ISQIHE 2020

BOOK OF ABSTRACTS

International Summit on Quality Indices in Higher Education

Organized jointly by
Delhi Technological University
&
Engineering Staff College of India
New Delhi, India
6th-7th November, 2020

THE WORLD BANK NPIU TEQIP-III

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CONTENTS

CONFERENCE ORGANIZERS

The conference is being organized by two partner institutions:

The **Delhi Technological University (DTU)** is a non-affiliating, teaching and research University at Delhi to achieve excellence in Science, Engineering and Technology, Management and other allied areas. The university enables the students to face the wide-ranging changes taking place in these fields globally. This includes innovation, design, development, construction, production, managerial and entrepreneurial activities. The university lays great emphasis on assisting students in the development of national character, self-confidence, leadership, and fostering an ecosystem for creativity and imagination. This premier institution is globally well-known for its outstanding education, research and innovations. The university currently offers various interdisciplinary and industry-relevant programs in science, technology, management and allied areas at both undergraduate and postgraduate levels. The university has established a strong academia-industry interface and has collaborations with reputed research organizations, industries and premier institutions.

The **Engineering Staff College of India (ESCI)** is at the forefront in the professional development of engineers in both core engineering disciplines and also interdisciplinary domains such as climate change, quality management, intelligent transportation, renewable energy and water resources management. Recent programs of ESCI address emerging areas such as additive manufacturing, information security, unmanned autonomous vehicles, engineering analysis, and simulation. ESCI also supports technical universities and engineering colleges through programs that focus on accreditation and assessment protocols, proficiency development for TEQIP institutions and employability enhancement of engineering graduates. Eminent engineers, scientists, industry leaders, IE (I) council members and academicians who serve as empanelled experts and adjunct faculty of ESCI enrich these programs through the sharing of their professional insights.

WELCOME ADDRESS BY THE ORGANIZERS

It is our pleasure and honor to welcome you to the **International Summit on Quality Indices in Higher Education, 2020, New Delhi, India.** This conference has been organized jointly by the Delhi Technological University, Delhi and the Engineering Staff College of India, Hyderabad with an aim to bring to a common platform, the achievements and challenges of higher education system from the perspective of quality assurance and to discuss further perspectives on the key strategic areas in higher education.

This conference addresses the achievements and challenges faced in the higher education system from the perspective of quality assurance and discuss varied perspectives on subjects related to higher education. It lays special focus on the quality initiatives in institutions, quality indices in higher learning institutes, implementation of the new education policy in India, and quality assurance in higher learning institutions. The overall goal of this conference is to bring together bright minds to give talks that are idea-focused, and on a wide range of subjects, to foster learning, inspiration, and wonder – and provoke conversations that matter.

We express our deepest gratitude for the distinguished speakers and panelists who agreed to deliver the keynote sessions and panel discussions for this conference. We would like to sincerely appreciate the participants and the presenters for their contributions and for making this conference successful. We would like to thank the Conference Chairs, the advisory committee, the overall monitoring committee, the technical program committee, the hackathon committee, the international participant facilitation committee, and the organizing committee for their unparalleled support in organizing this conference. We specially wish to thank the reviewers for their help in reviewing the manuscripts in time.

We wish to especially thank all the sponsors of this conference without whose support this conference would not have been possible. We hope that this conference will be a great platform for all of us to share our knowledge, expertise and innovation in the fields of higher education which will eventually lead to a technologically enriched, inspiring and enhanced learning for the learners of tomorrow.

-Conference Organizers

CONFERENCE AIMS & SUBJECT AREAS

AIM OF THE CONFERENCE

To spot achievements and challenges of higher education system from the perspective of quality assurance, to share good practices, and to discuss further perspectives. It will offer participants the opportunity to:

- Exchange information and experiences on implementation of quality initiatives and processes in their institution.
- Informal networking, work in groups, discussing and developing ideas on all quality indices in institution of higher learning.
- The conference is dedicated to discussing the tasks ahead in implementation of new education policy in India, the development of external and internal quality assurance in higher education, involvement of students in quality assurance processes.

The target audience for this conference are the quality managers and policy makers of higher education institutions, academic and administrative staff. It also targets the staff from quality assurance agencies, policy makers from the ministries of education and other public institutions, student representatives, as well as academicians working in HE Quality research and national experts.

KEY SUBJECT AREAS

The main subject areas of the conference are aligned to these four tracks:

Track 1: Accreditation System

Track 2: Ranking system

Track 3: Governance, Policy & Leadership in higher learning institution

Track 4: Technology, Innovation and Entrepreneurship

The goal is to bring together bright minds to give talks that are idea-focused, and on a wide range of subjects, to foster learning, inspiration, and wonder – and provoke conversations that matter.

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INTERNATIONAL SUMMIT ON QUALITY INDICES IN HIGHER EDUCATION

PROGRAM SCHEDULE

SESSION 1: 6th November, 2020 (12:00-2:00 pm)	
Session Chair: Prof. Rajesh Rohilla	
Session Co-Chair: Dr. Yashna Sharma	
Session Facilitator: Ms. Kirti Dalal	
Link for the Google Meet: meet.google.com/zaa-qfuy-dsx	
12:00-12:15 pm	***Paper ID: 1009*** Outcome based education (OBE) and learning approach in classroom: concept with sample example and case study
12:15-12:30 pm	***Paper ID: 1022*** Engineering Education Practices, Assessment, Evaluation through OBE
12:30-12:45 pm	***Paper ID: 1041*** From Marks to Grades: A Fine to Course Retrograde and Regressive Journey - An Unwarranted, Unscientific, Unjustified Irrational, Unconscious and Avoidable Proliferation in Autonomous Colleges in India and the way ahead
12:45-1:00 pm	***Paper ID: 1044*** Washington Accord: Are we heading to Macaulay Part-II again - An urgent need for Indianization of Accreditation Process
1:00-1:15 pm	***Paper ID: 1045*** Impact of Accreditation Process in Technical Education – a case study
1:15-1:30 pm	***Paper ID: 1066*** Question Paper Quality - A Major Concern in Outcome Based Education
1:30-1:45 pm	***Paper ID: 1097*** Revamping of Curriculum Design and Delivery: An urgent need to change the conventional start to end approach to a new approach from Coarse to Fine
	Concluding Remarks

SESSION 2: 6th November, 2020 (3:00-5:00 pm)	
Session Chair: Prof Amit Kumar Srivastava	
Session Co-Chair: Dr. Devanand	
Session Facilitator: Ms. Sreelakshmi	
Link for the Google Meet: meet.google.com/eft-aopu-soo	
3:00-3:15 pm	***Paper ID: 1067*** Curriculum Development Procedure - in the View of Achieving Accreditation
3:15-3:30 pm	***Paper ID: 1073*** Quality Assurance and Accreditation: Global Perspective
3:30-3:45 pm	***Paper ID: 1081*** Comparative study of key accreditation and ranking institutions in India
3:45-4:00 pm	***Paper ID: 1084*** Blended learning for teaching English language

