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*Celebrating
90
Years of
University News*

#Let'sBeatCoronaTogether

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Challenges of Mandatory Accreditation

G Srinivas* and Salil S**

Much has been written on the relevance and role of accreditation in higher education. In broader terms, accreditation is a process to scrutinize higher education institutions and programs to enhance quality. The concept and process of accreditation are less than three decades old in India. There is an increased concern for accreditation as an instrument of public interest. Exponential growth in the number of institutions, increased emphasis on employment-centric education, the need for self-evaluation and linkage with funding are the stated drivers of accreditation. Quality signaling and its positioning in the market, aligning to the national and international trends in education are also driving forces of accreditation. In the context of mandatory accreditation, this article looks into the challenges of mandatory accreditation in India. Undoubtedly, mandatory accreditation is a well-intended policy towards quality enhancement; but it is critical to understand its unintended consequences too.

University Grants Commission (UGC) has initiated the National Assessment and Accreditation Council (NAAC) in 1994 as the first accreditation body in India. National Board of Accreditation (NBA) was another accreditation body established by All India Council for Technical Education (AICTE) in the same year. While NAAC has been doing institutional accreditation, the NBA is conducting programme-based accreditation in the area of Technical Education. Accreditation was a voluntary activity since its beginning in India till when it 2016 became mandatory. Funding is through UGC which expects all Higher Education Institutions (HEI's) to be accredited by 2022.

Accreditation Target

With around a thousand universities and forty thousand other institutions of higher education, India has one of the largest and complex higher education systems in the world. Out of this, 363 universities are accredited where as the number of accredited colleges is only 8141 as on February 2020. This figure is inclusive of all grades. It appears as a herculean task to accredit all institutions by 2022 with a minimum score of 2.5. As a strategy to address the accreditation target, UGC has launched a scheme called 'Paramasrsh' in which institutions with higher NAAC scores will mentor the unaccredited

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institutions in the vicinity and encourage them to undergo accreditation.

Many countries, like the US and UK with lesser social and linguistic diversity than India, have multiple accreditation bodies. For example, in the United States, more than 80 accreditation bodies are in operation with programme-wise, region-wise, and subject-wise accreditation operation. Accreditation bodies are also periodically reviewed. Two years back, UGC brought out a draft bill for multiple accreditation agencies, including Private accreditation bodies, to share the accreditation load and to create a healthy competition among different accreditation agencies in line with other countries. However, the concept of multiple accreditation bodies is yet to be realised.

Compliance Vs. Excellence

In ideal conditions, regulations are meant for minimum compliance where as accreditation is meant for ensuring excellence which is much above the compliance. The process of accreditation shall be able to measure how far the institutions have grown beyond the basic compliance in predetermined criteria. This input will be useful for making further regulatory changes, funding decisions and changes the accreditation bar. Less than a quarter of the total number of colleges are accredited in India. Out of the accredited, more than 12% of colleges have C grade. Without customised support schemes, prompting a whopping number of colleges who are yet to meet the minimum standards prescribed by regulatory bodies to go for accreditation, in effect, relegates accreditation to the compliance level. This issue can be addressed by a differentiated approach towards colleges who are able to meet the minimum standards and others by assigning performance targets.

After analysing a large volume of literature on accreditation, Cardoso (2015) classifies quality in accreditation context into three different views – quality as *culture*, as *compliance*, and as *consistency*. In India, the primary purpose of accreditation was to create a quality culture that turned out to be more of compliance activity, in the backdrop of mandatory accreditation.

Some of the challenges of accreditation are generic. Whether quality assurance is perceived as actually being capable of promoting quality is still a question (Cardoso, 2015). Similarly, lack of institutional autonomy and competence of the review team as significant barriers to any attempts to improve the quality of higher education (Pham, 2018) is another one. The tension between the ambiguous nature of academic legitimacy and the structured nature of accreditation and thereby losing the distinctiveness of the programme (Blalock, 2019) is yet another issue.

Currently, accreditation is more related to reputation management and devoid of any sustained plans for quality assurance. Some institutions use this as another marketing tool.

The Challenge of Data Perception

To be verifiable, all sorts of accreditation needs data and evidence. Unfortunately, many institutions have relegated the accreditation process as a data management exercise and a documentation drill. This is mainly due to two reasons. Firstly, a lack of understanding of accreditation and considering it as an approval and confirmation activity. This is evident from the misplaced enthusiasm of many less informed institutions to fit all institutional activities into the accreditation frame. One of the most visible examples is the tendency to conduct a large number of events with marketing value compromising the educational value and purpose. Secondly, the lack of a fully functional well-integrated institutional ERP tool results in massive duplication of effort and shifting the focus on creating back-up files and evidence than doing the core academic activities. How the data verification, validation, and corroboration will change the entire accreditation landscape due to the advent of blockchain technology is briefed towards the end of this paper. The challenges of data management at the institutional level can be addressed through a supporting technology plan and freeing-up more resources for core educational activities.

Limitations in Linking Accreditation Score as A Sole Criterion

Many government colleges and State Universities face financial challenges to their continued existence.

It can be argued that this is partly driven by their inefficient financial management in the past and partly by lack of innovation and increased political interference. Despite the reasons, the situation results in poor accreditation and, thereby, inadequate funding. This becomes a downward spiral.

In spite of the best efforts of UGC and MHRD to fill the vacant posts in colleges and Universities, most government colleges do not have an adequate number of faculty members. Many are working with guest faculty members and untrained staff. This is a double-edged sword as it affects their overall functioning, and such vacuums invite lesser scores on certain parameters in accreditation. These appointments involve various authorities of the state, and other variables like relevant sanctions and nuances of the government sector are at play. On the other hand, the private institutions, because of their autonomy in the appointments, score better in these aspects. Moreover, government colleges in rural areas that target many first-generation learners with poor infrastructure get further marginalised if the accreditation score becomes the sole criterion for funding.

If further funding is linked only with the accreditation score of a single accreditation entity, we are inviting a downward spiral of such institutions. This is an unintended consequence that can be corrected by multiple accreditation bodies, multiple funding mechanisms, and special purpose vehicles to assist such colleges.

Institutional Responses

Institutions differ in viewing mandatory accreditation. Market friendly private institutions view accreditation as an investment for obtaining market authenticity and branding. In most private institutions, getting accredited is viewed as a matter of survival for the institution and the individuals working in those institutions. On the contrary, as salaries for individuals are deemed as promised in many Government colleges, institutional accreditation, at best, is an acceptable factor; neither critical nor compelling for the individual survival. In short-term, the individual imperative of accreditation is limited to research funding and institutional

development in such institutions, not their existence. We do not ignore that in institutions with a threshold number of committed faculty members, whether they are in government or private, the situation may be positive and highly welcoming; and we wish and plan all institutions to be so. It appears factors like criticality to the survival, felt-competence, perceived security and the institutional culture contribute how mandatory accreditation is perceived in different institutions. Therefore, we need to cater different clusters of institution-types and size separately to promote quality culture and excellence.

The current accreditation fee for colleges is Rs.3 to 5 lakhs, and for universities it is Rs.10-15 lakhs. This fee may *prima facie* appear as a nominal amount as an institution is concerned unless we come in contact with the majority of the rural government colleges with a visible lack of leadership and scarcity for shared ownership. Accreditation score of an affiliating college is not a priority for most Universities as it is not directly linked with their funding or performance. In the general scheme of things, most rural colleges do not have any funds to meet accreditation fees. We may attribute it to the poor financial management of such colleges in the past or lack of initiatives to generate internal revenue. In any case, to make such institutions come out of this vicious descending cycle, mandatory accreditation is not a panacea. State Governments, among their myriad educational agenda, overlook many government colleges both in their potentials and weaknesses. Teacher unions are more prone to collective bargaining for their conditions of appointment and promotion than for institutional accreditation.

Out of 8141 colleges accredited by NAAC, 982 Colleges has the lowest grade, C. This shows, many institutions who are ill-equipped to go for accreditation are motivated to go for it for funding reasons, not for educational reasons. Many such unprepared colleges prefer not to go for accreditation than receiving a C grade. As the accreditation is grade-based and directional (instead of dichotomous as in many countries), this approach poses a distraction with NIRF also.

Accreditation Consultants

Mandatory accreditation has paved the way for a market opportunity for accreditation consultants in higher education. There is no disagreement on getting advice and assistance from well-placed institutions and individuals with expertise. That is required for our institutions as a viable academic collaboration. However, what is expected to turn out thus, as an academic collaboration, ends up as an arrangement of highly paid accreditation consultants who serve the market values.

Though there is no evidence of their contribution, it is clear that only private institutions and groups can afford their costs. The point is that consultants are hired to ensure a higher score, not to make any long-term educational value addition. It again points to the fact that classifying institutions for funding on a single score for policy decisions will be detrimental and may lead to an unhealthy polarisation of institutions.

