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THE RAVENSHAW JOURNAL OF EDUCATIONAL STUDIES

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EDITORIAL

The COVID-19 pandemic has disrupted the education system worldwide. The sudden closer of face to face teaching and learning, lab activities and other related academic activities in the campus has disturbed the academic planning and motivation of students and teachers. It has severely affected the educational research particularly, related to field studies. The regular activity of publication of the journal is also severely affected due to pandemic. After a longgap, the present volume is released with two issues. There are eleven articles in this volume out of which nine are research based and two are conceptual. Out of the nine research papers, six followed quantitative approach and three followed qualitative approach. These articles cover the areas like, teacher education, higher education, school education, education of tribes, community participation, impact of social media and online teaching-learning. Out of the two conceptual papers, one is philosophical and the other one is related to training of mass untrained teachers.

The first article on *Existential Ethics: The Educational Perspective* by Gouranga Charan Nanda discusses certain life related questions. Existentialism, being a theory, asks man to ask himself to ponder the reason for his/her own existence. He/she has to explore values for himself, for his self-affirmation so as to get stability in his oscillating position. Dr. Nanda tried to give an historical perspective of existentialism focussing on existential ethics. He started with atheist perspective of Heidegger, Sartre & Nietzsche and moved towards the Theist Perspective of Kierkegaard, Jaspers, Buber and Tillich. He also discusses about how to inculcate existential values.

Under the provision of qualification of teachers in RTE Act, 2009, the Act mandated to appoint qualified teachers and training of all the untrained teachers within a period of five years of its implementation. Niradhar Dey addressed the challenges related to training of mass untrained teachers and discussed about the use of various training approaches particularly, blended approach and its pedagogy to train the huge untrained teachers.

During COVID pandemic, both students and teachers have to resort on online teaching and learning. They face many challenges during online teaching-learning. Yogita Kamal and Laxman Shinde conducted an online

survey to study students' perception about online teaching-learning in higher education during COVID pandemic particularly, Technical Problems, Teaching–Learning Process and use of E-Learning platform.

A systematic analysis of teachers' classroom interaction may provide a reliable assessment of what actually happened inside the classroom. It helps a teacher to bring desirable modification in his/her behaviour and improve the interaction with pupils for making his/her teaching more effective and purposeful. Jyoti Gangrade and Madhulika Varma conducted an experimental study on effect of Charles Galloway System of verbal and non - verbal interaction analysis category feedback system and emotional intelligence on teaching effectiveness of teacher trainees.

Anirban Mukherjee conducted an exploratory study about the educational hurdles that tribal students face, with special reference to schools in West Bengal. He attempted to identify incompatible areas between the modern education system and tribal culture, educational hurdles that tribal students face in the schools, assess the social standing of the tribal graduates, and examine the teachers' perception of tribal students. The research is qualitative in nature with observation and interviews conducted with the Santal, Lodha, Birhor, and Kharia tribes.

Social media provides a great platform for any individual for accessing and communicating the information worldwide at just one click. It has been observed that the younger generation is extremely much susceptible to social media. Rupa Gupta and Elizabeth Gangmei conducted an empirical survey on social media and examined the extent of usage of social media and academic performance of students at graduation level. This is an empirical study based on an online survey of graduation students

Many of the committees, commissions and documents have focussed on promotion of higher order thinking in students such as logical thinking, problem solving and creativity. Scientific creativity continuously stimulates students to understand and revamp concept about nature and natural phenomenon. Academic liberty and intellectual freedom has a visible impact on creativity, critical thinking and problem-solving ability of students. Sambit K Padhi and Subrat Kumar Padhi investigated how problem solving-ability of secondary school students, has moderating effect on the strength of relationship between academic freedom and scientific creativity. Prafulla Kumar Pradhan and Dillip Kumar Khuntia

conducted a descriptive survey design and examined the creative development of primary school students in relation to their socio-economic status and gender

Individuals differ in how they learn. There are different methods of learning or understanding new information. The way a person takes in, understand, expresses and remembers information determines its learning style.Metacognition is a regulatory System that helps a person understand and control his or her own cognitive performance. Learning styles and metacognitive strategies are the significant factors for Learning. Soumyabrata Mahapatra, Dadhi Baman Tali and Ashok Dansana undertook a descriptive correlational study to determine the Learning Styles as positive predictor and contributor for Metacognitive Strategies of secondary school students.

Quality assurance in higher education has been one of the major challenges in the development agenda not only in India but also all over the world. In this context, IQACs of NAAC accredited colleges are functioning for sustenance and enhancement of internal quality of the higher education institutions. Giri, Das and Dansana conducted an exploratory study on functioning of Internal Quality Assurance Cells in autonomous and non-autonomous colleges of Odisha.

Jagadish Biswal attempted to address the gap in local community participation for transforming the school education where the Vidyalaya Shiksha Samiti (VSS) members, community members, headmaster and other stakeholders like BEO, BRP, CRCC and Bal Sansad were taken as sample of the study. The study revealed that the community inclusion in school system brings an awareness about their responsibility to make the school process more effective.

We hope that the readers would be able to connect their studies and researches with the issues and challenges discussed in the present volume. We look forward for your suggestions and comments. We are also looking forward your contribution in the future issues of the journal in the form of articles, theoretical papers, book reviews, etc. I acknowledge the contribution of different authors who enriched the present volume of the journal.

Editor

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EXISTENTIAL ETHICS: THE EDUCATIONAL PERSPECTIVE

Dr. G. C. Nanda*

Abstract : *Existentialism, being a theory of individual meaning, asks everybody to ponder the reason for his own existing. It asks man to ask himself what significance he can attach to his own presence in the world. The paradoxical plight of man, on the one hand, is that he is pure subjectivity and on the other hand, he finds his life as a great delusion. He has to explore values for himself, for his self-affirmation so as to get stability in his oscillating position. There are two distinct perspectives of existential ethics i.e. the atheistic advanced by Heidegger, Sartre and Nietzsche and the theist perspective advanced by Kierkegaard, Jaspers, Bubber and Tillich. Since there is no pre-ordained destiny for him and his existence precedes his essence, he has to choose what he wants to be in the absence of a-priori standard of good and evil.When he finds the gap between what he is and what he wants, his finitude haunts him and he tries to stay connected with benevolent God inwardly. The facticity of his existence and value free set of his circumstances make him the pioneer of the value making process to lead a meaningful and fulfilling life. He chooses his own course of action and brings values into being for his authentic self-affirmation. Man is not an isolated unit. The self, therefore, is a being in community and man has to have a living relation with others. The existential ethics can be imparted through value clarification approach*

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advocated by Rath, Harmin and Simon (1966) which is a three-fold process of choosing, prizing and acting. To philosophise the existential ethics certain life related questions have been raised in the article notwithstanding the fact that existential ethics cannot be codified or theorised. Existential ethics is rather something to be intuited subjectively and realised through choice, commitment and confrontation for asserting one's unique identity.

Key words: *Nothingness, Existential, Ethics, Atheist, Theist, Authentic, Value Clarification.*

Introduction

Philosophy by nature is normative or prescriptive as it determines the nature of values and ideals. Existentialism as an approach to philosophy would have been incomplete without reference to this domain.

Existentialism is a theory of individual meaning. It asks each man to ponder the reason for his own existing. It asks to ask ourselves what significance we can attach to our own presence in the world. Human existence gives rise to a paradox. On the one hand man thinks his existence makes a difference. The cosmos would not have been the same without him. On the other hand, a thought disturbs him when he finds his existence is a big joke, a huge delusion. The cosmos does not require his presence as if he is a useless surplus. An idea of nothing ness haunts him. He undergoes a state of anxiety, a state in which a being is aware of its possible non- being. As a result he gets alienated from the society and from himself.

Existentialism is an approach to philosophy which aims at affirmation of self-amidst the forces of nothingness. But nothingness, according to them, is not a forgone conclusion, it is only a possibility.

The Atheist Perspective

Sartre's main theme 'existence precedes essence' is the starting point of existential ethics. Man is free to choose what he wants to be. He is defined by his action. There is no a priori value. Man has no pre-ordained destiny. Each man's life does not unfold in accordance with God's grand plan and His mysterious ways. It unfolds the way each man chooses it to unfold. Man, according to this atheistic ontology, is the source of all values. Man creates his values through his choices. Even a value held universally by everyone would still find its origin in each individual person.

According to Sartre man's choice can never be an evil choice. His choice can never go against any established notion of good because it is man who determines what is good. With death of God any possibility of a priori standard of good and evil has disappeared. Therefore, man always chooses the good but he is also ultimately and entirely responsible for what he has chosen. It is, therefore, said that man is free, not to be free. He is condemned to be free. Any attempt to obscure or divert oneself of this freedom and responsibility is called as bad faith by the existentialists. In order for man to disclose his being, he must first create it through his values and actions. If he then acts in keeping with his values, he lives authentically, he discloses his being because he coincides with himself. This coincidence refers to the momentary meeting of the for- itself with the in-itself.

The Theist Perspective

According to Kierkegaard, ethics and religion are not concerned with objective but are related to subjectivity. God is not an externality. He is to be realized inwardly. The theist would say that the religious talk in terms of collective/ universal spirit/ humanity are unspiritual. The gap

between what I am and what I want creates tension for the finite being leading to faith in the infinite, the benevolent God. Religion emerges out of man's sense of finitude. His inability to stay connected with God brings a sense of guilt. They would suggest to maintain and renew God consciousness (personal God) in every humble act of life with increasing faith that it would please Him. Man must transform his outward activities into inward contemplation. True religion is a personal inward relation of individual with God. The objective or universal God is a myth.

Man as the baseless base of values

In the act of existing, man chooses every day what he is going to do, what he is going to say, what goals he is going to pursue. To choose is an exercise in valuing, an exercise favouring this alternative before that. Man is the starter of value making process, but as such he himself has no base to stand on that can tell him which values he should start making. He has to discover, invent and create values and there is no escape from choosing in the world. Even to choose not to choose is a choice. In the act of choosing man brings values into being. He is an existential chooser. He creates something out of nothing. Before he chooses a course of action, there are no values in that situation, a value free set of circumstances. Once he chooses, he brings something new into existence, a way of responding to that situation.

Values and Society

Men do not exist in isolated units, but as members of some group. To Jaspers (1957), the true nobility of human beings is not found in an isolated unit. It exists in the inter- linkage of independent human beings. People are tied together by developing things in common. It is by creating and strengthening ties between human beings that a community is formed. Each person achieves his destiny by building and maintaining healthy relations or ties with others.

Friedman (1964) observes that the paradox of human existence is that man needs others in order to be himself. Each person is grounded in the essential otherness. While becoming one self-based on the otherness both the person and the community are growing. Hence, both individual and community are taken as correlative entities. "The self is a being- in-community".

The explanation of the phenomenon of dialogical life by Buber (1958) highlights a great deal towards the social value of existentialism. He notices the sphere of "between" or the realm of "Inter human" by which he explains life and reality in general. The essence of man is found only in a living relation with others. The central theme in the study of the wholeness of man or philosophical anthropology is "man with man".

There are two fundamental dimensions in human experience: the I-Thou and the I-It. The I-Thou relationship is subject – subject relationship characterized by mutuality, directness and presence where as I-It relationship exists in the impersonal and mechanical connections. I-It represents the typical subject- object relationship. "The distinction between I-Thou and I-It is clear if we look into the difference between the biologist and the artist in treating a flower". The former adopts a very objective, dispassionate, scientific outlook in his analysis or classification of the object while the latter regards the flower as a beautiful whole and responds to its unique totality while entering into it with empathy and appreciation. The same difference is found between a man's attitude towards a prostitute who is a mere sex object to be used for one's own pleasure, and a husband's attitude towards his wife (in the ideal situation) as the unique beloved person for whom he is ready to make the greatest sacrifices. Man can become whole not by virtue of a relation to himself but, only by virtue of a relation to another self.

How to inculcate Existential Values

When choosing has been acknowledged as the key for shaping the values of man, his power to make choices needs to be strengthened. The act of choosing is essentially a proper, stringent expression of the ethical, whenever in a stricter sense, there is a question of an either-or. Only absolute either-or is the choice between good and evil, but that is also absolutely ethical.

Rath, Harmin & Simon(1966) advocates value clarification approach for inculcation of values which is in line with existential framework. The strategy emphasizes the affective process based on the premise that values are more easily developed subjectively and through empathy. The authors point out that students, given the opportunity to clarify their values or to undergo the value clarifying process, showed improvement in their attitude towards learning and gain in knowledge. In this approach value clarification is shaped in a three-fold process such as: choosing, prizing and acting:

Choosing	:	(i)	Freely
		(ii)	from alternatives
		(iii)	after thoughtful consideration of consequences of each alternative.
Prizing	:	(iv)	cherishing, being happy with the choice
		(v)	willing to affirm the choice publicly
Acting	:	(vi)	Doing something with the choice
		(vii)	Repeating in same as a life pattern

In the process of valuing, students get the scope to choose their own values and get the freedom to act upon their choices. This is an ideal approach to ensure that values are not taught, but caught.

Since existential ethics cannot be codified or theorised, a set of questions are proposed for everybody to clarify his own position and perception on values. Each teacher or teacher educator must ask these questions to himself for his reflection so as to develop and strengthen his/her professional career.

1. Are you aware of yourself that you are different from others?
2. Are you aware of the fact that your existence is always challenged?
3. Do you believe that destiny is not inevitable?
4. Are you afraid of death/failure?
5. Can you affirm yourself in a problem situation?
6. Are you capable of making independent choice for yourself?
7. Do you feel that you are free?
8. Are you prepared to walk along off the beaten track?
9. Do you believe that you don't need others to be yourself?
10. Are you able to act on your choices?
11. Are you ready to take the responsibility of your free action?
12. Are you aware of the limitations of your rational faculty?
13. Are you too much dependent on technology?
14. Have you got a wish list of your aspirations and ambitions?
15. Do you believe that man should always abide by rules of the system?
16. Are you ready to follow your most ideal teacher?
17. Do you believe in the authority of books and experts?
18. Do you sometimes love loneliness?

19. Do you feel that every moment is a challenging moment for you?
20. Would you like to leave an imprint of yourself in this world?
21. Do you think that life is an opportunity to bridge the gap between what you are and what you could be?

One's answer to these questions may determine to what extent somebody is in line with existential ethics. Existential ethics is a matter of choice, commitment and confrontation to assert one's unique identity which in the language of existentialists is called as authentic self-affirmation.

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TRAINING TO MASS UNTRAINED TEACHERS: BLENDED VS. ONLINE LEARNING PEDAGOGY

Dr. Niradhar Dey*

Abstract : *Teacher education is always an important aspect for any country. A quality teacher education programme prepares quality teachers and they ultimately prepare quality learners who contribute the country in different ways. Training to mass untrained teachers in a country like India is always a great focus as their number is very high. This article discusses the use of various training approaches and its pedagogy to train the huge untrained teachers. In a traditional face-to-face approach, it is not possible to train huge teachers in a limited time period as there is the intake limitation in traditional face-to-face teacher education institutions. It is often seems impractical to train the teachers by using completely online learning system as teacher education programmes includes many skill and competency based activities which is possible to do in a school in a face-to-face situation. Blended approach of learning is another opportunity to train the huge untrained teachers in a limited time period. In blended learning system, a well-defined strategy is adopted to prepare a complete learning package including few components through online education system (mostly theoretical courses) and few other components through face-to-face mode (mostly practical*

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oriented courses such as school internship, school based activities, workshop and other practical activities) in the schools as well as in the learning centres.

Keywords*: Open and Distance Learning, Blended Learning, Online Education, MOOC.*

Introduction

India is a huge country with diversities in many aspects. Irrespective of the diversities, the country continuously marching towards the progress in all the fields of its development. Education is one of the fields which draw attention of everybody's concern as all other developments depend upon education. Again, elementary education is the prime concern, because, elementary education is the base to receive further education. Teacher training in elementary education system is an all-time issue both for the State as well as Central Government. In the eighty sixth amendment of the Indian Constitution, under the provision of Right to Education, in Article 21A, it is stated that "the State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine" (MHRD, 2019). It was a historic day when on 1st April 2010 that the 'Right of Children for Free and Compulsory Education Act' popularly called as Right to Education Act, 2009 was implemented across the country.

Right to Education Act, 2009 and Its Provisions for Teachers

For maintaining quality elementary education under the RTE Act 2009, many provisions have been laid down. Among them, here we will talk about three important provisions, i.e.

1. The first provision is about the 'qualifications for appointment and terms and conditions of service of teachers';

2. The second provision is about 'maintaining pupil-teacher ratio'; and

3. The third provision is regarding 'filling the vacancies of the teachers' within a specified time limit.

Under the provision of qualification of teachers, the Act mandated to appointment of qualified teachers and training of all the untrained teachers within a period of five years of its implementation. Under maintaining pupil-teacher ratio at the elementary stage, the Act mandated a pupil-teacher ratio of 30:1 at the Primary level (Class I to V) and 35:1 at the Upper Primary level (Class VI-VIII). In the last provision, that is, filling the vacancies of teachers, in which the Act mandated to fill the vacancy of the teachers in the schools within six months of its implementation and the vacancies should not be more than 10 percent of the total teachers as determined by the pupil teacher ratio of the Act in a school (MHRD, 2019 on RTE Act, 2009).

RTE Compliance for Training the Un-trained Teachers

After the Right to Education Act, 2009, was implemented, different States started approaching the MHRD, Govt. of India, to assist them in training the untrained elementary school teachers. Part of the responsibility, Indira Gandhi National Open University had taken the to train the untrained elementary school teachers through Diploma in Elementary Education programme by Open and Distance Learning mode, mostly in the North Eastern States like Arunachal

Pradesh, Manipur, Mizoram, Sikkim, Tripura and the Northern State of Uttarakhand.(IGNOU, 2013 and 2014).

Gradually, the States were realized that, the number of untrained elementary teachers across the country is around more than 10 lakhs and it was not simply possible to train them within the fixed time period. After several round of discussions and searching different options, the National Institute of Open Schooling has been given the responsibility to train all the untrained elementary teachers (around 15 lakh) through Diploma in Elementary Education (D.El.Ed.) programme by Online and Open and Distance Learning Mode by 31st March 2019 (PIB, Govt. of India, 3rdOct, 2017). NIOS has also trained the untrained teachers by using a blended approach of curriculum.

