feedback collected from over 1600 learners who took 5654 courses on the MooC platform within a year. With an average rating per course of 4.7 on a 5-point Likert scale, learner satisfaction is deemed to be significantly high. Additionally, the descriptive feedback from learners also confirms their substantial contentment with the platform.

Figure 3. Learner feedback (including students and faculty)

b) Learning Hours and Activity : Figure 2 given below provides statistics on the learning hours and activities by learners at the institution over one year following the implementation of the paid MooC platform. It details metrics such as

total learning hours, average hours per learner, and average monthly learning hours, indicating a high learner commitment to self-directed learning and development through the platform.

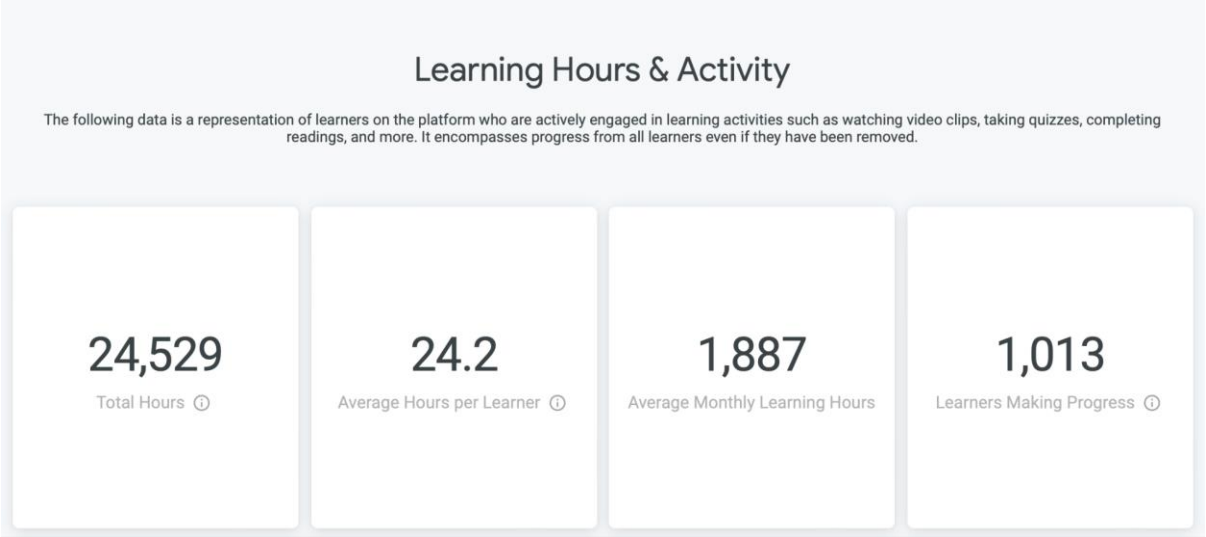

Figure 4. Learning hours and activities on the MooC platform

c) Skill Development Analytics: The figure depicted below highlights the proficiency distribution among students and faculty members within the higher education institution with a classification of the learners at the beginner, intermediate, and advanced skill levels. This classification helps in developing strategies to attain appropriate skill levels in emerging domains and functional areas.