Required Cohesion and Danger of Co-regulation

Mandatory accreditation is a part of educational policy of the central government while most affiliated colleges and state universities administratively come under the state government. While the need and relevance of mandatory accreditation is well accepted, its preparation and operational matters have to go through the state machinery. Therefore, proper dialogues, exchanges and understanding of details of quality assurance between central and state governments is an essential prerequisite for quality assurance.

Another matter is related to the shadow of co-regulation. The biggest challenge in education is that it is hard to measure its value, especially in the short-term. Some institutions, substitute accreditation scores to educational reality. Using a single score as a core criterion for giving autonomy or significant funding or any other policy decisions will magnify the ill effects. Further, accreditation is wrongly interpreted by some stakeholders as regulation. It reduces the perceived gap between accreditation and regulation. This unintended treatment leads to the unhealthy situation of co-regulation.

Alternative Methods

In many countries, governments have introduced Performance Based Funding (PBF) mechanisms in higher education. PBF is on the logic that linking economic effects to the performance of institutions will be taken more seriously. A meta-analysis of 12 empirical studies (Bell, 2018) on the impact of PBF in higher education in the US shows that the average effect of performance funding is not significantly different from zero. The study points out the unintended consequences of PBF on access for disadvantaged students. Nevertheless, that does not negate, nor do we argue against the PBF. The crux is linking PBF with a single accreditation score (with a single accreditor) in a diverse country like India will be more problematic than in the US.

Performance Agreements (PAs) is an alternative while maintaining all benefits of PBF. PAs are contracts signed between funding authorities and individual universities or colleges (Jongbloed, 2018). It is not based on accreditation score, but need-based and accountability-driven. An OECD report (2017) says that the budget linked to the agreements must be sufficiently large to have an impact, yet not so sizeable to the extent that the incentive becomes a goal in itself. Using the existing machinery of UGC, we will be able to design a variety of new and inclusive performance-based schemes and thereby can negate unintended consequences of mandatory accreditation. At the same time, we may be able to assist more institutions in the accreditation process.

New Directions

Future accreditation, as shown under multiple accreditation bodies in many countries, will be more closely working with professional bodies. This linkage can enable the institutions to access new resources and networks, which are not a well-shared practice in most institutions now. Questions like are we appropriately measuring the right things in proper context and how is it legitimately linked with funding, will be increasingly heard. The interface of technology and policy, not opinions and precedence, will come to aid at this stage.

Blockchain technology has the potential to alter the backbone of accreditation dramatically. Blockchain concepts like ledgers, applications like smart contracts, and solutions like blockcert can efficiently address accreditation data requirements. It can capture and verify all data points, even from minuscules like the self-study time of a particular student to vitals like the patent contracts of a faculty member. These data points can be verified without combing through the pile of digital or hardcopy documents or photographs. None can alter the data as it belongs to a broader transaction ecosystem of blocks. Exploring these possibilities will lead us to a new era of accreditation.

Conclusion

Multiple accreditation bodies, competitiveness among accreditation agencies, and proper technology can fasten the rate of accreditation and widen the accreditation choice for institutions. Pedagogical and contextual considerations should be at the forefront to meet the accreditation target, than expansionist orientation. To meet this, we need India specific researches on the lessons learned on accreditation in the last quarter-century. We need more experiments on funding and its possible linkages with accreditation and performance with randomized controlled designs and can look for the evidence from it.

Recognising that regulation is meant for compliance and accreditation is to ensure more institutions coming towards the level of excellence is the first step of avoiding dangers of co-regulation and assuaged-accreditation. Cohesion on accreditation affairs between the central and the state government is also significant. To realise the aspiration behind the mandatory accreditation we simultaneously need specific performance-driven context-based schemes, delinked to any single score. As accreditation is not an end in itself, we require both numbers of accreditation

and the stories behind those numbers to get a level playing field for all institutions.

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Note: Views expressed in the article are of the Authors.

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Blockchain Technology: The Possible Uses for Higher Education Institutions

Persis Voola*

Blockchain, the most important invention after the internet, is a rapidly evolving disruptive technology. The opportunities are tremendous in this ground breaking technology and revolution in this area has already made its beginning. The core features of blockchain are: cryptographic hash, digital signature, time stamping of documents, mining, consensus algorithms, commitment protocols and smart contracts. Though initially blockchain has been tied to bitcoin, one of the popular cryptocurrencies, because of its promising benefits like transparency, accountability, integrity, immutability and security, various fields are exploring and utilising the benefits of the blockchain technology. The applications of blockchain technology in the field of education have started evolving and will find more inclusive and useful applications with time. This article presents some of the application areas in Indian Universities (IUs) where adoption of blockchain technology facilitates to reimagine their functioning in an efficient and transparent way.

M Swan in his work “Blockchain: Blueprint for a New Economy” mentioned that blockchain is widely recognised to be in position to become fifth disruptive innovation of computing paradigm after mainframe, personal computer, internet and social networks. Indeed, blockchain is a very nascent technology maturing with time. Considerable research and development are going on hand in hand in this evolving technology.

The science behind the widespread popularity of blockchain and bitcoins is attributed to Satoshi Nakamoto’s work that introduced the concept of blockchain for transfer of currency in a decentralised trustless environment as against to the conventional centralised trusted environment. Since then, blockchain is progressing in leaps and bounds in both financial and non financial worlds.

Bitcoin, the first ever popular cryptocurrency, which relies on blockchain technology, despite the disputes sustains its existence. Nevertheless, blockchain technology has gained wide interest in broad range of applications covering Government functions, business operations, health, education, science and day to day operations.

Blockchain is looked at by all industries and organisations for all sorts of applications to be benefitted through the positive differences it can make for them. The quicker the blockchain is embraced, the better the benefits would be. With this phenomenon, many organisations are moving their operations onto blockchain platform.

Universities are to ensure quality education through efficient and transparent implementation of practices, programs, policies and processes. In this context, it is opportune to explore the features of blockchain suited for various operations of the universities and implement them as a means of ensuring overall efficiency, transparency and reduce possible human errors. The following sections present some possible uses of blockchain technology are discussed in the following sections.

Issuing of Degrees

The prevailing method of issuing any degree certificate by the university to the student is in a manual way, where the student receives the hard copy of the degree in person or through post. If a student misplaces his marks memo or any such academic grading certificate, the process of getting another is not very simple.

Later, when the student applies for any job, the concerned employer has to apply to the university for genuineness of the student’s degree, normally by paying some amount as per the laid regulations, and it may take not less than one week in the least. If the student moves to another country, the situation is even

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more cumbersome. To compensate this, some Indian universities are maintaining a database of digital certificates, where the certificate is made available without human intervention. However, significant disadvantage with this mechanism is that they are easy to fake without the use of standardised digital signatures and intermediaries are required to ensure the authenticity of the certificate, where there are enough chances for abuse of the control they are bestowed with. Further, this solution is prone to hacking and may result in data loss and/or data breaches.

Hence, the best solution is to develop an application that uses blockchain for storing of degrees, thereby ensuring the benefits that are otherwise not possible. Now, the degrees are available to the interested users in an immutable and secure way for lifetime.

It is worth mentioning that some institutes like MIT, UT Austin and the University of Nicosia have already moved to blockchain for issuing digital certificates, which are cryptographically secured and tamper proof.

Copyrights Protection and Thesis Tracking

Although considerable efforts are put in by University Grants Commission (UGC), a statutory body for coordinating universities, to improve the standards of research in India, it is observed and reported that malpractices are in rise. Hence, a transparent and reliable mechanism is the need of the hour to put a check on plagiarism as well as retaliate the malintentions of the research guides and staff of the universities through proper tracking of the thesis from the point of submission to the point of adjudication. Blockchain helps to address these concerns.

Blockchain helps to ensure that publications emanated during the course of research and thereafter can be protected from plagiarism. Blockchain helps to address the issue of violation of Intellectual Property Rights too.

Further, status of the dissertation reports received from the examiners can be made available in a controlled way to the university authorities, examiners as well as the research scholars using blockchain. This

ensures trust among the associated users, who work in a trustless environment.

Rewards to Teachers and Students

Teachers are to contribute to the students, society and nation through their teaching expertise, research publications and projects. A rewarding system using smart contracts can be designed and implemented to acknowledge and encourage their knowledgeable contributions. Citations of research publications can be administered through tokens where higher the number of tokens a teacher gains, higher the contribution of the teacher towards research.

Students on the other hand, pursue various courses through MOOC, earn certificates, and achieve credentials and badges. With blockchain, controlled access to the student data and their credentials can be provided to the interested parties, thereby reducing the burden of consulting the intermediary institute. Further, profiles depicting all credentials can be stored on the blockchain, which make them verifiable on their own.

This will also help potential employers to check if teachers as well as students possess the required skills.