Table-1: Data related to Elementary School Teachers in India

Parameters	**Number of Teachers**
Total number of sanctioned posts*	5103539
Total number of teachers working*	4203223
Number of post vacancy*	900316
Pupil Teacher Ratio (Primary Level)#	24:1
Pupil Teacher Ratio (Upper Primary Level)#	17:1
Number of Untrained Teachers$	511679

(**Note**: *Data as on 31.03.2017; #Data as on 2014-15; and $Data as on March 2015) (**Source**: Indiastat data as on 2017, 2015 and 2014)

Data shows in Table-1 revealed elementary teachers data in terms of sanctioned, working and vacant posts; pupil teacher ratio

at the primary and upper primary levels; and total number of untrained teachers across India. The untrained teacher shows in the above table provides a tentative estimate but the number of actual untrained teachers are more than that. The above data caters only the Government and Govt. Aided Schools. If we added the Non-Government private management schools, again the number of untrained teachers' data may increase significantly. All private management schools are also come under the purview of the Right to Education Act, 2009.

Training the Un-Trained Teachers: Pedagogical Process

Training the huge number of untrained teachers within a very limited time period is not an easy task for the part of any Government. This can only be done through adopting a proper approach and strategy of training. The general practice of preparing teachers is done through traditional approach of teaching which is done at the Teacher Education Institutions through face-to-face mode. In face-to-face system, only limited number of teachers can be trained in a year. The other mode of teaching i.e. through Open and Distance Learning (ODL) system has also got popular during last few decades across the world in the area of teacher training. Here in this section, let us discuss which mode of learning and pedagogy is appropriate for training the mass untrained teachers.

Training Mass Un-Trained Teachers through Face-to-Face Mode

Training the mass untrained teachers is always a challenge before any State. How can it be done effectively? Is it possible to do in **face-to-face mode**? The answer may be 'No', because, the

States do not have such huge system and infrastructure to train more than lakhs of untrained teachers in one-go through the face-to-face mode. There is limited number of institutions and the limited teacher education institutions are over loaded by their regular students. They are not in a position to take additional intake and train a large number within a period of one and half or two years. Moreover, there is also an annual intake limitation of trainees in teacher education institutions made by National Council for Teacher Education (NCTE, 2019) for maintaining quality in teacher education programmes. There is also a deficit of teacher educators in the State run teacher education institutions like in the College of Teacher Education (CTE) and District Institute of Education and Training (DIET) where the fresh and untrained teachers undergo training. In the face of these constraints, training to mass un-trained elementary teachers through face-to-face mode is a distance dream.

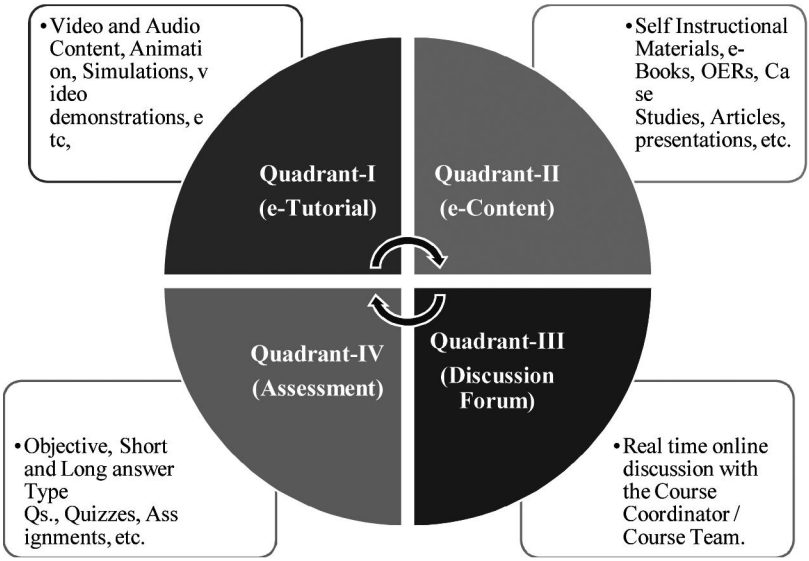
Training Mass Un-Trained Teachers through Online Mode

Next, let us consider the option of training the untrained teachers through **online learning mode**? This is a general perception of people that online courses are easy and do-able to do it online. But, the question need to ask is, is online education fit for training the mass untrained elementary teachers? In online learning, all aspects of curriculum transaction such as reading the text, writing assignments, getting feedbacks, writing examinations, etc. are done through online for providing academic support to the trainees.

As presented in Figure-1, Recently, MHRD, Govt. of India has initiated SWAYAM programme to achieve three cardinal principles of education policy, i.e. access, equity and quality. The Massive Open Online Courses (MOOCs) offered in SWAYAM is

designed in four quadrant principles, i.e. (i) through video lecture, (ii) specially prepared reading materials that can be downloaded and printed, (iii) online discussion forum for clearing doubts, and (iv) self-assessment strategies through tests and quizzes (SWAYAM, 2017).

Figure-1: Four Quadrant Approach of MOOCs



*(**Source**: NME-ICT, 2017 and SWAYAM, 2017)*

The above (Figure-1) four quadrant MOOCs model for providing online and real-time courses are getting popular to its merit and at the same tile it also put many questions of the quality of learning that the learners get. The third quadrant, which is one of the important pillars of the entire MOOCs is many a time observed silent as it takes real-time online interaction with the course

coordinator or the course team. Real-time online interaction requires huge faculty members and course-team who are readily available to provide online learning support and to solve learning difficulties and queries of the learners, which happens rarely.

Now questions come to mind, whether, the above four quadrant MOOCs model is capable enough to provide necessary training to the untrained teachers or not. Teacher education programmes are somehow different from any other programmes in terms of its purpose, pedagogy, knowledge-base it caters, rigorous internship activities, as well as skill-based practical activities that it undertakes.

Every task in an online learning model is time bound and the learners associate with the tutor online. Mostly, it has been observed that the online learning model is successful for a programme of short duration i.e. may be of few months. It is also successful, if the programme is has fewer hands on activities and practicum. Moreover the success of online learning also depends on the availability and access of the infrastructure which facilitates on the learning and is within the easy reach of learners. So far as untrained elementary school teachers are concerned, they are mostly rural based and are hardly acquainted with the online system of learning. Teacher education programmes include many practical, school based activities, workshops, internships, field works, etc. which is not possible do completely online as it requires face-to-face teaching and interaction with the learners in the selected schools where the trainees are supposed to develop their teaching skills. The untrained teacher groups are of diverse linguistic backgrounds. Providing online learning in so many languages is also an issue to deal with. Therefore, training the untrained elementary teachers through completely online mode seems impractical.

Training Mass Untrained Teachers through Blended-Learning Pedagogy

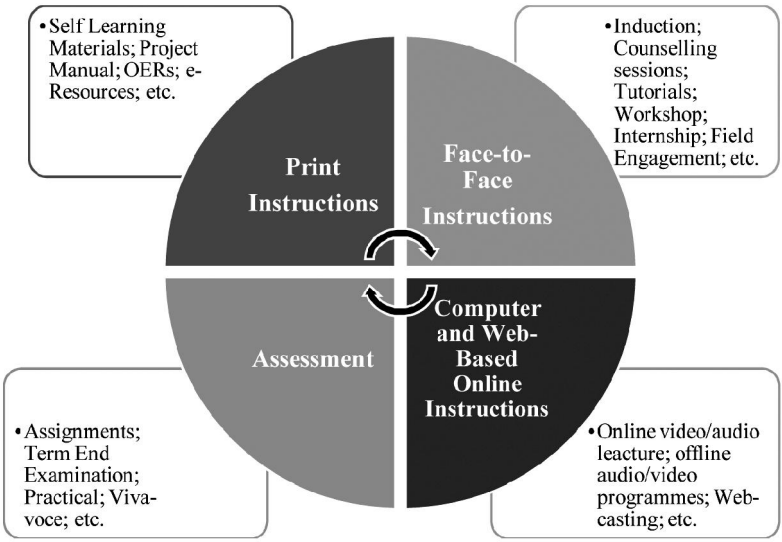
The third option left is of training through **blended-learning approach**. Let us try to understand, what a blended- learning approach is? A blended-learning approach combines online digital media as well as traditional classroom learning methods. Blended learning approach is quite popular across the world starting from the practices made by the UK Open University.

In India, Indira Gandhi National Open University (IGNOU) is successfully practicing blended learning approach for transacting its programmes since last three decades. IGNOU provides high-quality Self-Learning Materials to the learners both hard copies and also has access to get the soft copies of the entire learning materials in its website link that is e-Gyankosh. The University makes available the learners online academic support by conducting regular video teleconferencing (through GyanDarshan TV-1) and interactive radio counselling sessions (through FM radio). Apart from these, it also provides support to the learners for their skill development by conducting face-to-face counselling, tutoring, workshops, and internship activities special for the teacher education programmes. Recently, the University also provides learning supports to the learners by using the IGNOU StudentApp. By using the StudentApp, the learners can access their registration details, material dispatch status, identity card, grade card, TEE result, hall ticket and various other important links such as online services, download, announcements and grievances in one window. (IGNOU, 2019).

The Open University of UK practices its curriculum transaction by using with a blended-learning pedagogy by including both online

and offline learning elements. Blended-learning pedagogy brings together three elements of learning, i.e. face-to-face classroom based activities with teacher present; online learning materials in form of online modules including both text and audio/video content clips which is used in a flipped classroom model; and independent study using materials provided by the teacher either online or in hard copy to reinforce concepts or develop skills. The blend of activities that they practice make the teacher a blend of roles adding a facilitator element to their role to organize group activities both offline and online. Their blended learning pedagogy includes synchronous (teacher presence, immediate online feedback, and peer-interaction) and asynchronous (independent, flexibility and self-pacing) learning. (The Open University, 2019).

Figure-2: Student-CentredBlended Learning Pedagogy



*(**Note**: Figure 2 is developed as per the Blended-Learning practices made by IGNOU and other Open Universities globally)*

As presented in Figure-2, a blended pedagogy which include the contextual self-learning material may be in print or in electronic form added with numerous face-to-face activities in terms of classroom internships, practical, and tutorial activities along with both offline and online learning experiences through radio, television, web-casting, internet based interaction is needed for preparing teacher well equipped with teaching and other skills.

In blended-learning approach, the programme is composed with certain components to transact online mode whereas other components are transacted in a face-to-face situation. In the blended-learning approach, printed study materials can be provided to the learners with an additional online support. Learners can access the soft copy materials in synchronous or asynchronous mode. Apart from these, programme specific audio-video and other support materials can be supplemented which can be available at the Learner Study Centres as well as available in online platforms like YouTube, etc. So far as practical and other field-based activities are concerned, this can be done in a face to face situation at the programme study centre allotted to the learners. It is therefore, a programme like training the mass untrained teachers can only be possible through using a blended-learning pedagogy.

Important Considerations in Blended-Learning Pedagogy

From the above discussions, it can be said that training to the mass untrained elementary teachers can be better done by the blended-learning pedagogy not by completely face-to-face based teaching or completely online based learning. In the name of training the mass untrained teachers, the quality of instruction and the necessary knowledge base and acquisition of teaching skills cannot

be neglected. It is therefore a mixed-model learning pedagogy which is blended with both synchronous and asynchronous learning approach can be practiced. By doing so, we can ensure quality of our teacher education programme while catering huge number of training of the untrained teachers.

Let us highlight some of the important considerations that should be kept in mind while developing a teacher education programme equipped with blended-learning pedagogy. The following considerations are suggestive, not necessarily to address all the points discussed but it should be designed with all necessary learning supports to the trainees with an alternative provision for access.

1. Keeping in consideration the learners diversities, educational background, abilities to read-understand and write the examination, suitable learning materials can be supplied to the learners. The learning materials can also be made available for the learners putting it in a web-portal, where the learners can access the materials as well as take the printout of it if required.

2. A dedicated website can be developed to enable the learners get course materials on-line, audio-video materials, and other OER materials related to their studies. The website can be regularly monitored and other e-learning and OERs materials should be added time to time as per the need and requirements of the learners.

3. An online interaction/feedback link can also be activated in the website to facilitate the learners for put forth their comments, quarries, requirements, learning difficulties, and other general quarries. At least once in a day, the comments and quarries need to be replied by the programme or course coordinator or course-team member.

4. A dedicated centralized MobileApp equipped with all programme related information, online learning facilities including learning materials and YouTube link of related audio/video programmes with downloading option, etc. can be developed and make available in play store from wherethe trainees can install it in their mobile phone and use it as an alternative option for continuing their study.

5. A flipped classroom model can also be developed for providing synchronous and asynchronous learning experiences to the learners.

6. 50 to 100 learners can be clubbed at a study centre near the vicinity ofthe learners; may be in DIETs, CTEs, Block Resource Centres (BRCs), Cluster Resource Centres (CRCs), and identified Model Senior Secondary Schools.

7. 10 to 15 learners may be attached with one faculty at the study centre to have regular interaction and solve their difficulties.

8. All type of reading materials including Self-Learning Materials, audio-video programmes, etc. can be made available at the study centre as well as in online YouTube links.

9. The faculty in place and additional faculty from nearby places can visit the study centre to support the learners with their difficulties.

10. An intensive course wise orientation (both online and offline) can be provided to the study centre faculty to make them acquainted with the perspectives and context of teacher education curriculum which has entirely as per the NCTE Regulation, 2014.

11. Learners may be given a free access at the study centre and course-wise counselling and tutorial sessions need to be conducted on every week-end and other holidays.

12. Workshop based activities can be conducted at the study centerswith the supervision by the subject experts.

13. Practical and school based activities can be done at the allotted schools in close supervision by the mentor-teacher and the external observer.

14. Frequent Radio and Television programmes on various themes relating to the teacher education programme courses need to be broadcasted/telecasted as one of the important learning support for the learners. For this SWAYAM PRABHA 27×7 TV Channels, Gyandarshan-1 DTH TV Chanel and FM radio can also be used.

15. A system of transparent evaluation practices should be implemented and that should be included both continuous and term end assessment along with other skill based practical examinations done by both internal and external examiners.

16. Strict measures should be taken to enhance that the learners write the examination in fair conditions and to certify the learners.

17. Most important aspect is to close monitoring of the activities conducted at the Programme Study Centres both by the internal faculty members and external invitees. By monitoring the activities, quality in teacher training programmes can be ensured and that can also contribute for strengthening the system.

Preparing quality teachers is possible by educating them qualitatively. Blended-approach has its own strengths and it suit the learning styles and habits of every learner. It addresses the individual differences and abilities of the learners. Better using multiple mode of learning is the only panacea for Indian teacher education programmes, and it should be used to train the untrained mass elementary teachers.

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STUDENTS' PERCEPTION ABOUT ONLINE TEACHING-LEARNING IN HIGHER EDUCATION DURING COVID PANDEMIC

Yogita Kamal
Dr. Laxman Shinde

Abstract : *The purpose of the present study is to identify the perception of students at higher education about the problems faced during online learning. For this, three research questions were made based on three concepts that are Technical Problems, Teaching–Learning Process and perception about E-Learning platform. A sample of School of Education, DAVV, Indore was taken. The data was collected online and analyzed. It was found that majority of the student were capable of handling and solving technical problems but other was not. Secondly, online classes were interactive but still student not understand the concept. Thirdly students were not clear about the type of mode that is better for them.*

Keywords*: Online Teaching–Learning Process, E-Learning, Technical Problems, Higher Education*

Introduction

The interaction between teacher and students has changed due to corona virus pandemic that changes the Teaching-Learning processin Higher Education institutions. These changes in the

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situations, affect the whole education system all over the world. Due to which Universities were forced to carry out the activities in online mode such as conducting classes, taking exam etc. Generally the online learning is considered as an alternative to traditional learning but now it became an essential part for running and maintaining the activities of education.All these changes may change the perception of the student towards Teaching- Learning process. Through this paper, an attempt was made to found such changes in the perception of the students.

However, when conducting classes online there are some elements which should be kept in mind and tackled properly to make teaching effective. Like one can use discussion, presentation, animation, videos, poll, etc. during the lecture to make the content interesting. On the other hand there are some limitations such as lack of motivation, feeling of isolation due to lack of physical presence of classmate etc. nonetheless these obstacles can be overcome by selecting the appropriate strategies as per the need of the students. For maintaining the quality of online teaching, teachers should be experienced and knowledgeable about the online environment. Similarly, there are some advantages and disadvantages on the student's side. Advantages are that the young generation is very much familiar to the technology and can easily learn and handle the device. One of the disadvantage is that may be student don't have device/facilities for attending the online class.

Chakraborty, et.al. (2020)found that the students learn better in physical classrooms (65.9%) and by attending MOOCs (39.9%) than through online education. The students, however, felt that the professors have improved their online teaching skills since the beginning of the pandemic (68.1%) and online education is useful right now (77.9%). The students appreciated the software and online

study materials being used to support online education. However, online education is stressful and affecting their health and social life. This pandemic has led to a widespread adoption of online education and the lessons they learnt now will be helpful in the future.Coman, et. al.(2020)found that Universities did not have the technical capacity to provide optimal conditions for online learning. 69.4% of the respondents complained that they frequently and very frequently encountered technical problems with the platforms provided by the universities, although the majority of students (66.1%) had used the E-learning platform previous to the pandemic, their opinions regarding the use of the online environment for learning are divided. Some of them, (37.4%) consider it an appropriate environment for learning, some consider that is not very suitable (32%), and a third is undecided (30.6%). The same thing happens when it comes to the level of satisfaction towards their online learning experience: 39.1% being very satisûed and satisûed by the E-learning process, 31.9% were undecided, and 29% were dissatisûed, 66.1% of students had previously used the platform and did not report any diûculty in using and operating the instruments it provides.

Therefore, there are many challenges in front of university members as well as students. Some of the challenges were: keeping balance between the different online courses in the university, different health effects due to spending many hours in front of screen, provides support throughout the learning, taking account of the students those do not have cell phone and facilities for online classes, etc. On the other hand, main challenges face by students were accessibility, connectivity, lack of appropriate devices, social issues represented by the lack of communication and interaction with teachers and peers.

The aim of this research paper is to identify the student's perception towards online learning during this corona virus pandemic in order to modify and improve the E-Learning system. In other words, this study reveals the drawback of the process of E-Learning and identifies the perception of students towards the process of E-Learning. Also, how these technologies influenced their understanding of concepts, assimilation of information, etc. Furthermore, through this study the main difficulty areas of E-Learning were encountered and in which context students want the university to be further improve and use these platforms.

Thus, the conclusion of this research study can contribute to the improvement and development of the E-Learning process, for this three research questions were framed and further analyses of the collected data were done.

Research Questions

1. What is the perception of students about the Technical Problem occur during online classes?
2. What is the perception of students about the online Teaching-Learning process?
3. What is the perception of students about E-Learning Platforms?

Methodology

Convenience sample technique was used for selecting the sample. The sample consists of 40 B.Ed. students of School of Education, DAVV,Indore of session 2019-21. There were 10% male

and 90% female students. The age range of the sample varies from 21-39 years.