4:00-4.15 pm	***Paper ID: 1088*** ELT Phenomenon and University Level Students: A Study of the Problematic of Medium
4:15-4:30 pm	***Paper ID: 1093*** Current Trend of Internet of Things (IoT) Curriculum, Research and Industry Need :A Survey and Comparative Study
4:30-4:45 pm	***Paper ID: 1095*** Review of Management of Higher Education of Arunachal Pradesh
	Concluding Remarks

SESSION 3: 7th November, 2020 (9:30 -11:00 am)	
Session Chair: Prof. Nirendra Dev	
Session Co-Chair: Dr. Shilpa Pal	
Session Facilitator: Ms. Sreelakshmi	
Link for the Google Meet: meet.google.com/crx-kcqe-bwd	
9:30-9:45 am	***Paper ID: 2042*** Revamping of NIRF Ranking System : From Present Big Illusion to a Proposed Realistic Comparison
9:45-10:00 am	***Paper ID: 2051*** 2019 NIRF rankings of Indian Universities: Decoding the reasons to be in top 100
10:00-10:15 am	***Paper ID: 2061*** Quality Indicators of Higher Educational Institutions: Are they adequate in Indian Context?
10:15-10:30 am	***Paper ID: 2090*** National Institutional Ranking Framework (NIRF) 2019: Scientometric and Patentometric Analysis of Engineering Educational Institutions Research Outcome in Tamil Nadu
10:30-10:45 am	***Paper ID: 2017*** Implementation of benchmarking for quality assessment in higher education institutions
	Concluding Remarks

SESSION 4: 7th November, 2020 (11:30 am- 1:00 pm)	
Session Chair: Prof. S. Indu	
Session Co-Chair: Dr. Gurjeet Kaur	
Session Facilitator: Ms. Akanksha Srivastava	
Link for the Google Meet: meet.google.com/qyo-fcsa-qsd	
11:30-11:45am	***Paper ID: 3016*** Affirmative Action for Women in Engineering Education: A Study of Delhi, India
11:45-12:00 pm	***Paper ID: 3055*** The importance of incorporating social responsibility in the educational framework of engineers
12:00-12:15 pm	***Paper ID: 3068*** Unsuitability of publications, citations, impact factor to evaluate the quality of scientific outputs of a researcher in Engineering, Science and Technology
12:15-12:30 pm	***Paper ID: 3070*** Misleading Research Criteria for Measuring Quality: Do they promote genuine research or manipulation?

12:30-12:45 pm	***Paper ID: 3071*** Academic Autonomy in Higher Educational Institutions: The Most Used, Misused yet the Least Understood Term?
	Concluding Remarks

SESSION 5: 7th November, 2020 (1:30-3:00 pm)	
Session Chair: Prof. Rajan Yadav	
Session Co-Chair: Dr. Rishu Chaujar	
Session Facilitator: Ms. Megha Sharma	
Link for the Google Meet: meet.google.com/atv-xsuf-yxz	
1:30-1:45 pm	***Paper ID: 4018*** A role of technological institutes to convert learners into creators for the development of an effective entrepreneurs
1:45-2:00 pm	***Paper ID: 4031*** Holistic and Hierarchical Innovative Indices for Quality Assurance in Technical Education
2:00-2:15 pm	***Paper ID: 4036*** Employable Skills of Engineering Graduates from Assam
2:15-2:30 pm	***Paper ID: 4065*** Impact of ICT Based Content Development in Teaching, Learning and Evaluation ?
2:30-2:45 pm	***Paper ID: 4096*** The Necessity of Interdisciplinary Study: Bridging the gap between Technology and Humanities
2:45-3:00 pm	***Paper ID: 4100*** Decoding Sarcastic Sentiment in independent sentences using Transformer based language models
	Concluding Remarks

PAPER ID: 1009

Outcome based education (OBE) and learning approach in classroom: concept with sample example and case study

Shirish Adam, Prashant Gaidhane and Rajendra Kokate
Government College of Engineering, Jalgaon

ABSTRACT

The challenges of 21st century education are to improve student engagement and equip the students with the state of the art knowledge, skills and attitudes and to ensure the life-long learning process. It is not that accredited programs produce a better graduate. The accreditation of the program means meeting minimum requirements. It is recognition of quality of educational programs by different stakeholders. It is observed that until the Outcome Based Education (OBE) is actively implemented in classroom, the accreditation process will be a mere documentation. To achieve the goals of quality improvement and assuring the minimum requirements the definition, correlation and evaluation of Course Objectives (COs) is very important. At the time of curriculum design proper flow and steps are not taken care of which leads to the incorrect/irrelevant CO attainment calculations. This paper explains the process of defining the COs, process of mapping COs with standard Program Outcomes (POs) which are already defined by NBA (National Board of Accreditation). The paper illustrates mapping and weight assignment structure to the correlation cell with example. Accreditation parameters can be achieved for a program through offering different courses related to program domain and teaching learning process. Domain independent program outcomes can be achieved through teaching learning process and interdisciplinary courses. The main role of the teacher in outcome-based learning approach is guide and mentor the students.

PAPER ID: 1022

Engineering Education Practices, Assesment, Evaluation through OBE

Jay Singh
GL Bajaj Institute of Technology and Management

ABSTRACT

This paper describes the process of engineering program accreditation through Outcome Based Education (OBE). In current scenario, engineering education is not only to get a degree of particular program but it is a kind of outcome based certification to explore him/her in international engineering market. There are number of institutions/universities in various countries those are celebrating an education recognition of international engineering education standards. Now days most of students are getting degrees without awareness of outcome based education. Awareness of OBE is more important to one and all educators, students, parents, etc. The process of OBE awareness is the function of healthy practices adopted by institute/university. This paper elaborates the key points of healthy practices to be adopted for the accreditation of engineering programs to be fit in reputed engineering environment.