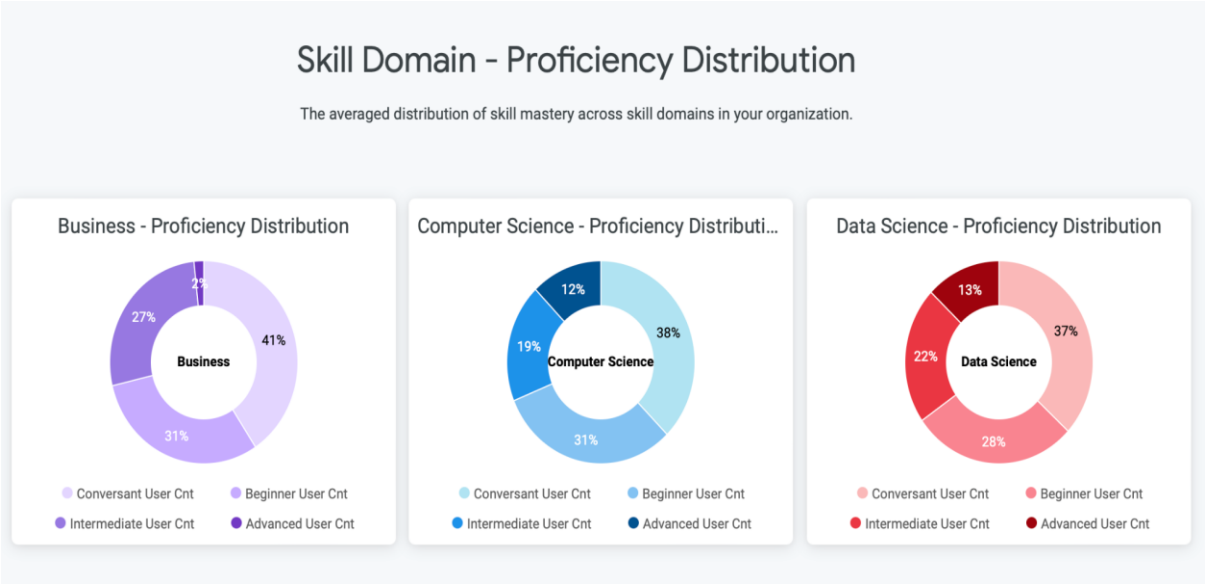

Figure 5. Skill domain proficiency distribution on the MooC platform

5. Implementation Blueprint for Tier-2/3 Institutions

Based on the interviews with stakeholders, insights from the surveys and examination of the overall learning analytics, this section presents a prospective implementation blueprint for institutions looking to adopt paid MooC platforms as part of their strategic objectives. The blueprint presented in the form of a phase-wise workflow (Figure X) is elucidated below:

