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Application Details

APPLICATION NUMBER	202221023262
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	20/04/2022
APPLICANT NAME	1 . Dr. Surendra Kumar Tiwari 2 . Prerana Vyas 3 . Dr. Vaishali Tiwari
TITLE OF INVENTION	TEACHING THROUGH SMART CLASS FOR DEVELOPING CONSTRUCTIVIST TRENDS FOR QUALITY EDUCATION
FIELD OF INVENTION	COMPUTER SCIENCE
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	29/04/2022

Application Status

APPLICATION STATUS

Awaiting Request for Examination



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TEACHING THROUGH SMART CLASS FOR DEVELOPING CONSTRUCTIVIST TRENDS FOR QUALITY EDUCATION

FIELD OF THE INVENTION

This invention relates to the field of education. In this invention, an intelligent class strategy is an innovative approach used in language and other subject classrooms to teach content engagingly. Smart learning environments allow students to learn flexibly and collaboratively, fostering personal and collective intelligence. Personalised learning support could also improve student expectations.

BACKGROUND OF THE INVENTION


A learning hypothesis found in psychology attempts to explain how individuals gain information and learn new skills. As a result, it has direct application in the field of education. Constructivism encourages students to design their own learning experiences. Constructivism education is concerned with developing excellent learners rather than merely imparting knowledge to pupils. Students in a Constructivism classroom study topics naturally and organically. They are encouraged to build on their views and support their points of view with facts and proof.

Smart classrooms are electronically enhanced lecture theatres and classrooms. These rooms create new opportunities in teaching and learning by integrating computer, multimedia and network technology. The smart classroom is highly technological concept where presentation of content is optimal, interactive, convenient access of learning resources. It is also helpful for contextual awareness, classroom layout and management.

SUMMARY OF THE INVENTION

An intelligent class strategy is an innovative approach used in language and other subject classrooms to teach content engagingly. The conventional classroom's interior structure and arrangements do not match the educational system's digital changes, technique, and social environment. Smart classrooms rethink learning space, student expectations, and teaching and learning resources. This is a new paradigm in educational development. Innovative education aims to improve learners' lifelong learning quality. Learning in intelligent environments is based on contextual, personalised, and seamless learning. Technology advancements, modern society, and pedagogical theory will impact innovative education. We expect intelligent learning environments to reduce cognitive load, allowing learners to focus on sense-making and ontology construction. Also, students' learning experience could be deepened and extended, promoting holistic development (affectively, intellectually, and physically). Intelligent learning environments allow students to learn flexibly and collaboratively, fostering personal and collective intelligence. Personalised learning support could also improve student expectations.




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Name: Venugopal Chandika
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Location: DELHI

BRIEF DESCRIPTION OF THE DRAWINGS

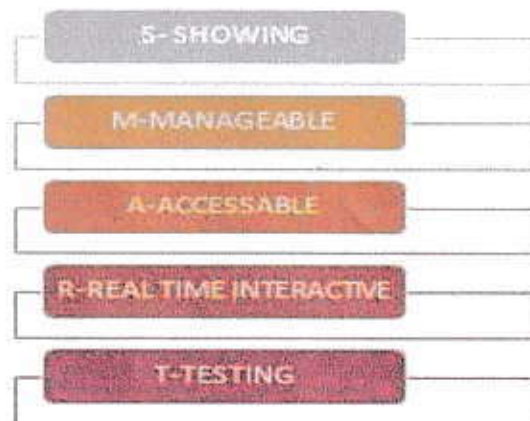


Fig.1 Depicts the Smart Model.

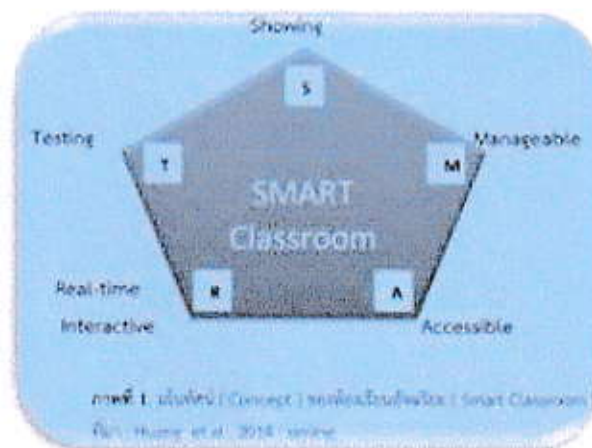


Fig. 2 Depicts the Smart classroom.






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Fig. 3: Depicts the View of A Smart Classroom.




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BRIEF DESCRIPTION OF THE INVENTION

Constructivism is a learning theory found in psychology that explains how people might acquire knowledge and learn. It, therefore, has direct application to education. Constructivism allows students to construct their learning. Constructivism teaching is about making good learners instead of simply giving students the information. In a Constructivism classroom, students organically explore concepts. They are encouraged to elaborate their ideas and use evidence to bolster their opinions. Using constructivism in the classroom can encourage students to work as a team. More and more group activities such as group discussion or debate can promote teamwork and collaboration. Group discussion promotes peer learning. Encouraging students to participate in several activities will make them neither active learners nor passive. Thus teaching through innovative classes involves all the Constructivist trends and quality education. Education doesn't mean feeding the students the bookish knowledge but helping them understand the true meaning of Education. The role of the teacher in the Constructivist social classroom is to help students build their knowledge & control the existence of students during the learning process in the school. Constructivist teachers do not take the role of the "Sage on the Stage"; instead, teachers act as a "Guide on the Side", providing students with opportunities to test the adequacy of their current understanding. Finally, the teacher concentrates on students' learning rather than teachers' performance.