Credits Transfer

It must be possible to exchange and/or transfer of credits among the HEIs of India. UGC has formulated guidelines for Undergraduate and Post graduate programs to adopt internationally acknowledged Choice Based Credit System (CBCS), with the objective of reforming Indian education system for academic excellence. One of the major renovations is the introduction of grades based evaluation in the place of marks based evaluation. This has the added advantage of easy mobility of students with credits incurred in one university to be transferred to another university of his choice. But, in practice this was a challenge for the universities. Students face more difficulties in transferring to a new university where they are expected to repeat courses to satisfy the university's requirements. This is a much bigger problem when students wish to study in another country. Blockchain addresses this issue where credits are automatically updated through smart contracts and are verifiable.

A more advanced proof of concept is in nascent stagewhere prototype implementation of the global blockchain-based higher education network was introduced through which a unified and ubiquitous solution for credits assignment for students which are globally consistent. The potential stakeholders of higher education; students, employers, and universities are benefitted. In order to perceive this concept of global blockchain for global consistency, it is better if a national level blockchain with all Indian universities as participants can be perceived.

Challenges

Accountability, integrity, transparency and auditability are ensured through blockchain, which are the key requirements to be satisfied for any university to impart trust among its stakeholders. Though blockchain offers many such promising benefits, challenges and limitations do have their space too. This section presents some of the challenges with the adoption of blockchain technology.

- Technical feasibility, economic feasibility and operational feasibility of the functions to be implemented on blockchain have to be addressed before implementing any of them.
- A more standardised version of CBCS should evolve, which will allow for transfer of credits among all Indian universities in a simple, consistent and transparent way.
- As number of transactions on a blockchain network increases, more blocks are required. As more blocks are created, more infrastructure requirements arise which will be a burden to the Indian universities.
- In order to impart trust among Indian universities, consensus with respect to data sharing has to be established to transit gracefully to the blockchain network.

- The challenges posed by immutability, privacy and security properties of blockchain need to be addressed in a systematic way in the context of services offered.
- As blockchain technology is the current trend in the technological skill base, it has to be included as part of the course curriculum. However, it is challenging to design and implement, as it is interdisciplinary aggregate of economics, business, law, computer science and engineering.

Conclusion

The research and implementation of blockchain technology is still in its infancy. Nevertheless, blockchain technology is going to renovate the functioning of Indian Universities in an aggressive manner, subject to the challenges addressed in a coherent manner. Therefore, the technology has to be adopted judiciously in the light of prevailing standards, guidelines and regulations of the universities.

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Online Teaching Tools and Resources: A Respite for Teachers' Working from Home

Aerum Khan*

The months of February and March, 2020 have placed a new kind of challenge in front of the entire human kind in the form of COVID-19. Each sector related to human population is diabolically affected by this virus, popularly known as Corona virus. When nobody is left from its affect, how the teaching learning process in schools, colleges and universities can remain un affected. This disastrous virus has fully captured the entire educational system compelling their closure, till the situation becomes safe for teaching-learning in the usual face to face manner. This is notable that March usually being the busiest month for the students at every level, this situation can be defeating. At this difficult time, most of the authorities and even the government advisories are suggesting the teachers and students to go online. Many suggestions are even received from stakeholders using different ways and means of the online education.

This paper is a compilation of some of the free tools and resources providing sites useful for both school education and the higher education sectors, the parents and administrators can also use them for their collaboration in the education of our future generation. Possible suggestions for the use of all the discussed online solutions are given based on empirical efforts so that a more viable technology can be found out.

This article got its inception after the suspension of classes and issue of advisory to the teachers for providing online support to the students and continuing teaching-learning process as far as possible. The article is being finalised in the night which is followed by a morning that will come with a complete lockdown in Delhi imposed by the government from 23 March, 2020. The same kind of situation prevails throughout the country and in most parts of the world. The Pandemic caused due to COVID-19 has confiscated our time and in many ways our lives.

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Government is asking everyone to work from home. This implies on the teachers too. Being a practicing teacher in a reputed University, I too use the simple online methods of providing online materials to my students in the form of useful articles, essays, videos or writeups compiled using different materials from the internet. Even in normal study conditions these materials are provided to the students beforehand to a particular class with a message of what to do with them as an instructions. This proceeds a classroom process initiation with the help of a discussion on the provided material. I observed that this kind of 'Flipped classroom' is very useful in case of PG level students, provably due to the smaller number of students and also the nature of students inclined towards reflectivity. The sharing of materials was done by the means of email groups and the very popular WhatsApp groups, we have a WhatsApp group for every section of a particular course, all the students and respective teachers are the group members. I was using this pedagogy very simply and never thought that it can become a solution of such a big problem in the coming days.

After the COVID-19 outbreak, now the stage has arrived which made it mandatory to use the online system for teaching and learning. Even the students can submit their assignments and projects online. For the sake of sharing my experiences with my counterpart teachers I thought of compiling a few from the sea of resource providing places and tools useful for teaching, these are those which I amply use for my regular teaching learning process and can be very useful in this 'Work from Home' situation for us, the teachers.

Some Free Online Teaching Tools and Resource Platforms

SWAYAM

This online course providing platform of Government of India provides courses for both school level and higher education level. SWAYAM

is the acronym for 'Study Webs of Active Learning for Young Aspiring Minds'. SWAYAM provides an integrated platform for various online courses across the educational levels and subject areas also covering the skill sector courses. SWAYAM platform which is the first course delivering online MOOCs platform initiated by the Government of India is indigenously developed by the Ministry of Human Resource and Development and the All India Council for Technical Education with the help of various international agencies. It is intended to ensure the benefit of every student from excellent material provided through the means of ICT. The major objectives of this effort is to deliver the best teaching learning resources to all, including the most disadvantaged group of audiences.

All the Massive Open Online Courses (MOOCs) developed under the aegis of MHRD-GoI by various National Coordinators like, AICTE (All India Council for Technical Education) for self-paced and international courses, NPTEL (National Programme on Technology Enhanced Learning) for Engineering, UGC (University Grants Commission) for non-technical postgraduation education, CEC (Consortium for Educational Communication) for undergraduate education, NCERT (National Council of Educational Research and Training) for school education, NIOS (National Institute of Open Schooling) for out of school students, IGNOU (Indira Gandhi National Open University) for out-of-universities students, IIMB (Indian Institute of Management, Bangalore) for management studies, and NITTTR (National Institute of Technical Teachers Training and Research) for Teacher Training programmes.

All these courses follow the 4-quadrant approach and are being hosted on the web platform of SWAYAM. Now the more developed new version of SWAYAM 2.0 for hosting MOOCs is available, more exciting features are added in it. The SWAYAM platform is also accompanied by a mobile application for easier access to the courses. The courses provided through SWAYAM platform can be accessed by the registered students of the respective course in universities and colleges for certification and credit transfer, as all the other registered learners also can access the platform and take courses in which they are interested, they can get certificates on successful completion of the courses. The assessment is being done through online evaluation processes as well as offline proctored examinations. The credits of

these courses get transferred to the report cards of the students. Now in many cases the external exams of SWAYAM courses are conducted and evaluated by the National Testing Agency (NTA).

How Teachers Can Use This?

In the present time we as teachers can visit the SWAYAM Platform (Weblink: <https://swayam.gov.in/explorer>) and search for those courses which can be given as supplementary to our students, this information can be passed on even to the administration. In case of those courses which are perfectly designed keeping in mind a particular paper at any level can be selected by the teacher and given to the students. The successful completion of this course can provide credits to the student which can be transferred to the academic progress report of the student.

National Repository of Open Educational Resources (NROER)

National Repository is developed to address the challenges faced by the education fraternity worldwide. By the contents and resources as well as opportunities available through it the repository intends to reach the unreached, include the excluded and extend education to all. It is a collaborative platform involving everyone interested in education. It offers resources for all school subjects and grades in multiple languages, bringing together all the digital resources for a school system such as educational videos, photographs, diagrams, charts, images, concept maps, audio clips, interactive objects (PheT Simulations, H5P objects, etc.), articles, learning objects, talking books, textbook pages and documents. The major objectives of the National Repository are to make digital e-Content available for teachers and students, enable the participation of the individuals, institutions/ organizations, community in development and sharing of digital resources, provide platform for teachers and students to participate in Massive Open Online Courses, groups, forums, etc., and create mechanism to evaluate digital content for public usage. The repository is in public domain and can be accessed on <http://nroer.gov.in>.

A steady flow of audio, video and interactive resources has been established from a variety of agencies; State Institute of Educational Technology (SIET) from Kerala, Andhra Pradesh, Maharashtra, Uttar Pradesh, Gujarat and Bihar have shared their collections regularly. Some SCERTs like SCERT

Manipur and SCERT Tripura have sent in their audio programmes, SCERT Chandigarh has also contributed bulk resources as a partner. Besides, organisations like CCRT, Vigyan Prasar, Directorate of Adult Education, Gandhi Smriti and Darshan Samiti, Gandhi Heritage Portal, GIET-Gujrat, SIERT-Rajasthan, Amaze Infotainment Pvt. Ltd. and individuals like Arvind Gupta and Vidya Online have contributed a large number of e-Resources as partners to NROER. This content is rigorously evaluated by a series of evaluators in-house and external both before uploading on the repository. Even the uploaded content can be evaluated, commented and rated by the users/teachers while access. This can add to the quality of the content further.

