

E-Wyre: Re-Engineering Higher Education

Sahana D., Prajwal M.

Abstract: Learning can be broadly classified into academics and non-academics. Academics is predominantly pre-defined syllabus driven and classroom centric with faculties on board. Non-academics are generally provided less than 10% of the total learning time. Areas like industry, research and inspiration are rarely addressed in the course time. The sector of E-learning has achieved proliferating reputation and popularity, and for the right grounds. Majority of the youth in this country belongs to the age group of 15-19. And a minimum of youth belongs to the age group of 25-29. With this growing population of the youth increases the learners and increases the need of more teachers and advanced teaching mechanisms. Begetting a powerful learning affair with a classroom like experience, presenting a near to conventional classroom essence are the aspirations of a lucrative E-learning platform. E-wyre is a versatile knowledge sharing supplement to help students. Especially at UG & PG level and above the education institutions address the access and shortfall of high caliber educators. The impact of this is pretty high at rural areas. The objective of e-wyre is to connect various domain knowledge experts (DKE) from various fields. This will be live, virtual, interactive and on-demand.

Keywords: E-learning, E-wyre, robust learning. Domain Knowledge Expert.

I. INTRODUCTION

IN recent years, the education industry has exhibited an extensive and a continuously expanding demand for inventive approaches of imparting knowledge that has driven the substantial adjustments in the learning technology and management [1]. The present generation demands the society to imbibe valuable knowledge, education and advanced skills in an appropriate and qualitative manner. A diversified method to pillar learning in a more personalized, amenable, portable, convenient and on-demand manner are providing the advancement of computer and networking technologies. These profound changes in learning exigencies and technology are fueling a transition in modern learning in the era of the Internet, commonly referred to as online learning [2].

The vanguard of higher education incorporates the stratagem affairs associated with online learning milieus concerned with both on campus and distanced education. Online learning education bestrides the scrutiny that emphasizes the augmentation of aggregate increase in the population with a level-3 degree or certificates within striking and eternal asset curbs. The accelerated admission growth in e-learning courses and programs illustrates that students and

the public extensively look at online options as increasingly attractive .



Figure 1: Internet usage for education

Figure 1 shows the impact of the internet in the field of education in the recent years. On the contrary of regulatory operations, up skilling and swoting initiates affluent reengineering in schooling and further education. The student solvency hours, faculty cram, margin usage, the scholastic programmer, strategy almanac and teaching learning proportionality coerce the committee upon giving imperativeness to these features. [3]. The root processes like teaching, learning, and research – stand impervious to some typical business processes like reengineering. The attempt to achieve an agreement to reengineer these root processes from the administrators, faculties and trustees are nearly impossible. This situation fazes every try at building mechanism to measure, calibrate, and justify these root courses [3].

This paper propounds the idea of using online learning platforms by backing face to face interaction in academic field and non-academic fields. Also, it aspires to stand as a simple to read and imbibe by justifying the gravity of adopting online learning platforms in higher education [3].

II. SURVEY

The paucity of adept manpower has really become a major issue in India. In consonance with the recent studies and evaluations made, the results state that there are numerous fields in India facing the above stated complication.

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The results proclaim that a requirement of around three lakh professionals for the upcoming 10 years is made [4]. Practically, with the current education system ongoing in India, it is nearly impossible to pull off this target.

An absolute necessity of skilled manpower in a few departments has been outlined in the reports. The Indian education system possesses untargeted approaches to study unlike the other countries. In India, the current youth population i.e., from age 20 to 34, is [5] 35,20,78,171, which means the issue is not about the manpower but the issue lies in obtaining a skilled manpower. The scholastic curriculum followed in India, is the root cause of these complications since, it does not prioritize prospective of education as skill oriented. This creates a considerable amount of restrain in the sector of employment as the companies have to invest most of the initial time and other resources in training the freshers [6].

Due to an enormous increase in the student enrollment rate and negligence of teaching career as an option, there has been a growing shortage of educators. The ministry's All India Survey on Higher Education reveals the data that states that the admissions of students in higher education institutes has augmented from 32.3 million in 2013-14 to 36.6 million in 2017-18 whereas the aggregate of teachers have dropped from 13,67,535 to 12,84,755. A meager student-teacher ratio increases the onus of a single teacher [7] educating numerous students. This also affects the coverage of syllabus in the prescribed span and also truncates the amount of attention every student deserves. Besides the onus of imparting knowledge to many students at a time, teachers are not able to propagate in the field of research and are also not able to influence their students to do so. The procured census display that this decline in the teaching faculties is being reconciled by the employment of ad hoc or part-time faculties. Nevertheless, these part-time faculties are hardly reliable for their performance.

