

Workshop Report
Use of E-Resources in Higher Education
Teachers' Training Workshop, Project E-QUAL
Jadavpur University

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Project E-QUAL, Jadavpur University conducted a two-day teachers' training workshop on the 'Use of E-Resources in Higher Education' on October 19 and 20, 2016 at K.P. Basu Auditorium, Jadavpur University, Kolkata. The workshop was attended by teachers from ten universities and proved to be instrumental in opening up a conversation on the use of E-resources. The proceedings of the teachers training workshop was initiated by Professor Sugata Hazra who welcomed the audience to take part in the two day long workshop. He then introduced professor Tapan Kumar Ghoshal and his contributions to the School of Education Technology. He mentioned the work that is being done by Jadavpur University in the area of technology enabled learning. Next, he invited Professor Supriya Chaudhuri to say a few words. Professor Chaudhuri gave a brief introduction of Project E-QUAL and an overview of the events to come. Then she went on to explain the usefulness of blended learning and how it could be beneficial for the teachers as well. She then invited Professor Ghoshal to present his paper which was titled 'IT-enabled Education-A Concise Introduction'.

In his presentation, Professor Ghoshal presented a few salient points on e-resources. He started with an introductory overview of his paper, and the first topic of discussion was the jargon used in relation to digital education. He pointed out how jargon often makes it difficult for a certain section of people to access terms that are otherwise not so formidable. He then discussed some of them, starting with 'IT-enriched medium' of learning which he described as when technology aids the traditional chalk and talk method of traditional learning. The next term was 'IT-enabled' mode of learning in which the technological equipment and infrastructure play a more important role and are used frequently. He also talked about the term 'flipped classroom', and explained it as a system in which technology is the primary source of learning and classrooms are used to reinforce the learning and to help students do the exercises. The next topic of discussion was the evolution of learning tools. According to his discussion, chalk and board was first used in Europe in 1740 and in 1900s, flipcharts were used for preparation of slides. In late 1900s, white boards came into use. He further talked about the evolution of technology as a help to education. According to him, from 1960 to 1980 was the era of mainframe and mini computers. In 1990s, desktops were developed and many innovations were made in the area of mass education. 1995 onwards is the IT-enabled era, he said. As internet developed from Arpanet, and its access spread, accessing materials became easier. Satellite based broadcasts also helped in making contents easily accessible. With the advent of microprocessor, he said, computers became smarter and it was easier to use technology. He

also gave a few examples of free, good quality learning material available on the internet such as MIT's open courseware, NPTEL and the Khan Academy; and also MOOCs like Edx. He emphasized on the importance of browsers and hypertext language as a tool that acts as a medium between the online contents and the users. He also talked about generating e-content and encouraged the teachers to do so. He concluded his presentation with some advice such as having good typing skills and expertise in software like Microsoft PowerPoint, Libre Office and Moodle platform for aspiring teachers.

After a brief tea break, Professor Sukanta Chaudhuri, Professor Emeritus, Department of English, Jadavpur University demonstrated the use of the largest online Tagore variorum in the world-Bichitra for learning and teaching purposes. He pointed out that many colleges do not have the entire collection of Tagore's work not only because of financial reasons but also due to bureaucratic proceedings. Under such circumstances, usage of Bichitra in class and getting students acquainted with the manuscripts that have been digitized can open up a new world for them to explore because students often respond better to images.. Furthermore, he said that Bichitra is more of a database and an independent resource that grant more autonomy to teachers and students which is usually not the case with pre-designed online courses. He demonstrated the usage of the search-engine and the various techniques that one can employ to find a particular version of a text in English or Bangla. It is not always to easy to decipher the handwriting on the manuscript and therefore a transcript is also provided simultaneously along with the manuscript. He highlighted how dynamic Tagore's texts were since he kept on revising them even after printing and the Collation Engine developed by the project can be extremely effective in comparing different versions of the text. He used the particular example of Tagore's play *Achalayatan* to show how the collation engine makes the process of comparison easier because after one has chosen one's base text, it also showed how much the base text matched with other versions of the text.