The NROER has the feature of theme mapping based on National Curriculum Framework, which in itself are learning resources for teachers, providing an opportunity for critically assessing the curriculum and aiding the construction of their own unique learning themes for their classroom practices. These digital resources are mapped to themes and concepts and enables access to a library from which teachers can choose appropriate resources. Each resource is tagged to related keywords or concepts making it accessible for use. Every resource can be downloaded and commented upon and are released for free use.

The National Repository houses multiple resources for every concept in order to make the teaching-learning process for the topic of concern more effective. Everyone can access the repository to view, download, use, remix, revise, reuse and redistribute the resources of their choice, in case of revised use the users have to necessarily give attribution to the creator of the resource as well share the resource again on the repository for further dissemination of the same, as all the resources on NROER are housed under CC BY-SA licence (This license lets others remix, tweak, and build upon your work even for commercial purposes, as long as they credit you and license their new creations under the identical terms. This license is often compared to “copyleft” free and open source software licenses. All new works will carry the same license, so any derivatives will also allow commercial use. This is the license used by Wikipedia, and is recommended for materials that would benefit from incorporating content from Wikipedia and similar licensed projects.). This process ensures the frequent use of digitised content

by the society, fulfilling the most important objective of NROER.

How Teachers Can Use This?

Teachers can visit the website and register to it, in this case whenever they want, they can log in and navigate through the resources of NROER. They can search for relevant e-materials and share their links to the students, also assignments can be given using these materials, which can be later contributed on NROER itself. This process will facilitate the development of e-Content among the students. In addition, the teachers themselves can create e-Resources in the acceptable formats and can contribute on the repository for universal accessibility of a greater audience.

SWAYAM Prabha

The SWAYAM PRABHA is a group of 32 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite. These Channels were launched on 9th July 2017. Every day, content of 4 hours which is repeated 6 times, allowing the students to choose the time of their convenience, is telecasted. The channels are uplinked from BISAG, Gandhinagar. The contents are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS. The INFLIBNET Centre maintains the web portal. Curriculum-based video programs at post-graduate, under-graduate, certificate and School level covering diverse disciplines such as arts, science, commerce, performing arts, social sciences, humanities, engineering, technology, law, medicine, agriculture, etc. are available on these channels. Videos for teacher’s training as well as teaching and learning aids for children to help them understand the subjects better and also help them in preparing for competitive examinations and professional degree programmes are also available on SWAYAM PRABHA (Source: <https://swayamprabha.gov.in/>).

How Teachers Can Use This?

Teachers can visit the Website of SWAYAM Prabha where advance schedule of a month or more are provided, from where the information about the useful programs with time can be collected and shared with students. They can go ahead with viewing these telecasts and learning from them.

Zoom Online Classes

The University of Minnesota has developed this system which provides platform for synchronous

class sessions, where everyone can log in to a web conferencing system pre-scheduled by a teacher. This is a way to create a fully teacher facilitated environment for online class/course conduction. The Zoom software can be used on laptops, desktops, phones and tablets.

How Teachers Can Use This?

The teacher requires at least a screen and a microphone. In case of laptop both the things are inbuilt along with the camera. The first thing a teacher and student can do is to install the desktop version of Zoom Software. Students can also be guided to install the software on mobile phone. They can download the Zoom mobile App. Zoom offers two formats, a Zoom flowchart and the other webinar/meeting comparison chart format. Both allow us to interact with our students. Now we have to sign up and use for our interactions. We have to plan beforehand the synchronous course session, schedule and also the topic of the lesson, also share it with the students so that they come prepared for the session.

We can plan for a 30 minutes or 60 minutes session according to the need. At a time the number of students joining is not restricted, but 25 students can show up in the gallery view at a time using their web cams. We can go ahead with many activities during the lecture to make it more interesting, like, setting up a 'Whiteboard' where students can collaboratively contribute; using 'Screen Annotations' like the text box, drawing tools, highlighters, etc.; setting up 'Polling' for different opinion checks; Using 'Chat as Backchannel' along with the simultaneous communication; using 'Breakout Room' feature where we can make groups of student which can work separately and as a teacher we can travel to these breakout rooms, and after the breakout session we can regroup all the students back for combine session.

Zoom is an excellent tool for teachers. To know more about it, visit the website on the following link: <https://it.umn.edu/zoom-teach-online-class-sessions>. However, government advisories need to be followed.

ePathshala

With a view to realise the goals of Digital India in the school education and teacher education sector and to reach out to all the people of India, NCERT took the initiative of providing its resources on the web

and mobile platforms. Through a special license, it has liberated access to all the digital contents including e-books. One can download and share the collections of e-textbooks for all classes and all areas of the curriculum (classes 1 to 12), supplementary reading material, resources for teachers, teacher educators and parents, in English, Hindi, Sanskrit and Urdu.

Supported by a web portal, <http://epathshala.gov>. in and mobile apps available for the Android, Apple and Windows environments, the e-contents including digital textbooks are being readily accessed across the country. The objective of the project was not only to provide free and easy access to the books, but also to involve parents, teachers and teacher educators in helping the children achieve desired levels of learning. Resources specifically aimed at parents are to help them understand and participate in quality improvement of their children's education. Resources for teachers to tailor their teaching-learning to different needs of children have been categorized and deployed. The collections include digital textbooks, supplementary readers, audio and video resources for students; teacher's guides and teaching resources for teachers; journals, policy documents and other scholarly resources for researchers and educators; resources for parents to help them appreciate and support their own children's education.

On the ePathshala the textbooks are converted to the EPUB 3.0 format. Supported by a specially designed EPUB reader, the text can be selected, the page zoomed, portions highlighted or bookmarked and the screen, font and colour changed to cater to the needs of all children including children with special needs. Included in the collection will be audio books and machine readable books in offline mode as well. To enable a teacher to display the books in class and to facilitate reading on a regular computer, the books have also been made available as flip books with a variety of special features to enhance the ease of reading. These books are available through laptops and desktops as flipbooks. The present collection spans all textbooks from classes I to XII, covering all subjects of the school curriculum.

ePathshala App for the Android, iOS as well as Windows platforms has been released to enable free and universal access to the ePathshala collections. The app interface is available in English, Hindi and Urdu.

The free app can be downloaded from the respective app stores.

How Teachers Can Use This?

The teachers can download the materials, chapters and other useful resources through the ePathshala mobile App and directly share the same with their students accompanied by the assignments and related work.

Diksha Portal

Diksha Portal is another initiative of GoI which houses QR coded energised content. more than 80,000 e-Books for classes I to XII created by CBSE, NCERT and States/UTs are available in multiple languages. The content is also accessible through scanning the QR codes or visiting the Diksha mobile app as well as the website.

How Teachers Can Use This?

We can select the materials or e-resources from here and share the same with our students through the mobile phones or any other device. The web address for Diksha portal is <https://diksha.gov.in/>

Google Classroom

This is a free application of Google for Education where we can create an online classroom, all the students of a course can be connected with the teacher using their Gmail account. A teacher can share study materials, distribute different individual or group assignments and even can send her feedback to the students. This class can be created by sharing a code among the students or by sending invitation to join.

How Teachers Can Use This?

We can create a classroom select the materials and share the same with our students through this, Even combine and collaborative assignments can be given and evaluated simultaneously. Web address is <https://classroom.google.com/>.

Google Hangouts

This is a free service provided by Google, through which we can connect with group of people from anywhere in a video call.

How Teachers Can Use This?

We can video call or chat with up to 10 students and conduct group discussions. We can set up a meeting

and share a link with those students with whom we wish to make discussions. The seminar discussion groups can be easily managed using this.

Class Dojo

This is a free communication web platform which can bring communities together and give them the tools, ideas and motivation to participate and improve the education of children. It can connect teachers, parents, administrators and students all together in a virtual classroom. The combined efforts of all of them can bring wonderful ideas in the classroom.

How Teachers Can Use This?

<https://www.classdojo.com/> is the address of the website of ClassDojo. We can use this platform to create an interactive and lively online classroom by using this. It can be an excellent community participation platform for remote learning in the present lockdown situation when social distancing is compulsory.

Edmodo

Edmodo is a resource providing platform where teachers, students and parents individually can connect and get learning resources, learning tools and a collaborative platform to chat and discuss curricular topics. It provides standard educational materials, can measure student performance and help us to communicate with the parents. It helps us to create more personalised and fulfilling learning experiences.

How Teachers Can Use This?