TEACHING THROUGH SMART CLASSES FOR QUALITY EDUCATION:


Smart classrooms are electronically enhanced lecture theatres and classrooms. These rooms create new opportunities for teaching and learning by integrating computer, multimedia and network technology. The smart classroom is a highly technological concept where content presentation is optimal, interactive, and convenient access to learning resources. It is also helpful for contextual awareness, classroom layout and management. It may be summarised as Showing, Manageable, Accessible, Real-time Interactive and Testing, nicknamed "SMART". The five dimensions embody the wisdom of an intelligent classroom feature, which can be referred to as the "SMART" concept model,

This aspect represents the teaching material and its presentation capabilities of the classroom, which needs to show the contents and be clearly and attractively visible. It is also showing content suitable for learners. The existing research indicates that multi-screen displays can decrease the cognitive load and improve learners' achievement. The multi-screen is far better than the single-screen for academic improvement and achieving good learners' accomplishments.

Manageable – This dimension signifies diverse layouts and the convenience of management of the Smart classroom. The equipment and apparatus, systems and organisation, various resources and aids of the Smart classroom should be easily managed, including the classroom layout, equipment, physical environment, electrical safety management, network management, etc.

Accessible - This dimension shows the convenience of resources procurement and apparatus access in the well-arranged Smart classroom, including resource selection, content and text distribution and access speed. The rich and vast network of learning resources is favourable and conducive to independent self-learning, interactive, cooperative learning, and modified learning. Hence, the implementation of this approach is for the betterment of educational socialisation.




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The Interactive real-time - This feature represents the ability and calibre to support the teaching-learning interactions and human-computer interactions of the Smart classroom, which involves essential convenient operation, smooth interaction, and interactive tracking among teachers and students in a timely process. Generally, the Smart classroom should be able to support the specific and ordinary interactions between man and machine. Their interactive equipment and interface with a simple, fully-featured, vibrant navigation, consistent with the operative habits and their characteristics, touch, visual and voice interaction can quickly improve the interaction between man and machine.

Testing –This aspect explains the perception of the physical environment during the classroom interaction and students' learning behaviour in the Smart classroom.

SMART CLASSROOMS

The class's physical environment, including air, temperature, light, sound, colour, odours, area, etc., affects teachers' and students' physical and mental activities and actions in the intelligent class.

ADVANTAGES OF SMART CLASSROOMS

Updating with online information: Teachers can utilise various online information such as knowledge databases, online audio-video and worldwide news items to strengthen their lessons and classroom teaching. Students and Learners can quickly access the wide range of powerful and resourceful tools in their respective fields and resources to conduct their academics.

Comprehensive connectivity in different fields and locations: Interactive technology tools and techniques allow for extensive connectivity in various areas, making ideal linkages and collaboration and providing a distance learning environment.

Improved thoughtful skills: It shifts the classroom experience to a more collaborative environment so that learners start thinking in a more logical and improved way.


Linking the urban/rural gap: The smart classroom generates another opening to fill the link /bridge for the urban/rural divide by giving the exposure of technology to students in a classroom setting.

Different style of imparting knowledge: Incorporating technology tools into the classroom environment positively changes the way of teaching. It gives an excellent opportunity for teachers to impart knowledge to students, and at the same time, it also simplifies the teaching-learning process for students and teachers.

Student involvement is increased: Students who usually do not raise their hands in class or the backbenchers who are generally sleeping, or somewhat if they are weak, now can take an interest to learn something new as these modern age tools provide more understanding to them as all the senses begin to involve in the bright classrooms. By fostering discussions and developing new and out of the box ideas, technology also helps improve the student-teacher bond.

Interact and share: The interactive nature of technology tools allows learners to share and participate in the teaching-learning process. Bright classrooms provide a platform for students and teachers to demonstrate their hold of the subject through touching, drawing, and writing. Every student has an opportunity to participate or contribute to the presentation and discussion.




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Offers Flexibility: Interactive technology tools allow various forms of media – including photos, illustrations, snapshots, maps, graphs and charts, games, and video, to be displayed. In addition to this, technology and tools make learning more dynamic as the different methods of offering information are readily available.

Teachers can do more pedagogy experiments: As academic professionals, teachers learn more about how to design and execute a class guided by technology effectively. He will learn something new in modern academia, whether it's a dramatic change such as teaching with a flipped classroom or just adopting a single tool for a specific project or term. Being well-versed in technology can also help build his credibility with students and colleagues.

Globally many countries have participated in projects focused on intelligent education. Malaysian innovative schools aim to help their country to foster the workforce of the 21st century by utilising and enabling the leading-edge technologies in schools. And the intelligent schools not only focus on stimulating thinking, creativity, and caring for the students but also consider the individual differences and learning styles among their learners. Innovative education in Singapore also emphasises the role of technology. Their goal is to foster an engaging learning experience to meet the diverse needs of learners through the creative use of information and communications technology. To realise this, Singapore created an enriching and personalised learner-centric environment and completed a nationwide education and learning architecture for educational institutions and lifelong learning. Korea carried out the innovative education project to provide customised and adaptive learning for students to foster self-directed learning and have fun using various resources and technology. Individualised instruction and creativity-centred education are considered the main keyword of intelligent education. Australia aims to build an innovative, multi-disciplinary student-centric education system using the following strategies: adaptive learning programs and learning portfolios for students, collaborative technologies and digital learning resources for teachers and students, computerised administration, monitoring and reporting, and online learning resources. New York proposed the keys to achieving Smart School: embracing and expanding online learning, utilising transformative technologies, connecting every school using the high-speed network, extending connectivity between inside and outside of the classroom, providing high-quality, continuous professional development, and focusing on fostering 21st-century skills. Finnish innovative education uses user-driven and motivational learning solutions to pro21st-century try learning. They proposed a pedagogical network of educational institutions called a "value network" that is the program's centre. It has five categories as follows: to understand user experience and usability, to receive expert feedback, to indicate learning outcomes, effects and quality of learning, and to develop skills and expertise. United Arab Emirates (UAE) aims for the education system to be student-centred by applying world-class teaching science and the latest tech technology. They encourage learners to develop creativity, analytic thinking and innovation. Their approach encompasses learning both inside and outside the classroom. The students can control an active participant in their learning process in interactive, engaging and enabling learning environments.

