

## **Development of OERs through International Collaboration E-QUAL Case Study**

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### **Abstract:**

Development of Open Education Resources (OER) is similar to product development and it requires due attention to get the final product. Generally, the focus is laid on the final product and not on the process. However, emphasis is required to integrate process and product development. It is critical to think through a few firsts before jumping straight into product development (developing OERs). For an assured optimum outcome, a few essentials need to be thought through and planned - manpower, content, learning design model, assessment framework, technological infrastructure, functional consistency, sustainability, dissemination strategy, etc. The process and product integration becomes all the more important when the product development is not linked to single institution. This paper deals with the case of E-QUAL project (a European Union funded project implemented in partnership with 4 Indian Universities and 2 Universities from EU, with British Council being the lead partner in the role of project management) where the OERs being developed in different time zones and in geographically spread facilities with an objective to have the final product on a common platform, the daunting task of aligning all the pieces into the final product - a classic case study of product and process integration. This paper would focus on the E-QUAL case study, about the various decision points and the importance of process and product integration. The paper will draw out from the E-QUAL experience and will share the best practices and lessons learnt. It will facilitate in the know-how of OER development and international collaboration with geographically dispersed partners.

**Key Words:** OERs, Collaboration, MOOCs, Assessment, Need Analysis, Pedagogy, Consortium

### **Introduction**

The Government of India plans to expand the gross enrolment rate at universities from the current to 30% by 2020, but even though the HE sector is expanding, it will not be able to serve the large number of students seeking entry into HE. Other, non-traditional, approaches to undergraduate education are needed to meet this demand. Technology-enhanced solutions, which improve quality and expand access, will almost certainly be a significant part of the way forward, not only for Indian HE, but for the wider global sector. This can be seen in the rapid acceleration of open source resources, massive online open courses (MOOCs) and virtual learning environments. The Indian Government has already invested significantly in high quality communications technology in universities, and is committed to continue this trend. However, the availability of technology is outpacing the capability of institutions to use it: the foundations for using this effectively for teaching and learning are currently very weak. India is in a position to take advantage of technology to meet its quality and access challenges, but requires international cooperation for the skills, knowledge sharing and experience to do so.

In this given context, the project aims to enhance the quality, governance and access of undergraduate teaching in India across a range of disciplines. This will be achieved through a consortium of Indo-European universities which will share skills and exchange best practice in undergraduate education, innovative pedagogies and assessment techniques for potential replication and scalability. The consortium will share, adapt, deliver and pilot models for innovative and interactive practices in teaching and learning through enhanced learning technologies blended with lectures and classroom teaching, with the aim of cultivating early stage research skills, analytical and critical thinking, problem-solving, team working, communication, research skills and intercultural dialogue between

Europe and India. These actions will involve sharing information between India and the EU on study curricula content, pedagogical approaches and learning assessment strategies.

In order for the action to have practical use and to influence the wider uptake of innovative solutions, replicable and scalable models, relevant to India's context, are needed to demonstrate the value and practical application of technology-enhanced solutions. The project, therefore, sets out to share, adapt and develop open educational resources in at least four subject disciplines, complemented by models for technology-enhanced student learning. This is supported by teacher development inputs, which will be designed to improve teaching and foster innovative and more effective pedagogies in Indian universities. Research, outputs and learning from this project will be used to lay the ground for future Indo-European collaboration in undergraduate education, and influence and inform Indian universities and government to enable strategic support for these innovations to take hold across the broader HE sector in India.

## **The Study**

### **Context**

The E-QUAL project is an innovative approach to enhance the quality, access and governance of undergraduate education in India through the joint design and production of Open Educational Resources (OERs). Funded by the European Commission (EC), the project was awarded to the British Council under the Internationalising Higher Education (IHE) programme in April 2013. The project is aimed to promote Indo-EU Higher Education partnerships and collaborations.

Project activities are being delivered in partnership with Ambedkar University Delhi, Jadavpur University, King's College London, UK, Shiv Nadar University, University of Bologna and University of Hyderabad in the following four subject disciplines.