In the next presentation of the day, Dr. Matangini Chattopadhyay, Director School Of Education and Technology, Jadavpur University demonstrated how TRAILS (Teaching Resources and Interactive Laboratory Simulations) can be utilized by students in their own time at home for practical understanding of the subject. There exists a disparity not only in the ratio of students and equipments but also in terms of time available for practical sessions. Therefore experiments are conducted in groups which may not always be the best way to learn. In such a situation, TRAILS can provide a unique and individualized learning experience. However she also pointed out that it can never be a replacement for actual work in the lab and dealing with the instruments physically. The modules designed by TRAILS have been integrated into to Digital Library of Jadavpur University and the feedback from reviewers has been subsequently used for development of the modules. She explained that modules have been developed in three areas-Electrical Engineering, Electronics and Telecommunication and Mechanical Engineering. After this, Angshumitra Ghosh, Project Manager for TRAILS gave a live-demonstration of how modules that have been developed by TRAILS function. She discussed the rationale behind division of each module into components of Theory, Lecture, Procedure, Simulation, Report and FAQ and emphasized the need for a balanced and holistic understanding of the subject.

In the post-lunch session, Professor Samar Bhattacharya gave a brief introductory speech on certain basics about education and what does teaching mean. He spoke on how teaching helps to learn more. Teaching provides a way to improve continually. A teacher appreciates the difficulties a learner experiences during learning. The goal of teaching is to promote long term understanding rather than initial comprehension. He spoke on the faults in the structure of education and how they can be addressed. He highlighted a few real issues of how learning material should be organized and presented in such a way to allow the students, to reconstruct the body of the material, with minimal reference of the resources. New piece of information is just a logical expansion of the previous one. He spoke how it enhances student to think analytically, critically and creatively. Professor Bhattacharya further discussed how students learn by visualizing, memorizing, reflecting and acting and certain other ways. How much a student understands depends upon his native ability and prior preparation. Every course has a pre-requisite, he emphasized the fact that while imparting knowledge, it is significant to find out

whether it has been fulfilled. Teachers teaching style is of great significance. He spoke about the different factors that are into play in technology enhanced learning. Some of the issues discussed by him were familiarity with online environment, quick responses to queries and others. He highlighted a few findings by University of Illinois, on the significant qualities which the facilitator should inculcate for the successful imparting of his course. He spoke about various developments that need to be done for success of an online course. He ended his presentation emphasizing the need for good documentation in online learning. Debanjan Chakrabarti, Director North and North-East, British Council India who made time for the workshop despite his busy schedule posed three questions: what is the role of methodology and pedagogy in 21st century, in e-learning environment? Next, the role of assessment in supporting e-learning and what would those assessments be like? Final question was the implications of using technology at this scale for access and equity? He concluded the discussion by expressing his thanks to the Project E-QUAL team and promises to actively contribute to its betterment.

Final speakers of this session were Professor Supriya Chaudhuri and Dr. Madhuchanda Sen. Professor Chaudhuri gave a brief introduction to the critical thinking course module. She informed that these pilot courses have been designed to guide others on how to develop online courses. Professor Chaudhuri put up for the view of the audience samples of the course material they have been developing. She divulged their future plans on how to make the courses more efficient. The project intends to invite other senior philosophers and teachers for contributions in the module. Professor Chaudhuri concluded by emphasizing how interaction greatly helps in enhancing the concept of critical thinking. The session was followed by a brief question and answer session where highly interesting and engaging topics were reflected on.