We can find some generalities by analysing these innovative education projects as follows. The goal of intelligent education is to foster a workforce that masters 21st century knowledge and skills to meet the need and challenges of society. Intelligence technology plays a vital role in the construction of intelligent educational environments. In innovative educational settings,




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learning can happen anytime and anywhere. It encompasses various learning styles, such as formal and informal learning and personal and social understanding, and aims to realise the continuity of the learning experience for learners. In this, learners are provided with personalised learning services and adaptive content according to their (learning) context and abilities and needs. So generally, 'smart' in intelligent education refers to intelligent, personalised and adaptive. But for different entities and educational situations, 'smart' has various definitions.

For learners, 'smart' refers to wisdom and intelligence. Wisdom is defined as using your knowledge and experience to make good decisions and judgments. According to Confucius, who is the most famous educator of China, wisdom can be achieved by three methods: reflection (the noblest), imitation (the easiest) and experience (the bitterest). In addition, intelligence is the ability to solve practical problems in one or more cultural settings. According to the concepts of wisdom and intelligence, we comprehend that being competent for a learner means an ability to enable people to think quickly and cleverly in different situations.


For educational technology, 'smart' refers to accomplishing its purpose effectively and efficiently. The technology includes hardware and software. 'smart' refers to a much smaller, more portable, and affordable smart device for hardware. It is practical to support learners taking the learning anytime and anywhere with intelligent machines. And some hardware (e.g., smartphones, laptops, Google glass, etc.) has functions to recognise and collect the learning data to engage the learner in contextual and seamless learning. For software, 'smart' refers to adaptive and flexible. It is efficient to carry out personalised education for learners according to their difference with adaptive learning technologies (e.g. cloud computing, big data, learning analytics, adaptive engine, etc.).

For the educational environment, 'smart' refers to engaging, intelligent and scalable. An intellectual, educational background can provide tailored and personalised learning services (e.g. context awareness, adaptive content, collaborative and interactive tools, rapid evaluation and real-time feedback, etc.) to engage the learner in effective, efficient and meaningful learning. And the open system architecture is required to support better the integration of increasing interfaces, smart devices and different learning data.

Based on the generalities of different countries' innovative education and the meaning of bright, the concept of creative education is proposed. He and Zhu stated that "the essence of intelligent education is to create intelligent environments by using smart technologies so that intelligent pedagogies can be facilitated as to provide personalised learning services and empower learners, and thus talents of wisdom who have better value orientation, higher thinking quality, and more robust conduct ability could be fostered.

And based on this definition of intelligent education, a research framework is proposed in Fig. 1. This framework describes three essential elements in innovative education: intelligent environments, thoughtful pedagogy, and competent learner. Innovative education emphasises the ideology for pursuing better education and thus had better be renamed more innovative education, which addresses the needs for intelligent pedagogies as a methodological issue and intelligent learning environments as a technological issue and advances the educational goals to cultivate competent learners result. Innovative environments could be significantly




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influenced by thoughtful pedagogy. Smart pedagogies and intelligent environments support the development of intelligent learners.

Smart Pedagogies

With the rapid development of technologies, students' increasingly flexible and efficient learning methods are developed. Research in cognitive science has indicated that knowledge and skills are closely intertwined. It needs to mix content knowledge and process skills to produce the learners' understanding. Then learners execute their commands in practice to make their performances. Critical thinking and learning skills are crucial, but these skills cannot be taught independently and s. Some proper factual understanding to be taught t in a particular domain and context. Using deliberate instructional or learning strategies can be related to cultivating learners' knowledge and skills. So to foster different abilities of competent learners, we searched the literature about related pedagogies or learning strategies using the conventional subject searching methods in some databases. Through analysing the literature, we summarised and adopted appropriate practical methods.


Students usually accept basic knowledge and core skills in the classroom. Learning goals and processes always are the same for each student in a traditional classroom. But students with different backgrounds have different needs. Every student deserves a rigorous education matched with content and performance standards that promote understanding. The classroom should be differentiated and responsive to learners' readiness levels, interests and learning profiles. Differentiated instruction emphasises the different needs of each student and cultivates the basic knowledge and core skills for students.

Whether learning happens in the classroom or online, students with different performances often need to learn together in a group or team to fulfil a common task or achieve a common goal. In the collaborative process, learners can foster comprehensive abilities, including critical thinking and problem-solving. Students in cooperative teams can keep knowledge longer by sharing information and engaging in discussion at higher levels of thought to take responsibility for their learning.

Learning processes should be tailored according to the student's learning needs, including requirements, background, interests, preferences, etc. In particular, personal interest is more important than external motivation because students' passion drives it. Interest-driven personalised learning emphasises students' interests and can foster intrinsic motivations and promote personalised expertise for students.

Intelligence is an ability to get things done that matter. Sternberg describes the three essential aspects of successful intelligence: analytical thinking, creative thinking, and practical application. As mentioned before, we facilitate abilities including problem-solving, decision making, creative thinking and interest-driven learning for learners. We need to integrate these abilities to generate intelligence. It is similar to the transfer of learning, or something in which we have been learned in specific situations that are intentionally applied in other different related conditions. Learning is a generative process. In such a process, the learner is an active recipient of the information who works to construct a meaningful understanding of information found in the environment). Generative learning can enable learners to apply the intelligence they have learned and generate it for relevant future situations.




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So, to foster the learners' performances, we propose four instructional strategies as a demon, as stated in Fig. 2. These strategies include class-based differentiated instruction, group-based collaborative learning, individual-based personalised learning (interest-driven predominantly) and mass-based generative learning (through online interactions essentially). These strategies encompass formal and informal education in both the real and the digital world. The four levels of innovative approaches are presented in detail as follows.

IMPLICATIONS:

The present study is conceptual about its implications for Students, Teachers, Society, Parents, Book Writers etc. for each one of them, implications are written separately as follows:

Educational Implications for Students:

The present research will help students to understand the importance of the Smart Class Strategy. It will build confidence among the students. Current research will help students guide middle and lower grade students with the extent of the Smart Class Strategy. Students will learn to manage the lower classes through different activities in the teacher's absence.

Educational Implications for Teachers: The present research will make teachers aware of the Smart class Strategy and its importance. This research will guide the teachers to implement a Smart class Strategy with their curriculum. It will help the teachers develop Smart class Strategies for the constructivist trend for quality education.