1. Critical Thinking
2. Cultural Studies
3. Human Ecology
4. Environment, Natural Resources and Sustainable Development

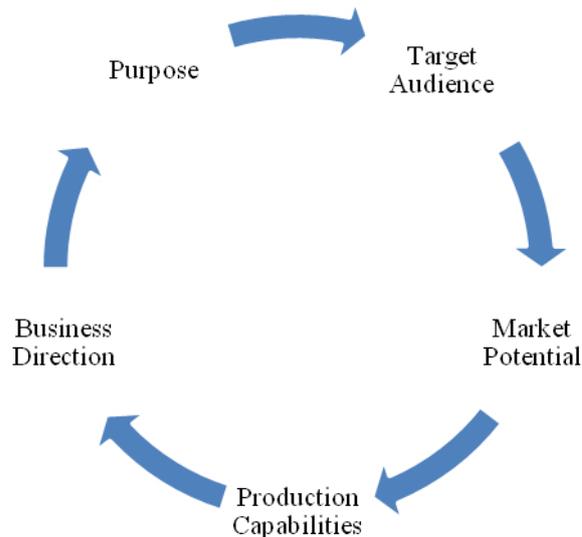
To maximise the success and impact of the partner consortium, careful consideration was given to the selection of the partners. The four institutions in India were selected based on a) their institutional strength, academic interest and need, b) the quality of their past international collaborations, and c) a consortium which reflected a wider representation of the Indian HE sector (state, national and private institutions across three Indian states representing north-central, south and east India), thereby increasing the relevance of the action to the wide and diverse education sectors in India. The two EU HE institutions were selected through their strength and interest in the area, coupled with their experience and strategic interest in developing institutional collaborations with India.

The E-QUAL project has broken new grounds by building international collaboration at the undergraduate level of education and promoting institutional partnerships between public and private Universities. It has positioned Indian and EU universities for the future through developing skills and building competencies in technology enhanced learning approaches; an area expected to transform the educational landscape in the next ten years, and set to be the primary means to expand transnational education.

The project partners have developed 80 hours of online learning material in four interdisciplinary courses. This has improved capability and understanding of the practical application and value of technology-enhanced approaches to education in India amongst practitioners. The collaboration between Indian and European HEIs has also enhanced increased capacity in relation to e-learning within institutions. It has also increased skills and competencies for future international working.

## Need Analysis

Project partners undertook need analysis to map the problem and the solution. Need analysis served as a valuable analytical technique to assess the final outcome of the action. It provided evidence based inputs and facilitated to unify diverse opinions. It enabled the team to think in the same direction with clear outcome.



It was evident from the need analysis that higher education sector demands more than one solution – which enables easy access and quality education. In view of the technological advancements, it is but obvious for educationists to take the technological route to education and provide access to quality education. To address the need of inclusive growth it is imperative to take the route of technology enabled learning and reap benefits for wider good.

Technological route to teaching and learning is quite progressive in approach but before this there are too many questions and decision points which should be addressed. Decision to develop online resources (Open Education Resources (OERs)) (product) is an easy one, but critical issue is to assess what all goes (process) in developing the online resources than what meets the eye. This is where the question of product and process integration comes in play.

A robust approach smoothens the entire journey of developing the online resources and ensures that the final product is in line with the requirements and is up to the expectations. Purpose of all the online material is to have a wider reach and they should be accessible to the masses.

Generally the focus is laid on the final product and not on the process; rather equal emphasis should be paid to integrate the process and the product. It is critical to think through a few firsts before jumping straight into product development (online resources). For an assured optimum outcome a few essentials need to be thought through and planned like - manpower, content, learning design model, assessment framework, technological infrastructure, functional consistency, sustainability, dissemination strategy, etc.

If the product and process integration is not done and the above mentioned essentials are not thought through then there will be too many stumbling blocks to cross, resulting in additional financial and manpower resources and ending up with stop gap arrangements.

The process and product integration becomes crucial when the product development is being done by consortium of partners. A case where product is being developed in different time zones and in geographically spread facilities with an objective to have the final product on a common platform. The daunting task of aligning all the pieces into the final product – a classic case study of product and process integration.

## **Decision Points**

Once the need to develop new online resources has been established then there are three main decision points which should be considered.

### **I. Administrative**

- a. **Partners** – Partners need to be identified in line with the external support required to meet the project objectives.
- b. **Timeline** – Decide on the project timelines, this will also be linked to the duration of funding.
- c. **Resources** – Assessing the availability of manpower and the institutional infrastructure and identifying the existing gaps.