PAPER ID: 1041

From Marks to Grades: A Fine to Course Retrograde and Regressive Journey - An Unwarranted, Unscientific, Unjustified Irrational, Unconscious and Avoidable Proliferation in Autonomous Colleges in India and the way ahead

Narayan Marathe
Walchand College of Engineering Sangli

ABSTRACT

Unfortunately almost everybody perceived that using Grades instead of Marks in Student Report Card integral part of Autonomy. Grading System has evolved in universities abroad having a rich faculty:student ratio enabling faculty member to observe students' in classroom and evaluate their expertise in solving assignments/tasks or undertaking project work to grade them in either Fail(FF) Grade or Pass Grade from (DD to AA). With higher faculty:student ratio, major assessment is formative where resolution of classification can't be very fine and 7 Grades are sufficient. In India, when this system was limited to IITs, it was fine. But suddenly Grading System was introduced by almost all Autonomous Colleges without making any changes in evaluation system which is mainly summative where students are awarded marks out of 100. It was done by forming bins from 40-44 corresponding to DD, 45-49 to CD, 50-59 to CC and so on upto 90-100 as AA. Grades DD to AA means scores from 4 to 10 in increasing order. This kind of conversion from Marks to Grades is biggest mockery. Nobody can explain exact advantage of suppressing wide range of marks from 40 to 100 (61 distinct levels) into just 7 Grades leading to Quantization Errors. Only difference it makes is counterproductive effect on overall performance due to quantization errors at boundaries. Student getting 59 marks in all 6 subjects gets CC Grade everywhere with 6.00 CPI (Total 354/600) whereas another student getting 50 marks in 3 subjects and 60 marks 3 subjects gets CC & BC Grades with 6.5 CPI (Total 330/600). This single example should suffice to throw away this Absolute Grading System. Whether actual marks obtained are to be directly taken to reflect Performance in that Course is debatable and depends on many factors ranging from quality of students, teacher, other resources and quality of evaluation system (question papers). To partially neutralize these factors, Relative Grading System is proposed with Flexible Grade Boundaries as against Rigid Grade Boundaries in Absolute Grading System but it also suffers from unavoidable quantization errors similar to above. Thus Grading is an unnecessary attempt to distinguish or classify Students' Performance in a course ONLY in 7 Pass Grades when large range of Performance Descriptor is available in the form of overall marks after Formative/Summative assessment. Therefore what is actually needed is Normalization of Overall Marks (After Formative/Summative assessment) into Performance Score out of 10 (From 0.00 to 10.00). Total Marks obtained after Overall Assessment (Formative/Summative) (Normally out of 100) are required to be mapped into Performance Score where expected mean and standard deviation of Performance Score for given course for a class in given situation is a-priory decided by suitable mathematical model. This paper tries to propose a new normalization system expected to be made applicable especially in Autonomous Engineering Colleges in India where assessment (whether continuous or semester-end) is largely of summative type and is expected to overcome the lacuna in the present Grading System (whether Relative or Absolute) being blindly practiced in India unfortunately.

PAPER ID: 1044

Washington Accord: Are we heading to Macaulay Part-II again - An urgent need for Indianization of Accreditation Process

Narayan Marathe
Walchand College of Engineering Sangli

ABSTRACT

Due to thrust by TEQIP since 2003, many Government and Aided Colleges became Autonomous and as major fulcrums of framing of Curriculum Evaluation of Students were delegated to these Colleges, it became necessary to have different parameters of Accreditation for Autonomous and Non-Autonomous Engineering Colleges. Simultaneously this was time where after proliferation of availability of learning material in the form of notes and videos on internet, there was a rethinking about overall teaching learning process right from curriculum design, delivery and evaluation. Pedagogy, Bloom's Taxonomy and Outcome Based Education became buzzwords of the day which every Tom, Dick and Harry started uttering without meaning even their meaning forget about context. And after signing Washington Accord in June 2014, situation for Autonomous Institutions covered under Tier-I has become simply miserable. Author firmly believes that Proforma designed for Tier-I Institutions sounds so perfect on paper and by having subsections for evaluations in less marks, one feels that it is highly objective, but it is sorry to say that situation is exactly similar to Engineering Education in India where Student passes out because of liberal policy of evaluation. It is simple mockery to ask so many redundant things and CO-PO mapping and its attainment where we are in a situation where there is large diversity of students and delivery of even a Single Course is itself a challenge. Expecting CO-PO mapping, Overall Attainment and its contribution to PEOs is exactly similar to situation to check deliciousness and test of food which itself is scarcely available to poor. Of course views of Author should not be taken in a Regressive way, but Author strongly feels that Backbone of Teaching Learning Process is Classroom Delivery which has to be thoroughly assessed is given a complete go bye in the system. Similarly where it should have been very easy to have something like objective Exit Test of the Outgoing Final Year Batch with today's Online Examination monitored by NBA Team, surprisingly it is not included at all. Instead of sending Self Appraisal Report (SAR) to experts, even if video recording of 3-5 lectures per Theory Course is sent, it will serve major purpose. Similarly the status of Passed out Graduates can also be ascertained from their exact job profile now which can be shared on a portal with enough security. Computation of attainment is just ridiculous because as there is no objective method to set targets, which itself is a major task, and these are not locked with time stamp, all what remains is just Reverse Engineering and adjust attainment figures by taking a suitable care not to show them too high so as to invite attention and subsequent questions! The author proposes to have Outcome Based but more realistic Proforma, much relevant in Indian context to evaluate the Tier-I Autonomous Programs which has some measurable components in the form of Financial Resources invested, Quality of Teaching learning process by actual observing Lecture Videos, Exit Test of passing out batch and the whereabouts of passout students.

PAPER ID: 1045

Impact of Accreditation Process in Technical Education – a case study

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ABSTRACT

We all know that in India, NBA is an autonomous accreditation agency for quality check in technical education. It has been evolved, under AICTE in the primitive years with output model process, and later to outcome model by 2014 and became signatory of Washington Accord [WA]. The changeover took place with lot of effort and thought process of eminent people across India related to Higher education. In contrast to the quality concerns, growth in number of technical educational institutions is multifold simultaneously. Regulatory bodies failed to check quality with quantity at a time in synchronous. To address the core issue, NBA has done significant contributions with the help of all stakeholders. Being an evaluator during 2011-2014, I have been trained by NBA for TIER-1 and TIER-2 models. So I would like to highlight some of the issues, how the accreditation process helping the institutes, students and society as a whole. In India, about 4000+ technical institutions are at UG and PG level including state universities. On average, not even 10% of programmes of total institutions are having NBA accredited. So, to achieve excellence through accreditation, all the technical programmes have to be accredited. To do so, robust implementation process is the need of the hour. In accredited programmes, most of them fall in TIER-2 category due to affiliating system in our country. The students of those institutions cannot compete globally with TIER-1 institutions having WA status. To address this issue, more autonomous colleges are the need of the hour and system is moving towards it at present. In semi autonomous institutions like some of the constituent colleges under state universities, the problem is trivial. At the time of starting of the college, and courses require no approvals but later when it is mandatory, either administration or regulating authority plays no role in getting required approvals and accreditation. So, all the stakeholders are getting suffered across India. To address the issue, correction mechanism is required at all higher education departments of state governments across India to follow the guidelines prescribed by AICTE and NBA. How to meet these challenges is the need of the hour, and I would like to suggest some of the feasible solutions in this paper.

