ROLE OF TEACHERS IN EFFECTIVE ONLINE TEACHING- A STUDY OF HIGHER EDUCATION SECTOR IN TELANGANA

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Abstract

The outbreak of Covid pandemic at the dawn of 2020 has converted proactive online teaching into reactive online teaching and compelled virtually every teacher to teach online and deliver the output. But most of the conventional teachers in Higher education sector were not exposed to the online pedagogy and required training on software tools that enables online teaching. This minimum degree of training obviously questions the effectiveness of online teaching and compels to see the role of teaching resources or trained human resources in effective online teaching. Thus, this paper proposes to analyze the present status of teaching resources in the state of Telangana and analyze the perceptions of teachers and students on digital teaching methods.

Key words: Online teaching, Higher education sector, Teaching resources

Introduction

Higher education has been witnessing many reforms along with other sectors of which digitalization of learning resources and online teaching stands as important milestones. Online teaching has been making gradual strides from the past twenty years and took a quantum leap with the sudden outbreak of Covid pandemic which has forced the state to shut down normal classrooms and teach online in order to avoid the causalities among students. This decision made online teaching a mandatory pedagogical method for two academic years during which the teaching resources had to wade through many troubled waters in order to discharge the teaching duties. Most of the teachers at Higher education level were very conventional with respect to teaching modes and confined to chalk and talk method throughout their career, for them, digital education meant only the aid of power point slides for quite a long period but suddenly the induced online teaching has exposed these conventional teachers to video lessons, virtual classrooms, usage of smart boards and many such other angles of modern teaching on which the teachers are not effectively trained. Therefore, the role of trained resources in promoting effective online teaching need to be studied to decide whether it becomes sustainable in long run.

The effectiveness of online teaching depends not only upon a teaching resources but also on online ICT infrastructure available at both the ends i.e. teachers and students. The availability of such infrastructure varies from urban to rural areas, corporate to state run institutions, state funded institutions to centers of excellence and ultimately from haves to have not's with respect to the students. All these dimensions are equally traceable in the higher education sector of the youngest state in the country, Telangana which reflects 40% of urban institutions along with the trained and untrained resources. Telangana is also accredited for accommodating many central research institutes, well ranked universities on one side and colleges with weak infrastructure on the other side. Therefore, studying the prospects of

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online teaching on the basis of the availability of teaching resources enables us to generalize the conclusions. Similarly, Telangana also holds the remark of not making recruitments in the state-run universities from the past seven years. This scarcity naturally questions the availability of effective teaching resources that can drive online teaching ahead. These pros and cons can be better analyzed with the help of literature available on online teaching and its advanced versions like MOOCs in the backdrop of Telangana.

Review of literature

Issroff& Scanlon (2002)[1] have made the propping efforts through their paper to study the effectiveness of relation between teaching and online education. This paper was brought to fore in the year 2002 when online education was gradually gaining the ground. It attempted to study the universal applicability of online education for which two extreme domains i.e. Science and History were considered as case studies and examined the role of online education in effectively transacting science and arts papers. The authors have drawn a conclusion that online education has got a very wider scope than the conventional ICT teaching tools like mere power point presentations and video lessons, of course these ICT tools place a very prominent role in connecting the teachers to online teaching environment.

Daniel ,James and Eugene(2011)[2] have tried to see the economic facets of integrating traditional teaching methods with online education, these facets mainly includes the cost and benefit factors studied by the authors by dividing the cost of implementing online education into four different categories, such as the zero cost factor that empowers everyone to access online education like open access learning source, the nominal cost factor that can be availed by minimum amounts like annual subscriptions , the affordable cost factor which enables the micro and small stakeholders to integrate themselves with online education and expensive cost factors which permits only high end institutions and state sponsored agencies to offer online teaching . the authors have attempted to understand the impact of each factor by administering a three-tier questionnaire of which the first order questions gathers basic details, the second order questions which were built on first order questions to check the readiness of stakeholders and the third order questions that emphasized on the macro level aspects of online educations and ultimately concluded in their paper that the incremental benefits of online educations are more comparing to the initial cost.

Marcin Geryk (2020)[3] has conducted an empirical analysis on the need of promoting multi-national education system to meet the skill requirements of global entities and developed a paper around sustainable development goals on higher educations. Gery took the tenets of World Commission for Environment and Development in order to study the linkage between teaching and digitalization efforts and concluded that there is a need to develop new partnerships between higher educational institutions and technology platforms in order to expedite the process of integrating teaching resources and online environment.

Afzal Syed &Dr.Anupam Mazumdar(2021)[4] **have** examined the role of online education in effective crisis management of education sector which has attracted wider attention amid the outbreak of Covid pandemic and their findings are quite interesting to note, that, online

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education shall be effective only when the course material and transacting pedagogy or skillfully designed. The authors drew a conclusion that technology used in promoting online education must be in the knowledge sphere of teaching resources so that the learning outcomes shall be more fruitful. Syed &Mazumdar have drawn these conclusions after conducting a study on premier universities of Britain.