Questionnaire was constructed by the researcher by taking three research questions under which statements were made (Table 1). The first research question was related to the Technical Problems faced by the students during online classes and it consists of 8 statements. Second research question was related to Teaching–Learning process and it consists of 12 statements. Third research question was related to the perception of students towards E-Learning platforms and it consists of 2 statements.

Table-1:
List of statements covered under the research question

Statements
Technical problems
1. Sound was clear and audible
2. Sound was breaking
3. Loss of signals: problem in network connection
4. Video/content was readable
5. Schedule was appropriate
6. Easy to handle the device (computer, laptop, mobile etc.)
7. Easy to share the screen for presentation
8. The app used for online class was appropriate
Problems face during Teaching-Learning process
9. Class was interactive(microphone, chat),

10. Same amount of content was taught online as compare to offline classes
11. Difficulty in giving presentation/seminar/projects online
12. Difficulty in understanding of the content online as compare to offline classes
13. The content was taught through audio, video, forum etc.
14. More focus on theory
15. More focus on practical tasks
16. Assignment/tasks was given weekly
17. There was more free time during lecture
18. Questions were asked in between the lecture
19. Questions were put up in the chat box
20. Note making was easy in online classes

Perception of student for E-Platform

1. Preference to online learning as compare to offline learning
2. Preference to hybrid learning both online and offline

Data were collected online through Google form. Questionnaires were prepared by using 5-point Likertscale and send to the student. There were 22 statements against which there are 5 options as Strongly Disagree, Disagree, Neutral, Strongly Agree, and Agree. There was no time limit to complete the form.

The collected data wereanalysed by using percentage for each statement.

Findings

Perception of students about the technical problem occur during online classes

Table 2: *Percentage of responses for each statement of first research question*

S. No.	Statement	Strongly Disagree	Disagree	Neutral	Strongly Agree	Agree
1	Sound was clear and audible	0	5	25	55	15
2	Sound was breaking	0	10	20	55	15
3	problem in network connection	0	10	35	45	10
4	Video/content was readable	0	20	20	40	20
5	Schedule was appropriate	0	15	15	55	15
6	Easy to handle the device (computer, laptop, mobile etc.)	5	15	25	35	20
7	Easy to share the screen for presentation	0	10	10	45	35
8	The app used for online class was appropriate	0	0	15	70	15

By observing Table 2, it is clear that majority of the students were strongly agreed55% with the first statement that sound was clear and audible during the online classes. While 0 % student was strongly disagreed, 5 % students were disagreed, 25% were neutral and 15% were agreedwith the statement. For the second statement that sound was breakable in online classes, majority of the students

were Strongly Agreed 55% with the statement while 0% were selected Strongly Disagreed, 10% selected Disagreed, 20% neutral and 15% Agreed with the statement. For third statement that is about the network connectivity, majority of the students were Strongly Agreed 45% with the statement while 10% student disagreed with the statement and 10% Agreed with the statement. Fourth statement based on readability of the video/content during online class, majority of the student were Strongly Agreed 40% with the statement while 20%, 20%, 20% voted for Disagreed, neutral and agreed respectively. Fifth statement related with the schedule of the classes, for this 55% Strongly Agreed and 15%, 15%, 15% responded as Disagreed, neutral and agreed respectively. Sixth statement related with the handling of the device, for which 35% student stronglyAgreed, 25% were neutral, 20% Agreed and 15 % disagreed with the statement. Seventh statement was related with the ease of presentation during online classes, for this 45% student Strongly Agreed, 35%Agreedd, 10%neutral and 10% disagreed with the statement. Eight statements were related with the online application used for teaching, for which majority 70% student Strongly Agreed, 15% Agreed, and 15% Disagreed with the statement.

Perception of students about online Teaching-Learning process

Table 3: Percentage of responses for each statement of second research question

S. No.	Statement	Strongly Disagree	Disagree	Neutral	Strongly Agree	Agree
1	Class was interactive (microphone, chat),	5	20	20	45	10

2	Same amount of content was taught online as compare to offline classes	15	30	30	20	5
3	Difficulty in giving presentation/seminar/ projects online	15	15	10	55	5
4	Difficulty in understanding of the content online as compare to offline classes	0	20	15	55	10
5	The content was taught through audio, video, forum etc.	0	5	20	70	5
6	More focus on theory	0	10	20	65	5
7	More focus on practical tasks	0	60	15	5	20
8	Assignment/tasks was given weekly	5	35	25	35	0
9	There was more free time during lecture	20	25	25	25	5
10	Questions were asked in between the lecture	5	5	0	75	15\
11	Questions were put up in the chat box	10	45	15	20	10
12	Note making was easy in online classes	10	35	20	15	20

By observing the table 3, it is clear that majority of the students were Strongly Agreed45%, 10% were agreed, 20% were neutral, 20% were disagreed and 5% were Strongly Disagreed. For the second statement about the content similarity of online and offline

classes, 15% were Strongly Disagreed, 30% were Disagreed, 30% were neutral, 20% were Strongly Disagreed and 5% were Agreed. For third statement that is difficulty in giving presentation, seminar etc. 15% were Strongly Disagreed, 15% Disagreed, 10% neutral, 55% Strongly Agreed and 5 % were Agreed. Fourth statement related with the understanding level in online as compare to offline, for which 0% were Strongly Disagreed, 20% wereDisagreed, 15% were neutral, 55% were Strongly Agreed and 10% were Agreed. Fifth statement were related with the content delivery strategy whether content taught through video, audio, forums etc. for this 0% were Strongly Disagreed, 5% were Disagreed, 20% were neutral, 70% were Strongly Agreed, and 5%were Agreed. Sixth statement was that the content was more focus on theory, for this 05 were Strongly Disagreed, 10% Disagreed, 20% neutral, 65% Strongly Agreed, and 5% Agreed. Seventh statement focus on the practical task given in online classes, 0% were Strongly Disagreed, 60% were Disagreed, 15% were neutral, 5% were Strongly Agreed, and 20% were Agreed. Eight statement deals with the assignment given on weekly basis for this, 55 were Strongly Disagreed, 35% weredisagreed, 25% were neutral, 35% were Strongly Agreed, and 0% were agreed. Ninth statement was related with the free time given during lecture, for which 20% were Strongly Disagreed, 25% were disagreed, 25% were neutral, 25% were Strongly Agreed and 5% were agreed. Tenth statement related with the interaction during the online classes, 5% strongly Disagreed, 5% Disagreed, 0% neutral, 75% strongly Agreed and 15% Agreed. Eleventh statement was related with the question put up in the chat box during the class, for this 10% were Strongly Disagreed, 45% Disagreed, 15% neutral, 20% were Strongly Agreed, 10% were Agreed. Twelfth statement

was related with the note making activity, for this 10% were Strongly Disagreed, 35% were disagreed, 20% were neutral, 15% were Strongly Agreed, and 20% were agreed.

Perception of students about e-learning platforms

Table 4: Percentage of responses for each statement of third research question

S. No.	Statement	Strongly Disagree	Disagree	Neutral	Strongly Agree	Agree
1	Preference to online learning as compare to offline learning	15	30	20	30	5
2	Preference to hybrid learning both online and offline	0	5	50	35	10

The above table 4 shows the two research question, first statement related with the perception of student towards online learning as compare to offline classes, for this 15% were Strongly Disagreed, 30% Disagreed, 20% were neutral, 30% were Strongly Agreed, and 5% were Agreed. For the second statement that preference to hybrid learning including both online and offline mode, for this 0% were Strongly Disagreed, 5% were disagreed, 50% were neutral, 35% were Strongly Agreed, and 10% wereagreed.

1. Majority of the students Strongly Agreed with the statements of technical problems faced by them during online class such as, sound breaking, lack of network connection. While other statement depicts the

strengthens the part of the online classes that for which majority of the student selected the Strongly Agreed option which includes, sound clarity, content readability

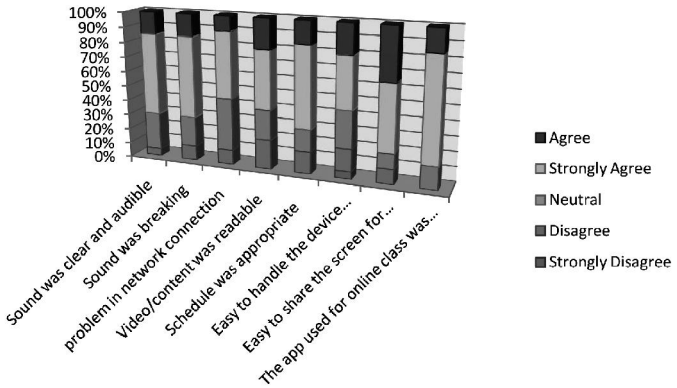

Figure 1: *Percentage wise representation of responses for each statement of first research question*

2. The second research question consist of the problems related with the teaching-learning process during online classes, majority of the students Strongly Agreed with the positive aspect of the e-learning that is class was interactive, different modes of presenting content like video, forum etc., questions were asked in between the class. While there were some problems or drawback of online class were elicited through this data that is, majority of the student found that the amount of content was not equally taught through online class, student not able to give online seminars, presentation etc., not able

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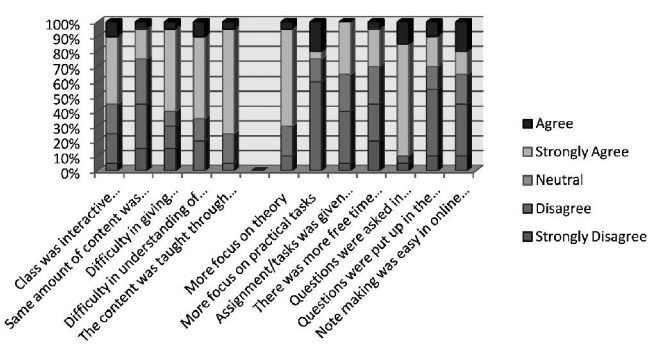

Figure 2: Percentage wise representation of responses for each statement of second research question

3. The third research question were related with the

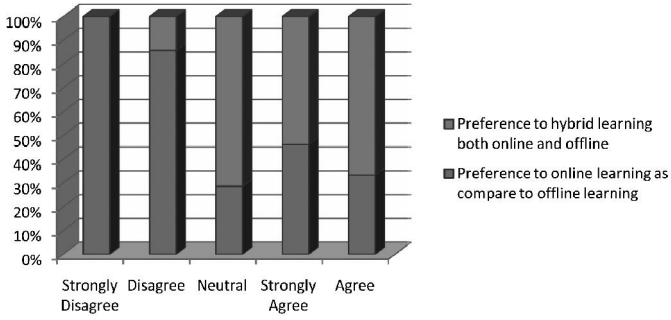

Figure 3: Percentage wise representation of responses for each statement of third research question

Conclusion

This paper was focused on the problems faced by the students of higher education during E-Learning. Due to corona virus pandemic whole education system transformed into digital, as all the work were done online. All the classes were conducted online since last two year. So, through this paper an attempt was made to identify the strength and weakness of the education system at higher education. By observing the responses of the students, following conclusions were drawn as per the research question.

First research question focuses on the Technical Problems occur in online classes and it was found that the app used for taking classes was appropriate, majority of the students can easily handle the device for attending classes and able to share their views, presentation etc. also, there was sound clarity and content was readable. On the other hand some of the students face problem in handling the device, and app, due to which their learning affects. There was one more problem which can affect the learner was network connection as it depend on the location of the student, network connection company, etc. and the schedule followed by the university/college was appropriate for the majority but not appropriate for some students.

Second research question focuses on the teaching learning process, it can be concluded that majority of the students found the

online class interactive and theoretical. They experience lack of practicability; lack of concept understanding, not able to share the content easily, more free time during lectures which deviated their concentration, not able to make notes properly, the whole content was not possible to cover online as compare to offline classes.

Third research question was related with the perception of the students to take online class, offline class or hybrid class and it was observed that the views were scattered among all the three options.

The following implications were drawn by observing the response and analysing the data:

1. As it was found that class was interactive but still the concepts were not clear, so, it is necessary to make the content easy and in understandable form. It can be done by using more than one example, using cross question during the class, using two-way communication, can use different strategies to make content interesting and attractive.

2. The technical problems were not completed solve by any method. It should be controlled and minimize by giving proper network connection by the university, proper devices, etc.

3. Some strategies must be adopted to deal with the practical subject. It can be done by giving task to individual student and then he must present the content to the class.

4. Note making was not easy in online classes, so teacher should provide content to the students in the form of

document, video, etc. so that student can pay attention towards concept instead of making notes.

5. It is necessary for teacher to give immediate feedback to the task completed by the student in order to motivate and support them.

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EFFECT OF CHARLES GALLOWAY FEEDBACK SYSTEM AND EMOTIONALINTELLIGENCE ON TEACHING EFFECTIVENESS OF TEACHER TRAINEES

Dr. Jyoti Gangrade*
Dr. Madhulika Varma**

Abstract : *The process of modifying the behaviour of a student can be conscious and a deliberate effort by the teacher through communication and knowledge. Modifications in students' behaviour could be done through interactions in the teaching learning process. Good and efficient teachers on account of their magnificent qualities, virtues and skills may prove a boon to proper growth and development of the personality of the students. Thus, teacher could be made efficient through proper training process. Feedback is an essential component for helping student-teachers to develop as self-reflective and expert teachers. A systematic or objective analysis of teacher's classroom behaviour or classroom interaction may provide a reliable assessment of what actually happened inside the classroom. For present study the Charles Galloway System of verbal and non - verbal interaction analysis category feedback system is used.*

Keywords:*Charles Galloway Feedback System, Emotional Intelligence, Teaching Effectiveness,Teacher Trainees.*

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Introduction

Feedback is an essential component for helping student teachers to develop as self-reflective and expert teachers. According to Kulhavy and Stock (1989), effective feedback provides the learner with two types of information: verification and elaboration. Verification is the simple judgment of whether a behaviour is correct or incorrect, while elaboration is the informational component providing relevant cues to guide the learner towards a desirable behaviour as given in traditional feedback system.

A systematic or objective analysis of teacher's classroom behaviour or classroom interaction may provide a reliable assessment of what actually happened inside the classroom. It helps a teacher to bring desirable modification in his/her behaviour and improve the interaction with pupils for making his/her teaching more effective and purposeful.For present study the Charles Galloway System of verbal and non - verbal interaction analysis category feedback system is used. In this teacher behaviour is first divided into various units. A behaviour unit is then classified into categories. In this system, at regular intervals of the observation period the category is observed.In total there are ten categories of verbal behaviour and ten categories of non-verbal behaviour. These are divided into three major sections (a) Teacher talk (b) Student talk and (c) Silence on Confusion.In this system relevance to the non-verbal cues is given along with the verbal behaviour, as the teachers do convey information to students through non-verbal cues. These cues can be either spontaneous or managed and facilitate any effort to understand others and to be understood.This system provides a unique approach to a more complete analysis of interaction in the

classroom as it combines both verbal and non-verbal dimensions of teacher behaviour.

For present study Teaching Effectiveness includes characteristics like planning for the lesson, organization of the Content logically and psychologically, implementing instructions, use of Appropriate Skills and Teaching Methods, Manage classroom activities according to their Ability, Aptitude and Interest. For all above activities both verbal and nonverbal behaviours are shown by teachers. In teacher trainees institutes all these behaviours can be learnt by providing appropriate feedback.

Socially and Emotionally competent teachers' set the tone of the class room by developing supportive and encouraging relationships with their students, designing lessons that build on students' strength and abilities, establishing and implementing behavioural guidelines, ways that promote intrinsic motivation, coaching students through conflict situation, encouraging cooperation among students and acting as a role model for respectful and appropriate communication and exhibitions of prosocial behaviour.

Characteristics of Socially and Emotionally Competent Teachers are:

- High Self Awareness.
- High Social Awareness.
- Exhibit prosocial values and make responsible decisions.
- Respect for others' emotions.

The teacher plays a pivotal role in teaching – learning process. To highlight this process, Bossing (1963) quotes that "the teacher is by all adds, the most influential factor in high school curriculum, organization, equipment as they are, count for little or nothing except as they are vitalized by the living personality of the teacher". By this definition one can easily understand that the teacher is a very important part of teaching-learning process. During this process a teacher has to do interaction with the students in which, various verbal behaviour such as- Lecturing, Reinforcing, Questioning, etc. and non-verbal behaviours such as- Acceptance, explaining and providing reinforcement with Gestures, Movement, Eye contact etc. are shown by the teacher. At majority of times a teacher shows verbal behaviour while giving instructions, directions, information's during lectures etc. but, these verbal behaviours are not complete without the corresponding non-verbal behaviours. As, the complete meaning of the words spoken can only be through proper facial expressions, gestures or other non-verbal components. So, there is a need to study the verbal and non-verbal aspect of teacher's behaviour so present study was conducted to satisfy this need. A detailed account of teacher's direct and indirect behaviours was received through the above process, which helped in improving the indirect behaviours of a teaching thus, increasing the teaching efficiency of a teacher. Some of the researches in this area are as: Naidu (1980), Kirkere (1981), Rajamany (1981), Prakasham (1988), More (1988), Desai (1992), Westerhof (1992), Patted (1993), Mondoh (1994), Naseema (1994), Rao (1995), Bajpai (1998), Singh (1998), Devi (2001), Kushwaha (2002), Shekhar (2002), Mani (2005), Siede and Shavelson (2007), Shaute (2008), Shah (2009) and Mishra (2012).

The objective of the study is "To study the effect of Treatment, Emotional Intelligence and their interaction on the Teaching

Effectiveness of B.Ed. students by taking Pre-Teaching Effectiveness as covariate." The hypothesis of the study is "There is no significant effect of Treatment, Emotional Intelligence and their interaction on the Teaching Effectiveness of B.Ed. students by taking Pre-Teaching Effectiveness as covariate."

Methodology

The sample at Experimental stage comprised of 124students, from School of Education, DAVV, Indore, Shri Vaishnav College of Teacher's Training and Gujrati B.Ed. College, Indore. These colleges were selected purposively and they are of both Self-Financed and Government in nature. 62 students for Experimental group and 62 students for Control Group (Traditional Approach) were selected.

For the present study a standardized tool on Emotional Intelligence and a researcher made tool on Teaching Effectiveness are used. The details are as under:

In the present study, the age of the students ranged from 23 to 40 years. The medium of instruction was Hindi. Keeping in mind, age and medium of instruction, the available standardized Emotional Intelligence tool 'Mangal Emotional Intelligence Inventory' by Dr. S.K. Mangal and Mrs. Shubra Mangal (2009) was used (Hindi version). Students were asked to read the statements carefully and put the tick mark in corresponding columns 'Yes' or 'No'. There were 100 statements in all. A separate answer sheet was given. For every correct answer, one mark was allotted. At the end all the marks were added and interpreted accordingly. The reliability coefficient for Mangal Emotional Intelligence Inventory through split half method was 0.89, by K-R Formula was 0.90, by test - retest method was 0.92 and the validity coefficient was 0.437 to 0.716.