### **II Academic**

- a. **Structure** - Structure of the modules to be agreed linking it to the purpose for which material is being developed. Important to decide if it will be a full course, part of the course, specific modules, no of hours etc.
- b. **Course Content** – Guideline documents like course outline, learner’s manual should be developed in consultation with the academic team
- c. **Setting up Joint Working Groups** – Each group is formed with key experts for developing, advising and reviewing

### **III Technological**

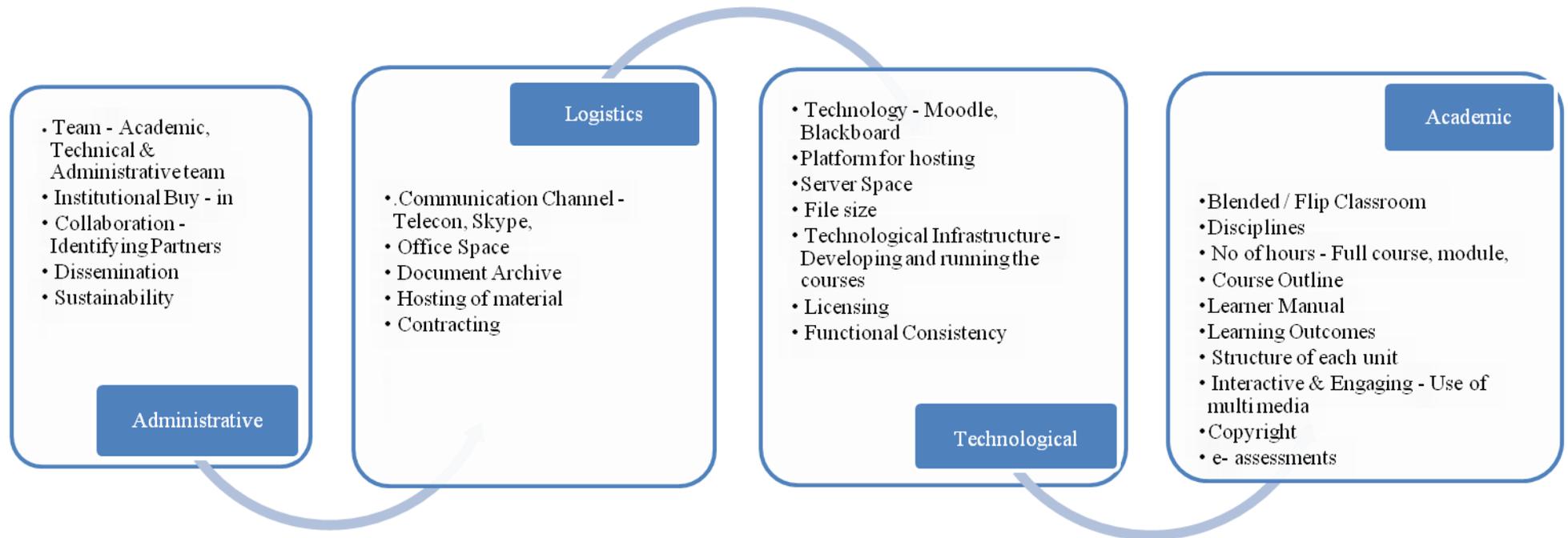
- a. **Infrastructure** – Assessing the available technological infrastructure within the institution and with the end user. Additional hardware and software support that the institution would require needs to be evaluated.
- b. **Mode of delivery** – Decision on delivery of material needs to be agreed which will be linked to both the external and the internal environment. Second, it will depend on the kind of infrastructure available with the end user.

### **IV Logistical**

- a. **Communication** – Effective communication is the key to every project, especially when partners are spread in geographically dispersed locations. It is critical to keep everyone informed, setting up meetings, teleconferences etc. The challenge required to be managed is of the different time zones, varying academic calendar, availability of all relevant people as a given time.
- b. **Documentation** – another key success factor for the project is timely sharing of information, keeping everyone informed, documentation, reports etc., this helps in maintaining a track record, conflict management and adhering to timelines.