The final session for day one of the workshop comprised expositions by the members of Project E-QUAL, Jadavpur University. The first speaker for the session was Deepnanda Ray, Project Coordinator, Project E-QUAL, Jadavpur University. She briefed on the regular work done by all the E-QUAL partner universities, detailing the role of Jadavpur University which houses the Central Communications Unit (CCU) of the project. She discussed the project objectives and highlighted its aim to make a critical intervention in the higher education space in India. The project artefacts, events and social media, networking and communication spaces were briefly mentioned and demonstrated. She explained how the E-QUAL academic team has chosen to pursue blended mode learning and explained various tools and concepts related to a smart classroom. She was happy to share the news that E-QUAL has been declared as a partner of SWAYAM, a government of India initiative. Next, Piyali Chakraborty, Researcher/Technologist, Project E-QUAL, Jadavpur University highlighted the intricacies of the open source Moodle platform on which the Project E-QUAL courses have been developed. She explained the benefits of Moodle are that it is easily customizable, is supported by almost all the browsers, supports multimedia elements, promotes better interaction, has good accessibility features and strong security mechanism. Then she gave a demonstration on course administration on the Moodle platform, which included how to edit a course, enrol a student, monitor participants etc. The next speaker for the session was Somak Mukherjee, Project Assistant, Project E-QUAL, Jadavpur University. He spoke about the bimonthly newsletter published by Project E-QUAL and how E-QUAL news has been successfully integrating both research work and the promotion of the project. He also highlighted the 12 issues published so far and mentioned that the E-QUAL partners as well as universities across the globe have contributed to the newsletter. 3 issues have been guest edited by the E-QUAL partners Shiv Nadar University, University of Hyderabad and Ambedkar University, Delhi. He also described the "News from Partners" section which publicizes the major project achievements. This was followed by a presentation from Sritama Chatterjee, Research Assistant, Project E-QUAL, Jadavpur University, titled "E-resources in India" which is a research work funded by project E-QUAL and jointly conducted by Jadavpur University and University of Bologna, Italy. She talked about various e-learning resources like CEC (Consortium for Educational Communication), E-PG Pathshala, NPTEL and also discussed the pros and cons including bandwidth issues, plagiarism and copyright checks involved with this medium. She briefly introduced the E-QUAL blog and invited articles for the same. The final presentation for the evening was given by the five member intern team of Project E-QUAL, Jadavpur University. Their

presentation was titled “Indian Education System” and explained the survey that the interns have conducted and analysed its findings. The speakers were all final year undergraduate students, Balagopal S. Menon and Ishita Chatterjee, Bachelor of Arts in English Literature, Sohini Basu, Bachelor of Arts in History, Harpal Singh and Aditya, BE in Electrical Engineering. Balagopal talked about the various reasons for taking up this survey titled “Problems and accessibility of traditional and online learning” e.g. unequal student teacher ratio, lack of quality institution etc. Sohini mentioned the methodology and the research criteria that was adopted, duration, online and offline sample size, publicity strategy and funding body for the survey. Harpal explained the survey findings related to the traditional education system. He discussed the shortcomings of the current curriculum and the need for restructuring. Aditya analysed the survey findings in the context of online learning. He talked of the awareness regarding online learning among students, their reasons for drop out and how that can be minimized. Ishita talked about the geographical limitations of the survey, summarized the inferences drawn from the survey and reflected on blended mode learning being a probable solution to the problems identified.

Prof. Sugata Hazra started the proceedings of the second day with some introductory remarks on the discussions that took place on the first day. Along with other delegates, he welcomed Professor Anupam Basu of IIT Kharagpur. He was followed by Ms. Parul Gupta of the BCI who talked about the initial goals of project E-QUAL and the road the project has covered since then. She talked about the importance of this workshop in reaching out to students of various institutions with the modules created by the partner institutions of Project E-QUAL. This was followed by a brief remark by Prof. Supriya Chaudhuri regarding the importance of learning the process of making Moodle and how interested teachers can propose their own courses in the SWAYAM platform created by the MHRD of India.

Prof. Anupam Basu started his keynote address by stating how e-learning has brought about a paradigm shift in education. He started off by focusing on issues like the right to contents, the courses being self-paced or not and whether the courses can be seen as personalized form of education. He stated that the contents mostly contain PowerPoint and video-lectures and talked about the possibility of creating simulations and platforms for laboratory based learning. He also briefly stated that the process of assessment needs to be modified. Creation of online forums was viewed by him as an enhancer to the building of a network of all the participants where the knowledge flow is not necessarily unidimensional. Prof. Basu, then went on to talking about various national initiatives like the e-PG Pathshala, NPTEL. He talked about how the contents of the initial NPTEL courses were asynchronous and unidirectional but the process of certification was started from 2014 onwards which is now recognized by industries and other institutions. He focused on how these courses now became synchronous where assessment is done through proctor exams. He also talked about the SWAYAM Prabha platform and its direct to home channels. He also acknowledged the challenges in establishing connection between various players in a country like India and how these platforms can help in facilitating that connection. He argued that there is a need for more simulations in Skill Development and Hands-on Experience based courses. Returning to the issue of assessment, he put forward the model of Bloom’s Taxonomy. He focused on how the most important part of assessment in our present pedagogy is remembrance and how the importance needs to shift from this to focusing on learning objectives and its category of cognition. He also focused on how we need a proper feedback process for initiating changes in our pedagogy and acknowledged that this process is rather weak right now. He finished his address by stating how we have got the expected learning outcomes but the courses must be able to cater to personalized demands of the students who come from different cognitive states. The session gave way to a stimulating interactive session where Prof. Basu stated his views on questions regarding the simplistic mode of assessment in MOOCs, how literature and humanities can be assessed through Bloom’s model, how vernaculars can be used in creating online courses and how paragraph type answers can be assessed through technological advances in online courses.