In the present study, investigator developed 'Teaching Effectiveness Scale' to assess the Teaching Effectiveness of Experimental and Control group students. The dimensions of Teaching Effectiveness are related with- content, psychological basis of implementing instructions in classroom, appropriate use of teaching skills, use of different trick and classroom aspects of teacher. The scale consisted of 80 statements. Against each statement, five columns with degrees like, to very high extent, to high extent, to moderate extent, to low extent and to very low extent are given. Students are asked to read the statements carefully and put a tick mark in any one of the corresponding columns. Marks allotted were +5, +4, +3, +2, and +1 for the positive statements and +1, +2, +3, +4 and +5 for the negative statements for respective columns. The test - retest reliability coefficient for the scale was 0.51.

Results and Interpretation

The objective of the study was "To study the effect of Treatment, Emotional Intelligence and their interaction on the Teaching Effectiveness of B.Ed. students by taking Pre-Teaching Effectiveness scores as covariate." There were two level of treatment namely CGS Approach and Traditional Approach. The students of CGS Approach and Traditional Approach were divided in respect of Emotional Intelligence into two groups on the basis of mean scores of Emotional Intelligences. The students scoring mean and above mean were designated as High Emotional Intelligence and below the mean were designated as Low Emotional Intelligence. Thus, the data were analysed with the help of two-way Analysis of Covariance. The results are given in the table given below:

Table-1: Summary of two-way ANCOVA of Teaching Effectiveness bytaking Pre-Teaching Effectiveness as a covariate

Sources of Variance	df	SSy.x	MSS.x	F
Treatment	1	28372.39	28372.39	16.16**
Emotional Intelligence	1	2666.35	2666.35	1.51
Treatment X Emotional Intelligence	1	443.50	443.50	0.253
Error	120	208819.92	1754.78	
Total	124			

*** Significant at 0.01 level of significance*

Effect of Treatment on Teaching Effectiveness of students by takingPre–Teaching Effectiveness as covariate

From the table-1, it can be seen that the adjusted F value for the treatment is 16.16 which is significant at 0.01 level of significance, with degree of freedom 1/120. It indicates that the adjusted mean score of teaching effectiveness of experimental group and control group students differ significantly. Thus, the null hypothesis that "there is no significant effect of treatment on Teaching Effectiveness of B. Ed. Students by taking Pre-Teaching Effectiveness scores as covariate," is rejected. In order to know which treatment adjusted mean scores of Teaching Effectiveness is significantly higher, the data were further studies in the table-1.

Table-2: Treatment-wise number of students, adjusted mean scores of Teaching Effectiveness of B. Ed. Students, when Pre-Teaching Effectiveness istaken as covariate

Treatment	Number of students	Adjusted Mean scores of Teaching Effectiveness
CGS Approach	62	496.55
Traditional Approach	62	449.38

Further form table-2, it is clear that the adjusted mean score of Teaching Effectiveness of CGS Approach students is 496.55 and Traditional Approach is 449.38, which reveals that the adjusted mean score of CGS Approach students is higher than that of Traditional Approach students. Thus, it can be concluded that:

CGS Approach was found to be significantly effective in comparison to traditional approach for development of Teaching Effectiveness among B. Ed. students when Pre-Teaching Effectiveness was taken as covariate.

The finding has consistency with Naidu (1980), Kirkire (1981), Rajamany (1981), Prakasham (1988), Desai (1992), Westerhof (1992), Patted (1993), Mandoh (1994), Naseema (1994), Rao (1995), Bajpai (1998), Singh (1998), Devi (2001), Kushwaha (2002), Mani (2005), Seidel and Shavelson (2007), Shaute (2008), Shah (2009) and Mishra (2012).

The difference between Feedback through CGS Approach and Traditional Approach is that CGS Approach focuses on individual's planning of lesson on the basis of verbal and non-verbal behaviour, implementing instruction, use of appropriate skills and teaching methods, managing classroom activities like acceptance of feeling, providing reinforcement, asking question and lecturing etc., their attitude and interest. It provides participants with an opportunity, to know about these behaviours, their impact on others and how to function more effectively in teaching – learning situations. While these

conditions are comparatively less in Traditional Approach and that may be the reason behind the finding.

Effect of Emotional Intelligence on Teaching Effectiveness of B. Ed. students by taking Pre-Teaching Effectiveness as covariate

From the table 1, it can be seen that the adjusted F value for Emotional Intelligence is 1.51 which is not significant at 0.05 level of significance, with degree of freedom 1/120. It indicates that the adjusted mean scores of Emotional Intelligence of students with high and low Emotional Intelligence do not differ. Thus, the null hypothesis that "there is no significant effect of Emotional Intelligence on Teaching Effectiveness of B. Ed. students by taking Pre-Teaching Effectiveness as covariate" is not rejected. Thus, it can be concluded that Emotional Intelligence was found to be independent of Teaching Effectiveness when pre-Teaching Effectiveness was taken as covariate.

The reason of finding may be as Teaching Effectiveness associated with cognitive domain as the student teacher needed in depth knowledge of content, comprehension of teaching learning situation, application of teaching maxims, analysis of content, synthesis of teaching environment and evaluation of presentation. So, in this way it is associated with cognitive domain of the students. Teaching is done for a group and overall development of students is considered. Emotional Intelligence is related to the Affective domain of the students. As an individuals' Emotions or feelings are only considered so, may be due to this, Teaching Effectiveness may found to be independent of Emotional Intelligence. The finding has consistency with Dwivedi (2004).

Effect of Interaction between treatment and Emotional Intelligence on Teaching Effectiveness of students by taking Pre-Teaching Effectiveness as covariate

From the table 1, it can be seen that the adjusted F value for interaction between treatment and Emotional Intelligence is 0.253 which is not significant at 0.05 level of significance, with degree of freedom 1/120. It indicates that interaction between treatment and Emotional Intelligence had no significant effect on Teaching Effectiveness. Thus, the null hypothesis that "There is no significant effect of interaction between Treatment and Emotional Intelligence on Teaching Effectiveness of B. Ed. students by taking Pre-Teaching Effectiveness as covariate" is not rejected. Thus, it can be concluded that interaction between Treatment and Emotional Intelligence did not produce significant effect on Teaching Effectiveness of B. Ed. Students when Pre-Teaching Effectiveness was taken as covariate.

The reason of the finding may be as for the Treatment through CGS Approach, the students were given feedback for both verbal and non-verbal behaviours and so, there was an equal emphasis for both kinds of behaviours shown by the teacher, whereas,in Traditional Approach, the feedback was given for verbal and non-verbal both or only for verbal behaviours. In both the cases of giving feedback, the emotions of students were not considered whether they were of high Emotional Intelligence or low Emotional Intelligence. So, the interaction of Treatment and Emotional Intelligence was not found significant.

Conclusion

The educational implications of present research are as follows-

- Treatment is useful for the teachers and student teachers to improve their indirect behaviour for development of Teaching Effectiveness.
- It is also useful for the text – book writers to include such content which demands new methods and strategies in Teaching – Learning process. While teaching these topics, teachers could be evaluated for their behaviours through the CGS Approach treatment.
- It is useful for the Policy Makers to involve this treatment necessarily during the practice teaching sessions of B.Ed. Students for development of Teaching Effectiveness.
- It is useful for the Administrators to involve this treatment at their levels so as to minimize the workload of supervisor, with maximum accuracy and preciseness by giving feedback through CGS Approach with computer.
- It is useful for the Curriculum Developers in enhancing Teaching Effectiveness of teachers', by considering knowledge of verbal and non-verbal behaviour of teachers' according to the content.

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EDUCATION FOR THE TRIBALS: UNMASKING THE DOMINANT DISCOURSE

Dr. Anirban Mukherjee*

Abstract : *This paper explores the educational hurdles that tribal students face, with special reference to schools in West Bengal. The research reveals that though acts and policies have been designed for enhancing enrolment of tribal students in nearby schools, they have largely ignored incorporation of elements of tribal culture in the curriculum. Stated differently, educational policies have mostly been homogenous in nature and does not take note of the cultural peculiarity of the specific population in question. Such cultural dissonance between the school and the home environment results in increased alienation of the tribal child from school. Thus, the curriculum enforces assimilation of the tribals to the mainstream values and norms, giving them the impression that their culture is a liability rather than asset. Moreover, although claimed to be free, achieving educational success involves subsidiary costs like, private tuition which presents an obstacle for the poverty stricken tribal families. The problem is further complicated due to the unempathetic attitude of the teachers and other lop-sided developmental policies of the government. The research also explores how education has increased socio-cultural wedge between the Sanskritized tribes and their downtrodden brethren and distanced the former from their cultural roots. In sum, the research attempts to identify incompatible areas between the modern education system and*

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tribal culture, educational hurdles that tribal students face in the schools, assess the social standing of the tribal graduates, and examine the teachers' perception of tribal students. The research is qualitative in nature with observation and interviews conducted with the Santali, Lodha, Birhor, and Kharia tribes.

Keywords: *Tribes, Education, Cultural Imposition, Sanskritization, Subaltern.*

Introduction

India isinhabited by vast population of indigenous people or the tribals. The population of the tribals in the country is 104 million, which is 8.6% of the total population in India (Census of India, 2011). These tribal people are the poorest and most exploited people and they rely on hunting, forestry, agriculture, and fishing for their livelihood. Most of the tribals reside in scattered and small habitations in remote and inaccessible parts of the country, where the basic infrastructural facilities are unavailable. The literacy rate of the tribals remain low and a large number of tribal children remain outside of the schooling system. Further, tribal children exhibit higher dropout rates from school in comparison to the mainstream children (Statistics for School Education, 2010-11) and substantial portion of the population falls below the poverty line (Report of Planning Commission, 2009-10).

In the post-independent India, the Government has taken several steps to alleviate the condition of the tribals. For instance, the Right to Education Act, Sarva Shiksha Abhiyan (SSA) are some of the acts that attempt to universalize education. More so, these acts allows the students to receive free education in private school till standard eight, permits them to take admission in schools in case of temporary unavailability of

birth and transfer certificates, banned corporal punishment in schools, etc. Despite all these provisions, the fact remains that only 41.9 of the tribal children are able to complete standard VIII, and 13.9 students are able to study till standard XII (Statistics of School Education 2010-2011; Report of the Ministry of Tribal Affairs, 2013). Therefore, this study attempts to explore the educational hurdles that tribal children encounters in schools, with special reference to the schools in West Bengal.

Methodology

The research was mainly qualitative in nature, with observation and interview as the main tools of data collection. The state of West Bengal was chosen because the literacy rate of the tribals (57.9%) in the state was way below the national average (74.04%) (Census of India, 2011). In the state of West Bengal, the districts of Bankura, Birbhum, Paschim Midnapore, and Puruliya were chosen because they exhibit substantial concentration of tribal population. The children belonging to the Santal, Birhor, Lodha, and Kharia tribal groups were chosen because the above-mentioned districts have a higher concentration of these tribal groups. And finally, the schools in villages of Jhilimili, Santiniketan, Belpahari, Bethkundari, and Bagmundi were shortlisted for the study. Students, teachers, parents, and school graduates were interviewed and the interviews were semi-structured and open-ended. In reporting the findings, pseudonyms were used for maintaining confidentiality of the research subjects.

Findings

The findings revealed that though the government has taken several steps to universalize education, the policies broadly overlooked the cultural specificities of the tribals. For instance, the

time-table of the surveyed school was found to be very structured and inflexible and tribal children suffered because they were not used to such structuration of life. Similarly, it was found that the food in the hostel and sports facilities offered were not suited to tribal preference and culture. As one of the students shared:

"We don't like the food provided in the hostel since the menu does not include rice-peg or meat. Because we have to rush as soon as the bell rings (for lunch or dinner) because there is often no food left for the latecomers."

Such inflexible scheduled is not suited for the tribal culture where members engage in activities as per their choice and interest. Furthermore, it was found that the school calendar adhered to specificities of the mainstream society and did not address the tribal culture. For instance, Santals celebrate "Sohrai" festival in the month of January and Birhors celebrate the "Sahrul" festival in the month of March, during which the school remains open. The high absenteeism of students during these months adversely affects their academic performance.

The teachers, who were mainly from the mainstream society, does not adequately empathize with the tribals students and understand that the school curriculum is ill-suited to cater to the tribal needs. As the principal of a school mentioned:

"A tribal child is typically of very stubborn character. It is very hard to make them "civilized". The mainstream language, dietary habits, mannerisms that are picked up by these students after sustained efforts by our teachers, are very easily undone when the tribal students visit home during leave."

In many of the schools, students were barred from using their mother-tongue on the premises and were subjected to corporal punishment if they were found to do so. Such behaviour tend to create an impression among the students that their culture is a liability and not an asset. Thus, if was found that tribal children were reluctant to wear their ethnic attire, celebrate their festivals, speak their language, lest they be designated as backward. In the words of a tribal parent:

"Wearing of traditional dresses is now considered to be a symbol of backwardness among the younger generation…. In fact, some of the tribals are quite ashamed to reveal their tribal identity."

Interestingly, many of the students considered the tribal tradition of dancing around the fire to be backward and they reason their aversion in the fact that such dance entails the stigma of tribalism. As a matter of fact, cases were revealed in which tribal students stopped maintaining contact with their parents and brethren once getting educated and finding a job in the city.

Teachers in the schools were mainly from the mainstream society and some of them considered it to be their ill luck to be posted in the remote tribal areas. They complained to the limited development infrastructure available in the area and wished for their transfer to the city at the earliest opportunity. Interaction with the teachers revealed that most of the schools suffered from shortage of teachers and hence they recruited part time teachers. These part time teachers were poorly paid and often encouraged students to take paid private tuition from them outside of school hours. However, the fact remains that most tribal families were too poor to afford

private tuition for their children and hence the tribal students lagged behind their mainstream counterparts.

Surprisingly, none of teachers in the schools surveyed had a diploma in tribal course. Moreover, schools were found to blatantly ignore the specialization of a teacher while assigning courses to him/her. And one principal justified the act on the ground:

"We run schools where there is shortage of teachers. We need teachers who have higher degrees because they have to teach subjects other than their own specializations."

The schools were also found to suffer from several infrastructural shortages. For example, schools were found to have shortages of classrooms, laboratories, hostel accommodation, libraries, toilet facilities, and lacked electricity. In fact in the residential schools of Bagmundi and Jhilimili, 20 students were accommodated in one hostel room. None of the hostel rooms did have bed and students slept on the floor. Even worse, because of unavailability of electricity students had to manage without fan in their hostel rooms during summer months. Similarly, because of the absence of laboratories, students had no chance to conduct the science experiments with their own hands.

Teaching was thus reduced to memorization only and content analysis of the question papers revealed the same. For instance, in the annual examination, students of grade IX in a school at Bagmundi were asked to compose the following notice: "Suppose you are the Secretary of the School Magazine Company. Write a notice to the students requesting their contribution to it." The question was objectionable because the school in question did not have school magazine and students did not understand the meaning of the term

'secretary'. In a similar vein, the class V students of a school in Bagmundi were asked to write about the purpose of ECG (Electro-Cardiogram). The interesting part was tribal students knew the answer to this question but the village does not have a hospital or even an electrocardiogram machine. Surprisingly, none of the question papers had any question from the tribal setting. Students thus learn to memorize their lessons without ever questioning them. Astonishingly, some teachers were found to justify such mode of learning. As Respondent N revealed:

"The tribals have a relationship structure quite different from the mainstream society. Their society is kind of horizontally structured. The first thing that we teach the students in school is to have respect for elders. Curiosity and inquisitiveness in the students develops automatically at a later stage."

Some of the above-mentioned irregularities could be checked by means of school inspection. However, some schools revealed that they have never been inspected or their inspection was a mere formality. School inspection was found to involve only checking the attendance register but never the classroom activities. A principal of a school in Santiniketan explained:

"Inspectors come from faraway places. They have to do their job as a formality in order to reach home that very day."

Nonetheless, few tribal children were found to emerge successful from such a system. Their success could be explained from the fact that they belonged to the 'Sanskritized' (Srinivas, 1952) tribal families. The elite or the Sanskritised tribals had higher incomes, had nuclear families, used mainstream language (Bengali) at homes, and owned television and other electronic gadgets. Stated differently,

they not only had higher incomes but also had the necessary cultural capital to succeed in the mainstream education system. Most of these Sanskritised tribes were school and college educated people, who had business or government jobs in the city. They resided in spacious houses and maintained nuclear families. Their interaction with the villagers was limited and it happened only when they returned home during the weekends. They resembled more the mainstream Indians rather than their cultural brethren and were quite distanced from the later. Undoubtedly, their 'cultural capital' and 'exposure to the outside world' helped their children to succeed in school. In the words a K, a Sanskritized tribe:

"The child can't have academic success all by himself. Being a conscious parent, I take the trouble to look into as to what he is studying, what are the areas in which he is facing difficulties. I make it a point to talk to his teachers at school once every month and also have arranged for his private tuition. I regularly bring reference books (for him) from Calcutta so that there is no dearth of efforts….Yes, I do take my family to Calcutta whenever the kids don't have school."

Interestingly, it was found that Sanskritized tribals urged the teachers to set higher teaching standards in schools so that their children are able to compete with their mainstream students. As one the teachers mentioned:

"Our school teaches the poem Daffodil by William Wordsworth to students of grade V. The school committee is thankful to the tribal parents who urged us to set higher standards in teaching. Now they are able to realize how competitive is the job market and how important it is to

compete with private English schools of Calcutta….Recently, we have changed the language of the application form for admission from Bengali to English imitating the private English medium schools."

Children of the tribal elite families were also found to be very much accultured. Unlike their downtrodden counterparts, they made friendship with the academic achievers and idolized cricketers and Bollywood film stars. An elite tribal child shared the following comment about her tribal classmate:

"Tumpa (name of the tribal girl) does not wear tidy clothes. She bears the mark of native. I will loose my friends if I talk to her."

Elite tribal children also displayed typical middle class mentality and the acculturation traits required to be successful in the mainstream education system. Thus, they displayed exam related anxiety and fear psychosis, typical of the mainstream children. In Jhilimili, H, a tribal elite child described her exam related anxiety in the following words:

"Today the result of our mathematics examination will be announced. I am very tensed about the result. If I do poorly, my parents will be very upset and will stop talking to me."

Conclusion

The government needs to understand that by constructing school in the middle of a village or by designing policies, they are not absolved of their duties and responsibilities. What goes on in the name of education is the process of acculturation. Little attempt is being made to incorporate element of tribal culture while designing

educational policies for them. This results in the alienation of the tribal children from the schools and eventually leads to high dropout among them. In line with Antonio Gramsci (1971), I contend that education is a great status quoist and here it convinces the tribal students of their intellectual inferiority. Tribal students are made to understand that they need to have the cultural capital of the Indian middle class to achieve educational success. So, mainstream education has become the means through which hegemony over the tribal society is maintained.