PAPER ID: 1066

Question Paper Quality - A Major Concern in Outcome Based Education

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ABSTRACT

Indian Education system is revamping through the quality concern by various accreditation agencies like National Board of Accreditation (NBA), National Assessment and Accreditation Council (NAAC). Adaption of Outcome based education is the major concern about improving the quality of technical education and major focus on imparting higher order learning and problem solving skills amongst students. Present examination system and question papers test the remembrance and reproducing skills. This is limited approach which focuses on the skills of blooms taxonomy level 1 or 2. Examination/Assessment play important role in order to assess the skills in students. To assure these skills designing of question papers i.e. Quality of question papers plays an important role. The question paper should be designed to test the remembering, understanding, applying, to some extent analyzing skills through the internal tests end semester examination and Analyzing, evaluating and creating levels should be assessed through the mini projects, major projects ,course projects . This paper discuss the examination reforms related to Quality of question paper, Components / Structure of question paper, Design of questions and its corresponding blooms taxonomy level, Course Outcome ,Program outcome ,Related competency skills acquired and performance indicator .The paper illustrates the classification of question ques, skills demonstrated, two step process of competencies and performance indicators to bring the clarity in assessment of program outcomes as well as course outcomes. Also it relates the attainment levels from Course outcomes to assess directly the corresponding skills of blooms taxonomy. This helps for the student as feedback to polish or improve the less attained skill. Similarly Teacher can focus the teaching to the individual student level to improve specific skills required in that students. As a summary the institutes need to reform the examination system. Question paper Quality is the most serious and important basic step to upgrade the quality of technical education in the institutes, universities. As a first step to start imparting the quality concern by arranging Question paper deign workshops in the institutes.

PAPER ID: 1097

Revamping of Curriculum Design and Delivery: An urgent need to change the conventional start to end approach to a new approach from Coarse to Fine

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ABSTRACT

Engineering Education which has seen phenomenal growth in last 30 years and caters vast student population with diverse background needs an India-Specific Pedagogical approach than globally adopted approach. Normally four year Engineering Degree Program covers a standard list of 40-45 Courses in eight semesters with each Course normally is a 40 hour course in addition to laboratories and Project Work. Generally a Course is spread in six modules consuming 6-8 hours each. Traditionally the Module is a Self-sufficient unit and covers right from introduction till design details encompassing most of the levels in a Bloom's Taxonomy. Even though such an approach is appropriate with a small group of homogeneous students abroad, the same approach is highly counterproductive especially in an Indian context with a class of diversified students and that too in large number. Delivering a meaningful lecture to such a class is itself a challenge once we reach to higher taxonomical level and despite many attempts of remedial coaching for slow learners, what is actually observed on field is that such students who are interested at initial sessions where discussion at a broader level is going on in the first module tend to lose their interest when detailing out starts at the last sessions of the first module at higher taxonomical levels. Even though when next module starts again with a broader level discussion, it is practically impossible for any teacher to bring back the interest of such students who have got detuned from the mainstream during the higher level discussions of the last module. This typical problem can be addressed at two levels - At Program level while framing curriculum or at Course level while it's delivery. At Program Design level, where the old classical concept of a Full fledged Course needs to be done away with. The courses should be designed in multiple levels - Coarse and Fine. In fact IIT Hyderabad has come up with a new model of Fractal Academics but it is in a different context. This paper tries to propose to split most of the Core Courses from second year onwards in two parts. Second and Third Year will cover all these Courses at a Coarse level with 2 Credits (Lectures per week). Each Semester will comprise 8 such Courses, covering about 25 such Core Courses leaving remaining space to Science and Humanities. In the final year, again there will be Spelization top-ups of 2 Credits and the students depending upon their ability can choose minimum 6 and maximum 12 such Courses. Those who opt for lesser such Courses have to makeup the remaining Credits through Minor Project and/or Finishing School type rigorous Training through Laboratory Courses. In India, looking at the students' diversity and larger class size, above Solution is considered as optimum. At a Course level, teacher instead of covering every module in detail at one go, should first broadly cover entire syllabus in about 27 hours and which most of students will understand and use remaining 13 hours to fill details.

PAPER ID: 1067

Curriculum Development Procedure - in the View of Achieving Accreditation

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ABSTRACT

The technical institutions are to be accredited to assure the quality education to various stakeholders including students for global equivalence and acceptance. Accreditation methodology is mostly aligned with Outcome based Education (OBE) and emphasizes the attainment of program outcomes. Curriculum design and development determines an implementation of OBE and have correlation and significance with quality outcomes. This paper presents the role and consideration of program educational objectives (PEO) and program outcomes (PO) in curriculum development. The systematic strategy for curriculum development in accord with institutes vision mission statement, departmental PEO and PO, industry requirements, and global standards is proposed. Various formats for mapping and evaluations are illustrated with case study and examples. Current accreditation criteria and parameters are explained for curriculum development. The paper suggests various observations for achieving independent program outcomes through teaching learning process and interdisciplinary course. Overall, the paper provides simple and systematic curriculum development procedure to ensure accreditation.

PAPER ID: 1073

Quality Assurance and Accreditation: Global Perspective

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ABSTRACT

Now-a-days providing quality education has become an increasingly important matter for higher institutions and it is important for stakeholders. Quality assurance means an overall improvement of institutions and their management. Every stakeholder wants quality education, so there is much need for accountability, reliability and value for money. Many agencies are providing Quality related certificates and it is the responsibility of the accreditation agencies and educational institutions to assure that the education and other related work are of an excellent standard and in accordance with the global standards. Many governments desire to establish at least one, 'world class' higher education institution, so they are going for overall quality improvement. The objective of this study is to compare the accreditation/ assurance certification standards of different countries of different continents.

PAPER ID: 1081

Comparative study of key accreditation and ranking institutions in India

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ABSTRACT

Quality of education is always an important aspect focused by Government, Industry and Society. It has a direct relation with the quality of human resource and economic growth of the country. In technical and higher education in India, the issue of quality is even more critical as rapid growth of the institutions took place in last three decades in order to improve the gross enrollment ratio and meet the aspirations of the school passing out students. Ministry of Human Resource Development of Government of India has framed several policy frameworks to increase quality of Technical and Higher education and at present there is enormous focus on Accreditation of the intuitions and their ranking. Due to multiplicity of such instruments, the institutions are not able to comprehend them as they see them independent. In this paper a holistic view has been presented regarding the three most popular instruments namely NBA, NAAC and NIRF. A case has been made that though they have different nomenclature and weightage of various dimensions of quality, the requirements of all of them is similar.

PAPER ID: 1084

Blended learning for teaching English language

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ABSTRACT

The 21st century learners are tech savvy and flexible in their approach with their learning not being confined to classrooms. The digital natives are not comfortable with conventional method of teaching as their concentration span is shorter than required. Blended learning is the best way to teach the new generation. Although there have been many methods evolved by ELT practitioners to teach English but in the present context a combination of traditional lecture method and e learning is adequate. Flipped classroom is a part of blended learning where students are required to watch prerecorded short lectures online and through interaction and discussion learning takes place. In this the teacher aims to empower students with the skills and information needed to make the most of the online material by guiding them in the classroom for reaping maximum benefits. Learning theories support flipped classroom as e learning enhances and promotes learner centered customizable learning. The paper will focus on the method of blended learning in English language teaching for better results.