Educational Implications for Society: The present research will help society adopt different strategies for Quality education. It will make the community aware of the changes brought forward by CBSE in its curriculum.

Educational Implications for Parents: The present research will make parents aware of Smart Class Strategy. They will be able to understand the new concept. They will also motivate students to teach innovative ways of gaining knowledge in different subjects.

Education Implication for Book Writer:

The present research will develop standards for e-Textbook and e-Schoolbag. This research paper gives theoretical guidance, teacher training, and application assessments. It is expected that this research paper will help test different architectural models of intelligent learning environments and try out the brilliant learning strategy mentioned above.




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ABSTRACT

The current study focuses on the necessity and approaches of using the Smart Class Strategy in teaching and learning to build constructive trends for an excellent education. Our current education system stresses bookish information, whereas kids nowadays seek more knowledge to develop their intrinsic abilities and overcome problems. The study's primary goal was to emphasise the relevance of the Smart Class Strategy in building Constructivist trends for excellent Education. We live in a digital world. The traditional teacher-centred learning technique emphasises rote learning. This article outlines the need to reframe education to incorporate critical thinking abilities and new teaching and learning approaches to provide excellent education to students. The smart class idea is innovative and may inspire students to study. ICT and other educational technologies in teaching and learning are also creative. Teachers and students may benefit from intelligent schools and classes. Systematic use of computers, multimedia, internet, projectors, and whiteboards in blended learning. This notion is used well in all fields of education, from primary to higher school.

CLAIMS

1. The class's physical environment, including air, temperature, light, sound, colour, odours, area, etc., affects teachers' and students' physical and mental activities and actions in the intelligent class.
2. The role of the teacher in the Constructivist social classroom is to help students build their knowledge & control the existence of students during the learning process in the school.
3. Smart classrooms are electronically enhanced lecture theatres and classrooms. These rooms create new opportunities for teaching and learning by integrating computer, multimedia and network technology. The smart classroom is a highly technological concept where content presentation is optimal, interactive, and convenient access to learning resources.
4. Incorporating technology tools into the classroom environment positively changes the way of teaching. It gives an excellent opportunity for teachers to impart knowledge to students, and at the same time, it also simplifies the teaching-learning process for students and teachers.
5. Intelligence is an ability to get things done that matter. Sternberg describes the three essential aspects of successful intelligence: analytical thinking, creative thinking, and practical application.
6. Learning processes should be tailored according to the student's learning needs, including requirements, background, interests, preferences, etc. In particular, personal interest is more important than external motivation.
7. Critical thinking and learning skills are critical, but these skills cannot be taught independently and s. Some proper factual understanding to be taught t in a particular domain and context.




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BRIEF DESCRIPTION OF THE DRAWINGS

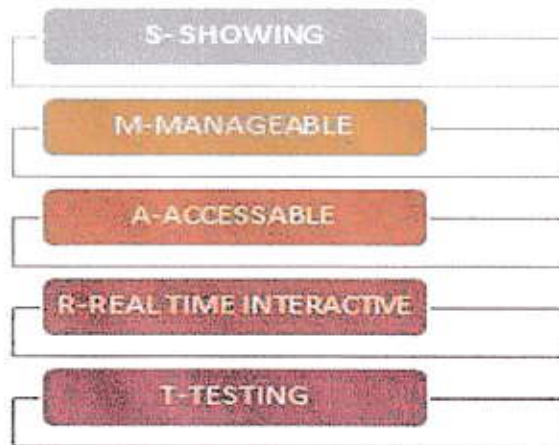


Fig.1 Depicts the Smart Model.

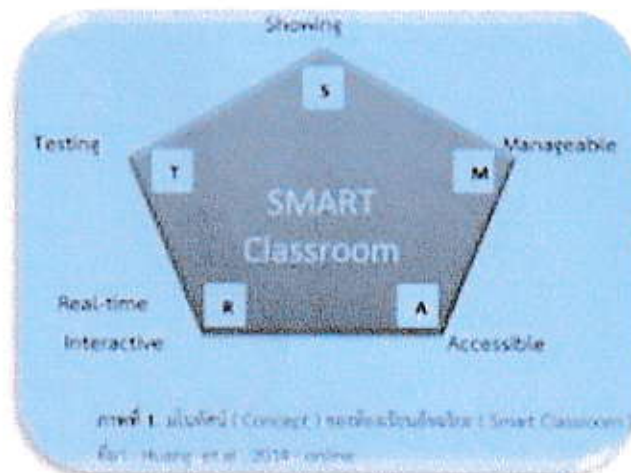


Fig. 2 Depicts the Smart classroom.



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Fig. 3: Depicts the View of A Smart Classroom.




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The current study focuses on the necessity and approaches of using the Smart Class Strategy in teaching and learning to build constructive trends for an excellent education. Our current education system stresses bookish information, whereas kids nowadays seek more knowledge to develop their intrinsic abilities and overcome problems. The study's primary goal was to emphasise the relevance of the Smart Class Strategy in building Constructivist trends for excellent Education. We live in a digital world. The traditional teacher-centred learning technique emphasises rote learning. This article outlines the need to reframe education to incorporate critical thinking abilities and new teaching and learning approaches to provide excellent education to students. The smart class idea is innovative and may inspire students to study. ICT and other educational technologies in teaching and learning are also creative. Teachers and students may benefit from intelligent schools and classes. Systematic use of computers, multimedia, internet, projectors, and whiteboards in blended learning. This notion is used well in all fields of education, from primary to higher school.