The fact that the tribal culture and values are totally rejected in school, gives the impression to a child that his/her culture is more of a liability than an asset. The implication is that students getting accultured in such a system is distanced from their brethren and are basically sanskritized into mainstream values and norms. So, the sanskritized tribals represent the category of 'organic intellectuals' (to use the Gramscian term), who develop alongside the mainstream society and function for the benefit of the mainstream society. These organic intellectuals are the product of the mainstream education system and it is through them that the mainstream society maintains hegemony over the tribal society.

The teachers fail to adequately empathize with the tribal children and displayed little understanding of the nuances of tribal culture. Thus, teachers should be carefully recruited and their services should be strictly voluntary. Stated differently, teachers should have a commitment towards the community they serve. They are not supposed to be people who are 'here today and gone tomorrow' and should develop relationship with the community and nurture the feeling among people that 'local school is everyone's school'. In terms of the curriculum, an integrated curriculum that combines mainstream curriculum with the tribal content

should be promoted. It is the task of the teachers to enlighten the tribal students of their rich cultural heritage and the contribution of the tribal leaders like Tilka Manjhi, Birsa Munda, Sitaram Raju towards the independence of India.

Most of the schools suffered from infrastructural inadequacies in the form of shortages of classrooms, teachers, laboratories, libraries, etc. Such problems could be addressed by means of having rigorous accountability structure and providing a more prominent role to the school inspector.

Echoing Franz Fanon's ([1967] 2008) observation about the destiny of Black men, let us end with a similar note: "*For the tribal man, there is only one destiny. And it is mainstream Indian."*

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SOCIAL MEDIA AND ACADEMIC PERFORMANCE OF STUDENTS AT GRADUATION LEVEL

Rupa Gupta*
Dr. Elizabeth Gangmei**

Abstract : *Social media is now a part of everyone's life. Social media provides a great platform for any individual for accessing and communicating the information worldwide at just one click. It has been observed that the younger generation is extremely much susceptible to social media. So, this study is an attempt to examine the extent of usage of social media and academic performance of students at graduation level.This empirical study is based on a survey of 187 students at the graduation level of Patna College of geography department.Data collected online, through Google form was analyzed through MS Excel and SPSS Software. The findings of the study revealed that (i) There is no significant difference in the usage of social media for academic purposes on the basis of gender (male and female) students of graduation level. (ii) There is no significant difference in the usage of social media for academic purposes by the graduation level students belonging to different areas (urban, rural, and semi-urban set-up). (iii) There is no significant difference in the usage of social media for academic purposes by the graduation level students studying at different levels (1st year, 2nd year, and 3rd year).*

Key Words:*Social media, Academic performance, Graduation level students.*

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INTRODUCTION

Social media is websites and applications which expedite the sharing of information, thoughts, ideas, and knowledge through virtual networks and communities. Social Media is websites and applications that enable users to create and share content, which includes personal information, documents, photos, and videos.

Social media has gained credibility over the years as a reliable source of knowledge and platform where organizations can interact with audiences, even educational institutions adapting these developments into their systems and relying on group resources and mechanisms to improve students' life.

Social media are helping students, teachers as well as parents to get more relevant knowledge and also to connect with learning groups and other educational systems that make education more approached. Electronic devices and social media create an opportunity for the students for collaborative learning and also allow the students to share the resource materials with the colleagues (Gikas & Grant, 2013).

Social network tools are very beneficial for both students and institutions in numerous ways like improving teaching and learning methodologies, sharing, and interactions. Now a day's online tutorials through YouTube, LinkedIn, and online courses delivered by universities abroad through Skype, and a wide array of resources that are shared through social networks are proving boons for learners to become 21st century skilled learners.

Social media enables learners to know about the expertise of different fields and subjects. And, by following these, learners can

gain insight which empowers them to produce effective results and hence, become adaptive learners. Social media platforms in academic institutions allow students to interact with their mentors, access their course contents, customization and build student communities (Greenhow, 2011a, 2011b).

Nowadays, learners easily get connected with each other through social media networks such as Facebook, Google Plus groups, and YouTube. These networks not only help students to tackle issues but also help to gain valuable knowledgesuch as analytics and insights on various topicsfor study purposes through group interactions.

Types of Social Media with Examples:

- **Social Networks:** Facebook, LinkedIn.
- **Bookmarking Sites**: Pinterest, Flipboard, Diggs.
- **SocialNews:** Digg.
- **MediaSharing:** Pinterest, YouTube, Vimeo.
- **Microblogging:** Twitter, Facebook.
- **Blog** comments and forums.
- **Social** Review Sites.
- **Community** Blogs.

Students' engagement in social media and its types represent their physical and mental involvement and time spent boosts to the enhancement of educational excellence, time spent on interaction with peers, teachers for collaborative learning (Kuh, 2007).

After studying the facts of social media and the high academic performances of students, the investigators felt the need for this study. So, the investigators have chosen the topic for the study "Social media and academic performance of students at graduation level". The objectives of this study were as follows:

1. To examine the extent of usage of social media by graduation-level students for their academic purposes.
2. To study the gender-related difference in the usage of social media by graduation-level students for their academic purposes.
3. To ascertain the difference in the usage of social media for academic purposes by graduation-level students residing in different areas.
4. To ascertain the difference in the usage of social media for academic purposes by graduation-level students studying at different levels.

HYPOTHESES

H_0 1. There is no significant difference in the usage of social media for academic purposes on the basis of gender (male and female) students of graduation level.

H_0 2. There is no significant difference in the usage of social media for academic purposes by the graduation level students belonging to different areas (urban, rural, and semi-urban set-up).

H_0 3. There is no significant difference in the usage of social media for academic purposes by the graduation level students studying at different levels (1st year, 2nd year, and 3rd year).

METHODOLOGY

In the present study, the investigators selected the quantitative descriptive survey method in view of the objectives of the study and the nature of the problem concerned. The survey was conducted by using an online survey tool.

The population of the study consists of students studying at graduation level in the colleges of Patna.

The investigators used the convenience sampling technique for selecting the samples. The sample of the study was 187 students of the geography department studying at Patna College of2018-2021, 2019-2022, and 2020-2023 batches.

A self-developed and well-constructed questionnaire titled "Social Media and Academic Performance of Students" (SMAP) was used to get the desired information from the students. The questionnaire was divided into two sections (A and B). Section A was for the collection of information on personal data of respondents while section B consisted of 10 statements out of which 2 statements were negative that elicited responses from the respondents on a five-point rating scale i.e. Likert Scale with response options: Strongly Agree (SA), Agree (A), Undecided (UN),Disagree (D) and Strongly Disagree (SD). All of the questions are socially acceptable, through positively and negatively stated, the scoring of each statement is done in descending/ascending order for determining the extent of usage of social media by giving a score of 5 for Strongly Agree (SA), 4 for Agree (A), 3 for Undecided (UN), 2 for Disagree (D), and 1for Strongly Disagree (SD), and reverse for negative items.

The designed questionnaire was submitted to the experts for vetting, correction, and approval before distributing it to the respondents.

The reliability of the research instrument was determined using a split-half test using the odd and even-numbered items to form the two halves. The two halves were administered to a sample of students of the geography department from a college not selected for the main study. The Pearson Correlation Coefficient was used to determine the reliability of the instrument. A co-efficient value of 0.69 indicated that the research instrument was reliable; hence it was adopted for getting the desired information for the study.

The study aims to find out theextent of usage of social media and academic performance of students at graduation level.The link of the prepared e-questionnaire was sent to the students of Patna College of geography department of 2018-2021, 2019-2022, and 2020-2023 batches, through email and other sharing platforms. An informed consent form was also attached to the e-questionnaire, and each participant consented to participate in the survey after reading the consent form. They filled in their responses and submitted their feedback online. The researcher compiled the online responses for further analysis of data and for testing the hypotheses.

Depending upon the nature of the hypotheses the investigators used the following statistical techniques: Mean, SD, t-test, and ANOVA for analyzing and interpreting the data.

Depending upon the nature of the hypotheses the investigators used the statistical techniques: Mean, SD, t-test, and ANOVA for analyzing and interpreting the data.

FINDINGS

Table 1: Presentation of Demographic data

Gender	Frequency	Percent (%)
Male	72	38%
Female	115	62%
Area of residence	**Frequency**	**Percent (%)**
Urban	79	43
Rural	55	29
Semi-urban	53	28
Students at different levels	**Frequency**	**Percent (%)**
1st year students	69	37
2nd year students	51	27
3rd year students	67	36

Table 1 shows the demographic data of the participants: 75 representing (38%) of the respondents were male and 115 representing (62%) were female; 79 which represents (43%) of the respondents were residing in an urban area, 55 which represents (29%) of the respondents were residing at rural area, 53 which represents (28%) of the respondents were residing at the semi-urban area, 69 which represents (37%) of the respondents were from the first year, 51 which represents (27%) of the respondents were from the second year, 67 which represents (36%) of the respondents were from the third year.

Usage of social media by graduation-level students for their academic purposes

For finding the extent of usage of social media by the graduation level students for their academic purposes, a percentage analysis has been done. The outcome of this analysis has been shown in the following table 2 and figure 1:

Table 2: The extent of usage of social media by the graduation level students for their academic purposes

Sl. No.	Activities related to the usage of social media for academic performance	Frequency	Percent (%)
1. Duration	Less than 1 hr.	49	26%
2. Duration	1 to 3 hr.	75	40%
3. Duration	More than 3 hr.	63	34%
4. Academic Purpose	Browse the internet to collect information to prepare notes	156	83%
5. Academic Purpose	Sharing subject-related information among mates	102	55%
6. Academic Purpose	Accessing e-books	67	36%
7. Academic Purpose	Accessing e-newspaper	46	25%
8. Academic Purpose	Project Work	88	47%
9. Academic Purpose	Self-study	167	89%
10. Academic Purpose	Attending webinar, and online conferences	37	19%

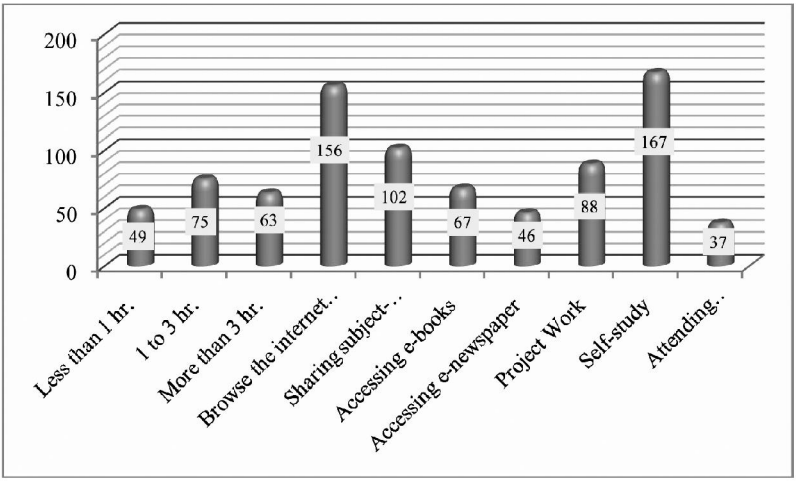

Figure1: The extent of usage of social media by the graduation level students for their academic purposes

Table 2 and figure 1 reflect that 49 (26%) of the respondents spend less than 1hr., 75 (40%) spend 1 to 3 hr., and 63 (34%) spend more than 3hr. on social media for their academic purposes; 156 (83%) of the respondents browse the internet to collect information to prepare notes, 102 (55%) of the respondents shares subject-related information among mates, 67 (36%) of the respondents access e-books, 46 (25%) of the respondents access e-books, 88 (47%) use social media for their project work, 167 (89%) of the respondents use social media for self-study, and 37 (19%) of the respondents use social media for attending webinars, and online conferences.

Significance of difference in the usage of social media for academic purposes on the basis of gender (male and female) students of graduation level

The mean, standard deviation, and t-test and the result of this analysis have been shown in the following table 3 and figure 2:

Table 3:t-test on the usage of social media for academic purposes on the basis of gender (male and female) students of graduation level

Category	Male (72)		Female (115)		df	t-value	Critical value
	Mean	SD	Mean	SD			
Usage of social media	38.56	3.73	38.37	3.25	185	0.35	1.97

t value is not significant at 0.05 level

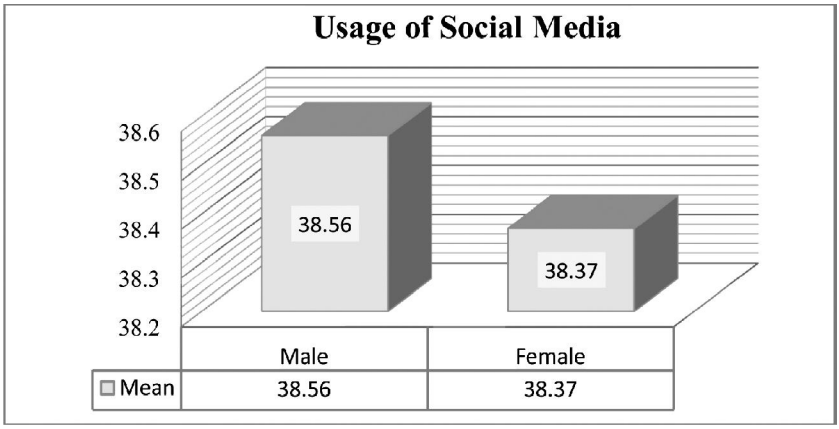

Figure 2: The usage of social media for academic purposes on the basis of gender (male and female) students of graduation level

Table 3 and Figure 2 reveal that the mean scores of the male students are higher than the female students. The obtained t-value 0.35 is less than the critical value 1.97 at 185df. It is interpreted that the mean is not significant at 0.05 level. Hence, the null hypothesis

is accepted and it can be said that there is no significant difference in the usage of social media for academic purposes on the basis of gender (male and female) students of graduation level.

Significance of difference in the usage of social media for academic purposes by the graduation level students belonging to different areas (urban, rural, and semi-urban set-up)

F-test has been donefor testing the above hypothesis. The result of this analysis has been shown in the following table 4:

Table-4: ANOVA test on the usage of social mediafor academic purposes by the graduation level studentsbelonging to different areas

Source of Variation	Sum of Squares	df	Mean Square	*F*	*P*-value	*F* Critical value
Between Groups	5.32	2	2.66	0.22	0.79	3.04
Within Groups	2190.83	184	11.90			
Total	**2196.16**	**186**				

F is not significant at 0.05 level

The findings shown in the table above reveals that the calculated value of F i.e. 0.22 when compared to the table value at (2,184) df is found to be not significant and hence there is no significant difference in the usage of social mediafor academic purposes by the graduation level studentsbelonging to different areas(urban, rural, and semi-urban set-up).

Significance of difference in the usage of social mediafor academic purposes by the graduation level students studying at different levels (1st year, 2nd year, and 3rd year).

F-test has been done for testing the above hypothesis. The result of this analysis has been shown in the following table 4:

***Significance of difference in the usage of social media for academic purposes by the graduation level students* studying at different levels (1st year, 2nd year, and 3rd year).**

Table 5 ANOVA test on the usage of social media for academic purposes by the graduation level students studying at different levels

Source of Variation	Sum of Squares	df	Mean Square	*F*	*P*-value	*F* Critical value
Between Groups	11.19	2	5.59	0.47	0.62	3.04
Within Groups	2184.96	184	11.87			
Total	**2196.16**	**186**				

F is not significant at 0.05 level

The findings shown in the table above reveals that the calculated value of F i.e. 0.47 when compared to the table value at (2,184) df is found to be not significant and hence there is no significant difference in the usage of social media for academic purposes by the graduation level studentsstudying at different levels(1st year, 2nd year, and 3rd year).

The findings of the objectives elicit that 49 (26%) of the respondents spend less than 1hr., 75 (40%) spend 1 to 3 hr., and 63 (34%) spend more than 3hr. on social media for their academic purposes; 156 (83%) of the respondents browse the internet to collect information to prepare notes, 102 (55%) of the

respondents shares subject-related information among mates, 67 (36%) of the respondents access e-books, 46 (25%) of the respondents access e-books, 88 (47%) use social media for their project work, 167 (89%) of the respondents use social media for self-study, and 37 (19%) of the respondents use social media for attending webinars, and online conferences. Further, the findings of the hypotheses revealed that (i) There is no significant difference in the usage of social media for academic purposes on the basis of gender (male and female) students of graduation level. (ii) There is no significant difference in the usage of social media for academic purposes by the graduation level students belonging to different areas (urban, rural, and semi-urban set-up). (iii) There is no significant difference in the usage of social media for academic purposes by the graduation level students studying at different levels (1st year, 2nd year, and 3rd year).

CONCLUSION AND DISCUSSION

Learning through social media has numerous benefits. It is also very economical in terms of time, effort, and money as learners no need to travel or spend excess money for their learning.

- Social media platforms will allow teachers as well as students to stay connected to their students outside of institution hours to exchange resources, videos, ideas, methodologies, and pedagogical practices.
- Social media will provide a large variety of different resources such as videos texts, presentations, and quizzes that learners can use to adapt their learning at their own pace.

- The use of new technologies gives students the freedom to experiment in their learning practice and the ability to make changes if something doesn't work.
- Over time learners become more independent learners.
- The dependency of learners will not be confined only to a single or a few books for their learning.

Undoubtedly social media has numerous boonsto a student's life as it not only broadens our perspective on various contents or subjects but also illuminate us to upgrade our knowledge with the recent changes taking place around us. It also provides an opportunity to have a diverse interaction with peers, teachers, and experts to urge answers on topics that are very complex to understand.

Learners use several apps on a daily basis like Facebook, WhatsApp, etc. These also enable them to make groups and host video calls, etc., making their lives much easier when they work in collaboration on a project or an assignment with other students.

There is valuable knowledge to be gained through social media like analytics and insights on various topics or issues for study purposes. As an educational institution, it is obligatory to be active in many social platforms possible; this helps create better student training strategies and shapes student culture. But, it should be incumbent that there must proper utilization of social media networking sites for avoiding its misuse.