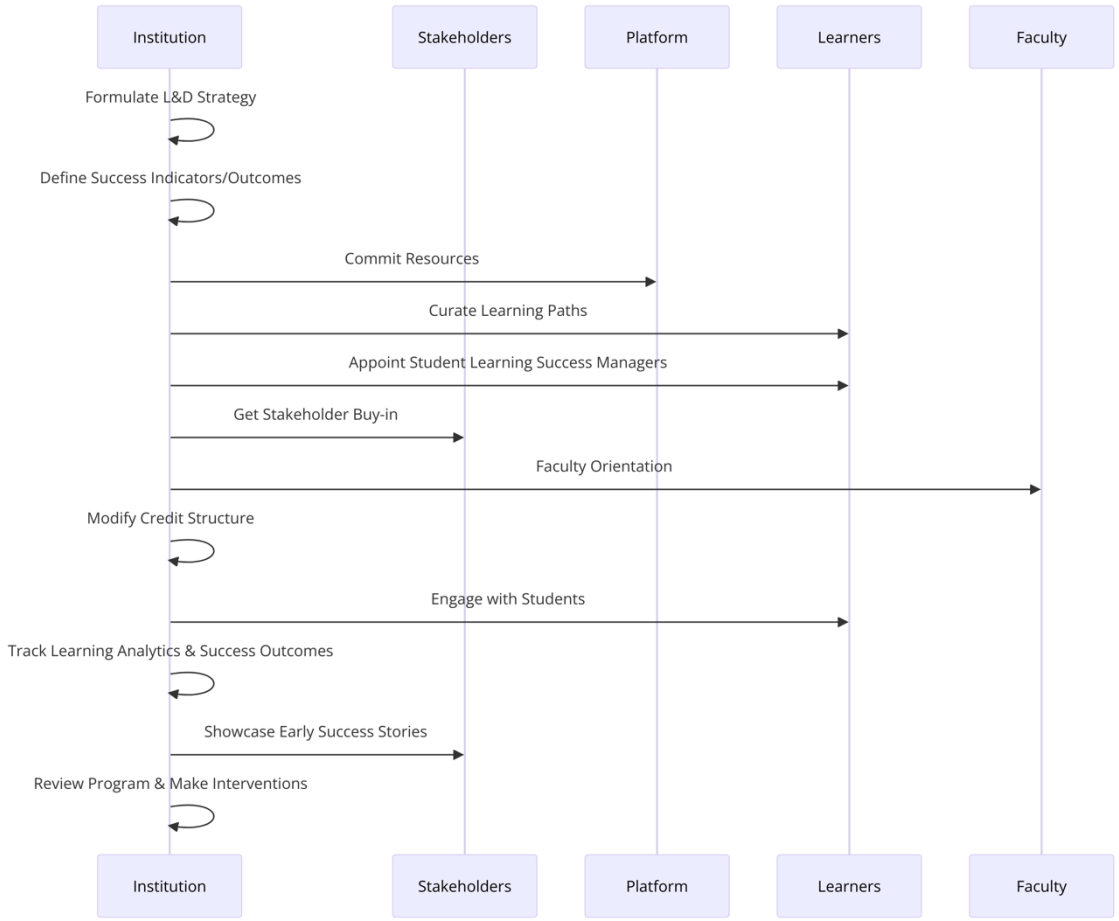

Figure 6. Institutional Blueprint for implementation of paid MooC platform

a. Formulate a Learning and Development Strategy

Institutions desirous of implementing a MOOC platform for their students and faculty should understand the importance of having a long-term strategy to upskill their primary stakeholders. Hence, formulating a forward-looking Learning and Development (L&D) Strategy is critical to set the context for the entire institution and committing to the journey. Strategy and policy support is critical to the success of any L&D initiative, and the importance of this base step cannot be over-emphasized (Anthony et al., 2022; Jansen et al., 2015). The broad contours of an L&D strategy include a learning culture, use-of-technology, professional development in emerging domains, continuous and life-long learning, access to content, resource allocation, collaborative and interdisciplinary learning, adoption of global best-practices and platforms, and academic support. It is important that institutions develop a strategic approach to enhancing the learning outcomes for their faculty and students, irrespective of their current resource position.

b. Define Success Indicators/Outcomes

A strategy alone is not sufficient for institutions. It will help if the learning outcomes indicative of success can be clearly articulated for tracking purposes. Learning outcome success can be defined in terms of the percentage of users on the platform, number of courses enrolled in, successful completion ratio of the courses, certifications earned, completion of curated and defined learning paths, courses corresponding to top 10 emerging domains identified by Gartner, courses aligned with United Nations Sustainable Development Goals (UNSDGs), micro-credentials earned corresponding to industry certifications, and hours of learning per learner (Jansen et al., 2015; Deng, Benckendorff, & Gannaway, 2020). For institutions starting out, having simple yet meaningful success outcomes might be a better approach. More complex success indicators correlated to extrinsic outcomes can be defined subsequently in an iterative manner.

c. Commit Resources

It is imperative for institutions in tier 2 cities to commit financial resources for implementing the MOOC platform, which is typically calculated in terms of dollars per user license (Chaudhary & Sharma, 2021). The primary reason for employing a paid MOOC platform is to get a labelled platform endorsing the institution's brand each time a learner accesses a course on the platform. The second reason is to get access to a dashboard providing learning analytics and insights which can help refine the institutional interventions and further improve learning success indicators (Kuo, Tsai, & Wang, 2021).

These features are not available in any free MOOC platform. Self-financing institutions can further optimize the resource commitment by managing the platform licenses smartly by assigning the licenses to different learners in different semesters. While this reduces the funds outflow, the institution needs to have a competent platform administrator to manage the licenses internally as per the learning needs of the learners (Lan & Hew, 2020).

d. Curate Learning Paths

Initially, institutions would do well to define learning paths for learners, so that learning can be structured, and the course completion requirements can be met. This is also needed to not overwhelm the first-time MOOC platform users with a wide choice of courses. Apart from these learning paths, the students can opt to complete any course of their choice from the huge library of courses, empowering them further with complete flexibility. Curating learning paths is non-trivial and needs to mirror the best curriculums adopted by good institutions while catering to the learning level and needs of the learners. Hence, the choice of courses at different levels (beginning, intermediate, and advanced) and a mixture of those offered by university professors and industry experts needs to be carefully performed, ideally by a panel of experts (Kuo, Tsai, & Wang, 2021; Lan & Hew, 2020).

e. Appoint Student Learning Success Managers

While MOOC platforms are designed for individuals to approach learning at their own pace, it is important for institutions adopting such platforms for the first time to have specifically appointed student success managers who track the student progress on the platform and intervene if the student progress is not satisfactory and the student is at risk of non-completion of a course (Lan & Hew, 2020). If these online courses are made a part of the curriculum, then non-completion will put the student at risk of not acquiring enough credits needed for progression to the next semester (Deng, Benckendorff, & Gannaway, 2020). Hence, regular monitoring and support are required for learners at tier 2 institutions. In the pilot study, 4% of the students did not complete a mandatory course through the MOOC platform on average, necessitating such an intervention from the institution (Jansen et al., 2015).