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FORM 1 THE PATENTS ACT, 1970 (39 of 1970) & THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT [See sections 7,54 & 135 and rule 20(1)]	(FOR OFFICE USE ONLY) Application No.: Filing Date: Amount of Fee Paid: CBR No.: Signature:
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 Location: DELHI

Madhya Pradesh, India

3. TITLE OF THE INVENTION: TEACHING THROUGH SMART CLASS FOR DEVELOPING CONSTRUCTIVIST TRENDS FOR QUALITY EDUCATION

**4. ADDRESS FOR CORRESPONDENCE OF APPLICANT /
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5. PRIORITY PARTICULARS OF THE APPLICATION(S) FILED IN CONVENTION COUNTRY:

Sr.No.	Country	Application Number	Filing Date	Name of the Applicant	Title of the Invention
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6. PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION:

International Application Number	International Filing Date as Allotted by the Receiving Office
PCT//	

7. PARTICULARS FOR FILING DIVISIONAL APPLICATION

Original (first) Application Number	Date of Filing of Original (first) Application
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8. PARTICULARS FOR FILING PATENT OF ADDITION:

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Principal

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Shiksha Mahavidhyalaya
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Main Application / Patent Number:

Date of Filing of Main Application

9. DECLARATIONS:**(i) Declaration by the inventor(s)**

I/We ,Dr. Surendra Kumar Tiwari,Prerana Vyas,Dr. Vaishali Tiwari, is/are the true & first inventor(s) for this invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) of the inventor(s):

(c) Name(s): Dr. Surendra Kumar Tiwari,Prerana Vyas,Dr. Vaishali Tiwari

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) :

(c) Name(s) of the singnatory: Dr. Surendra Kumar Tiwari,Prerana Vyas,Dr. Vaishali Tiwari

(iii) Declaration by the applicant(s)

- The Complete specification relating to the invention is filed with this application.
- I am/We are, in the possession of the above mentioned invention.
- There is no lawful ground of objection to the grant of the Patent to me/us.
- I am/We are, the assignee or legal representative to true first inventors.

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

Sr.	Document Description	FileName
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I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated hereing are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this(Final Payment Date): -----

Signature:

Name: Venugopal Chandika

To The Controller of Patents

The Patent office at MUMBAI

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FORM 9

THE PATENT ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003

REQUEST FOR PUBLICATION

[See section 11A (2) rule 24A]

I/We **Dr. Surendra Kumar Tiwari, Prerana Vyas, Dr. Vaishali Tiwari** hereby request for early publication of my/our [Patent Application No.] TEMP/E-1/25605/2022-MUM

Dated **20/04/2022 00:00:00** under section 11A(2) of the Act.

Dated this(Final Payment Date):-----

Signature

Name of the signatory

To,
The Controller of Patents,
The Patent Office,
At Mumbai

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Prof. S.K. Tiwari
Principal
Swa. Gulab Bai Yadav Smriti
Shiksha Mahavidhyalaya
BORAWAN (M.P.)

Signature Not Verified

Digitally Signed,
Name: Venugopal Chandika
Date: 20-Apr-2022 15:59:40
Reason: Reason Testing
Location: DELHI

FORM 9

THE PATENT ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003

REQUEST FOR PUBLICATION

[See section 11A (2) rule 24A]

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GEOGRAPHICAL INDICATIONS

(<http://ipindia.nic.in/index.htm>)

Application Details

APPLICATION NUMBER	202221022185
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	13/04/2022
APPLICANT NAME	1 . Dr. Laxman Shinde 2 . Dr. Surendra Kumar Tiwari
TITLE OF INVENTION	ANALYTIC STUDY OF THE QUALITY ASSURANCE PRACTICES INHIGHER EDUCATION OF MADHYA PRADESH, INDIA
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	thilaksayila@gmail.com
ADDITIONAL-EMAIL (As Per Record)	thilaksayila@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	03/02/2023

Application Status

APPLICATION STATUS

Awaiting Request for Examination



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[View Documents](#)

ANALYTIC STUDY OF THE QUALITY ASSURANCE PRACTICES IN HIGHER EDUCATION OF MADHYA PRADESH, INDIA

FIELD OF THE INVENTION

This invention relates to the area of Education. This empirical endeavor helps the higher education institutions identify, examine, and enhance their current quality assurance processes and finally permits them to stay up with the aspirational problems. This research will assist build a baseline on the level of quality assurance methods in India's higher education industry.

BACKGROUND OF THE INVENTION


A nation's religious leaders, social reformers, industrialists, and professionals such as doctors, engineers, lawyers, and those in economics all derive inspiration and knowledge for their work from universities. Universities enrich society by developing its values and resources. Greater access to higher education is essential to the growth of knowledge-based economies. As a result, governments in the developing world have taken steps to raise participation rates. Concerns regarding the quality of higher education in rich and developing countries alike have grown due to the globalization, diversity, and privatization of the higher education system. A higher education institution must implement quality assurance methods to effectively and efficiently react to rising global competition and national education reform.

Many studies, including one by the World Bank, have noted the need to build a solid quality assurance system for higher education to meet the current problems encountered by this quickly expanding industry. Several governmental and commercial institutions in India have used several quality assurance methodologies. The higher education commission has set aside 85 billion rupees for improvements in the industry. Higher education needs a system to guarantee that public interests are protected. Given the enormous and growing number of higher education institutions, the institution is developing on the right path. Only a system can accomplish those goals. The United Kingdom's Quality Assurance Agency for Higher Education (QAAHE) has established significant-quality assessment and quality assurance goals in higher education.

SUMMARY OF THE INVENTION

This empirical attempt enables the higher education institution to identify, review, and improve their existing quality assurance practices and eventually facilitates them to keep up with the ambition challenges. This study will help establish a baseline on the status of quality assurance practices in India's higher education sector. This study is also of remarkable assistance to the policymakers, implementers, and development partners involved in India's higher education sector by providing information and analysis to identify and prioritize capacity-building needs for quality improvement. The study presents a snapshot of the quality assurance practices being experienced by the Higher education institutes and what the head of quality assurance is witnessing in future expansion. Not only are current practices of public and private universities acknowledged, but gaps and loopholes are identified. These findings can provide a foundation for developing a comprehensive quality assurance model for India's higher education sector.