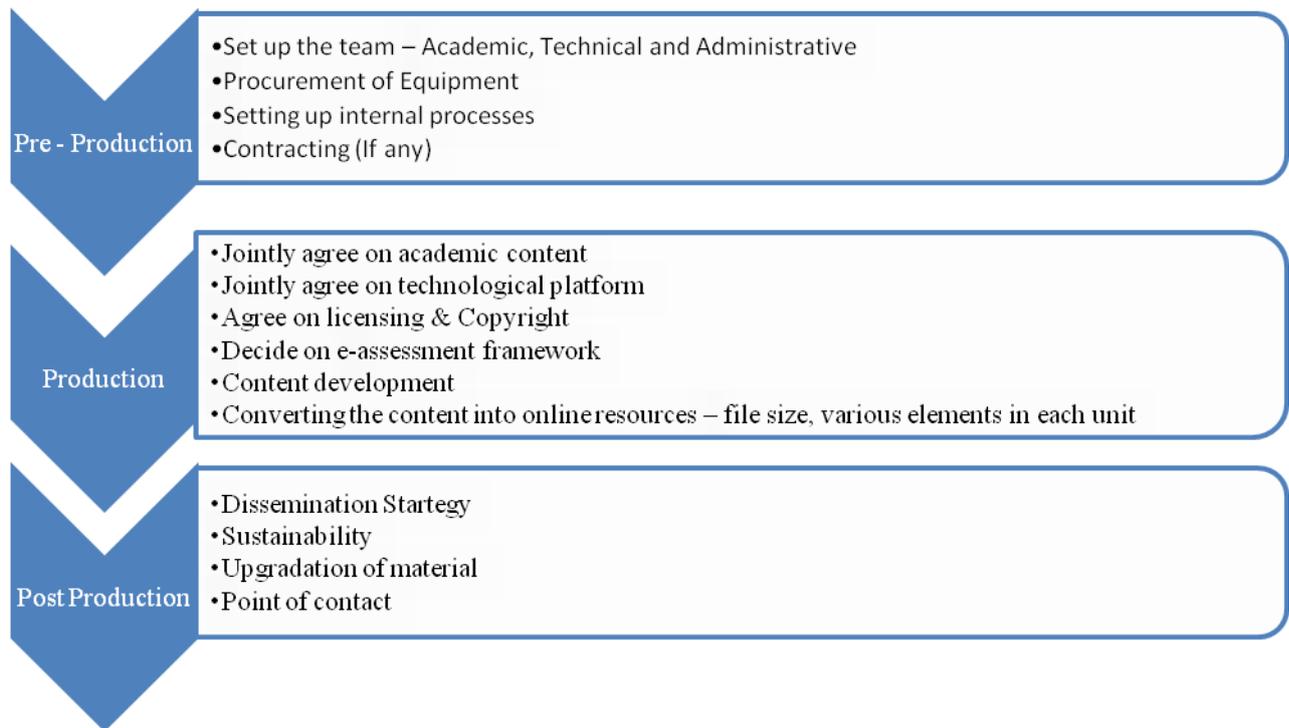


## Process Map



There are number of activities associated with developing online resources which need to be aligned step by step leading to process planning. Process planning enables in categorising critical and non-critical tasks with the goal of preventing time-frame problems and process bottlenecks. Timely resource allocation should be ensured as any delay in critical tasks would lead to time lag. In addition alternatives should be devised for the most critical tasks as a part of risk mitigation.

## Stages of Production



## E-QUAL Challenges

1. **Professional differences** – managing professional differences is one of the most difficult challenge. Making academicians to agree can be quite daunting and developing online resources is completely academic in nature hence this needs to be handled sensitively.
2. **Lead time** required for setting up the team and the infrastructure should be well anticipated. Every project has teething problems and there are invariable delays which are not anticipated at the start of the project. One common characteristic is delay in start of the project and catching up the momentum. Time bound activities get impacted due to these delays.
3. **Timelines** –timelines not be followed to the ‘T’. At the planning stage everyone involved with planning is quite optimistic to do/get things done within a particular time frame but at the implementation stage the timelines tend to defer.
4. **Setting up processes** – setting up processes in line with the project requirements, institutional processes and the funding agency. Project has its own requirements, institutions have their own well established processes and funding agency requirements/guidelines are different. Mapping these all together, making changes in the existing institutional processes and setting up new processes is quite challenging.
5. **Cultural Differences** – working with partners in different time zones with difference in cultural understanding was another challenge.
6. **Availability of Key Personnel** – Though there was a complete buy-in from the partners but academicians had limited time allocated for the project. This led to their engagement with other activities leading to limited availability for project activities. This impacted in meeting the project timelines.