f. Get Stakeholder Buy-in

The success of any initiative depends on stakeholder adoption. Hence, proper orientation programs outlining the benefits and underlining the commitment of the institution to the learning needs of the stakeholders is important (Zaremohzzabieh et al., 2022). No new initiative should be forced through the system, but gradually eased in with the required communication and engagement (Jansen et al., 2015). Once the orientation programs are completed, the IT teams must be equipped with learner enrollment and onboarding, sharing documentation/videos on how to proceed and the requirements of the institution with respect to online learning (Albelbisi et al., 2023).

g. Faculty Orientation

Faculty orientation is outlined as a separate item in the blueprint, because faculty upskilling is the most critical element in improving the quality of education across India (Khalid, Chaveesuk, & Chaiyasoonthorn, 2021). A group of faculty members committed to self-development and learning can energize the whole system of education and can not only upskill themselves, but also assist students in their MOOC journeys (Anthony et al., 2022). Again, a faculty learning success manager may be considered to ensure faculty completes the courses in emerging domains and remain equipped to teach effectively in a rapidly changing knowledge landscape (Deng, Benckendorff, & Gannaway, 2020).

h. Modify Credit Structure

Institutions must modify their program credit structure to include credits from MOOC platforms. This is as per the New Education Policy (NEP) in India and endorsed by regulatory agencies such as the AICTE (AICTE, 2020), wherein up to 40 percent of the credits in a professional degree can be earned by students from accredited online learning platforms. Institutions such as those who are affiliated to universities and cannot change their curriculum can still introduce paid MOOC platforms by positioning these courses as value-added or skill development courses (Jansen et al., 2015; Khalid, Chaveesuk, & Chaiyasoonthorn, 2021).

i. Engage with Students

Student engagement is equally important when students use MooC platforms. Doubt clearing sessions, dedicated consultation hours, remedial and enrichment classes are still relevant to support student success in MooC courses. Without these interventions, students in tier 2 cities can be quickly demotivated and disillusioned with these platforms and find them too tough. Many of the courses on these platforms are delivered by foreign professors and their accents can be hard for Indian students to follow, necessitating support. The role of student engagement in the adoption of MOOCs has also been confirmed in various studies by Lan et.al (2020) and Dubey et.al (2023).

j. Track Learning Analytics and Success Outcomes

It is important for institutions to put in place a regular review process to look at the weekly or monthly learning analytics and track course completion on the MooC platform (Barutcu and Ebner, 2020). Insights into what students are learning and their average rating of courses should be used to select or remove courses as part of the predefined learning paths. Without insights and quick course corrections, especially at the initial stages, the success of such initiatives can be compromised.

k. Showcase Early Success Stories

To build traction for MooC platforms at the institution level, early success stories must be highlighted and celebrated. It creates the required incentive for other stakeholders to participate enthusiastically and aid in widespread adoption. Early champions need to be identified and supported so that they can mobilize other students and faculty members. From the experience in the pilot study, the institution had 90% of the users active on the platform in the first 2 months.

l. Review Program and Make Interventions

Regular reviews of the program by the leadership team constitute the critical final aspect of the blueprint. This ongoing assessment ensures that the successful implementation of the MOOC platform remains a strategic priority for the institution and keeps key personnel focused on its success. Furthermore, it allows for timely course corrections or interventions as required, along with the issuance of necessary directives (Deng, Benckendorff, & Gannaway, 2020). Each year, based on the program's success, the institution should ideally increase the number of licenses if student enrollment grows. Therefore, the business case and Return on Investment (ROI) for any additional investments must be comprehensively understood by the leadership team.

The blueprint presented above provides a comprehensive implementation plan based on validated implementation experiences at an institution. It can serve as a template for other institutions to successfully adopt paid MooC platforms and create value for their stakeholders.

6. **Conclusions**

Institutions of higher learning in India, especially those located in tier 2/3 cities, need to provide varied learning experiences and exposure to their students through access to world-class content and consistent upskilling. Paid MooC platforms provide an ideal solution for such institutions to provide clear value-differentiation for their students and help them attain higher outcomes. However, the success of such platforms is not a given, requiring careful planning and execution to ensure that its potential benefits are actualized. This paper presents a detailed case of implementing a paid MooC platform at a tier 2 city in India with significant success. Results indicate significant student propensity for adopting such platforms along with high value and prestige perception. A blueprint for implementing such platforms is also laid out for potential replication by other similar institutions. The success of such initiatives can help a large number of students and institutions across India in realizing individual and institutional objectives. The study also has few limitations. There are chances of potential biases in self-reported data. Also, the findings may be difficult to generalize across different regions or types of institutions.

Acknowledgement:

Figure 6 has been generated using LLM.

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