We can create a class on Edmodo (Web address: <https://www.edmodo.sg/>) by sharing a code among our students or by invitation through any of the communication means. We can select the materials and share the same with our students through the web platform itself.

Schoology

This is a powerful learning management system which intends to unify the classrooms and keep learning going in any emergency situation like the one arrived due to COVID-19. It allows teachers to create a private social network for their students, parents and colleagues. It helps to communicate with students, manage our classroom, collaborate with our colleagues

and do many more things using our own creativity. This is perfect for schools, with more than 200 study tools integrated with the system, can be very helpful in the present situation.

How Teachers Can Use This?

We can log in and ask the students to make so, in addition their parents can also make a separate log in so that they can facilitate their children's progress in the direct guidance of the teachers. The web address of Schoology is: <https://www.schoology.com/>

YouTube

YouTube is an online video sharing platform started in February 2005 by three friends. In November 2006 Google bought the site and now it runs as its subsidiary. YouTube allows its users to upload, share, view, comment, rate and add to playlist small video clips and video programs. Now a days YouTube has become the biggest teacher. It has democratised the learning process, now any one can learn with the right selection of videos from it.

How Teachers can Use this?

We can go ahead and search for appropriate videos useful for the students, their links can be copied and shared with them. There is a caution which we can take before sharing, the auto play button must be switched off so that only the particular video is shared. Also, it can be noted that if we want to adapt a video portion, we should check the license of the video. There are two type of licenses the 'YouTube standard License' which is placed on a perfectly copyrighted video and the other one is 'CC-By' which is an Open License. So, we can just check the license before reusing the video, sharing of a video for educational purpose can be done for a video with any type of License. We can select the materials and share the same with our students through the mobile phones.

Conclusion

There is no doubt that ICT adds immense value to teaching and learning, but it cannot replace a teacher; ICT can aid a teacher and can surely help make the teacher-student relationship more interactive. This can also be expressed in a way that ICT at times becomes the only solution to keep things going. Hopefully the situation created throughout the world due to COVID-

19 gets over at the earliest. The educational system including the other things come back to the usual form. Till then we should follow the social distancing practices and utilise the online services freely available to us. At least they will assist us to narrow down the gap caused due to the lockdown situation. We always wanted that in the age of continuously evolving technologies the ICT tools get absorbed into everyday teaching, though its actual practice came in a weird way. Various projects, websites, repositories, tools, software and platforms can prove to be instrumental in this situation. Let us join our hands in using them right and moving ahead in the direction together to make our future better!

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School Effectiveness : Learning from Effective Schools

Ajit Mondal*

The term 'school effectiveness' is a popular term widely used since 1960. Effective schools are those that successfully progress the learning and development of their students. In an effective school, the goal is to teach basic skills and appropriate behaviours to all students. Besides, in such a school, an optimum learning environment is created by supporting the cognitive, affective, psychomotor, social and aesthetic development of the students. Before entering into a discussion about the factors, components, characteristics and principles related to school effectiveness, the concept of school effectiveness should be understood with respect to giving quality education in terms of enhancing learning achievement of all children.

Defining School Effectiveness

School effectiveness is an elusive but fascinating topic of continuing interest among the educational administration scholars. It has become an area of major concern for educational research from the sixties onwards in the United States. These studies have tended to focus on secondary school effectiveness till 1980. The definitions of effectiveness are almost as numerous as the researchers engaged in its study. But the main focus of all definitions is achieving pre-established organizational goals and objectives. In other words, effectiveness can be defined as the degree of goal realization. Effective, according to New Oxford Advanced Learner's Dictionary (Hornby, 2009), is an adjective meaning producing the result what is wanted or intended; producing a successful result. Effectiveness is a measure of the match between stated goals and their achievement. If a school is to be termed as effective, it needs to have certain characteristics.

The conception of the effective schools research began in 1966 with a study known as the Coleman Report. The famous report found that in the United States student background (mostly socio-economic) factors showed much stronger association with student achievement than any school-related factors, such as per-student expenditures and teacher qualifications (Coleman et al., 1966). Coleman (1966) thus concluded

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that student background characteristics were far more powerful in determining student achievement than any school-level factors. In essence, Coleman determined that a school's effectiveness was not the decisive element in determining student achievement (Cobanoglu & Huseyin 2008). But the other researchers in the area of school effectiveness disagreed with these findings. Their investigations revealed that there are some variables or correlates in some schools from the poorest neighbourhoods producing high achieving students under difficult environmental conditions contributed to the school effectiveness. According to Subbs (1995), the correlates which show the salient characteristics of effective schools can be defined as the means of achieving high and equitable levels of student learning. It is expected that all children regardless their demographic and ethnic characteristics will learn at least the essential knowledge, concepts and skills needed for now and future (Kirk and Jones 2004).

Identifying effective and ineffective schools is an important issue in education in the light of increasing concern for achievement and accountability. The effective schools movement continues gaining momentum among school personnel whose primary responsibility is to meet the challenge of providing each student with the opportunity to develop to the fullest potential. In the last decade, educational research efforts concerning effective schools have focused on identifying the characteristics of an effective school and establishing specific criteria for measuring effectiveness. Reviews of the effective schools literature reveal that there is no consensus on the definition of an effective school. There is no simple recipe for an effective school. In the most general sense, 'school effectiveness' refers to the level of goal attainment of a school (Scheerens, 2017, p. 11). Many factors combine to make each school what it is, and each school is unique. However, it is possible to identify a set of factors or characteristics that contribute to school effectiveness.

According to Brooker et al. (1979) an effective school is one, characterised by high evaluations of students, high expectations, high norms of achievement with the appropriate pattern of reinforcement and instruction in which students acquire a sense of control over their environment and overcome the feelings

of futility. Brookover emphatically stated that the characteristics of an effective school are not isolated components, but that they are integrated and must be considered as a whole. Definitions of effectiveness should encompass qualitative variables (i.e., school climate, instructional leadership, high expectations, etc.) as well as quantitative variables (public achievement scores). Benjamin S. Bloom (1982) in his book, 'Human Characteristics and School learning' identified three interdependent variables essential to any investigation of school effectiveness – (a) cognitive entry behaviours, (b) affective entry behaviours and (c) quality of instruction. Mortimore (1991) has defined an effective school as one in which students progress further than might be expected from consideration of its intake. An effective school then adds an extra value to its students' outcomes in comparison with other schools serving similar intakes.

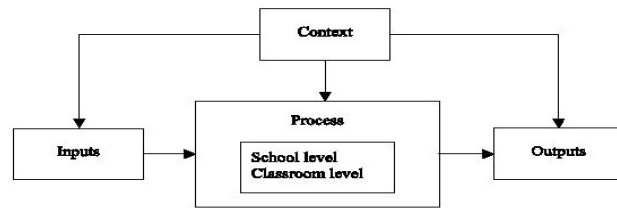
An effective school is one that promotes the progress of its students in a broad range of intellectual, social and emotional outcomes, where students progress further than might be expected from knowledge of their backgrounds (Balani, 2015, p. 423). The definition of successful school is quite difficult to generalize, as it would consist of different components for different environments, as it is context specific. Definitions of school effectiveness show that effective schools are characterised by a variety of factors.

Exploring Characteristics, Factors, Components and Principles of Effective Schools

During the last four decades, the field of school effectiveness has been explored from a variety of research paradigms using both qualitative and quantitative methods. However, at the heart of all school effectiveness research is an attempt to explain how school inputs, the context of schooling, and school processes affect school outputs (Figure-1). In general, school inputs include variables such as teacher qualifications, school infrastructure, and per-student expenditures. The context of schooling consists of variables such as support from higher administrative levels and school location. School processes encompass variables such as teacher behaviours, orderly atmosphere, and the quality of school curricula.

Student achievement is usually considered to be the major school output. Student background also a school input but it is not under the control of the school system, and so it needs to be removed from examination of the impact of school factors on student achievement

Figure 1: A Basic Systems Model of School Effectiveness



Source: *Fundamentals of Educational Planning No. 68* Scheerens, J. (2000)

(Teodorovic 2009).

Researchers (Kitchen, et al., 2004) for the University of New Mexico (UNM) studied nine distinguished high achieving schools serving low-income communities throughout the United States that were part of a Hewlett-Packard (HP) funded project. The High Achieving Schools Initiative Project, released in February 2004, offers new information that students from low-income communities can excel in Mathematics when schools make teaching and learning a top priority. The study identified seven characteristics common to schools where poor children were succeeding in Mathematics. The initial research findings demonstrate that the nine highly effective schools that serve low-income communities shared some common characteristics. The common themes that emerged included:

- 1) Teaching and learning are prioritized to support high academic expectations;
- 2) Supplemental support is provided for student learning;
- 3) A strong and well defined sense of purpose among the faculty;
- 4) Faculty collaborate and support each other;
- 5) Explicit focus on test preparation;
- 6) Teaching resources are available; and
- 7) Teachers have regular access to professional development opportunities (Kitchen, et al., 2004).