7. **Monitoring and Evaluation** – A consistent and regular monitoring of the project activities became essential to ensure that the final timelines are met. Lot of time and resources were allocated and was a challenging task to ensure implementation of activities

### E-QUAL: SWOT Analysis

<b>Strength</b>	<b>Weakness</b>
<ul style="list-style-type: none"> <li>• Mix of the consortium partners having expertise in their respective areas of work</li> <li>• Institutional mix</li> <li>• Willingness to contribute as individuals</li> <li>• Institutional Buy-in</li> </ul>	<ul style="list-style-type: none"> <li>• Cultural and professional differences</li> <li>• Technological infrastructure</li> <li>• Availability of time</li> <li>• Compliance of EU guidelines</li> <li>• Cultural Differences</li> </ul>
<b>Opportunity</b>	<b>Threat</b>
<ul style="list-style-type: none"> <li>• Collaborative learning</li> <li>• Developing e-learning strategy at institutional level</li> <li>• Capacity Building</li> <li>• Future collaborations</li> <li>• Online community building</li> </ul>	<ul style="list-style-type: none"> <li>• Fastidious partners</li> <li>• Time delays</li> <li>• Sustainability</li> <li>• Professional disagreements</li> <li>• Compliance of European Commission and institutional process guidelines</li> </ul>

### Best Practices

1. Setting up project and technical team at each partner institute helped in coordination and documentation of information. This also helped in sharing the administrative work load.
2. Deciding the technological structure at the start of developing the materials. Once the material is developed and uploaded then it is very difficult to move it to a different platform. An early collaborative decision to use Moodle as a platform helped everyone in ensuring consistency.
3. The partners were chosen with due consideration. Technological partner facilitated in providing direction and functional consistency to the developed resources
4. Preparing course outline and learners manual. Once these documents were prepared and jointly agreed they served as the guiding principles
5. Setting up joint working groups for jointly developing the material. As all partners were spread out geographically coordination was a big challenge. Formation of joint working group helped in coordination and deliberation on the material. Communication channel was established over e-mails, monthly skype meetings and telecons.
6. Internal communication with all partners was ensured through PBWorks, Google drive Skype calls, face to face meetings and monthly calls with the partners.
7. Consultative and exploratory workshops were in-built as a part of project activities. For the benefit of the end users academic and student conferences were organised. These conferences lead to research, sharing of information and bringing the experts together. End users were engaged with the project.

## **Conclusion**

Developing online material requires institutional buy-in and full commitment of the individuals involved. Institution should be ready for a long term commitment once a business decision has been taken. Best approach will be to set up a separate department which deals solely with online learning and design approaches this will also lead to sustainability. All stages of production should be well thought through where teams and resources are identified and committed.

Project team plays a very critical role apart from the academicians. Though academicians are the key personnel but project team acts like a centrifugal force. They are the centre point of all the activities and are the main point of contact. They support to smoothen the complete process and weave all the threads together.

Dissemination of the outcome is another key area which requires enough deliberations. Developing material and making them available online is one part of the whole activity. World Wide Web is a huge ocean with numerous websites and information flow. In this given maze reaching out the target audience/end users is a huge challenge. The complete exercise goes in vain in case it does not reach the intended outcome. The dissemination plan/strategy is of utmost importance. In case the material can be hosted on the National portal (if any) or the portal which has the maximum visitors then the task becomes easier.

Blended learning will be the most sought after mode of learning and teaching. This not only addresses the issue of access and quality but also provides flexibility to the learners. Lot of informal online learning is already happening. Google has become the most sought after tool for people to get any kind information. Students will gradually look for more flexibility, more information than what is available in a classroom and teachers are evolving in this changing environment. New innovative teaching and learning pedagogies are being increasingly introduced.

The E-QUAL courses can be viewed as per the below details

**url:** [www.equalcourses.net](http://www.equalcourses.net)

Online resources developed under E-QUAL have been acknowledged by the Ministry of Human Resource Development (MHRD). The material is likely to be uploaded on the National SWAYAM portal. SWAYAM is a National online portal being developed by MHRD. The E-QUAL team is currently working to re-purpose the developed material as per the requirements of SWAYAM. This has been a landmark success of the online resources developed under E-QUAL.