ELT Phenomenon and University Level Students: A Study of the Problematic of Medium

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ABSTRACT

English language teaching is a complex phenomenon in itself. In a multi-varied and linguistically diversified country like India, this complexity gets heightened to a major level due to the psychological and cognitive barriers created by learners. It is a fact widely acknowledged that the psychological inclination of learners has a great impact on their overall learning outcome. This research article intends to unravel the complexities of psychology of non-native students while they learn English language. Tentative measures to be initiated in classroom to make the students overcome their social, psychological, and behavioral interruption while learning English have been worked upon. This work further unravels the impact of efficacy and hindrances created by mother tongue of the learner while comprehending this language. The present research included a feedback system in order to understand the conditioning and thought process of these students while learning English language. Surveys were conducted after six months of teaching to learn about their expectations and results. The problematic of teaching English was further explored through longitudinal analysis, qualitative exploration and comparison of medium of instruction and approach.

PAPER ID: 1093

Current Trend of Internet of Things (IoT) Curriculum, Research and Industry Need: A Survey and Comparative Study

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ABSTRACT

Internet of things (IoT) has emerged as a new wave of advancement in computing and communication technology. Most of the Universities have included IoT related course in Undergraduate (UG) program but there are few Universities which have dedicated IoT course for UG students. Various IT and Embedded System industries have developed IoT programs, development platform and tools for learners to build and develop their basic understanding of IoT. Incorporation of dedicated IoT curriculum for Undergraduates of Engineering disciplines to create cross-trained innovators of next generation products and services is needed. In this paper recently published research in IoT curriculum developments for Undergraduates has been studied. This paper presents a step by step comparative study of existing syllabi of IoT in various Indian Universities like IITs, NITs, state Universities and Foriegn Universities at undergraduate as well as post-graduate levels and also reviews IoT workshops & Short Term Courses (STCs) of IITs and NITs. Analysis of IoT Job profiles posted by various companies through employment websites like naukri.com, timesjobs.com, shine.com and indeed.co.in for different positions related to IoT technology has been presented. Questionnaire based survey for B.Tech (UG) students and faculty of different universities was conducted. As extension of the survey and consequent analysis, this work is also carried out in the field of sensor data fusion & its techniques including development platforms (Hardware & Software both) in IoT syllabus.

PAPER ID: 1095

Review of Management of Higher Education of Arunachal Pradesh

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ABSTRACT

The study is an attempt to review the status of the growth and development of higher education in terms of establishment, innovation, and legality in the state of Arunachal Pradesh. Also, it will identify the problems, progress, and prosperity in the form of management of higher education special reference to the establishment, innovation, and legality. The research approach used for the study is the review method. Lastly, the research will bring manifold benefits for the state of Arunachal Pradesh especially in higher education for growth and development of education. This also will review new reforms and policy implementation for the management of higher education in the form of establishment, innovation, and legality.

PAPER ID: 2042

Revamping of NIRF Ranking System: From Present Big Illusion to a Proposed Realistic Comparison

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ABSTRACT

Despite a welcome initiative to have a structured mechanism for Ranking of Institutes imparting Higher Education in India started in September 2015, a firstever such attempt at a National level by MHRD, with Ranking released in 2016, its Outcome is in fact very much illusive and therefore rather counterproductive especially in the case of Engineering Colleges. A mere study of extremely poor Correlation between NIRF Ranking and the Admission Cut-Off Marks/Average Merit Score substantiates this fact beyond doubt in case of State Engineering College Ranking and therefore needs to be revamped in an overhauling manner. This paper tries to address this issue at length and comes up with a proposed feasible solution. Quantification of Reputation of any Educational Institution which is Perception Based Descriptor into a Measurable Numerical Merit Score is in itself an abstract, intangible or incorporeal phenomenon. Any process designed to achieve is naturally susceptible and therefore very challenging. Weightages assigned to various Parameters in the total Score and actual measurement of these Parameters is highly vague for the want of reliability of measuring tool and authentication. While Ranking Process relies on a fixed distribution of marks to various parameters whereas Ranking of an Educational Institution is actually driven by one very strong parameter even by ignoring deficiencies in few other parameters. The Static Weightages assigned to various Parameters in the existing system cannot reflect this inherent feature which is pertinent in building up a Reputation of an Institution. The proposed method tries to address this issue by suggesting a Weighted Sum of Multiple Parameters with Dynamic Weights in a flexible window, width of which depends upon the exclusiveness of the particular parameter in building Institutional Reputation. The Overall Score is then Objective Function which is to be maximized by varying different Weights and boils down to a Classical Constrained Optimization problem. The Career Progress of Alumni which reflecting the history and the Competency Index of the Admitted Students which reflects the future have been quantized in an effective manner in the proposed solution alongwith Infrastructure, Faculty & Staff and Teaching Learning Process which indicate the Present State of an Institution. Especially the focus of the proposed method is on quantification of Alumni component into a Alumni Progress Index which is expected to make the NIRF Ranking more Realistic. Any attempt to quantify the Reputation of an Educational Institution without involvement of a scientifically mapped Public Opinion Component will always be incomplete. The proposed method tries to include this component by quantifying the public opinion through a Google Form based Survey from various Stake Holders through proper authentication and also by applying appropriate Data Analytics Statistical Techniques to exclude Non-genuine responses. The Engineering Human Resource in the organized Sector happens to be a major participant in the Survey which further makes this Survey about Reputation more genuine. In all the paper tries to address the shortcomings in the present NIRF Ranking System which is typically conventional and static with a more Scientific, robust, dynamic, adaptive and modern System.

PAPER ID: 2051

2019 NIRF rankings of Indian Universities: Decoding the reasons to be in top 100

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ABSTRACT

In the age of competition among higher education institutions for seeking admission of students, getting grants and better research students, it has become necessary for every institution, both government aided and private to get ranked among top 100 of the NIRF ranking system. The spatial spread of the top 100 universities shows that the central, eastern and NE states of India lacks good universities, both public as well as private and most of the top ranked universities are based either in southern states or in the Delhi NCR. The ranking is based upon the scores of parameters such as teaching, admissions, research, facilities and perception. To understand the reasons which affects the ranking, three sets of data have been analysed, one for all the top 100 Indian universities, for all the public universities among the top 100, which are 65 in number and private universities, which are only 35 in number. It can be concluded that the all the universities score almost similar in faculty qualification, faculty student ratio, examination metric and budget utilization. The factors which really makes a difference in the ranking are number of student enrollment, students completing PhD, number and quality of publications. Patents and consultancies are two areas where almost every Indian university is struggling, as the score is abysmally low for all the institutions, except the top ranked University, IISc, Bangalore. Perception is another factor which, apart from research, affects the ranking.

PAPER ID: 2061

Quality Indicators of Higher Educational Institutions: Are they adequate in Indian Context?