HeryHorjono(2017)[5] brought out a paper to highlight the advantages of online education by using highly customized research tools like unified language model that enabled him to generalize the perceptions gathered from different walks of life . He has applied Learning management System to crosscheck his claim and stated that online education system is more flexible providing a global reach and enables perfect interaction among the learners and tutors. This paper is however not feasible to be generalized owing to the pre-conceived notions of the author, as he stresses on the benefit of perfect interaction which is disagreed by many psychometric tests conducted throughout the spectrum of higher education.

Srinivasa Rao. K(2021)[6] has conducted a study on the way online educationis implementedin Andhra Pradesh ,a southern state of India which accommodates twelve state universities and three private universities with very aggressive usage of online teaching platforms and concluded that the present usage of online platform has been reactive to the unforeseen lockdown imposed by the state causing a gap between teaching resources and students. This scenario may not prevail in long rum during which the adoptability of onlineeducation must become proactive. The author has also stressed in his paper that online education has been contributing to the value enrichment of teaching that need to be converted into academic synergies by means of institutional efforts.

Gladis Mathew (2021)[7] has conducted study on different human resource management strategies adopted by higher education institutes of UK and found that, among all the HR management strategies of education sector, IT enabled strategy that is navigated by MOOCs and such other virtual interfaces is the most effective strategy. Such strategy not only helps the employers reducing the cost of recruiting and training, but also helps the employees to voluntarily upgrade their skills and introduce many concepts for the benefit of students. According to Mathew, MOOCs also helps educational institutions to standardize the appraisal system of teaching resources and thereby avoids the problem of appraisal conflicts.

Gaps in literature

It is found from the review of literature that much of the work on online teaching took place in the western education sector especially in terms of designing and disseminating courses through MOOCs but the university system in the states like Telangana has not yet hastened itself to convert conventional teaching into online mode. It is also observed that there is a scant amount of literature available to establish a linkage between the quality of teaching resources and online teaching in the states like Telangana. Therefore, the following objects are designed to establish such linkage in this paper.

Objectives of the study

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1. To study the pros and cons of online education

2. To identify the gaps of teaching resources in Higher Education sectors in Telangana

3. To assess the impact of trained teaching resources on theeffectiveness of online teaching

Need for the Study

The objectives of this paper attempts to establish the linkage between the efficiency of online teaching and the degree of training and exposure of teaching resources to offer the prime attributes of promoting online teaching. It is an obvious fact that the emergence of edu tech firms has been taking online education to every door and virtually to every sect of the society, but only few could strike the chord of learners irrespective of the profile and experience of the instructors who are the prime resources of online education. Therefore, there is a need to understand the characteristics to be ingrained among the teaching resources to tune them towards blended teaching of online and conventional teaching.

Scope

This paper has got a finite scope of analyzing the association between the level of exposure possessed by the teaching resources towards online teaching and the effectiveness of online education though there are many other factors impacting online educational environment. The geographical scope of this paper is limited to the analysis of present status of teaching resources in Telangana.

Methodology

The first objective of this paper is accomplished with the help of secondary data published in various sources to analyze the pros and cons of online education in the contemporary scenario and the second objective that captures the aggregate position of teaching resources in Telangana is perceived with the help of three tier data on Professors, Associate Professors and Assistant Professors and the corresponding vacancies therein, so that the gaps in teaching resources at every level are tabulated to see the suitability of the resources to inculcate online teaching atmosphere. On the other hand, the third objective which requires primary data to test the hypothesis is collected through a Likert scale and tested with the help of Chi Square.

Sample Size

The primary data required to test the hypothesis of this paper is collected from one hundred respondents who are teachers working in higher education sector of Telangana in both rural and urban areas, so as to avoid the bias with respect to the opinions expressed by them. The respondents are selected through a random cluster sampling method.

Null Hypothesis

H_0: The trained teaching resources could not significantly impact the effectiveness of online education.

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Pros and Cons of Online Teaching

It is widely debated across the academic spectrum whether online teaching can replace or substitute the conventional teaching. The answer for this lies in understanding the pros and cons of online education, especially in the newly formed states like Telangana wherein the urban and rural institutions and students have been distributed with minimum rate of skewness. Like any other teaching mode, online teaching too reflects the advantages and equal quantum of disadvantages. But it is well established that if the incremental benefits are more com paring to the incremental costs, a method or model has to be accepted, and the same holds good for online teaching either.

Online teaching has enabled many institutions in the sphere of higher education to connect themselves with many students through virtual class rooms and teach the subjects to those who could not access the quality education in such institutions due to various reasons, it is one prime advantage online education offers to the students. Similarly, online education also deserves a greater degree of appreciation for providing flexibility with respect to the learning hours and revising the curriculum which is hardly possible in conventional teaching. Online teaching also stands superior to other modes for enabling the instructors to make use of latst instructional tools like three dimensional images and simulators to better explain the concepts in a virtual mode. The problem of maintaining health student teacher ratio does not arise in the case of online teaching, there are instances where millions of students have enrolled for a single programme taught by single teacher in the digital plot forms like Course Era. These are few pros that encourage modern institutions to adopt online teaching as one of the formidable mode of creating an interface between the tutors and tutees.