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ACADEMIC FREEDOM AND SCIENTIFIC CREATIVITY: THE MODERATING EFFECT OF PROBLEM SOLVING ABILITY

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Subrat Kumar Padhi**

Abstract : *This study aims to investigate how problem solving-ability, one of the vital competencies of secondary school students, has moderating effect on the strength of relationshipbetween academic freedom and scientific creativity. Data were collected from 110 secondary school students for this purpose. Problem Solving Ability Test (PSAT) and Scientific Creativity Test (SCT) were administered to collect data from students. Data analysis was done by using regression to confirm the moderating role of Problem solving ability. Results indicated that the relation between academic freedom andscientific creativity is moderated by problem solving ability. Classroom implications are discussed. The findings also provide significant implications for educational institutions to understand better the importance of problem-solving ability, which will be helpful to enhance scientific creativity of students.*

Keywords*: Scientific Creativity, Academic Freedom, Problem Solving Ability*

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Introduction

Twenty- first century highly focus on conceptual clarity over the subject and promotionof higherorder thinking in students such as logical thinking, convergent thinking, divergent thinking, analytical thinking,critical thinking, reasoning skills, creativity and generating innovative ideas. Several international and national policy documents now a days emphasising on promotion of 21st century skills among the learners. National Education Policy2020, strongly suggeststo foster higher order thinking and reasoning skills among the learners. Important skills like scientific creativity, scientific process skill needs to be inculcated in learners at very early stage of schooling to cater the need of present time (NGSS, 2013).

Creativity refers to a core competency or a skill that enables individual to think outside of box and generate novel idea for a new situation. (Kleibeuker, et al. 2013: Amabile,1996). Research highlights the contribution of creativity towards enriching and reforming science education over years. (Barrow, 2010; Schmidt, 2010). Creativity brings new hope in science to understand and interpret our natural surroundings. Scientific creativity is an attribute thatcontinuouslystimulates our understandingto revamp concept about nature and natural phenomenon (Lederman and Antink Mayer, 2015). The evolution ofscience and its associated processes gain new look by the inclusion of scientific creativity. It's quite difficult todefine creativity in a single approachwhich gives a clear picture about its pros and cons. (Kind and Kind, 2007).Multi- approached technique such as cognitive and psychometric need to be used for measuring creativity with accuracy. Imagination and thinking are the wings of scientific creativity (Runco, 1998).Science classwhich

getting beautified by its specific and unique approach of teaching-learning inspires students to investigate scientific facts and concepts through inquiry, enquiry and discovery(Keselman, 2003). A combination of varied simple and complex cognitive process is involved to accomplish it (De Jong and Njoo, 1992; Schön, 1987). Scientific method of learning includes different cognitive processes in various forms such as observation, induction, hypothesis generation, hypothesis testing, experimentation, data collection, data analysis, conformation or rejection, reflection, and dissemination (Pedaste. 2015).

Problem is a stimulus which motivates an individual to respond differently. (Sharma, 2006). Problem solving ability is one of the vital components for all stages of learning. A problem is an adverse situation thatdemands a sustainable solution. Problem is such a stimuluswhich push our minds to think, feel, act and react deliberately to reach at destination with solution. Actually, problem solving is a competency and it has its own norm and standard. When it takes the shape of problem-solving ability, it remains confined to the efficacy and efficiency of cognitive hardware and software to act up to the norm. Problem solving is a general term made up of emotional, social and cognitive problem solving ability. Problem solving ability energises cognitive process to respond quickly to a situation for understanding and identifying the problems followed by sequential pathway to pick up best solution (Young Oh, 2009). A typical problem solving skillrecognises core component such as hierarchical thinking, problem identification, idea generation, idea implementation and monitoring effectiveness. (Tae-young Chung, 2011).

Academic liberty and intellectual freedom are the futuristic blue-prints of national education policy. Academic freedom has a

visible impact on creativity, critical thinking and problem -solving ability of students. Academic freedom refers to freedom in thought, freedom in collecting, interpreting and disseminating information, freedom in generating and communicating ideas, freedom in constructing knowledge, freedom in holding belief, criticizing belief and representing belief, freedom in inquiry and freedom in experiencing or experimenting. The concept and context of academic freedom have widely been understood at several forums for its long -lasting advantage on current educational reformation. In India, academic freedom and its nurturance towards developing core competency in individual has rarely observed in higher education setting (Sethy 2021). Academic freedom cannot be misinterpreted as the freedom form external control and interference. It is the freedom of creativity (Mendeleev 1982). Academic freedom helps learners to use an array of cognitive approach freely and compile cognitive task without any restriction (Magsino,2010; Shin and Harman 2009).

Classroom context in the form of free learning environment where freedom to construct knowledge, freedom to learn and freedom to ideation encourage creativity has been emphasized by various researchers. Many documents highlight the impact of classroom environment on students' higher order thinking (NCF-2005). Study reports the classroom context of creativity (Beghetto, and James, 2014). The influence of academic freedom on student's higher order of thinking may be envisaged through whether creative potential will be supported or suppressed. Dozens of studies reveal the significant correlation between academic freedom and culture of creativity in university (Mohammad 2021). Reducing the scope for freedom creates intellectual slaves in society and promoting freedom increases intellectual property.

Institutional excellence is always indebted to academic freedom and without it, institutional legacy getting tarnished over time as it never helps in converting conservative society to knowledge society (Albatch, 2001). The vision of higher education institutions is to inculcate the tradition of intellectualism and vibrate young mind to develop a culture of intellectual sovereignty (Newman, 1982). A research study provided evidence regarding education for sustainability through academic freedom (Ekon and Ekwueme, 2016). Sometimes, stringent and conservative educational policies reduce the scope of academic freedom in the institution and it leads to the attainment of creativity and critical thinking at an under-developed stage. Research study warrants the impact of educational micro- policy on developing creativity among students. (Monfared, 2014). It's an indispensable need and utmost responsibility of administration or especially teachers and educators to care about academic freedom of students in their respective institutions and also sensitize others to promote the same.

So far as the relationship among academic freedom, problem solving ability and creativity are concerned, they are complementary to each other and freedom avails such conditions to develop both traits in students. (Joseph, 2017). Both problem -solving ability and creativity are linked to each other and decided by several factors. While deciding creativity in the light of fluency, flexibility and originality, problem- solving ability is considered in the light of applying concept into the context to seek best solution of a problem. Besides various factors, grade, gender, age, intelligence, family structure and socio-emotional status of students play a vital role in determining scientific creativity and problem solving ability. Reports unveil that problem solving ability increases with grade but creativity doesn't show any response towards the increasing grade level in students (Barutcu, 2017). Research substantiates the individual

and interaction effect of subject specific cognition such as problem - solving ability and science process skill on scientific creativity at secondary stage. (Dhir, 2014). Study says that the individual effect of both problem-solving ability and science process skill on scientific creativity is significant but interaction effect is not found among them. A lot of studies depict the scenario of problem-solving ability and creativity among students at the secondary and higher secondary stage (Kumar, 2020). Lack of evidences regarding the correlation between problem-solving ability and scientific creativity opens a new school of research. Few studies established a foundation on the status of higher order of mental attributes among gifted and talent at school level (Nuhuglu, 2019). It has been reported in many researches that high IQ students have fluency, flexibility and originality and relation between problem- solving ability and IQ is not much known. Confusion looms over the complex relation among problem-solving, creative problem solving and creativity. Domain specific and subject specific creativity such as scientific creativity and mathematical creativity are still an untouched area in the field of educational research. A handful study reports the association between problem-solving ability and mathematical creativity among school students (Chia-Yiln, 2017). Scientific creativity and its demographic variables have been studied as well as moderating and mediating effect of third variable has also been established (Dikici and Ozdemir, 2018). The role of Problem-Solving Demand (PSD) in promoting creativity has claimed by many studies (Qin- Zhou, 2012). Study found that the relation between scientific creativity and divergent thinking is moderated by convergent thinking. (Weili- Zhu, 2019).

Academic freedom is a complex concept and shouldn't be included to any specific category. It is better to understand the spirit of

freedom, liberty and privacy in social context. As we know that school is the extension of home, so academic freedom and its role in promoting creativity and problem-solving ability in familial context shouldn't be under-estimated.

Problem -solving, creative problem-solving and creativity are tied with each other in one string as the core component of these three are superimposed to each other. Core process such as problemunderstanding and identification, generating solution, executing solution and checking its effectiveness are the basic part of both problem-solving and creative problem- solving ability (Finkett, et al., 1992; Mumford, et al., 1991). Freedom to think outside the box is a pre-requisite for developing creative problem-solving ability but the contribution of domain knowledge and creativity are to be equally considered (Tamara and Carl, 2017).

Research studies based on problem solving ability at school stage has rarely found. Development of subject specific problem-solving test especially in science and mathematics are gaining momentum at snail speed. Problem- solving test has been developed in mathematics for gifted students (Hongwonand Seokhee, 2004). A lot of factors influence problem- solving ability directly or indirectly (Chia-Yi, 2011). Research study highlightsthe sequential linkage among problem posing, problem-solving ability andcreativity (Bonotto, 2015). It cannot be denied the role of freedom in any form such as flexibility, freedom or reflection towards higher order of thinking.

Freedom and its connection to creativity are not new. Academic freedom- Creativity pairing has been eyewitnessed over years. Academic freedom-Scientific Creativity pairing is logically best fit pairing described by Lock and Key theory of Science. Unfortunately, a countable number of research studies found which

able to speak the underlying chemistry between these two. Existence of Problem-Solving Ability (PSA) in education is not clearly defined. It neither gets an independent identity nor include in creativity fully. Few research studies try to understand the intermediate role of problem-solving ability at Problem solving-Creativity interface. A large number of recent studies used Creative problem -solving as a construct instead of problem- solving ability. NEP2020 highlights the importance of problem -solving ability in Indian education system but confusion looms over the acceptance of problem- solving ability as an independent entity. A major misconception regarding the association of convergent thinking with problem-solving ability and divergent thinking with creativity remains as a widespread issue but latest research study denies the independent role of either convergent thinking or divergent thinking towards creativity. Few studies speak about their combined role in defining creativity. When problem-solving ability is diminishing its existence and merging with creativity to get a new identity, it would be quite interesting to go back to examine its independent and combined role. A handful of studies depict the mediating and moderating impact of problem-solving ability on scientific creativity with other variable but there is a dearth of research documented on the role of problem solving ability in between the relationship of academic freedom and scientific creativity. Therefore, a serious attempt has been made to investigate the role of problem solving ability as a moderator in the relationship between academic freedom and scientific creativity at secondary stage. The following objectives were developed in order to conduct the present study.

1. To study the influence of academic freedom of secondary school students on their scientific creativity.

2. To study the influence of problem solving ability of secondary school students on their scientific creativity.

3. To study the moderating effect of problem solving ability of secondary school students in the relationship between their academic freedom and scientific creativity.

Research Model and Hypothesis

The dependent variable is the scientific creativity and independent variable is academic freedom. The problem solving ability is the moderator variable.

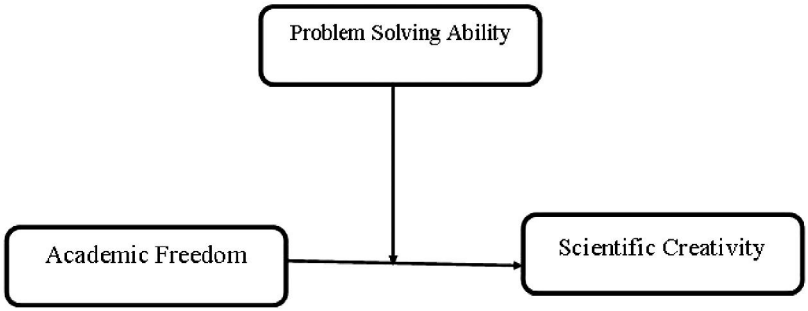

Fig-1: Research Model

The reason behind selecting problem solving ability as a moderator is that it is a major determinant of scientific creativity acknowledged by a number ofstudies. As a core competence, it has been well documented at all levels of education.

The hypotheses for the study were as follows:

1. Academic freedom of secondary school students has a significant effect on their scientific creativity

2. Problem solving ability of secondary school students has a significant effect on their scientific creativity.

3. Problem solving ability of secondary school students has a significant moderating effect on the relationship between their academic freedom and scientific creativity.

Methodology

The study adopted **s**urvey method and data were collected through online mode only. The study has been conductedamong the secondary schools of Odisha. A sample of 111 secondary school students of Odisha were participated in this study.

Two tools such as Scientific Creativity Test (SCT) and Problem-Solving Ability Test (PSAT) were administered to collect the desired responses from the students. The information regarding their academic freedom was collected through self-report.

The Odia version of Scientific Creativity Test (SCT), which was originally developed by Hu and Adey (2002), used to measure scientific creativity of students. The test consists of seven items under three dimensions, Product, Trait and Process. Product refers to knowledge, phenomena and problem related to science. Trait consists of fluency, flexibility and originality. Process refers to imagination and thinking. Questions of SCT portraits multi- attributes of creativity.

Problem Solving Ability Test was developedto measure problem solving ability of students. The structural properties of PSAT are based on four dimensions; exploring and understanding the problem, planning and executing, representing

and formulating, and monitoring and reflecting. A total of four situations are provided in the test paper and each situation is followed by respective questions. Questions are based on the above mentioned four dimensions.

All the participants were communicated regarding the objective of the research and online consent was received before administering on line battery of tests. On an average 60-80 minutes were provided to complete each test and two tests were administered in two different sessions.

In order to assess the moderation effect, the predictive weightage of predictor on the outcome was hypothesized to change linearly with respect to moderator variable. Linear effect is calculated by taking the interaction of problem-solving ability and academic freedom into the regression equation (Baron and Kenny,1986.) According to Field (2014) centering is particularly important when the model contains an interaction term/variable. Academic freedom andproblem-solvingability were entered separately in first and second model / step, and their interactive effect (academic freedom * problem solving ability) was entered in the third step. Scientific creativity was the outcome variable for all three regression models.

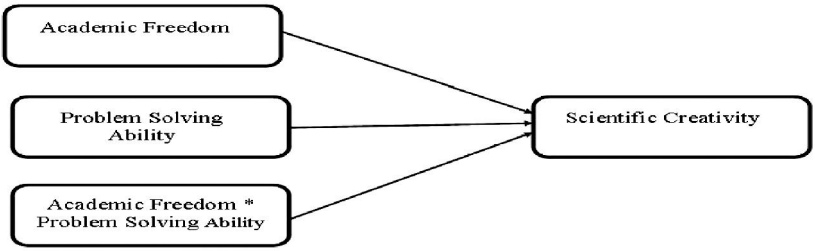

Fig-2:Moderation Model

Results and Discussion

Regression analysis was carried out to test the research hypotheses. Hypotheses were analyzed and results were reported systematically.

Table-1: Regression Analysis for Predicting Scientific Creativity from Academic Freedom

Dependent Variable	Model	B	SE	β	T	P
Scientific creativity	(Constant)	114.19	20.91		5.46	<.01
	Academic Freedom	13.43	3.68	0.330	3.65	<.01
R=0.330, R^2 =0 .109, F=13.321, p< 0.01						

It is evident from the table -1 that F ratio is 13.321, which is significant at 0.01 level of significance. Regression result indicates that there is a significant effect of academic freedom on scientific creativity (β= 0.330, t= 3.65, p< .01) and academic freedom accounted 10.9 percent of variance in scientific creativity, which confirmed that academic freedom is one of the predictors of scientific creativity. In other words, it can be said that the higher the academic freedom of students, the higher is the scientific creativity.

Table 2: Regression Analysis for Predicting Scientific Creativity from Problem Solving Ability

Dependent Variable	Model	B	SE	β	T	p
Scientific creativity	(Constant)	20.77	3.42		6.07	<.01
	Problem Solving Ability	2.61	0.45	0.484	5.77	<0.01
R=0.484, R^2 =0 .234, F=33.297, p< 0.01						

It is evident from the table- 2 that F ratio is 33.297, which is significant at 0.01 level of significance. Regression result indicates that there is a significant effect of problem solving ability on scientific creativity (β= 0.484, t= 5.77, p< .01) and problem solving ability accounted 23.4 percent of variance in scientific creativity, which confirmed that problem solving ability is one of the predictors of scientific creativity. In other words, it can be stated that the higher the problem solving ability of students, the higher is the scientific creativity.

Table3: Correlation between Academic Freedom, Problem Solving Ability and Scientific Creativity

Variable	Scientific Creativity	Academic Freedom	Problem Solving Ability
Scientific Creativity	1	.330*	.484*
Academic Freedom		1	.034
Problem Solving Ability			1

P< .05, significant at .05 level

In exploration of relationship of academic freedom, problem solving ability and scientific creativity indicates a positive significant correlation between academic freedom and scientific creativity (.330), and problem-solving ability and scientific creativity (.484). However,insignificant correlation wasnoticed between academic freedom and the problem solving ability (.034).

Table 4: Hierarchical Regression Analysis and Moderation Effect of Problem Solving Ability in Predicting Scientific Creativity

	Model Variable	Dependent Predictor	B	SE	β	t	p
1	Scientific creativity	Academic freedom	13.43	3.68	0.33	3.65	< .01
2	Scientific creativity	Academic freedom	12.79	3.20	.0.31	3.99	< .01
		Problem solving ability	2.56	0.42	0.47	6.02	< .01
3	Scientific creativity	Academic freedom	12.27	2.79	0.30	4.40	< .01
		Problem solving ability	3.00	0.38	0.56	7.96	< .01
		Interaction	5.08	0.85	0.42	5.98	< .01

B- Unstandardized Betacoefficient, SE- Standard Error, β-Standardized Beta coefficient

A hierarchy multiple regression was conducted to test the moderation effect in which academic freedom, problem solving ability and an interaction (academic freedom and problem-solving ability) was regressed on scientific creativity. At model-1, the academic freedom generated R^2 = 11, F (1,1090 is 13.32, p< .01 (adjusted R^2=.10). At model-2, with the inclusion of problem-solving ability, R^2=.33, F (1,108) =26.90 (adjusted R^2=.32). F change= 36.18, p<.01). In the final and third model, the interaction term contributed a significant amount of variance (F change=13.47, p< .01) and increased R^2=.50, F (1,107) is 35.71, p< .01 (adjusted R^2=.49). The significance of interaction term (academic freedom x problem solving ability) in predicting scientific creativity suggested presence of moderator, which altered the relationship between academic freedom and scientific creativity. F-variation of

the third step become 0.22(DF= 0.22), which indicates that the problem solving ability of students is concluded to have significant influence in the relationship between academic freedom and scientific creativity. It may be concluded that interaction term did incrementally add to the prediction of scientific creativity beyond the main effect.