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ABSTRACT

Parallel to the exponential growth of higher educational institutions (HEIs) worldwide the questions of academic quality and public accountability have been arising from several mediums (Dill and Soo 2005). The culmination of public demand and systematization of quality evaluation processes have given birth to Institutional Ranking systems and League Tables across the world (Altbach 2013). India also followed this trend and discovered its own National Institutional Ranking Framework (NIRF). Literature however suggested that due to several subtle factors the practice of producing report cards in public may create more harm than good (Vardy 2016). Such factors include diversity of the local aspirations and distinguished nature of the institutions (Deem 2001; Boulton 2011). According to our study, Indian academic scenario is quite divergent in terms of quality perceptions, requirements and aspirations of the stakeholders. Bunch of quality indicators that is being used by international rankings represents mainly the global aspirations of the domain. It completely ignores the local factors and aspirations (Marginson and Rhoades 2002). In addition, there are issues about the processes involved and the data used for such rankings (Harvey 2008; Bowden 2000). NIRF though does some justice for Indian academic stakeholders, however several factors are still missing that need focus for a meaningful ranking framework. We identify these factors, namely Transparency, Accountability, and Autonomy etc., as meta-quality parameters. Further, we argue that a comprehensive framework is also needed to handle and mine the data utilized for ranking purpose such as an Educational Data Mining (EDM) Framework, as proposed in Sadh and Kumar (2019). Although, concerning about quality standards and providing performance report is a welcome step towards public accountability, but assessment of quality is not so straightforward due to the reasons mentioned above. Thus, there is a need to rediscover quality indicators for producing more appropriate report cards of Indian academic institutions.

PAPER ID: 2090

National Institutional Ranking Framework (NIRF) 2019: Scientometric and Patentometric Analysis of Engineering Educational Institutions Research Outcome in Tamil Nadu

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ABSTRACT

Most of the Scientometric people are addressing only for scientific publication only not for patents/ Patentometric. This paper presents a Scientometric analysis and Patentometric analysis (research output) of Tamil Nadu educational institutions. The focus is on all the technical education institutes in Tamil Nadu indexed 2019 in the National Institutional Ranking Framework (NIRF) Ranking which is a recognized body and is approved by MHRD Minister of Human Resource Development (MHRD), Govt of India, to assess technical institution in the field of education. The research output published during 2009 to 2019, indexed in Clarivate Analytics, Intellectual Property Rights – Indian Patent Advanced Search System portal, Derwent world patent index were considered for this analysis. Different Scientometric/Patentometric indicators have been calculated to present a detailed assessment of the scientific performance measured. This study provides a brief but informative summary of research outcome of Tamil Nadu educational institution. This paper analyses the performance of the technical institutes in Tamil Nadu based on the parameters as no of web of science documents, category normalized citation impact, Times cited, % of documents cited, international collaboration, funding agencies, research area et al and Patentometric aspects like no of patents granted, no of patent published in the patent journal and commercialized by the institutes and perception from the stake holders associated with the institute. The main contribution of this study is to analysis the relationship between Institutions' Scientometric and Patentometric Research outcome with respect NIRF Score.

PAPER ID: 2017

Implementation of benchmarking for quality assessment in higher education institutions

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ABSTRACT

The last two decades have seen the rise in online and classroom technical degree programs offered by universities and colleges in India and other parts of the world. This has created a lot of indecisiveness among stake holders due to availability of a wide range of choices. This study proposes a methodology using benchmarking, which is a process of recognizing the most imperial standards of superiority for any product, service or process and then making the changes/enhancements vital to reach those standards. It has been employed to assess quality standards for various criteria viz. academic reputation, graduation outcome, employer reputation, student faculty ratio, citations per faculty, outreach and inclusivity, international faculty, international students, etc. These criteria are used by both national and international ranking agencies. Further, this methodology has been illustrated by taking a case of top twenty Indian technological universities and colleges that are ranked by National institute ranking framework & QS India university rankings. Thereafter scope for improvement in these universities and colleges has been identified against a benchmark and lastly, methods for improvement for the same has been suggested.

Affirmative Action for Women in Engineering Education: A Study of Delhi, India

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ABSTRACT

Purpose: Engineering is mainly considered as a male profession and women participation is low. However, during last 15-20 years, significance of women participation has been realised by stakeholders (Singh, 2013). The United Nation's SDG5 also talks about gender equality. India being one of the signatories, has to comply by 2030. Objective of study: In this context, this paper attempts to analyse following for the state of Delhi, India: (i) various reservation facilities for students on the basis of gender, caste, religion and other criteria by the colleges of Delhi. (ii) Gender participation among these reserved categories will also be discussed on the basis of intake of the year 2015-16. These students have just graduated in 2019. Methodology: The analysis has been done on the basis of both secondary data as well as primary data. The secondary data has been used for getting the information regarding the enrolment/intake capacity of the colleges. The primary data on student intake for various college has been collected from the website and Annual Reports of the college. In case of any ambiguity, the office of the college has also been contacted. Findings: There are 24% women participation in Delhi while for all India it is 29.9% while there is one university exclusively for women. In cases of ST student's gender participation is 30% but just 21% per cent for SC and 19% for OBC. Interestingly, the study reveals that women participation in engineering among Muslims is found to be significantly less as compared to other religion groups in Delhi. However, the primary survey includes two institutions (Jamia Millia Islamia and Jamia Hamdard) that provide reservation to Muslims to improve their access to engineering education. Therefore, while analysing Muslim women participation in engineering education with inclusion of these two colleges, the share gives a better picture. Relevance: The findings of this study will be quite helpful for the regulatory bodies to take corrective measures. Limitation of the study: Analysis has been done only on secondary data and institutional primary data. Students being important stakeholder, their views are also important and that also need to be considered.

PAPER ID: 3055

The importance of incorporating social responsibility in the educational framework of engineers

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ABSTRACT

The Global community is fronting overwhelming and growing obstacles that /endanger the prospects for sustainability and the prosperity of humanity. A majority of these predicaments are related to technology and how they operate across the globe. It implies that an engineer considers and gives adequate attention to the outcomes of his/her actions for the betterment of others along with the consequences of his/her work on society at large. A need for both bottom-up teaching initiatives from individuals or groups of academic teachers, and top-down support to secure appropriate embedding of the same at university-level. Most often, the latter has been lacking or inadequate. This work investigates the associations between the common perceptions of engineering students towards their social responsibilities and their subsequent participation in service oriented and/or extracurricular activities. There is a need to refocus engineers' perspectives towards the systems of regulation so that they see them not only as restraints but as implied enablers supporting socially competent engineering. The premises of the specific aspects of the service oriented experiences that foster positive attitudes towards social responsibility in engineering students, to be specific types of structured reflection and mutual partnerships with the community have been reserved for future study.