On the other hand, online teaching also mirrors few cons comparing to the conventional teaching. For instance the direct connectivity and non verbal communication attributes like the direct eye contact shall lack in the digital mode which is very required for a teacher to assess the receptive levels of the learners and tune them to the band. Similarly, online teaching is also criticized for being too mechanical that hardly provides any room to develop personal raport between the teachers and students. It is well established from the success stories of the top notch universities that personal rapport among the students is very essential to develop synergies like strong alumni association and commitment of the students to such association. These pros and cons therefore enables to form an initial opinion that online education cannot substitute conventional teaching, rather it can complement the existing teaching practices to provide more benefits to the learners, provided the teaching resources are well trained to understand such pros and cons.

Status of teaching resources

S.No.	Designation	India(2019-2020)	Telangana(2019-2020)
1	Number of Professors	139797	7190
2	Associate Professor	160137	7444

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| 3 | Assistant Professor | 1023519 | 62123 |
| 4 | Tutors | 80172 | 3207 |

Source: Telangana State Council of Higher Education

It can be seen from the table that the proportion of Professors in Telangana comparing to that of India is roughly around 5 percent (7190 out of 139797) which is very less comparing to the population proportion of the state. Similar trends can be seen among the associate and assistant professors which stood at 4.6 % and 6 % respectively. The last segment of the above table representing tutors is also on similar lines. This situation acts as both proactive and reactive motivator of promoting online education in Telangana. This can be further analyzed through identifying the gaps in teaching vacancies across the state along with the data on regular and ad hoc teaching resources available in the state.

Status of Teaching Resources in theUniversities of Telangana

S.No.	University	Contract Teachers	Regular Teachers	SFC Teacher
1	**Kakatiya University**	182	133	49
2	**Osmania University**	370	249	121
3	**JNTUH**	265	185	80
4	**MGU**	49	13	36
5	**Telangana University**	52	39	13
6	**Telugu University**	22	-	22
7	**Satavahana University**	39	33	06
8	**Palamuru University**	100	43	57
9	**RGKTU - Basara**	136	136	-
10	**JNTUA(Fine Arts)**	99	24	75
11	**BRAOU**	21	-	21
Total		1335	855	480

Source: Enadu help desk, June 2021

The above table makes it clear that there is a huge gap between the requirement and availability of teaching resources across all the eleven universities of the state, and some of such gap is mitigated by the government through contract and ad hoc recruitments. the biggest universities of the state like Osmania University and JNTU also mirrors the shortage

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of regular and qualified teaching resources which eventually impacts the attempts of the set to digitalize the higher education sector in general and promoting online teaching in particular.

Status of faculties in universities of Telangana

S.No.	Designation	Sanctioned	Vacant	Working
1	Number of Professors	395	238	157
2	Associate Professor	910	781	129
3	Assistant Professor	1,532	850	682
Total		2,837	1869	968

Source: Sakshi e-paper, 05th September 2021

https://epaper.sakshi.com/c/62913091

Online education requires the existence of competent teaching resources to transact the curriculum, but the above table reflects that there are 238 vacancies among the sanctioned strength of 395 Professor Cadre resources which is 60% of deficiency. Similarly associate and assistant professor cadres reflects the deficiency of 85% and 55 5 respectively indicating a very unhealthy resource gap needed to be cemented on war foot basis to materialize any efforts towards online education or other digital academic efforts.

Testing of Hypothesis

Pivot table and observed frequency

	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total
All of the above	8	9	7	15	7	46
Fills the gap of teaching resources	8	3	8	4	2	25
Helps enriching the academic knowledge of teachers and students	6	8	5	6	3	28
Helps in effective HR management				1		1
Grand Total	22	20	20	26	12	100

Expected frequency

MOOCs is very helpful in communicating the subject compared with the traditional teaching						
	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total

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All of the above	10.12	9.2	9.2	11.96	5.52	46
Fills the gap of teaching resources	5.5	5	5	6.5	3	25
Helps enriching the academic knowledge of teachers and students	6.16	5.6	5.6	7.28	3.36	28
Helps in effective HR management	0.22	0.2	0.2	0.26	0.12	1
Grand Total	22	20	20	26	12	100

Chi-square :0.559814323

Interpretation

The null hypothesis could not be rejected as the calculated value of 0.55981 is far less than the table value of 3.55 at the given degrees of freedom. Therefore, it implies that the trained teaching resources could not significantly impact online education in the state of Telangana.

Conclusions:

The residual values obtained from testing the hypothesis of this paper enables to conclude that the teaching resources receiving a nominal training on transacting online education in the state of Telangana could not significantly impact the way digital platforms are used. Therefore, it is very required to initiate more induction programmes to provide hands on experience to teachers and help them with the required infrastructure to create a strong interface with the learners as online education shall remain seamless and requires effective teaching resources without whom higher education unto itself cannot be a dynamic entity.

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