It is shown from the table that R^2 of the first, second and third models were 0.109, 0.332 and 0.50 respectively. There is a consistent increase observed in the values of R^2 from model -1 to model-3. Measure of R^2 indicates the variability in the outcome/ dependent variable due to the predictors. For the first model, R^2 value is 0.109 which means that academic freedom accounts for 10.9 percent of the variation in scientific creativity. However, when interaction occurs, the R^2 value increases to 0.50, which accounts for 50 percent of the variance in the scientific creativity. In other words, it can be said that interaction term (academic freedom X problem solving) helps in explaining significant additional variance in the scientific creativity. It is seen that R^2 change value for model -2 is 0.224 and 0.168 is for model-3 and total R^2 change is 0.491. This means that inclusion of problem solving ability after academic freedom helps in explaining the additional 22.4 percent variance and interaction helps in explaining additional 49.1 percent variance in the scientific creativity. The p-value for testing significance of corresponding F- change is significant at 0.01 level of significance

Further analysis also reveals that problem solving ability influences the strength of relationship between academic freedom and scientific creativity. Regression result indicates that academic freedom (β=.0.314, t= 3.99, p< .01) and problem solving ability (β=0.473, t=6.02, p< .01) accounted for 33.2 percent of variance in scientific creativity. A significant interaction effect of (academic

freedom X problem solving ability) on scientific creativity was found, i.e. (β= 0.418, t=5.99, p< .01), whichalso confirmed that interaction term did add to the prediction of scientific creativity beyond the main effect.

The current study has few limitations that needs to be addressed in future researches. Firstly, the research conducted on a small sample of secondary schools students, so the study may not be generalized to other population. Secondly, the crossectional design of this study limits our ability the causal nature of the relation between academic freedom, problem solving ability and scientific creativity. Thirdly, the current study could be improved upon by the inclusion of demographic and behavioural dimensions. Finally, this study utilized self-report responses of sample on academic freedom and self-made tool to measure problem solving ability. Since these attempts are not much ideal, future research should include more reliable and valid measures of academic freedom and problem solving ability.

Conclusion

Despite limitations, these findings disclosed that how problem solving ability impacts on the direction and intensity of association between academic freedom and scientific creativity by showing problem solving ability moderates the relationship between academic freedom and scientific creativity. Further, future study may use meta-analysis to understand the real existence of problem solving as a moderator that influences the relationship between academic freedom and scientific creativity. Increasing scope for academic freedom parallel to problem solving ability will definitely help in enhancing scientific creativity among the learners, which is the need of the time.

It was confirmed that interaction effect predominates over direct and indirect effect between academic freedom and scientific creativity. This inference has a valuable input towards conservative science classroom although now a day we are enchanting about modern science class. It has immense advantage towards School Improvement Plan (SIP) that specially focus on pedagogical renovation. So far as teaching- learning aspects are concerned, it helps both teacher and students to prepare exemplar activities for science classes with lots of enthusiasm and interest. As problem solving is well related to scientific creativity, enhancing problem solving ability of students through an array of activities would definitely improve creativity of students. School should prepare micro-plan by considering students interest, attitude and temperament towards science with much precaution where the scope for understanding freedom, executing freedom and evaluating freedom for academic purpose in an academic setting to be given utmost priority. Freedom to ideation, freedom to communication and freedom to implementation are the real indicators of academic freedom and to be nurtured by putting student at adverse situation. Formative factors such as curiosity, engagement with scientific facts and fallacies, scientific exercise, scientific rehearsal, scientific manipulation are too involved in freedom of learning. It paves a new way for improving scientific creativity of students. It becomes essential to say that not only problem solving and academic freedom are the factors of scientific creativity but intermediated or inter-related factors are also there. Gaming, drawing, writing and painting are few of the modalities to be nurtured for making school climate vibrant, dynamic and creative.

The sample of the present study consisted of students from both government and private schools of Odisha having different

boards such as state board, CBSE board and ICSE board who learn different subjects with different difficulty levels and their exposure and interaction with content remain different. So, the findings of the study cannot be generalised. Similar studies bytaking socio-scientific and socio-cultural issues may be undertaken to showcase the comprehensive picture of creative attributes. Finally, a tool on problem solving skills may be developed that measures theproblemsolving skills of secondary school studentsgenuinely with special reference to science.

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CREATIVE DEVELOPMENT OF PRIMARY SCHOOL STUDENTS IN RELATION TO THEIR SOCIO-ECONOMIC STATUS AND GENDER

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Dr. Dillip Kumar Khuntia*

Abstract : *The present study is intended to examine the creative development of primary school students in relation to their socio-economic status and gender through descriptive survey design. To conduct the study, 120 primary School students, studied at class-VI, VII and VIII in the session-2019-20, from 12 schools of Boudh District were selected by using Simple Random Sampling technique. A standardized tool of Socio-economic Status Scale (SESS) developed and standardised by Dr. Meenakshianda teacher made Tool developed and standardised by the investigators for Measuring Creative Development [TMCD]were used. The researchers analysed the data by applying Pearson's Correlation Coefficient and t-test. The findings of the study showed that there is a significant difference between the High and medium SES [Socio Economic Status] students in respect to their creative development. There is significant difference between the Medium and Low SES students in respect to their creative development. There is significant difference between the Low and High SES students in respect to their creative development. There is no significant difference between the Male and Female*

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students in respect to their creative development whereas there is significant relation between creative development and socio economic status.

Key words:*Creative Development, Primary school, Socio Economic Status, Gender*

Backdrop

Owing to distinctiveness,each and every person is unique in his or her own way which commonly known as the Creativity; means seeing or expressing new relation among things or ideas. It is said that every child is born with certain traits; however, it is up to the environment to nurture and develop these traits. Creativity is one of these traits, is dependent upon both inherent and biological factors. The present study aims at studying the effectiveness of socio economic background and gender on creative development. Creative activities provide opportunities for problem solving & experimenting with new ideas. There are a number of factors such as surrounding, peer groups, parental interaction, activities involved,thinking and reasoning capability etc. which influence the creative development; socio economic status is very much important in the creative development of students.So, it is very important to examine the relation of Socio-economic Status on students'academic life and creative development. The present study may help parents, teachers and educational administrators to know the importance of SES and gender in determining creative development of the students as well as in the process of development of the country.

Literature Review

Jerial (1979) conducted astudy on creativity among the students with different SES background and found a positive relation

between creativity and socio economic status. Agarawal and Kantaprasad (1988) also made a study at secondary level and the result correlates with Jerial i.e., Socio-economic status influenced creativity. Nambiar (1988**)** found that there is significant difference in the mean achievement scores of secondary school pupils belonging to educationally forward and educationally backward areas of Kerala. Jennifer (2006) and Mohanty (2009) indicated that the strongest predictor of students' performance is their socio-economic status. Saha (2012)reported that 1) creativity is positively related with socio-economic status, 2) High Socio-Economic Status children were more creative than low Socio-Economic Status children.Catherine and Vaishnavi (2017) reported that 1) The primary children whose parents income was between 10,000 to 20,000 have high creative thinking than other children 2) The primary school children whose parents do have occupation as business do show high creative thinking. Makkar and Sharma (2019) found that there exists a positive connection among Creativity and Socio-Economic Status of Secondary School Students.

On the other hand, Padhan (1990) found that there was no significant relationship between creative thinking and socio-economic status.Gupta and Katoch (2013) reported that there was no significant relationship between SES and Academic Achievement**.**

Different researchers reported differently regarding creativity of male and female students.Torrance (1962**) ,**in his tests of thinking until five years, found little difference in the ability of boys and girls; boys begin to acquire superior ability in manipulating and experimenting, whereas girls excel only in fluency of responses.Kelly (1965) observed that males scored higher than females on non-verbal creativity measures in his own high school students.Straus

and Straus (1968) reported that boys performed better than girls on measures of creativity in both Indian and American culture, while, sex differences were more prominent in India.Srivastava (1989) found boys and girls significantly differ with fluency, flexibility, and originality components of creativity at high, average and low levels of intelligence. Datta(1989) found that Sex difference did exist in scientific creativity.Maruti andShakuntala (1992) reported that boys were found to be better than girls on the fluency component of verbal creativity. George and Basavarajappa (2014) reported that there are significant differences between boys and girls with regard to nonverbal creativity scores and elaboration scores (both verbal and nonverbal). They found that a significant difference is observed between boys and girls with regard to nonverbal elaboration and verbal elaboration wherein boys have a higher mean for nonverbal elaboration scores indicating that boys outperform girls with regard to nonverbal elaboration whereas in verbal elaboration; girls have a higher mean indicating that they outperform boys.Catherine andVaishnavi (2017) found that 1) there are relationshipsbetween creative thinking and intelligence in gender, locality, age and English medium primary school children 2) Boys have high creative thinking than girls.

But Berretta and Privette (1990) studied the influence of play on creative thinking and found no significant difference between boys and girls related to effects of flexible and structured play on creative thinking. Saha (2012) reported that there is no such differenceobserved between boys and girls with regard to creativity.Dutta and Chetia (2018) reported that there was no significant mean difference on creativity between male/female, rural/urban as well as government/private secondary students of both the districts (Lakhimpur and Sonitpur) of Assam. Dutta and Rajkonwar

(2018)found there was no significant mean difference on creativity between male/female; rural/urban; and government/private secondary school students of Dhemaji district.

The perusal of research studies reveals that Jerial (1979), Agarawal, Kantaprasad (1988), Jennifer (2006), Mohanty (2009), Saha (2012), Catherine andVaishnavi (2017) andMakkar and Sharma (2019) reported a positive relation between creativity and Socio Economic Status whereas Padhan (1990) andGupta and Katoch (2013) reported it negatively.

From the above research studies, it is found that while Kelly (1965), Straus and Straus (1968), Shrivastav (1989), Maruti and Shakuntala (1992), George and Basavarajappa (2014) andCatherine and Vaishnavi (2017)reported significant differences between the creativity of male and female students, Torrance (1962), Berretta and Privette (1990), Saha(2012), Dutta and Chetia (2018) andDutta and Rajkonwar (2018) found no significant difference. Due to such difference, there emerges a ground to study further to explore about the relationship between creativity and socio economic status and also to investigate the significant difference between the creativity of male and female students.

Research questions

1. Do the high socio-economic status students and medium socio-economic status students differ significantly in their creative development?

2. Do the medium socio-economic status students and low socio-economic status students differ significantly in their creative development?

3. Do the low socio economic-status students and high socio-economic status students differ significantly in their creative development?

4. Do the male children and female children differ significantly in their creative development?

5. Do the creativity and socio economic status co-related significantly?

Objectives

1. To study the creative development of high socio-economic status students and medium socio-economic status students.

2. To study the creative development of medium-socio economic status students and low socio-economic status students.

3. To study the creative development of low socio-economic status students and high socio-economic status students.

4. To study the creative development of male children and female children.

5. To find out the correlation between creativity and socio economic status.

Hypotheses

$\mathbf{H_{o1}}$: There is no significant difference of creative development between the high socio-economic status students and medium socio-economic status students.

$\mathbf{H_{o2}}$: There is no significant difference of creative development between the medium socio-economic status students and low socio-economic status students.

$\mathbf{H_{o3}}$: There is no significant difference of creative development between the low socio-economic status students and high socio-economic status students.

$\mathbf{H_{o4}}$: There is no significant difference of creative development between the male children and female children.

$\mathbf{H_{o5}}$: There is no significant relation between creativity and socio economic status.

Methodology

Sample

For the present study, the researchers by using simple random technique selected 120 samples of primary school children comprising class–VI to VIII from the three blocks of Boudh District of Odisha having different socio economic background. The sample students included 12 schools with 10 students each both from government and private sector.

Tools Used

A standardized tool of Socio-Economic Status Scale (SESS) developed by Dr. Meenakshi (Patiala) is used for measuring SES of the children and creativity tool is prepared and standardised by the investigators for the measuring creative development **(TMCD)**.

Statistical Techniques used

The researchers analysed the data with the help of t-test and Pearson's coefficient of correlation.

Results

Table-1: Group Means, S.Ds and significant difference of creative development between High SES students and Medium SES students

CATEGORY	N	MEAN	S.D.	S.E.D.	T	REMARKS
High SES students	17	33.70	5.55	1.31	3.57	Significant at both 0.05. and 0.01 level
Medium SES students	42	29.02	6.20			

Table- 1 shows that there is significant difference between the High SES students and Medium SES students in respect to their creative development. The mean and standard deviation of High SES students are 33.7 and 5.55 whereas the Mean and standard deviation of Medium SES students are 29.02 and 6.20 respectively. Standard error of difference between means is 1.31. The calculated "t" value between the means scores comes out to be 3.57, which is greater than the table value at both the level of significance i.e. at 0.05 and 0.01 levels which are 2.00 and 2.66 respectively at 57 degrees of freedom[$p<0.05$ and 0.01]. Therefore, the formulated Null hypothesis i.e. H_{o1}: *There is no significant difference of creative development between the high socio-economic status students and medium socio-economic status students* is rejected. So the difference is statistically significant. The mean value reveals that the High SES students have greater creativity than their counter parts i.e. Medium SES students. The group mean score of High SES students and Medium SES students towards creative development have been graphically represented in Fig.-1.

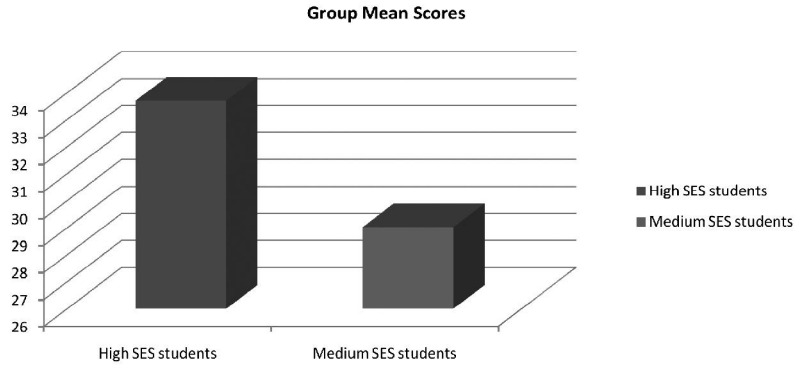

Figure -1: Group Mean Scores of high SES and medium SES

Table-2: Group Means, S.Ds and significant difference of creative development between Medium SES students and Low SES students

CATEGORY	N	MEAN	S.D.	S.E.D.	t	REMARKS
Medium SES students	42	29.02	6.20	1.29	2.69	Significant at both 0.05. and 0.01 level
Low SES students	61	25.54	6.75			

Table 2 shows that there is significant difference between the Medium SES students and Low SES students in respect to their creative development. The mean and standard deviation of Medium SES students are 29.02 and 6.20 whereas the Mean and standard deviation of Low SES students are 25.54 and 6.75 respectively. Standard error of difference between means is 1.29. The calculated "t" value between the mean scores comes out to be 2.69, which is greater than the table value at both the level of significance i.e. at

0.05 and 0.01 levels which are 1.98 and 2.63 respectively at 101 degrees of freedom[$p<0.05$ and 0.01]. Therefore, the formulated Null hypothesis i.e. H_{o2}: *There is no significant difference of creative development between the medium socio-economic status students and low socio-economic status students* is rejected. So the difference is statistically significant.

The mean value reveals that the Medium SES students have greater creativity than their counter parts i.e. Low SES students. The group mean score of Medium SES students and Low SES students towards creative development have been graphically represented inFig.2.

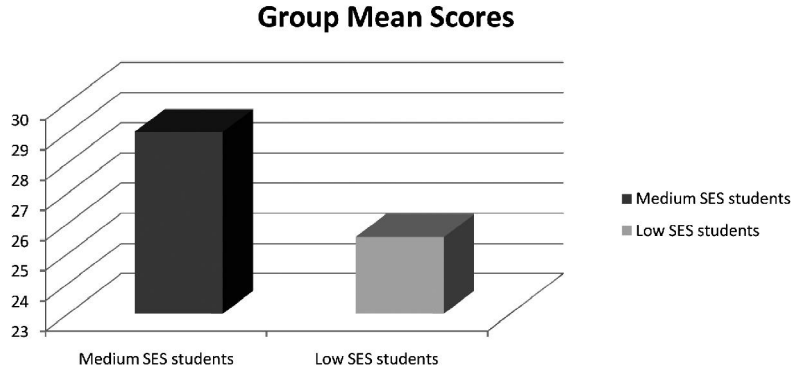

Table-3: Group Means, SDs and significant difference of creative development between Low SES students and High SES students

CATEGORY	N	MEAN	S.D.	S.E.D.	t	REMARKS
Low SES students	61	25.54	6.75	1.60	5.10	Significant at both 0.05. and 0.01 level
High SES students	17	33.70	5.55			

Table -3 shows that there is significant difference between the Low SES students and High SES students in respect to their creative development. The mean and standard deviation of Low SES students are 25.54 and 6.75 whereas the Mean and standard deviation of High SES students are 33.70 and 5.55 respectively. Standard error of difference between means is 1.60. The calculated "t" value between the means scores comes out to be 5.10, which is greater than the table value at both the level of significance i.e. at 0.05 and 0.01 levels which are 1.99 and 2.64 respectively at 76 degrees of freedom[$p<0.05$ and 0.01]. Therefore, the formulated Null hypothesis i.e. H_{o3}: *There is no significant difference of creative development between the low socio-economic status students and high socio-economic status students* is rejected. So the difference is statistically significant.

The mean value reveals that the High SES students have greater creativity than their counter parts i.e. Low SES students. The group mean score of Low SES students and High SES students towards creative development have been graphically represented in Fig.-3.

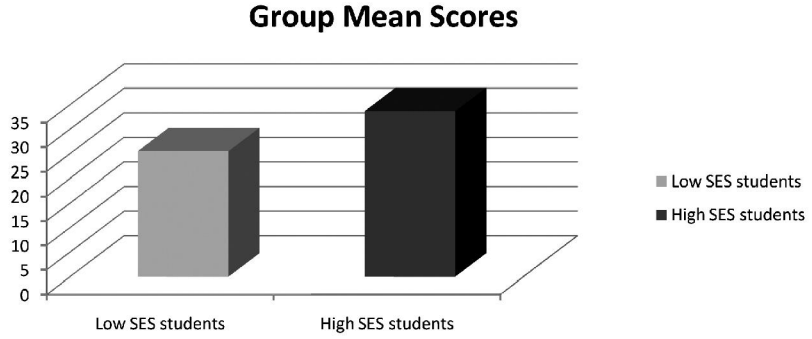

Table-4:Group Means, S.Ds and significant difference of creative development between Male students and Female students

CATEGORY	N	MEAN	S.D.	S.E.D.	t	REMARKS
Male students	60	28.55	8.60	1.68	0.78	Not significant at both 0.05. and 0.01 level
Female students	60	27.23	9.75			

Table-4shows that there is no significant difference between the Male students and Female students in respect to their creative development. The mean and standard deviation of Male students are 28.55 and 8.60 whereas the Mean and standard deviation of Female students are 27.23 and 9.75 respectively. Standard error of difference between means is 1.68. The calculated "t" value between the means scores comes out to be 0.78, which is less than the table value at both the level of significance i.e. at 0.05 and 0.01 levels which are 1.98 and 2.62 respectively at 118 degrees of freedom[p>0.05 and 0.01]. Therefore, the formulated Null hypothesis i.e. H_{o4}: *There is no significant difference of creative development between the male children and female children* is accepted. So the difference is statistically not significant.