PAPER ID: 3068

Unsuitability of publications, citations, impact factor to evaluate the quality of scientific outputs of a researcher in Engineering, Science and Technology

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ABSTRACT

Although, newspaper, magazines and journals play a vital role in bringing out various news and information concerned with various aspects to the public. Yet, the question that still remains unanswered is whether these journals are adequate enough to infer on the quality of research? Many of the journals are usually run by some private sector business houses, whose primary focus is business. They usually do not publish anything which could adversely effect their business. Unlike, researches in theoretical studies concerned with proving a hypothesis theoretically, researches in Engineering and Technology, may not confine only with theoretical proofs but also their implementation and evaluation in the actual working environment. Moreover, many of the sensitive researches carried out in various research laboratories confidentially without revealing it to the public. The journals usually do not have access to them. Hence, confining the study only to the published articles in journals may not be sufficient enough to know the existing state of art. Also, it is found that the impact factor of journals and citation behaviour of the published articles in general may be affected by various factors including field-dependent factors, which not only can invalidate comparisons across various disciplines but also within different fields of research in one discipline. This paper discusses these aspects to determine the unsuitability of the number of publications, citations and impact factor of journals to evaluate the quality of scientific outputs of a researcher.

Misleading Research Criteria for Measuring Quality: Do they promote genuine research or manipulation?

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ABSTRACT

Due to the exponential growth of research publications, the assessment of research quality has become a significant concern all across the globe (Souto et al. 2007). Several policies and indicators have been discovered for evaluating the research quality in the past. These indicators have now become so prevalent and wide-spread that they are preferred in crucial academic decisions such as promotions, hiring, funding etc., (Birman and Schneider 2009). However, these quality evaluation practices and indicators have their own limitations. Most of the generally used indicators i.e., publication count, citation count, h-index etc., stress over quantity and not necessarily over quality, which is the ultimate objective (Ioannidis et al. 2019). Further, they are misleading at times (Hirsch 2019). Similarly, the reputation of publication venues defined by low acceptance rate, high impact factor etc., is treated as an indicator of quality (Parhami 2016). Most of these parameters are subjective, discipline specific, and are therefore debatable, and inconclusive. These issues leads to manipulation and tweaking of research quality. Studies also show that such parameters are at times become the blockade for inspiring bold ideas (Parhami 2016). Despite the above issues, academic institutions and regulatory bodies utilize abovementioned factors to grant degree, funding, hiring and positioning in many countries including India (Patwardhan 2019). One tweaking of most of the above quality indices is that higher the number of publications, higher would be the value of most of the above mentioned quality parameters. As a result, publishing more papers has become the primary objective of the young as well as established researchers instead of concerning about the genuine research contribution. This makes serious research culture to be converted into a paper printing industry. The rise of predatory and non-credible publications is an outcome of such misleading practices (Agnes 2019). Several research findings also depict the direct linkage between predatory publishing and these misleading quality criteria (Seethapathy et al. 2016). Therefore, rethinking is required over the research evaluation practices currently being used and to define robust quality indicators.

PAPER ID: 3071

Academic Autonomy in Higher Educational Institutions: The Most Used, Misused yet the Least Understood Term?

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ABSTRACT

Autonomy is treated as a most effective remedy for non-decisive system. Some systems dealing with specialized profession are large and complex having non-linear, cause-effect relationships. For smooth functioning of such a system and to deal with the interplay of several internal and external factors, such a system should be quick responsive. Lack of responsiveness reduces the whole system in a non-decisive chunk of liability. Therefore, autonomy is a sacred term for such institutions. It encourages responsiveness and smoothness of the system which in turn assists to maintain quality standards of the specialized profession. In addition, it provides capability of self-assessment and self-improvement. Academic institutions belong to this category, and therefore, they enjoy greater degree of autonomy. Literally, the term autonomy means self-rule. However, this does not mean an autonomous system is based on someone's likes and dislikes, autonomy is not autocracy. Higher Educational Institutions (HEIs) are governed by their act, statutes, ordinances and regulations. The autonomy refers to governance of HEIs in accordance with these statutory provisions, and if needed these rules could be revised as per the due-processes defined by the same. The autonomy of academic institutions is as old as our civilization. Gurukuls were the early example of such autonomous academic institutions. In today's India, the Institution of Excellence (IoE) is the tag for utmost autonomy of an academic institution. Autonomy, as being practiced in today's HEIs, leads to subjectivity and ad-hocism. These two factors are serious threat to the whole objective for which autonomy has been enshrined. Autonomy coupled with subjectivity may produce results that are grave in nature or fatal. Autonomy is enshrined to maintain and improve quality standards and smooth functioning of the HEIs. Another dimension, a binding concept of achieving quality with autonomy, is through enforcing accountability, devoid of conflict of interests. Thus, accountability without conflict of interests works as a shield against intentional or unintentional usages, misusages and conversion of autonomy into autocracy. There are several instances, in ancient and modern HEIs, which have put a question mark about functioning of HEIs though exercising autonomy and without pre deciding accountability and conflict of interest. Therefore, it is no wonder to say that exercising autonomy without deciding accountability is like having a golden egg that can easily burst and spill at any time. In this talk, we will traverse autonomy of academic institutions from Gurukuls to today's institutions of excellence along with some typical cases in the light of the above issues.

PAPER ID: 4018

A role of technological institutes to convert learners into creators for the development of an effective entrepreneurs

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ABSTRACT

In India, All India Council of Technical Education (AICTE), an inspection body of technical and professional education in the country which sanctions intakes of professional institutions and monitors the quality indices through administrative and academic activities across the country. As per AICTE , it can be said that every year more than 1.5 million engineering and technology graduates are produces and available in the market. The market survey indicates that there are hardly 25 percentage technical graduates are ready to employable to the industries and remaining major lots are not useful as they lacks readiness and skilled knowledge which is an essential parameter to the industries. It simply means that every year more than 1 million engineering/technology graduates are unemployable immediate after the graduation, in addition to millions of other unemployable professional and unprofessional graduates provided by government and private universities/institutes across the country. Therefore from last decade, millions of graduates are unemployable and thus an unemployable graduates become concern of all stakeholders. As per entrepreneurship development concerned, the country has underdeveloped professionalism in the traditional models of real sense entrepreneur which were in existence in India before and mid of twenty-first century. In early years, more than 70 percent population were living the villages which were truly autonomous in real sense and these rural parts were a strong pillar of economy and social infrastructure. It should be important to note that the unemployed graduates from towns are migrating into urban area, where the sets of various categories under the umbrella of unemployment are already exist. Therefore such large number of graduates without skill-sets are not only unemployable and burden to infrastructure facilities in industrial belts but also dangerous to the society and economy in terms of family-cum-social life cycle. The professional and technical education providers should focus on development of entrepreneurship during the graduation of learners similar to the placement of the students during the campus. This would not only lead to decline the unemployment but also creates an opportunities to improve the economy by creating jobs to skilled and unskilled humans. In the process of ranking and accreditation major credits to be given accounting back-history of entrepreneurship creators by institution so that the scenario of entrepreneur development can be addressed. In the accreditation evaluation of the institutes either through National Board of Accreditation (NBA) or National Assessment and Accreditation Council (NAAC), mandatory credits should be given to the institutes where institutes aggressively engaged to develop entrepreneur during the graduation of the students.