Another research on high performing but high poverty schools in Florida (Tilley, 2011) identified four contributing factors to school success – a) additional academic support through use of personnel (tutoring), b) an academic program (AR), c) a web-based instructional program, and d) an instructional method (small group and differentiation). The study also revealed that following items are fundamental to student achievement:

- the principal's motivation, expectations, and instructional leadership,
- a culture of excellence
- purposeful programs and student support

Perhaps the best known summary of the characteristics of an effective school is provided by Ronald Edmonds (1982). He identified five distinct characteristics in high achieving schools:

- 1) Strong administrative leadership, particularly in the area of curriculum and instruction;
- 2) An orderly, safe environment conducive to learning;
- 3) A pervasive and broadly understood instructional focus emphasising a commitment to basic skills;
- 4) Teacher behaviours that convey the expectation that all students are expected to obtain at least minimum mastery; and
- 5) The use of measures of pupil achievement as the basis of program evaluation. (p.4)

Lezotte (1991) in his study found out seven correlates of effective schools which evolved the original correlates shared by Edmonds (1982) and added two variables by actual research findings: 1) Instructional leadership, 2) Clear vision and mission, (3) Safe and orderly environment, (4) High expectations for students' achievement, (5) Continuous assessment of student achievement, (6) Opportunity and time on task (7) Positive home-school relations.

Purkey and Smith (1983) paint the portrait of an effective school, differentiating between organizational components that can be implemented administratively, and process components, which follow organizational components and define a school's climate and culture. Table - 1 enumerates these components:

In 1994 the Office for Standards in Education (OFSTED) commissioned the International School Effectiveness and Improvement Centre (ISEIC), Institute of Education under the University of London to conduct a review of school effectiveness research summarising current knowledge about the factors identified in the literature as important in gaining a better understanding of effectiveness. Accordingly, Pam Sammons, Josh Hillman and Peter Mortimore made an extensive review of school effectiveness research to find out key characteristics of effective schools. This

Table – 1: Components of an Effective School

Organizational Components	Process Components
1) School site management—leadership and staff	1) Collaborative planning and collegial relationships
2) need autonomy to address how to increase achievement	2) A sense of community
3) Instructional leadership	3) Clear goals and high expectations that are commonly shared
4) Staff stability	4) Order and discipline
5) Curriculum articulation and organization:	
a) purposeful programs of study	
b) School-wide staff development,	
c) focused on altering attitudes and behaviours and providing	
d) staff with new techniques and skills	
e) Parental involvement and support	
f) School-wide recognition of academic success	
g) Maximized learning time	
h) District support	

Source: Preston et al., 2017, p. 527

review results (Sammons, Pam and Others, 1995) provides an analysis of the key determinants of school effectiveness in elementary and secondary schools. A literature review identified the following key correlates of effectiveness: (1) professional leadership; (2) shared vision and goals; (3) a learning environment; (4) concentration on teaching and learning; (5) purposeful teaching; (6) high expectations; (7) positive reinforcement; (8) monitoring progress; (9) pupil rights and responsibilities; (10) home-school partnership; and (11) a learning organization. The majority of effectiveness studies have focused exclusively on students' cognitive outcomes, but there is less evidence about school and classroom processes that are important in determining schools' success in promoting social or affective outcomes.

In 2002, Washington state school improvement specialists from the Office of Superintendent of Public Instruction (OSPI) in the State of Washington reviewed more than 20 studies to answer those questions. The studies – most of which looked at elementary schools – focused on schools with students who achieved at higher levels than their demographic characteristics would predict. From the studies, OSPI researchers distilled nine characteristics that were found most often in high-performing schools (Shannon & Bylsma, 2007):

- 1) Clear and Shared Focus;
- 2) High Standards and Expectations for All Students;
- 3) Effective School Leadership;
- 4) High Levels of Collaboration and Communication;
- 5) Curriculum and Instruction Aligned with Standards;
- 6) Frequent Monitoring of Teaching and Learning;
- 7) Focused Professional Development;
- 8) Supportive Learning Environment;
- 9) High Levels of Community and Parent Engagement.

Since publication of the first edition, the characteristics have become a framework for school improvement in Washington. Also, more research has been done on high performing schools and improving student learning. With that in mind, in 2006 OSPI asked a number of experts to review the original document. Their comments and suggestions helped shape the second edition of “Nine Characteristics.” In essence, reviewers confirmed the validity of the nine characteristics (Ibid, p. 2). The second edition also focuses on how the nine characteristics are interrelated and suggests a continuous cycle of action that systematically attends to all nine. Seminal research on effective schools is included, as well as about 120 new references and relevant OSPI documents. The overall purpose of the document is to help schools successfully implement their school improvement efforts.

While the characteristics help to define an effective school, the presence of some basic components ensures school effectiveness. T. S. Ravi (2011) pointed out the correlates for an effective school as follows (pp. 27-28):

Clear School Mission: In the effective school, there is a clearly articulated school mission

through which the staff shares an understanding of and commitment to instructional goals, priorities, assessment procedures and accountability. Staff accepts responsibility for students’ learning of the school’s essential curricular goals.

High Expectations for Success: In the effective school, there is a climate of expectation in which the staff believe and demonstrate that all students can attain mastery of the essential content and skills, and the staff also believe that they have the capability to help all students achieve that mastery.

Instructional Leadership: In the effective school, the principal acts as an instructional leader and effectively and persistently communicates that mission to the staff, parents, and students. The principal understands and applies the characteristics of instructional effectiveness in the management of the instructional programme.

Frequent Monitoring of Student Progress: In the effective school, student academic progress is measured frequently. A variety of assessment procedures are used. The results of the assessments are used to improve individual student performance and also to improve the instructional programme.

Opportunity to Learn and Student time on Task: In the effective school, teachers allocate a significant amount of classroom time to instruction in the essential content and skills. For high percentage of this time students are engaged in whole class or large group, teacher-directed, planned learning activities.

Safe and Orderly Environment: In the effective school, there is an orderly, purposeful, businesslike atmosphere which is free from the threat of physical harm. The school climate is not oppressive and conducive to teaching and learning.

Home-School Relations: In the effective school, parents understand and support the school’s basic mission and are given the opportunity to play an important/ role in helping the school to achieve that mission.

Jaap Scheerens (2000) of the International Institute of Educational Planning (IIEP), UNESCO, aptly stated, “School effectiveness refers to the performance of the organizational unit called ‘school’. The performance of the school can be expressed as the output of the school, which in turn is measured in

terms of average achievement of the pupils at the end of period of formal schooling”. In this organization, the relationship between the individuals is strong and all peers are working in co-operation. The organization aids the students in developing their fundamental skills while on the other hand providing them with critical thinking skills. A more-or-less established model of school effectiveness consists of five factors (Scheerens and Stoel, 1988):

- a) strong educational leadership;
- b) high expectations of student achievement;
- c) academic goal consensus;
- d) emphasis on basic skills; and

e) safe and orderly climate.

This is known as five-factor model of school effectiveness. However, research on effective school has been carried out largely in primary schools. In more recent contributions to effective schools research became more integrated with education production function and instructional effectiveness research in the sense that a mixture of antecedent conditions was included. Scheerens & Bosker (1997) made a summary of the main components of fourteen effectiveness – enhancing factors as presented in the Table – 2. These fourteen factors may be a platform for school effectiveness research in our country.

Table – 2: Components of 14 Effectiveness-Enhancing Factors

Factors	Components
Achievement, Orientation, High Expectations	<ul style="list-style-type: none"> • Clear focus on the mastering of basic subjects • High expectations (school level) • High expectations (teacher level) • Records on pupils’ achievement
Educational Leadership	<ul style="list-style-type: none"> • General leadership skills • School leader as information provider • Orchestrator of participative decision-making • School leader as coordinator • Meta-controller of classroom processes • Time educational/administrative leadership • Counsellor and quality controller of classroom teachers • Initiator and facilitator of staff professionalization
Consensus and Cohesion among Staff	<ul style="list-style-type: none"> • Types and frequency of meetings and consultations • Contents of cooperation • Satisfaction about cooperation • Importance attributed to cooperation • Indicators of successful cooperation
Curriculum Quality/Opportunity To Learn	<ul style="list-style-type: none"> • The way curricular priorities are set • Choice of methods and text books • Application of methods and textbooks • Opportunity to learn • Satisfaction with the curriculum
School Climate	<p><i>(a) Orderly atmospheres</i></p> <ul style="list-style-type: none"> • The importance given to an orderly climate • Rules and regulations • Punishment and rewarding • Absenteeism and dropout • Good conduct and behaviour of pupils • Satisfaction with orderly school climate