In the second session of the day, Dr. Elena Pacetti from the University of Bologna Italy delivered a highly stimulating lecture. Coming directly from the University of Hyderabad after attending a similar sort of a workshop

there, Dr. Pacetti eagerly shared her experience in her lecture demonstration. She began her lecture demonstration by talking about her university which is presumed to be one of the oldest universities in the world and how much different it was than Jadavpur University in not having a real campus as the latter possessed but having the look of a medieval town altogether. Dr. Pacetti even explained that she dealt with teaching and learning methodologies which were not only restricted to the sphere of schools or institutions of higher education but are highly important in extra-school educational activities. Dr. Pacetti's demonstration was illuminating as she highlighted the various problems that confront not only the teacher student dynamics in higher education but also provided the methodology whereby one teacher can bring out the maximum creativity, innovativeness and analytical abilities of a student. Dr. Pacetti further elucidated what she called, 'the three missions at the university' as teaching and learning, research and public engagement. She further highlighted the fact that for a teacher, there should be a harmony among these three spheres of knowledge gathering. Dr. Pacetti talked about the importance of learning and she made a critical point while talking about enabling e-learning resources that while designing the course content, it should be kept in mind that such a course should be beneficial not only to students but rather the learners. Dr. Pacetti emphasized on Bloom's Taxonomy and its importance in the designing of online course modules. Throughout her lecture demonstration it was evident that she had paid a great deal of attention to the problems the students faced at universities and colleges, problems that were related to expression of individual opinion and analysis which if not in consonance with the general notion would lead to penalization. Moreover she urged how the e-learning platform should overcome this problem, enabling a student to develop skills and competency. Moreover a reform the traditional form of assessment was needed. This was followed by a few words from Professor Suranjan Das, the Vice-Chancellor of Jadavpur University. He said that he had come to express the solidarity of the administrative wing of Jadavpur University with Project E-QUAL partners and British Council India. Moreover Professor Das also congratulated them on the many milestones they had reached and wished further success in the days to come.

This was followed by Professor Sudipta De's lecture demonstration of the 'Sustainable Energy' module. Professor De is a member of the Joint Working Group in Natural Resource Management and Sustainable Energy, EU-India Project E-QUAL and is also a professor of the Mechanical Engineering Department, Jadavpur University. In his demonstration, Professor De brought up some crucial points in stating that one type of teaching methodology can never be applicable to all students. This procedure depends on the purpose and the type of subject. Moreover age of the student is also a factor in determining the methodology of teaching along with appearance and overall personality of the teacher. He echoed Dr. Pacetti's point that a teacher's task was primarily to help the student develop a liking for the subject and also enable the student to be innovative and think creatively as much as possible. He completed his demonstration by showing a few of the lecture videos that he had developed on 'Sustainable Energy' as a part of the module.

Soon after the lunch break, the next session began with a presentation by Dr. Sudeshna Datta Chaudhuri (Postdoctoral Fellow at the School of Cultural Texts and Records, Jadavpur University) titled "Demonstration of the Digital Cultural Modules in Project E-QUAL". In her presentation, Dr. Chaudhuri talks of the Digital Culture Module developed jointly by the members of Project E-QUAL and the School of Cultural Texts and Records. The presentation began with a demonstration of the contents of the module such as the first unit (which mainly consisted of references with supplementary reading), the second and third units (which were split into two parts), and so on. This was followed by a brief description of the designing of the units where it was said that the module has been designed in such a way, so as to incorporate as many aspects of digital culture in it. The presentation concluded with a brief mention of the assessment methods adopted by the course and a demonstration of the course feedback page.