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Reason: Reason: Testing
Location: DELHI

BRIEF DESCRIPTION OF THE DRAWINGS

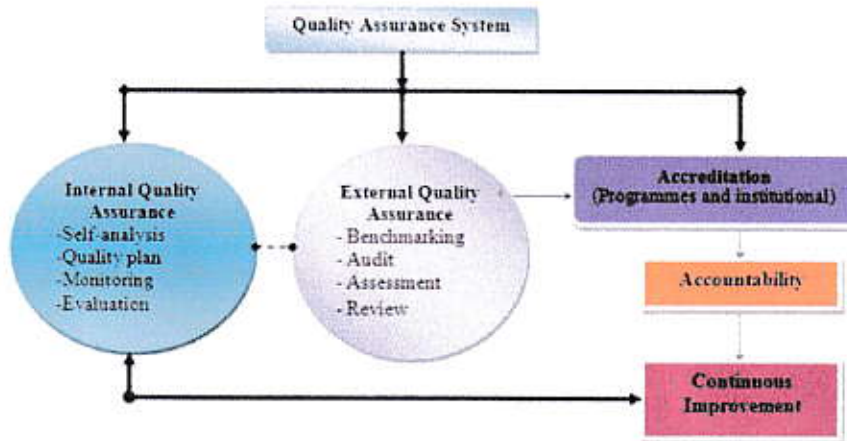


Fig.1 Depicts the Quality Assurance Practices Model.

Universities	Number of Universities	Administrators
Public universities	05	35
Private universities	05	35
Total	10	70

Table.1 Depicts Sample Details.

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		Registrar	10
		Controller of examination	05
		Hostel warden	05
		Deputy Registrar	10
		Assistant Registrar	15

Table.2 Depicts the questionnaire used for data collection from the respondents.





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Dimensions of the study	Higher Education Universities	OPTION PERCENTAGES					χ^2 (df=4) P<0.05
		SA	A	UNC	DA	SDA	
Infrastructure and Learning Resources	Public	38	30	-	07	09	10.7
	Private	30	46	8	12	04	
Environment & Sanitation of Campus	Public	26	26	4	24	20	9.8
	Private	42	24	14	14	06	
Teaching Learning and Evaluation	Public	26	50	4	12	08	13.5
	Private	44	16	4	24	12	
Classrooms Facilities and well equipped.	Public	22	26	2	40	10	10.9
	Private	34	38	8	14	06	
Student Support and Progression	Public	34	44	8	14	-	9.2
	Private	28	46	10	10	06	
Governance, Leadership, and Management	Public	38	34	4	16	08	n.s
	Private	40	42	6	10	02	
Institutional Values and Best Practices	Public	24	38	8	14	06	11.0
	Private	22	26	2	40	10	
Research, Innovations, and Extension	Public	38	22	6	20	14	14.6
	Private	8	24	4	36	28	
Development of Learning Resources, Patented Products & MOU	Public	44	18	-	26	12	11.6
	Private	18	16	6	34	26	
University Ethos & Ethics	Public	48	28	-	16	08	n.s
	Private	30	36	4	14	16	
Curricular aspects	Public	38	26	8	18	10	10.7
	Private	40	28	-	18	14	
The library is well furnished and equipped with books and journals	Public	14	42	6	20	18	n.s
	Private	40	36	6	26	14	
The faculty is complete with professional people as per UGC criteria	Public	24	16	4	38	18	n.s
	Private	18	38	8	26	08	
Internal Quality assurance practices System	Public	34	18	6	22	20	n.s
	Private	36	30	4	20	10	

Table.3 depicts the summary of Administrators' opinions of Public and Private universities in Madhya Pradesh.




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BRIEF DESCRIPTION OF THE INVENTION

Universities play a vital role in any nation's social and economic development because all the religious, social reforms, industrialist, professionals like doctors, engineers, lawyers, and economics get their inspiration and knowledge from the university. Who serve society by enriching its values and developing its resources. The development of knowledge economies depends on more significant participation in higher education. Governments in the developing economies have recognized this and have sought to increase participation rates. The expansion, diversification, and privatization of the higher education system worldwide have raised concerns about the quality of higher education in both developed and developing countries. Higher education institutions must establish quality assurance practices to respond to increased global competition and national education reform effectively and efficiently. The world bank report and many other types of research have recognized the need to create a robust quality assurance system for higher education to address today's challenges faced by this rapidly growing sector.

Some public and private institutes in India have implemented different quality assurance models. The higher education commission has allocated 85 billion rupees for higher education sector reforms. This mammoth amount and increase of Higher education institutes demand a mechanism to ensure that public interests are safeguarded, and higher education is moving in the desired direction. A system can only achieve those objectives. For quality assurance, the quality assurance agency has concluded the primary purposes of quality assessment and quality assurance in higher education for the higher education of the united kingdom as:-

1. To Guarantee that the public funding is used for the education of acceptable quality.
2. To Provide public information about quality education.
3. And to provide insight and persuade improvement in education.

The problem highlighted in the above discussion is an urgent need for a quality assurance mechanism in higher education. This study will examine different quality assurance practices experienced in India's higher education sector, and the problem related to these practices will also be explored.


Quality Assurance

Ellis 1993 defines quality assurance as a process whereby a consumer or other interested party is confident that standards will be maintained. Carley and Waldron 1984 described it as planned, deliberate activities instigated and carried out to maintain and improve the quality of learning for the participant. A more inclusive definition is provided by Harvey & green 1993 who refer to it as those mechanisms and procedures designed to reassure various stakeholders in higher education that institutions accord a high priority to implement policies designed to maintain and enhance institutional effectiveness.

Therefore, it combines several principles and philosophies that promote commitment and motivation. Critique of control argues that a university's overall quality depends on all aspects of the university's activities.

Quality Assurance Approaches




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1. External Approaches

It is frequently stated that an institution's internal faculty committees are kept on track through the guidance of external review committees that can be formed by a group of universities and their faculties. The first stage of external review must be a document reporting the self-evaluation. Still, the further visit should be to meet with both small and large groups at the institution; however, quality assurance might be achieved within an individual program in a university as a process of internal review.

2. Internal Approaches

L'Ecuyer mentioned that quality assurance is first and foremost up to the institutions themselves. Central agencies are not there to do the institution's job but to ensure that they do it correctly and satisfactorily. According to Becher, it positively affects faculty involvement, interest, and teaching effectiveness.

3. Outcome Assessment

It is the assessment of institutions as well as of students. The above three components are evident in most quality assurance systems. These three components must be part of an integrated approach to the quality of teaching and programs offered at an institution.