A number of analysts [8-13] have accessed the worth of imposing online learning in higher education. The analysts deduced that online learning system imparts a constructive and a productive sway on student learning. It assisted the professors in Kingdom of Saudi Arabia to ameliorate their work accomplishments [9]. It also enhanced the quality of schooling in Universiti Teknologi Mara (UiTM) [10], University of Aveiro (UA) Portugal [11] and Romania [13]. Nagi, Anaraki and Suesawaluk [12] came to a conclusion that online learning yielded some drastic changes and upgraded the standards of learning.

III. WORKING

A. Domain Knowledge Expert

A teacher or an expert to be a DKE should undergo a onetime registration (OTR) which will not be chargeable. A profile of the expert containing his/her field of experience, current designation, occupation, time of availability and other optional details is a must. Also, certifications have to be uploaded in order to verify the qualifications as claimed in the profile. These certifications are not publicly visible. They are saved at the backend of the portal and can be accessed only by the members of the portal. If any discrepancies found between

the information provided and the certifications, then such experts will be barred from the portal. After the verification process is complete, he/she designated as a DKE.

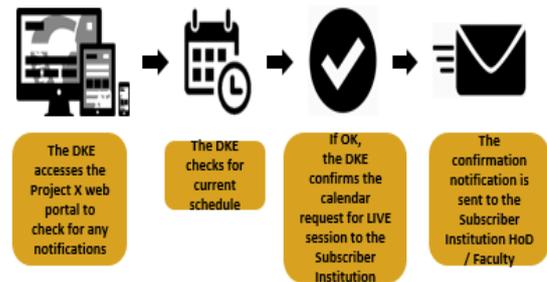


Figure 2 view from DKE's side.

Figure 2 depicts the procedure from the DKE's point and how he can accept a request from the student or an Institution. Also, he/she can demand a decent amount of fees based on their own criteria keeping in mind that 20% of the demanded fees will be in the interest of the portal. A license agreement stating the same is signed by the expert in prior. After the licensing is done, the expert is ready to take up classes. Now, the procedures from the DKE end are completed and he can start conducting his classes for the students.

The institute or a student can send a calendar request to the DKE. If the calendar is compatible with the expert's schedules, then a confirmation mail to the institute or student is sent by the DKE. Other information like student reviews, his demo lecture videos are updated into his profile to make it easier for the institution or a student to choose a particular DKE. If a DKE does not turn up on the date and time as agreed, then the fees paid will be refunded. If a DKE fails to take up classes on the agreed dates for a couple of times in a row, he/she will be barred from the portal.

B. Institute

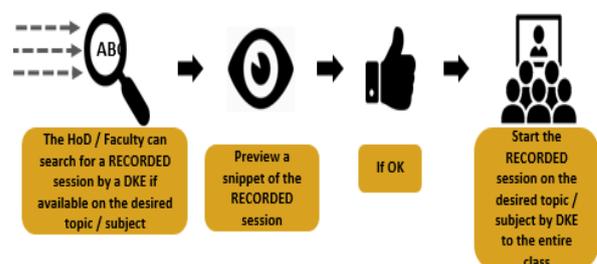


Figure 3 from institute view.

Figure 3 depicts or shows how the receiver (Institution or student) can choose a DKE they want to interact with and how the scheduling process takes place from their end. For an institution or a student to access this portal, OTR is done which is also non-chargeable. Once the institution becomes a registered member, the faculties or the head of the department can access the portal for the content.

When a faculty desires to arrange a session on a particular topic, he/she can access the portal to search for a DKE. A DKE can be chosen based on his/her profile and the feedback received on their recently conducted session. Once the DKE is finalized they will be notified by the institution's head/faculty mentioning the date, time, size of the class, on the topic of interest via a calendar invitation. If they receive a response from the DKE, the aforementioned fee has to be paid and the fee receipt will be provided with the payment ids for future references.

In a case where the institution is not willing a live session, or if a chosen expert is not available to take live sessions, then the recorded sessions of that particular DKE can be accessed. The faculty can search for a recorded session by the DKE if available on the desired topic / subject. Later a class can be arranged to demonstrate the class. It is necessary to know that, if a class or student is not prepared for the class with the basic requisites that include a minimum internet connection of 1mbps, projector, monitor, etc., then the class will be cancelled and no refund will be provided.