Factors	Components
	<p><i>(b) Climate in terms of effectiveness orientation and good internal relationships</i></p> <ul style="list-style-type: none"> • Priorities in an effectiveness-enhancing school climate • Perceptions on effectiveness-enhancing conditions • Relationships between pupils • Relationships between teacher and pupils • Relationships between staff • Relationships: the role of the head teacher • Engagement of pupils • Appraisal of roles and tasks • Job appraisal in terms of facilities, conditions of labour, task load and general satisfaction • Facilities and building
Evaluative Potential	<ul style="list-style-type: none"> • Evaluation emphasis • Monitoring pupils' progress • Use of pupil monitoring systems • School process evaluation • Use of evaluation results • Keeping records on pupils' performance • Satisfaction with evaluation activities
Parental Involvement	<ul style="list-style-type: none"> • Emphasis on parental involvement in school policy • Contacts with parents • Satisfaction with parental involvement
Classroom Climate	<ul style="list-style-type: none"> • Relationships within the classroom • Order • Work attitude • Satisfaction
Effective Learning Time	<ul style="list-style-type: none"> • Importance of effective learning • Time • Monitoring of absenteeism • Time at school • Time at classroom level • Classroom management • Homework
Structured Instruction	<ul style="list-style-type: none"> • Importance of structured instruction • Structure of lessons • Preparation of lessons • Direct instruction • Monitoring
Independent Learning	No sub-components
Differentiation	<ul style="list-style-type: none"> • General orientation • Special attention for pupils at risk
Reinforcement and Feedback	No sub-components

Sources: Scheerens & Bosker, 1997; Scheerens, 2016, pp. 116-117

Concluding Remarks

Considering all the research findings it can safely stated that student achievements should and ought to be the basic products of effective schools. Otherwise nobody can evaluate the school or school systems as effective organizations. The findings of major researches establish that the evaluation of effective school correlates in terms of student academic achievement. There is positive relationship between school effectiveness and student achievement in schools. An effective school is defined in the literature in a variety of ways. Pupil achievement is generally recognized as the primary variable used to measure school effectiveness. A good and efficient school is one with well trained teachers and highly motivated and effective teaching methods. The global concept of school effectiveness and its sub-ordinate concept of teacher effectiveness are the contesting ground for the researchers as in modern age delivery of quality learning to all is a global campaign. Therefore, teacher education must take into account the idea how to build effective schools fitted with effective teachers.

In India there is a need of research more within the variety range of schools in the context of RTE-SSA and RMSA programmes. The National Council of Educational Research and Training (NCERT) organised an International Seminar on 'School Effectiveness and Learning Achievement at Primary Stage' on 17-19 July 1995 under the auspices of the District Primary Education Programme (DPEP) of the Government of India in order to gain from the experiences of Western scholars and to share with them the outcomes of Indian studies since 1993 in the context of District Primary Education programme (DEEP) implemented by the Government of India. This first seminar has culminated in the organisation of the Second International Seminar on 'Classroom Processes and School Effectiveness at Primary Stage' in July, 1996, the third in the series is the International Seminar on 'Teacher Empowerment and School Effectiveness at Primary Stage' held at New Delhi in July, 1997 and the fourth International Seminar on 'Researches in Learning Organisation, Community Participation and School Effectiveness at Primary Stage' in July, 1998. These seminars mainly focussed on various aspects of classroom processes, teacher behaviour, curriculum related and other methodological issues, pedagogical and motivational issues, school climate and interpersonal relations, school-community partnership, teacher training, policy and management issues and case studies in teacher empowerment and school effectiveness and community

participation and their implications for School Effectiveness at the Primary Stage. Thus, the concept of School Effectiveness for quality improvement at primary stage with respect to enhancing the learning achievement of children has become crucial in India. In case of developing countries like India, efficiency of primary school system becomes essential because of the high wastage and poor quality of the system.

Here we have discussed various criteria that the purpose is to equip you with necessary inputs to improve your school and make it effective. We now once again recapitulate the criteria that have been identified as being important in the development of an effective school: high academic expectations, faculty collaborate and support each other, strong professional leadership, shared vision and goals, a learning environment; clear and shared focus, effective school leadership, frequent monitoring of teaching and learning, supportive learning environment, high levels of community and parent engagement, safe and orderly school climate, continuous professional development of the staff, promoting open communication and collaboration among all staff, respect for diversity and etc.

It should be kept in mind that school effectiveness with respect to giving quality education in terms of enhancing learning achievement of children at primary stage is important. The question of quality education has baffled man since time immemorial. As such, a variety of attempts have been made over the ages to fix the meaning of school effectiveness. The most basic element of an effective school is to stir up and strengthen the pleasure and power of every child to work hard and uninterruptedly for optimum realisation of his veritable potentialities through the process of education. Since effectiveness of schools are measured in terms of achievements of its objectives and learning outcomes of its students, the main focus of its objectives the learning culture of the schools need to be focused. In other words, the effective functioning of an organization lies in a strong School Learning Culture and Leadership Behaviour of the head of the school.

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National Seminar on Enhancing Quality in Teacher Education

A One-day National Seminar on 'Enhancing Quality in Teacher Education' was organized by PSNL College of Education Sattur, Tamil Nadu, recently. Dr. V Thamodharan, Former Principal, VO Chidambaram College of Education, Tuticorin, Tamil Nadu and Dr. C Praveen, Principal, Institute of Advanced Education, Thirur, Kerala were the Guests of Honour. About three hundred and fifty teachers, research scholars and students participated in the Seminar. The Seminar was chaired by Thiru K Raju, Chairman of College and inaugurated by Dr. V Thamodharan. Mr. B Kannan, Assistant Professor of Physical Science delivered the welcome address.

Dr. G Gopalakrishnamoorthy, Academic Advisor in his address, spoke about the significance of Seminar and expressed happiness towards the University for achieving first rank in Tamil subject successively for the second year. Dr. V Thamodharan, in his inaugural address, lamented on the low rank of Tamil Nadu in Education. He pointed out that Tamil Nadu is at 23rd place among the states in India which is very low in the world ranking. He said that the youngsters are the backbone of our country and the teachers are the backbone of the youngsters so the academic community must be very efficient and effective. He said that it is a matter of botheration that the quality in teacher education is diminishing day by day.

During the technical session, Dr. V Thamodharan spoke on 'Revamping the Professional Enrichment of Teachers'. He pointed out that a good teacher touches the heart of the students where as a teacher simply touches the ears. A teacher should behave ethically as well as morally and should update the knowledge regularly keeping in mind the rapid changes in the world. A teacher should have the qualities of a mother and father and should assess the strengths and weaknesses of a student. Nowadays, many students have the feeling of insecurity and a teacher should uproot such feelings from the students. Welcoming questions from the students and allowing them to interact are the good qualities of a teacher, he said. He opined that a teacher teaches but a good teacher makes students learn more.

He explained a few strategies to impart excellence and efficiency in teacher education.

Dr. C Praveen spoke on 'Integrating ICT for Quality Enhancement in Teacher Education'. He rightly pointed that ICT benefits both the students as well as the teachers. He said that ICT enables greater imaginative understanding, provides clear logical thinking, enhances learner capacity and provides new forms and structure for representing knowledge. He said that in the era of technology, ICT supports plenty of resources to enhance the quality of teacher education. He was of the opinion that the quality of knowledge in a society depends upon the quality of education it provides. He stressed the need of creating positive learning environment. He said that in a positive learning environment all students feel comfortable and secured and interact with the teachers. Teachers can also help to create a positive environment by simply caring for the students and telling each of them that they are special. He opined that a teacher should enter the classroom with an energetic and positive attitude. In the paper presentation session, seventy three research articles were presented. Dr. R J Rathiees, Principal of the College was the moderator. Mr. K Raju, Chairman of the College distributed participation certificates to the participants. Dr. S Karthika, Assistant Professor of English delivered the Vote of Thanks.

Faculty Development Programme

A two-day Faculty Development Programme on 'Innovation of Teaching and Learning Methods' was organized by the Internal Quality Assurance Cell (IQAC) of Srimath Sivagnana Balaya Swamigal Tamil, Arts and Science College (SSBSTAS), Mailam, Tamil Nadu recently. The College Principal, Dr. S Thirunavukkarasu delivered the welcome speech. The Inaugural address was delivered by Sivathiru Rajiv Kumar Rajendran, Secretary, SSBSTAS College. He spoke about the importance of the Programme and instructed the Faculty Members to nurture their teaching with technical advancement.

The Presidential Address was delivered by Holiness Swami Ji Sri Sivagnana Balaya Swamigal, Chairman of SSBSTAS College. He emphasized on the 'Role of Teachers' and advised all the teachers to equip themselves with updated technology related to

teaching and learning, and like a sculpture shape the students to face the competitive world through value based education system. He compared the innovation of various countries with India. He explained that the reading and writing skills will improve the knowledge level which in turn will lead to form a good society. He also said that the topic of the Seminar was very effective and essential to the current situation in the country.