Higher Education Scenario in India:


Higher Education in India is governed more by neo-liberalism, neo-capitalism, and neo-colonialism. The increase in the demand for higher education, whether liberal or technical, is unmanageably significant, rapid, and pressing. The public and private dichotomy continue to be there in higher education. The governance & administration of Higher Education ought to be based on scientific, democratic, and humanistic principles. CBCS is being implemented mainly in higher education. There has to be a significant shift from F2F to e-mode to distance mode. Apex agencies are still lost in the dual way of granting & monitoring. Higher education is governed by bureaucratic, conservative, hierarchical, and obsolete models.

Learning from the profiles of Nalanda & Takshshila, the culture of Higher Education needs to be revived and even trans-created. We will have to do away with ritual conferences often without invocations. Higher Education's top academic leaders & administrators have to be creative & critical inter-disciplinary and multi-disciplinary experts having rich profiles and balanced personalities. The Professors ought to profess at the level that every bit of their text and act is its testimony. The support staff ought to support & guard Higher Education, always and all ways, every moment, everywhere, under all conditions. Rather than stretching hands for grants, Higher Education will generate a corpus of funds through its production and patents. Art without perspective, Commerce without substance, Science without ethics, Administration without sensibilities and sensitivities, and Leaders without creative & critical thinking, decision making, and problem-solving abilities are worthless.

The Rationale of the Present Study:

At Present, none of the universities globally can be identified as a university because none of these is the true representative of the universe. Let us call these Higher Education Institutions




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if these continue to be higher. The intent of the Present study is how to assure & ensure Higher Education in the Madhya Pradesh State of India. This research involves an analysis of quality assurance practices and processes in Higher Education Institutions of public and private universities in Madhya Pradesh. Compared to the more advanced higher educational systems in the world. Likely, knowledge of quality assurance practices of agencies, namely, NAAC, UGC, NCTE, BCI, NBA, QCI, and practices from other countries would be helpful in the development of higher education in Madhya Pradesh. The following would be the focus of the present study:

- Provision for quality assurance practices in the public and private universities of Madhya Pradesh.
- Periodic assessment and accreditation of higher education institutions in Madhya Pradesh.
- academic environment for promoting quality in teaching-learning and research in higher education institutions.
- Autonomy and accountability in higher education.
- TQM in the Institutes of Higher Education of Madhya Pradesh.
- Functioning of the IQAC in the institutes of Higher Education.
- Status of Teaching & Learning in the institutes of Higher Education of MP.
- Status of Research and Innovation in the institutes of Higher Education of MP.
- Entrepreneurship development in the institutes of Higher Education of MP.
- Quality assurance and ensuring practices are in vogue in Higher Education.
- The ranks of the Universities and HEIs in MP.
- The practices of assuring the quality of higher education of the public and private universities of Madhya Pradesh?
- The significant differences between the public and the private university of Madhya Pradesh concerning quality assurance.

Objectives of The Study :

1. Investigate Quality indicators in public and private sectors universities in Madhya Pradesh, India.
2. Examine the Quality of Management of public and private universities of Madhya Pradesh, India.
3. Compare the Quality of infrastructure in public and private sectors universities of Madhya Pradesh, India.
4. investigate the Quality assurance practices currently being utilized in the higher education institutes of Madhya Pradesh, India.
5. Compare the quality assurance practices adopted by public and private sector universities in Madhya Pradesh, India.





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The sample was selected by the use of a stratified sampling procedure. The research included thirty administrators, one hundred professors, and two hundred students from twenty different institutions. Table 1 has a detailed description of the model.

The information from the respondents was gathered via the use of a questionnaire. On a 5-point Likert Scale, all of the questions were designed, with the responses being categorized as 5, 4, 3, or 1. (strongly agree to disagree strongly). Information was also gathered from the five-year plans of the relevant departments, educational reports, economic surveys, and the Higher Education Commission's statistical indexes, among other sources.

As shown in Table 2, the data obtained were tabulated and analyzed using percentages and two-way chi-square tests, respectively. The administration believed that private universities were superior in construction, environment, sanitation on campus, and campus upkeep and classroom amenities. However, public universities performed better in the areas of Teaching, Learning, and Evaluation; Student Support and Progression; Research, Innovations, and Extension; Development of Learning Resources; Patented Products and MOU; University Ethos and Ethics; Curricular aspects; and Research, Innovations, and Extension (RIE). The library is well-furnished and stocked with books and periodicals. The faculty comprises professionals who meet the requirements of the University Grants Commission and the Internal Quality Assurance Practices System.





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ANALYTIC STUDY OF THE QUALITY ASSURANCE PRACTICES IN HIGHER EDUCATION OF MADHYA PRADESH, INDIA

ABSTRACT

Most higher education institutions in developing nations like India are not well equipped to keep up with rapid developments in science and technology. They cannot effectively disseminate and generate the information required to tackle these problems. The condition of higher education establishments in India necessitates an urgent revamp of quality assurance. Most emerging nations in Africa and Asia have understood that high-quality higher education is crucial to achieving the government's goals. These nations have established various quality assurance bodies for higher education. In recent years, multiple networks of quality assurance organizations have formed national quality assurance agencies. Only 18 founding members started the International Network for Quality Assurance Agencies in Higher Education in 1991. In 15 years, it has grown to 150 members from 100 countries. This fast growth of quality assurance organizations reflected the importance of quality assurance in higher education. Higher education quality and security have become significant challenges in Asia, the Pacific, and globally.