C. Individual Student

There might be some scenarios where just an individual student wants to attend a session or is interested in some topic but the whole institution is not willing to take up. The portal can group up the desired class number for a DKE and the classes can be conducted. Such a class can be called as a virtual class, that is made up by the algorithm of the portal so that an individual still can take up the course.

D. Industry Knowledge

Any industry expert or any retired industry experienced person who is willing to share his/her industrial experience and guide students who are freshers can enroll into the portal. Industrial knowledge is one of the fields about which most of the graduated or yet to graduate students are completely un-aware of. Consequently, this service of the portal can help the students to be apprehended that can prove vital in deciding their carrier. Also, they can latch on to the path of growth in a particular field and achieve their goal.

IV. ADVANTAGES

For an academic DKE, he/she can showcase his knowledge & reach out to other institutions and spread his knowledge in a wider range. The portal can act as a dynamic 360-degree profile builder to share it to the future prospective recruiter for the DKE. For a motivational DKE, this portal helps to reach out to wider audiences for inspirational & motivational sessions with this portal. It helps connect with the younger and dynamic talents on boosting their self-esteem and efficiency. An industrial DKE, establishes as a 'Knowledge Power Centre' with the institutions and student community. He can collaborate with other profound industry DKEs for knowledge, skills, and toolsets upgradation in turn is a betterment of the industry. For a research DKE, he can create awareness on 'RESEARCH' as an undervalued career option and can spread knowledge in a wider range on the topic. He can present wide spectrum of research areas and persuade institutions to develop research driven curriculum. An

honorarium is received as a great incentive and recognition for every session delivered.

For a registered institution, E-wyre provides the supremacy of learning from the finest DKEs as their lecturer or professor. Also, it brings out clear understanding of chosen subject and increases vast knowledge, research factor and aptitude among students. Sessions across industries, career counseling, inspirational, etc. are received by the institution. The received sessions are certified to be qualitative. This portal helps to cultivate conducive ecosystem for best practices of teaching and learning. It brings in strong industry perspective and increases employability quotient. Also, it helps to collaborate seamlessly with rich and abundant DKEs around the globe.

V. DISADVANTAGES

This portal may not be useful for the people with good knowledge and potential but no certifications. So to benefit the rare number of people with the knowledge but no certificate from any University, we can ask our current DKEs to design a small test to check if they actually have the knowledge of any other professor or an expert. If so, the portal can accept him as a DKE. The language barrier cannot be solved in this portal. Live sessions of a few DKE's could be rare due to timing barriers and incompatibility of schedules. No matter how good the portal gets, it cannot replace academic teachers.

VI. FUTURE SCOPE

Online portals that provide certified professional courses to improvise resumes and also gain expertise in domains of interest are going to be the next emerging markets. The industry is already at a net worth of stunning \$50B, [14] it is poised to grow more as the world trend is shifting towards becoming a global village with more and more resources pouring in and means to connect with each other and learn co-operatively.

Global Fortune 100 companies are the one adopting this method predominantly as they can access efficient training methods with gamification of content and real time progress report. It on the other hand is very cost effective and reliable.

The online learning market has profusely established in the U.S. but yet to be implemented effectively in Asian countries. In countries like India where major importance is given to schooling, online learning could emerge as a lucrative field as it is seen to be highly opted in the recent times. The complete digitalization of education in the upcoming times would bring no bewilderment after the rise of 'The Digital India' campaigns and also the increased number of productions of electronic goods such as mobile phones, tablets, etc.

While most of them have gotten themselves online, it would be interesting to see when online learning will dominate the academic sector, which is just a matter of time.

Further this idea can be modified to access the recorded videos even offline. Also, an entrance test for the non-certified aspirants to be the DKEs can be designed to check if they possess the knowledge a teaching expert.

This might create a decent number of experts as well as students who would want to learn new techniques. And also resolve the teacher-student ratio inequalities.

VII. CONCLUSION

As quoted by Seymour Papert, [15] a mathematician of MIT, “You cannot teach people everything they need to know. The best you can do is position them where they can find what they need to know and when they need to know”. The idea presented in this paper is upholds the above quoted. The portal lends the learner an appropriate platform for learning and also to build a social connects. The salient features such as, live, on-demand, interactive learning, and also access to recorded sessions enables the student an ease of scheduled learning as well as provides the teacher an ease of teaching. A social connect is built between the industries and the aspirant. This idea when implemented can be affluent as well as lucrative since in India, education is given a high prominence Authors should consider the following points:

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