The keynote address was delivered by Dr. Siva Pon Ambalavanan, Principal, Siddhar Sivaagnani Arts and Science College, Bommayapalayam, Puducherry. He highlighted on three components – reading, writing and expression. He clearly explained that reading and writing skills will improve the knowledge which in turn will lead to form a good society.

During Technical Session, Prof V Nagarajan, Director, Mind Scaping Academy, Puducherry spoke on ‘Personality Development in Leadership Quality’. He explained the concepts of personality and leadership through task based activities like mind mapping, brain storming, three minutes speed test, and motivated all the participants by providing optimum learning of the Topic.

Dr M Vijayarathy, Assistant Professor, Department of Philosophy, Madras Christian College, Chennai spoke on ‘Intervention of Psychology in Understanding Class Room Space :A Critique on Technology’. He highlighted on classical conditioning and motivation.

Dr. P Suresh, Associate Professor, Department of English from Vels Institute of Science, Technology and Advanced Studies (Vels University), Chennai shared his experience on ‘Gen-Y Learners–Challenges and Strategies’ and defined different types of learners and their characteristics and learners challenges. He

also spoke on teachers equipments and instructional strategies and approaches.

Dr. V Shanmuganeethi, Associate Professor, Head I/c, Computer Science and Engineering, NITTTR, Chennai delivered a lecture on ‘e-Content Development, Technology Enabled Teaching Learning Process’ online courseware, hypertext minds: qualities, golden angle of three learning questions like instructional questions, assessment questions and alignment questions and critical thinking skills with tools of education.

Mr. J Arumugam, Librarian, PSG College of Technology, Coimbatore spoke on ‘Research Indicators and Predatory Journals’. He spoke on Impact Factor (IF) and citation analysis. He also demonstrated the citations databases such as Web of Science, Scopus and Google Scholar-UGC Care List journals etc. He further explained how the Impact Factor (IF), h-index, i-index was calculated. He gave awareness about the consequence of Plagiarism. He stressed the faculties to avoid plagiarism while conducting their research work. He also added about the basic ethics in publishing papers for the research world. He explained the guidelines followed by the UGC.

Dr. S Thirunavukkarasu, Principal in his valedictory address narrated the conversation of Dr. A P J Abdul Kalam with the Faculty Members. He spoke about the lack of motivation innovation, and creativity in teachers and explained how it can be improved. During valediction, Principal Dr. S Thirunavukkarasu welcomed everyone and appreciated all the Resource Persons for their excellent presentations and transformation of knowledge. The Report of the event was delivered by Dr. C Anuradha, Head, Department of Computer Application SSBSTAS College.. Dr. U Sivasubramanian IQAC Coordinator, SSBSTAS College proposed the vote of thanks. □

AIU NEWS

National Workshop on Management of University Administration

A National Workshop on Management of University Administration on the theme: *Managing Strategic Change in Governance of Indian Universities* was organised by the Association of Indian Universities (AIU), New Delhi during November 27-29, 2019. The event was hosted by Chandigarh University (CU),

Mohali. Dr Amarendra Pani, Joint Director & Head of the Research Division at Association of Indian Universities was the chief convener of the event. Dr Usha Rai Negi, Assistant Director, Research, AIU, New Delhi was the AIU Coordinator of Workshop. Prof Shiv Kumar Tripathi, Executive Director, School of Management was the Convener from Chandigarh University. A total number of 37 participants from five states and six universities participated in the Workshop.

The Workshop was inaugurated by Prof R S Bawa, Vice Chancellor of Chandigarh University.

The inaugural ceremony of the Workshop commenced with the welcome note of Prof Shiv Kumar Tripathi where he presented a brief account on the achievements of Chandigarh University. In his introductory address Dr Amarendra Pani elaborated the background of the Workshop and provided a detailed account on the activities of AIU and its contribution to build capacity in Indian universities. Dr Pani observed that the digital era of twenty-first century necessitates the university administration and management to be modernized, be equipped to respond to the challenges faced by the universities. He shared his thoughts on some of the modern trends of university management like walk in admission, on demand examination, cafeteria approach, implementation of CBCS, flip classroom, blended learning, problem based learning, etc, and have brought flexibility to the system thereby providing wide opportunity to pursue their studies seamlessly. To manage these developments, the university administration needs to be restructured, he said.

While delivering the inaugural address, Prof R S Bawa emphasized on the need for preparing for the desired changes, which are inevitable due to fast changing global environment. He observed that new age institutions need to gear up to handle the pressing demand of the society. The age-old practice of university management may not adequately respond to the changing demands. The expectations of the stakeholders and society at large is increasing day by day. Under the circumstance, there is no way but to revamp the management system for its better and efficient functioning and serving the society. The inaugural ceremony was concluded with vote of thanks delivered by Prof Nilesh Arora.

The first technical session of the Workshop was on the subtheme, 'The *Changing Environment and Need for Change in Indian Universities*'. Prof N D Mathur, Manipal University, Jaipur was the Resource Person of the session. While speaking in the context of change in Indian universities, Prof Mathur stressed on the need for qualified faculty; quality of curriculum and pedagogy; quality infrastructure; academic-industry linkages; world class research and innovation (beyond

ranking and numbers); ability to handle uncertain regulatory framework and political interruptions.

'Strategic Management of Universities and Higher Education Institutions in Indian Context' was the subtheme of second technical session. Prof Shiv K Tripathi, Chandigarh University was the Speaker of the session. Speaking on the strategic management context of Indian Universities, Prof Tripathi elaborated on changing perspectives and the role of universities. He emphasized on the role of new technology; changing work value; knowledge exposure; competition; market turbulence; globalization; and socio-political changes. He also emphasized on the importance of widely shared mission statement, firmly embedded in the attitudes and culture of the university as well as the importance of a university to delegate initiative and a large part of decision making to the lower levels in the hierarchy.

In the third session, hands on exercises were conducted. The participants were guided for sharing change management strategies and practices adopted by their respective universities. Prof Tripathi was the moderator of the session.

Fourth technical session was on 'Planning and Implementing Change in the University'. Prof K K Bajaj, Dean of Colleges cum Director, CDC, Himachal Pradesh University, Shimla. Prof Bajaj elaborated on the need for becoming more operationally efficient and effective; emphasising on improving student outcomes; increasing excess to higher education; and recruiting and retaining top faculty members and researchers.

'Future Directions and Strategies for Strategic Change Management in Indian Universities' was the subtheme of the fifth session in which Prof Pushpinder Singh Gill, Professor, School of Management Studies, Punjabi University, Patiala was the Resource Person. Prof Gill stressed on identifying the areas of improvement; presenting the case for change such that it is received well by the team; maintaining the transparency and addressing the why, when, and how the change is going to be implemented; successfully implementing the change and being prepared to address the problems as they arise; and reviewing and continuing to re-evaluate the achievement of goals and accountability for the same.

In the sixth technical session a talk was delivered by Mr D P Singh, Senior Executive Vice President, Chandigarh university on the subtheme 'University Strategic Change Management Process'. Mr Singh elaborated on establishing a sense of urgency; creating the guiding coalition; developing a vision and strategy; communicating the change vision; empowering the employees for broad based action; generating short term wings; anchoring new approaches into the culture. Mr Singh also explained John Kotter's eight step model for leading the change in the context of universities.

The seventh technical session was again devoted to the practical exercises. The session was moderated by Prof R M Bhagat, Chandigarh University and Prof (Dr) Shiv K Tripathi, Chandigarh University wherein the participants had a peer interaction and exchange of ideas and practices on managing change in their respective contexts.

The eighth session was entirely devoted group presentations based on their learning during first two days of the workshop. The session was conducted by Prof (Dr) R M Bhagat, Chandigarh University and Prof (Dr) Shiv K Tripathi, Chandigarh University. Total 5 groups made presentations where the participants highlighted a number of factors, including: the need for change in semester system to suit Indian context;

issue of rigidity and flexibility in public and private institutions respectively; the relevance of accreditation; need for research-driven improvements in management of higher education; and need for joining hands together to prevent flow of money outside the country.

'Developing a Change Management Roadmap in the Context of Indian Universities: Some Perspectives' was the subtheme in the ninth session of the workshop in which Prof Ramesh Chander, Chairperson, Management Studies, Kurukshetra University, Kurukshetra was the resource person. Dr Chander highlighted the changes happening in context of Indian higher education. Based on his experience in the management of Indian universities, he emphasized on need for planned interventions to realize desired changes in the future.

The valedictory session started with welcome note and workshop-report presentation by the Workshop Convenor Prof Shiv K Tripathi. The Chief Guest Prof B S Sohi, Pro Vice Chancellor, Chandigarh University stressed that due to fast changing environmental factors, universities must be ready for the change in order to be relevant to stakeholders' need. The workshop ended with vote of thanks by Prof Nilesh Arora.

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