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CLAIMS

1. Universities play a vital role in any nation's social and economic development because all the religious, social reforms, industrialist, professionals like doctors, engineers, lawyers, and economics get their inspiration and knowledge from the university. Who serve society by enriching its values and developing its resources.
2. Some public and private institutes in India have implemented different quality assurance models. The higher education commission has allocated 85 billion rupees for higher education sector reforms.
3. Higher Education in India is governed more by neo-liberalism, neo-capitalism, and neo-colonialism. The increase in the demand for higher education, whether liberal or technical, is unmanageably significant, rapid, and pressing. The public and private dichotomy continue to be there in higher education.
4. At Present, none of the universities globally can be identified as a university because none of these is the true representative of the universe. Let us call these Higher Education Institutions if these continue to be higher.
5. The intent of the Present study is how to assure & ensure Higher Education in the Madhya Pradesh State of India. This research involves an analysis of quality assurance practices and processes in Higher Education Institutions of public and private universities in Madhya Pradesh.
6. However, public universities performed better in the areas of Teaching, Learning, and Evaluation; Student Support and Progression; Research, Innovations, and Extension; Development of Learning Resources; Patented Products and MOU; University Ethos and Ethics; Curricular aspects; and Research, Innovations, and Extension (RIE).
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BRIEF DESCRIPTION OF THE DRAWINGS

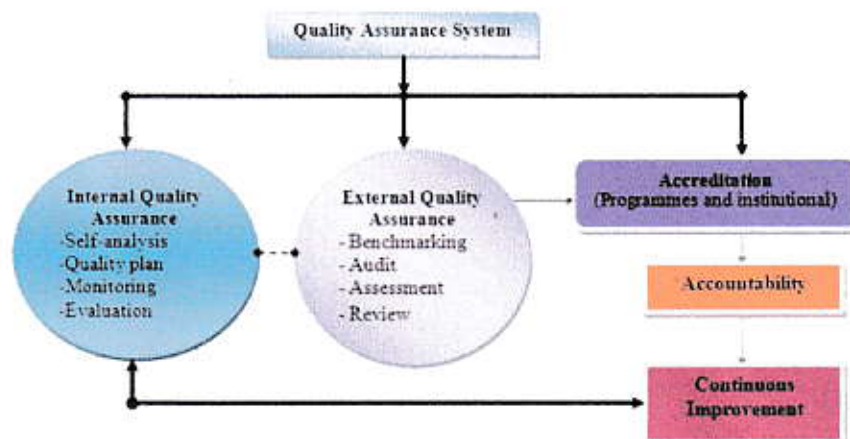


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FORM 1

THE PATENTS ACT, 1970
(39 of 1970)

&

THE PATENTS RULES, 2003
APPLICATION FOR GRANT OF PATENT
[See sections 7,54 & 135 and rule 20(1)]

(FOR OFFICE USE ONLY)

Application No.:

Filing Date:

Amount of Fee Paid:

CBR No.:

Signature:

1. APPLICANT(S):

Sr.No.	Name	Nationality	Address	Country	State
1	Dr. Laxman Shinde	India	Head, School of Education (IASE), Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh, India	India	Madhya Pradesh
2	Dr. Surendra Kumar Tiwari	India	Professor, Department of Education, Swa.Gulab Bai Yadav Smriti Shiksha Mahavidyalaya, Borawan Khargone, Madhya Pradesh, India	India	Madhya Pradesh

2. INVENTOR(S):

Sr.No.	Name	Nationality	Address	Country	State
1	Dr. Laxman Shinde	India	Head, School of Education (IASE), Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh, India	India	Madhya Pradesh
2	Dr. Surendra Kumar Tiwari	India	Professor, Department of Education, Swa.Gulab Bai Yadav Smriti Shiksha Mahavidyalaya, Borawan Khargone, Madhya Pradesh, India	India	Madhya Pradesh

Signature Not Verified

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ABSTRACT

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3. TITLE OF THE INVENTION: Analytic Study of The Quality Assurance Practices In Higher Education of Madhya Pradesh, India

4. ADDRESS FOR CORRESPONDENCE OF APPLICANT / Telephone No.:

AUTHORISED PATENT AGENT IN INDIA: Fax No.:

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Mobile No: 8500580495

E-mail: thilaksayila@gmail.com

5. PRIORITY PARTICULARS OF THE APPLICATION(S) FILED IN CONVENTION COUNTRY:

Sr.No.	Country	Application Number	Filing Date	Name of the Applicant	Title of the Invention
--------	---------	--------------------	-------------	-----------------------	------------------------

6. PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION:

International Application Number	International Filing Date as Allotted by the Receiving Office
PCT//	

7. PARTICULARS FOR FILING DIVISIONAL APPLICATION

Original (first) Application Number	Date of Filing of Original (first) Application
-------------------------------------	--

8. PARTICULARS FOR FILING PATENT OF ADDITION:

Main Application / Patent Number:	Date of Filing of Main Application
-----------------------------------	------------------------------------

9. DECLARATIONS:

(i) Declaration by the inventor(s)

I/We, Dr. Laxman Shinde, Dr. Surendra Kumar Tiwari, is/are the true & first inventor(s) for this invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) of the inventor(s):

(c) Name(s): Dr. Laxman Shinde, Dr. Surendra Kumar Tiwari

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----



Prof. S.K. Tiwari
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Swa. Gulab Bai Yadav Smriti
Shiksha Mahavidyalaya
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(b) Signature(s) :

(c) Name(s) of the signatory: Dr. Laxman Shinde, Dr. Surendra Kumar Tiwari

(iii) Declaration by the applicant(s)

- The Complete specification relating to the invention is filed with this application.
- I am/We are, in the possession of the above mentioned invention.
- There is no lawful ground of objection to the grant of the Patent to me/us.
- I am/We are, the assignee or legal representative to true first inventors.

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

Sr.	Document Description	FileName
-----	----------------------	----------

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated hereing are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this(Final Payment Date):

Signature:


Name: Venugopal Chandika

To The Controller of Patents

The Patent office at MUMBAI

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 Prof. S.K. Tiwari
Principal
 Swa. Gulab Bai Yadav Smriti
 Shiksha Mahavidyalaya
 BORAWAN (M.P.)

FORM 9

THE PATENT ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003

REQUEST FOR PUBLICATION

[See section 11A (2) rule 24A]

I/We **Dr. Laxman Shinde, Dr. Surendra Kumar Tiwari** hereby request for early publication of my/our
[Patent Application No.] TEMP/E-1/24289/2022-MUM

Dated **13/04/2022 00:00:00** under section 11A(2) of the Act.

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Prof. S.K. Tiwari
Principal
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(39 of 1970)
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THE PATENTS RULES, 2003

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