PAPER ID: 4031

Holistic and Hierarchical Innovative Indices for Quality Assurance in Technical Education

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ABSTRACT

The demand for quality in Technical Education is growing day by day with the changing face of the technical world. This requires the development of new indices for quality assurance and quality control for the grading of technical education so that the attainment of program outcomes can be guaranteed. It is not long back when a degree in engineering was considered to be a certificate of proficiency and capability. But today, the employers do not have faith in the degree or marks scored, leading to the development of independent testing procedures by individual employers. The present situation of the employability of engineering graduates is very disheartening as it is leading to a shortage of capable staff for the industrial sector on one hand and the widespread dissatisfaction of all the stakeholders in technical education on the other hand. It is deeply discouraging as the growing unemployable technically trained workforce poses a grave challenge to the entire socio-political and economic system. If not tackled timely, this would eventually nullify the advantage of the widely proclaimed benefit of the demographic divide that India has at present. Further, the rampant under-employment and under-compensation of engineers has presently created an aversion among the youth towards the engineering profession, by large, which would eventually lead to the scarcity of quality engineers to run the modern world in the near future. Hence, it is necessary to revamp the technical education sector completely to restore faith in the profession. There is a need to come out of the traditional scheme of quality assessment on the basis of marks and grades scored in the examination and the scheme of teaching to develop generalists rather than specialists. Recently, the Washington accord has standardized Graduate Attributes and brought in some standardization to the quality of technical education. However, the present-day reforms in technical education based on these attributes, outcome-based education, and Bloom's Taxonomy based pedagogy are required to be further improvised with incorporation of proposed qualitative holistic and hierarchical indices at student level, teacher level, program level, and institute level and their integration to form the quality indices at the technical education level. These qualitative indices are expected to be more comprehensive than the quantitative indices being currently employed by the system.

PAPER ID: 4036

Employable Skills of Engineering Graduates from Assam

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ABSTRACT

The college education in engineering was limited to Government funded institutions only in the state of Assam, India till recently. Recently few engineering colleges have also been setup in Assam under private management to meet the growing demands. However, the limitation in attracting qualified faculty, low input quality of students and lack of industry orientation leading to engineering graduates with shortage of employable skills in India and is further aggravated in Assam due to low penetration of industry in this area. A study was carried out in 2017-18 to find out the reasons for skill gaps in the final year engineering graduate students. Lack of industrial linkages, qualified faculty, research orientation were found to be the major reasons for the skill gaps. The survey also tried to check the students orientation towards areas of interest in pursuing higher education and the mode of accessing employment information. The results have shown that there is an urgent need for collaboration of Assam engineering colleges with Industry to improve employability of students. The project works, internships have to result oriented and focussed.

PAPER ID: 4065

Impact of ICT Based Content Development in Teaching, Learning and Evaluation

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ABSTRACT

This paper presents the impact of ICT based content development in teaching, learning and evaluation process. Total 211 faculty of the institute have been provided the training on ICT based content development by 15 faculty experts. All faculty are divided into 15 clusters wherein every cluster consists of 10 faculty members. Each cluster is a combination of senior and junior faculty members. Training went for 20 days during the summer break. Various modes of ICT based content development are used such as MOOC Development, Animations, Power Point Presentations (PPTs), Use of MS Office Tools, Opensource platforms for content development, Google Classrooms, Kahoot, Google Forms, Webpage, Google Sheets, Microsoft Team and Software Studios. Systematic monitoring of the ICT based content development is carried out by the Dean Academics, Dean Quality Assurance, HOD and Assistant Head Academics of each department. Deployment of this content is done through the use of flipped classroom concept during the teaching-learning and evaluation process. Based on the students feedback, it is observed that the use of ICT based contents seems more popular amongst the students due to various factors such as quick understanding of the concepts, joyful learning, enables self-paced learning, easy grasping of the difficult engineering concepts, popular amongst not only students but as a group of faculty and students, promotes learning by doing approach and provides access to a wide range of up-to-date learning materials. Effective understanding of the students helps them into quality development of major projects, design and development of innovative engineering ideas, course projects, research projects and internship projects. As the learning component is enhanced, the result improvement of the students is observed in last 2 years. The passing percentages has been increased by 6.47% as well as improvement in first class students is also seen. As per Digital India - campaign launched by the Government of India; in the field of education, it is achieved by the way of incorporating ICT based practices in teaching learning process. This ensures its alignment in favor with the national interest. Students and faculty feels this practices as a joyful learning experience which indicates its effective internalization and has become the culture of the institution.

PAPER ID: 4096

The Necessity of Interdisciplinary Study: Bridging the gap between Technology and Humanities

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ABSTRACT

Human skills stand indispensable and distinct in a world with digital technology and help us to work hard in envisaging the end product and its utility which requires real-world experience, judgement and historical context. Technology alone cannot suffice the human world. To create a better world, we need to focus on people as much as technology, on humanities and societal behaviours as much as the natural sciences. Technologies roll out just in time when humans mindfully modify the material world for meeting human ends. And Humanities gives that crucial context, insights and guidance to the world that is all too often missing in the technology solutions we are creating. Eric Berridge, the Co-founder and former CEO of Bluewolf quotes, "If Science teaches how to build things, it is Humanities that teaches us what to build and why to build them". Humanities teaches us to persuade to perform tasks, gives language that we use to convert our motions to far end actions and therefore, they rightly need to be on the same equal footing with the Sciences. Our future workforce needs diversity, a diversity of backgrounds and skills. The need of the hour is to bring these two disciplines together in academia and business. We cannot effect any meaningful mutations to the future of humans and machines until we don't blend their understanding and interaction. Once we coalesce these insights and innovations, we can make greater strides to developing technology that enriches the human experience, creating new and better opportunities for all.

PAPER ID: 4100

Decoding Sarcastic Sentiment in independent sentences using Transformer based language models

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ABSTRACT

Sarcasm is often an ironic or satirical remark tempered by humor. Such witty or humorous remarks that mean the opposite of what they say tend to introduce a hidden sentiment that needs to be decoded to understand the true meaning. There has been an extensive study to extract visible sentiment in any sentence using various techniques. To decode the hidden sentiment of a sentence, however, is still an elusive task for an automated system and holds extensive applications in the analytics of subjective reviews and comments, among others. In this paper, we address this task of deciphering the hidden intent or sarcasm by employing several different Deep Learning models on a dataset of News Headlines. For this, we compare the performance of trained models of CNN, LSTM, BiLSTM, GRU, BERT, and XLNet in understanding the context of sarcastic occurrences. Through extensive experiments, we learn that the XLNet model performs remarkably well for this particular task, which is reflected in the improvement in the baseline scores by at least 5% in terms of the classification accuracy. Hence we propose a methodology to decode the hidden intent of any statement to precisely point out root cause problems.