The next speaker, Professor Moinak Biswas (Member of the Joint Working Group in Cultural Studies, Project E-QUAL, Jadavpur University) demonstrated the Evolution of Film Forms Module, a part of Cultural Studies, one of the course topics offered by Project E-QUAL. The presentation, a joint effort by Professor Biswas and

DhritiSundar Roy Chowdhury (Research Fellow at the Media Lab, Jadavpur University), began with a brief explanation of the basic principle followed in designing the courses. The speaker explained how the course, instead of focusing on the content of films, focused on the question of form. The course takes Early Cinema (1895-1906, roughly) as its starting point to explain the production of frames and camera movements in films that lacked a proper narrative. Thus, by explaining the relationship between the screen and the audience, the student is made aware of the basic principles of the form of the film. The speaker even pointed out that commentaries are given along with the essays that are a part of the module and that important parts within the essays are highlighted so as to make it easier for the students to learn. The presentation concluded with the description of various practices followed in Early Cinema (which is primarily Western in nature) and early Indian cinema to explain the structure of the module. Before leaving for the coffee break, the participants in the workshop were divided into five groups for the PEAT (Pedagogy, Experience, Assessment, Technology) format of discussion and interaction in the final session of the workshop.

The conclusion of Project E-QUAL's 'Teachers' Training Workshop on Use of Higher Resources in Higher Education was brought about through an innovative PEAT (Pedagogy, Experience, Assessment and Training) exercise which involved extensive audience participation. The five groups present were allotted respective topics with the fifth group getting free choice. Group one, which consisted of Pritha Banerjee, PanchuliaBhutia and Parjanya Sen were allotted the topic 'Pedagogy'. Pritha Banerjee represented the views of the group and spoke on their behalf. She mentioned that; with respect to the reality of the world we live in, there is not much freedom in creating new systems or courses so the online platforms can be used to present the given text in a new and innovative format which can encourage the students to think critically. She also observed that these online resources can be used to bridge the vernacular gap, through the use of subtitles and all, which is not often possible in traditional teaching methods. Next was Group two, which consisted of Tathagata Banerjee, Sourav Das, Tapu Biswas, Shubham Roy Choudhury and Surojit Koyal. They were given the topic 'Experience' to speak on. Surojit Koyal spoke on behalf of the group and emphasized the problem of accessing the e-platforms since numerous colleges in the country cannot afford hi-tech digital devices so, he concluded that blended mode is the most significant method since it would combine traditional teaching methods in a way which would allow them an glimpse of the world which is often not possible because of the specific class timings. He also mentioned that the visual way of presenting the course materials needed to be improved because even with the incorporation of images and videos, a constant body movement of the teacher presenting it is important rather than a static figure chanting out notes by rote. So dramatization is an important aspect as well. Group three consisted of Anamitra Chatterjee, Javed Iqbal Bhatt, Shilpa Shaw and more participants. Their allotted topic was 'Assessment' and Javed Iqbal Bhatt spoke on behalf of the group. He emphasized that there is mainly quantitative budgeting in the universities instead of the more practical qualitative one. He elaborated by saying that a teacher's remuneration is connected to the quality of teaching which in turn depends upon the assessment from students. But this feedback is hardly ever transparent so an objective and rational process of assessment is required. He concluded by stating that for e-resources to be popular, the huge geographical and digital gap has to be bridged. Next was Group four, which consisted of Dr. Monirul Islam, Parthasarathi Bhowmick and Nitai Shaw. Their topic was 'Technology' and Dr. Islam spoke on behalf of his group. He mainly emphasized on the ways technology can be used to improve learning in a literature class. Elaborating on his topic, he mentioned that e-learning was a structured and defined space but literature classes are rarely that because of the numerous references given while teaching a topic. He also agreed with Javed Iqbal Bhatt's views of geographical and digital gap which is prominent in the remote areas which lack even the basic internet facilities and stated that e-projects should make an effort to penetrate to the grassroot level instead of being confined to elite institutions so that the disability of less privileged can be removed. Group five selected the topic 'Experience' and their group consisted of Madhumita Majumdar, Ashmita Bhattacharyya, Riya Roy Choudhury, Piyali Basak and more. Ashmita spoke on behalf of her team and began by pointing out that Project E-QUAL and other online courses generally lack cohesiveness in regards to the number of subjects offered. She also stated that the courses should start off with

the absolute basics in order to familiarize or remind the students regarding the subject materials and topics. She concluded by saying that the members who are associated with similar e-projects should make headways to spread the word and organize more workshops so that it can reach the remotest areas. Therefore the workshop, with participation from stakeholders of education proved to be an enriching platform for discussion and dissemination of ideas which Project E-QUAL hopes to improve upon and implement.