The mean value reveals that the Male students have greater creativity than their counter parts i.e. Female students, but the difference is not statistically significant.The group mean score of Male students and Female students towards creative development have been graphically represented in Fig.-4.

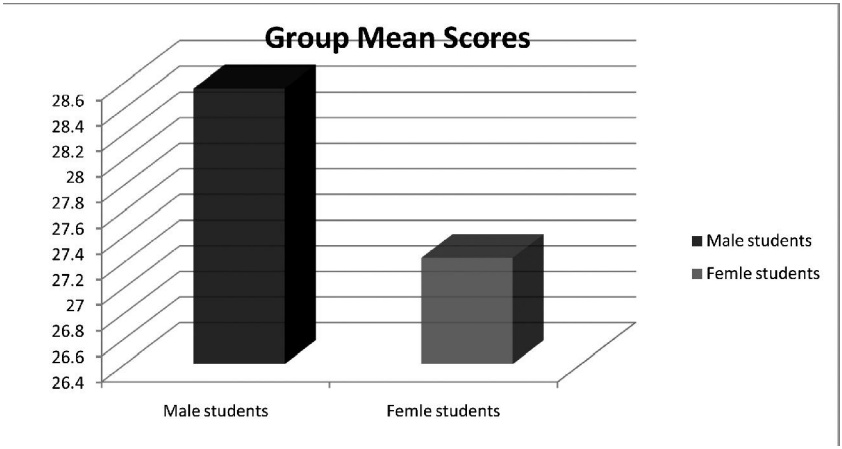

Table-5: S.D. and significant relation of creative development and Socio Economic Status

CATEGORY	N	S.D.	S.E.D.	r	Remarks
Creativity	120	9.1	1.39	0.33	Significant both at 0.05 and0.01 level
Socio Economic Status	120	12.22			

Table -5 shows that there is significant relation between the creative development and socio economic status. The r value was found to be 0.33 which indicates that there exists a relationship between creative development and socio economic status. Here the degrees of freedom is 118 as N=120. The calculated value of r i.e. 0.33 which is greater than the table value at both the level of significance i.e. at 0.05 and 0.01 levels which are 0.174 and 0.228 respectively at 118 degree of freedom [$p<0.05$ and 0.01]. Therefore, the formulated Null hypothesis i.e. H_{o5}: *There is no significant relation of correlation between creativity and socio*

economic status is rejected. Hence the relationship between creativity and socio economic status is true.

Findings

Findings of the study are as follows:

1. There is significant difference of creative development between the high socio-economic and medium socio-economic status students.
2. There is significant difference of creative development between the medium socio-economic and low socio-economic status students.
3. There is significant difference of creative development between the low socio-economic and high socio-economic status students.
4. There is no significant difference of creative development between the male and female children.
5. There is significant relation between creativity and socio economic status.

The areas of the study are very significant where it is found a number of conclusions regarding creative development and socio economic background. The study conducted for the primary school children of class-VI to class-VIII and the children are significantly different as per their SES background in the field of creative development.

- The primary school children of High SES differ significantly from the Medium SES children on the basis

of creative scores (M1=33.70, M2=29.02, t=3.57, P<0.01) which implies High SES children perform better than Medium SES children.

- The primary school children of Medium SES differ significantly from the Low SES children on the basis of creative scores (M1=29.02, M2=25.54, t=2.69, P<0.01) which implies Medium SES children perform better than Low SES children.
- The primary school children of Low SES differ significantly from the High SES children on the basis of creative scores (M1=25.54, M2=33.70, t=5.10, P<0.01) which implies High SES children perform better than Low SES children.
- There is no significant difference between Male and Female children on the basis of creative scores (M1=28.55, M2=27.23, t=0.78, P>0.01) however mean value shows that Male children perform better than female children.
- There is a correlation between Creativity and socioeconomic status from the r value which is 0.33.

Conclusion

Flexible and well matched curriculum helps the students at the developmental stage. Reasoning level of child will be enhanced by the newly designed curriculum. A creative approach to learning makes them more open with the puzzles that come their way and gives them a feeling of accomplishment and pride. It gives opportunity

to the child for thinking, experimenting, to explore and provide in their own search of conceptual, social and emotional understanding.

The teaching activities such as storytelling and skits help them to learn without the pressure of learning. Students are always fun loving and they should learn with fun. Learning by doing helps to develop their creative development. Play way method of teaching also encourages the student for the development of creativity and reduces their stress and anxiety. It boosts problem solving skills. The brainstorming activities involving puzzles can stimulate the skills of problem-solving in children. Students should be given puzzle like cut-outs in the study, making different models, drawing on some specific topic and origami which helps them to develop their reasoning level and they excel to overcome it.

Creative persons have an upper hand in triggering future opportunities than those with a mere academic skill set. They can express freely during knock out rounds and the way they present themselves really matters in this competitive age. So teacher will initiate for the opportunities. A person with a creative mind-set always has that craving to learn new things every time and this helps them to have that amazing feeling of lifelong learning. This would really keep them engaged and active throughout which in turn helps them to stay young always.

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LEARNING STYLES OF TEACHER TRAINEES AND ITS RELATIONSHIP WITH USING METACOGNITIVE STRATEGIES DURING TRAINING PROGRAMME

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Dr. Ashok Dansana****

Abstract : *Metacognition and Learning styles are significant factors that influence learning. Learners exhibit different learning styles that influence the way they make sense of the learning experiences. Metacognitive strategies are the set of some executive techniques of cognition which are consciously used by learners to achieve a specific learning purpose. The present study has made an attempt to explore the relationship among Learning Styles and Metacognitive Strategies of Teacher Trainees and determine the Learning Styles as positive predictor and contributor for Metacognitive Strategies of Teacher Trainees during their training programme. The data have been collected by using random sampling techniques, through administered the tools,*

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Metacognitive Strategies scale, (self-made) and Learning Styles Questionnaire (Developed and standardized by Peter Honey and Alan Mumford (1986) from 120 teacher Trainees from four teacher training Institutions affiliated to different universities of Odisha and recognized by NCTE. The collected data were analyzed using Product moment coefficient of correlation (r) and Regression analysis. The results of the study reveal that metacognitive strategies metacognitive strategies of teacher trainees are positively related with their Activist, Reflector, Theorist, Pragmatist Learning Styles, further, Theorist and Reflector learning styles are the strong predictors and contributors of planning, monitoring and evaluation Metacognitive strategy, and Theorist and Pragmatist learning styles are the strong predictors and contributors of Organizing Metacognitive strategy of teacher trainees of teacher trainees.

Keywords:*Metacognitive Strategies, Learning styles, Teacher Trainees.*

INTRODUCTION

The value of education does not lie only in acquiring knowledge but rather in developing thinking abilities therefore, in today's information age, thinking skills are viewed as crucial for educated persons to cope with a rapidly changing world. This thinking could be unproductive without cognitive theory that is used to resolve doubt about what to do, how to do, how to organize, how to achieve, what to believe, or what to desire or seek. Thinking about what to believe, what to desire are the part of learning process, and how to do is the part of cognition and metacognition.

The nature of learning or knowing and nature of thinking are both area of interest with in the theories of educational psychology. However, these concepts do not occupy the same place in both fields. Theories of learning cover the area of how human learns using different styles of learning and how human think, how to do plan to achieve the learning outcomes, what are the strategies need to implement these styles of learning are the area of metacognition, an emerged cognitive theory. In this contrast, the researcher attempted to study on Learning styles i.e.Activist, Reflector, Theorist and Pragmatist with Metacognitive Strategies i.e. Planning, Organizing, Monitoring and Evaluation.

RATIONALE OF THE STUDY

Learning styles and metacognitive strategies are the important factors which affect the learners learning process. Peoples learn in various ways, by seeing, hearing, analyzing, visualizing, thinking, memorizing, reasoning etc. Thus, each individual in the process of learning has his/her own unique characteristics known as learning styles which determine in which way the people perceive information and understand the phenomena. On the other hand, Metacognitive strategies are plans or techniques which are consciously used by learners to achieve a specific purpose by implementing effectively these styles of learning or solve a problem or task. In other words, these are some techniques or devices used by the learners in order to acquire knowledge (Rubin, 1975). According to Oxford and Nyikos (1989), language learners tend to use those strategies which reflect their learning styles. Brown (2007), in the same vein, points out that, learning strategies do not operate by themselves, but rather are directly linked to learners' innate learning style and other personality-related factors. Therefore, the ways in which learner

process information affect strategies which they select. If the metacognitive strategies do not match learners' learning styles, learners cannot have a good performance on learning.

After review the related literature it is revealed that the maximum number of studies have been conducted across the world on the area of metacognitive strategies which correlates with the learners' academic achievement, personality factors, self-efficacy and on another cognitive phenomenon and very few number of studies are found in India in relation to studies in abroad as founded by investigator. Above studies (Dales, &Gaylo, 2017; Sawhney &Bansal, 2015; Tok, Ozgan & Dos, 2014; Doganay, & Demir, 2011; Nagoziibe, 2009; Ozsoy, Memis&Temur, 2009; Ozsoy& Ataman, 2009; Fry& Young, 2008; Countinho, 2007; Landine& Stewart, 1998; Soleimani, Nadia, Nagahi&Morteza, 2016; Sony& Sony, 2015; Keskin, 2014; Gheemi, Farid &Sabkrouh, 2015; Susan, 1995; Fernandez, 1987; Keskin, 2014; Ozturk, 2015; Sony& Sony, 2015; Chipman, Schrangen, Shalin. & Cooke, 2001; Deonaraine, 1998) also indicated that in India there are few studies have conducted on the area of metacognitive strategies with learning styles, thinking styles of different students belongs to different science subject background as compared to studies conducted in abroad and It has also revealed from the above studies that no study has been conducted in the teacher education field with directly taken the variables like *Learning* Styles of Teacher Trainees and using their *Metacognitive Strategies* During Training Programme. So, it can be said that there is gap in time, context and also selection of variables. So, investigator has a keen interest to study the relationship of Learning Styles and Metacognitive Strategies of Teacher Trainees and to determine the Learning Styles as positive predictor and

contributor for Metacognitive Strategies of Teacher Trainees during their Training Programme.

Keeping on this above discussion and review of related literature the researcher has found the significance of Metacognition as an influenced factor of learning which affects learners' academic performance, cognitive functioning, and personality. In these regards there are many studies have been conducted by the researcher to explore the relationship between metacognition and other cognitive process of learners like learning styles, learning performances, self-efficacy, thinking styles, personality factors.

OBJECTIVES OF THE STUDY

The objectives of the present study are:

1. To analyze the Learning styles of teacher trainees.
2. To ascertain the use of Metacognitive Strategies of Teacher Trainees.
3. To study the relationship of Learning Styles and Metacognitive Strategies of Teacher Trainees.
4. To determine the Learning Styles as positive predictor for Metacognitive Strategies of Teacher Trainees during their Training Programme.

HYPOTHESES

H_1. There is significant positive relation between learning styles and Metacognitive Strategies of teacher trainees.

H_2. Activist Learning style is positively related with the Metacognitive Strategies (planning, monitoring, organizing evaluating) of teacher trainees.

H_3. Reflector learning style is positively related with the Metacognitive Strategies (planning, monitoring, organizing evaluating) of teacher trainees.

H_4. Theorist Learning style is positively related with the Metacognitive Strategies (planning, monitoring, organizing evaluating) of teacher trainees.

H_5. Pragmatist learning style is positively related with the Metacognitive Strategies (planning, monitoring, organizing evaluating) of teacher trainees.

H_6. The learning styles of teacher trainee is the positive predictor of their using Metacognitive Strategies.

DELIMITATIONS OF THE STUDY

The present study was delimited to:

- Four Teacher Training Institution affiliated to SCERT, Odisha and recognized by NCTE.
- A sample of 120 teacher trainees.
- Variables are Learning Styles and Metacognitive Strategies.

METHODOLOGY OF THE STUDY

The purpose of present study aimed to assess the relationship among Learning Styles and Metacognitive Strategies of Pre-service Teacher Trainees of Odisha, keeping in view, the nature and objectives of the study the correlational research method was used.

Population and Sample

All the Teacher Trainees those who are pursuing their secondary teacher training programme from different teacher training institution affiliated to SCERT, Odisha constituted as the population of the present study.

In this present study the selection of sample has passed through different stages.

Stage-I: the investigator has procured a list of Teacher Training Institution affiliated to SCERT of the state Odisha and recognized by NCTE.

Stage-II: after procuring the list of Teacher Training Institutions affiliated to SCERT, Odisha and recognized by NCTE have been selected purposively. Keeping in view the criteria, which have similar teacher trainee ratio, development and strength.

Stage-III: out of the 4 institution from the state of Odisha, 120 students (i.e.60 from any two Government institution and 60 from any two-private institution) have been selected by using random sampling technique.

Finally**,** 60X4=120 students have been included in the sample for present investigation.

Tools used

In order to collect the data, one standardized tool and one self-made tool have been used.

1. Metacognitive Strategy Scale

2. Learning Styles Questionnaire by Hooney Mumford (2001)

DATA ANALYSIS AND INTERPRETATION

Table-1: Coefficient of correlation between Learning Styles and Planning MetacognitiveStrategies of Teacher trainees

Variables	N	Coefficient of correlation 'r'	Significant Level (2 tailed)
Planning Vs Activist	120	0.528**	0.000
Planning Vs Reflector	120	0.561**	0.000
Planning Vs Theorist	120	0.533**	0.000
Planning Vs Pragmatist	120	0.529**	0.000
Planning Vs Total Learning Styles score	120	0.640**	0.000

**significant at 0.01 level of significance

It is evident from table 1 that the obtained values of coefficient of correlation of Planning dimension of metacognitive strategy and Activist, Reflector, Theorist, Pragmatist and Total Learning Style of Pre-service teacher trainees are (Accordingly 0.528**,0.561**, 0.533**, 0.529**, 0.640**) positively related and significant at level 0.01and 0.05 level of significance. As their p values are less than 0.01 level of significant.

Table-2: Coefficient of correlation between Learning Styles and Monitoring Metacognitive Strategies of pre-service teacher trainees

Variables	N	Coefficient of correlation 'r'	Significant Level (2 tailed)
Monitoring Vs Activist	120	0.562**	0.000
Monitoring Vs Reflector		0.616**	0.000

Monitoring Vs Theorist	0.607**	0.000
Monitoring Vs Pragmatist	0.545**	0.000
Monitoring Vs Total Learning Styles score	0.690**	0.000

**significant at 0.01 level of significance

It is evident from table 2 that the obtained values of coefficient of correlation of Monitoring dimension of metacognitive strategy and Activist, Reflector, Theorist, Pragmatist and Total Learning Style of Pre-service teacher trainees are (Accordingly 0.562**, 0.616**, 0.607**, 0.545**, 0.690**)positively related and significant at level 0.01and 0.05 level of significance. As their p values are less than 0.01 level of significant.

Table-3: Coefficient of correlation between Learning Styles and Organizing MetacognitiveStrategies of pre-service teacher trainees

Variables	N	Coefficient of correlation 'r'	Significant Level (2 tailed)
Organizing Vs Activist	120	0.530**	0.000
Organizing Vs Reflector		0.480**	0.000
Organizing Vs Theorist		0.566**	0.000
Organizing Vs Pragmatist		0.549**	0.000
Organizing Vs Total Learning Styles score		0.636**	0.000

**significant at 0.01 level of significance

It is evident from table 3 that the obtained values of coefficient of correlation of Organizing dimension of metacognitive strategy and

Activist, Reflector, Theorist, Pragmatist and Total Learning Style of Pre-service teacher trainees are (Accordingly 0.530**, 0.480**, 0.566**, 0.549**, 0.636**)positively related and significant at level 0.01and 0.05 level of significance. As their p values are less than 0.01 level of significant.

Table:4 Coefficient of correlation between Learning Styles and Evaluation MetacognitiveStrategies of pre-service teacher trainees

Variables	N	Coefficient of correlation 'r'	Significant Level (2 tailed)
Evaluation Vs Activist	120	0.545**	0.000
Evaluation Vs Reflector		0.562**	0.000
Evaluation Vs Theorist		0.602**	0.000
Evaluation Vs Pragmatist		0.504**	0.000
Evaluation Vs Total Learning Styles score		0.656**	0.000

**significant at 0.01 level of significance

It is evident from table 4. that the obtained values of coefficient of correlation of Evaluation dimension of metacognitive strategy and Activist, Reflector, Theorist, Pragmatist and Total Learning Style of Pre-service teacher trainees are (Accordingly 0.545**, 0.562**, 0.602**, 0.504**, 0.656**) positively related and significant at level 0.01and 0.05 level of significance. As their p values are less than 0.01 level of significant.

Discussion of results

From the above analysis and interpretation, it can be concluded that learning styles (i.e. Pragmatist, Theorist, Reflector and Activist) of

teacher trainees were positively related with their Planning dimension of metacognitive strategy. Results of the present study were supported and correlates directly to the research findings of many studies are Jafarpanah, Z & Farahian, M (2016), investigated that "Significant relationship between learning styles with metacognitive strategy". Abu-Ameerh (2014) revealed that "Significant positive correlation between the dimensions of learning styles and meta-cognition, learning styles significantly explain and predict all sub-dimensions of meta-cognition." Heidari& Bahrami (2012), indicated that "Levels of thinking styles were positively correlated with metacognitive awareness. Moreover, significant positive correlations were found between hierarchical, anarchic, and external styles and metacognitive awareness." Armbruster, Echolesand Brown (1983) found in their study that "Development of metacognition is related to proficiency in learning". Baker (2002) indicated that "The control component of Metacognition is related to self-regulation of cognitive efforts, and it Comprises on "planning", "efforts", "evaluating", "remedying", and "testing". Akkoyunlu, Soylu & Shannon (2008)revealed that "Students' Metacognitive strategies is a valuable skill that helps students become more self-directed learners.

Table:5 Predicting Learning Styles as independent variables about dependent variable Planning dimension of Metacognitive Strategy of pre-service teacher trainees

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4173.829	4	1043.457	1043.457	1043.457
Residual	5811.763	115	50.537		
Total	9985.592	119			
a. Dependent Variable: PL1					
b. Predictors: (Constant), PRGM4, THEO3, REF2, ACT1					

Table 3. indicates the overall significance test assessing whether the group of independent variables when used together reliable predict the dependent variable. The 'F' value **20.647** of different Learning styles (i.e. Pragmatist-PRGM4, Theorist -THEO3, Reflector-REF2 and Activist-ACT1) of pre-service teacher trainees with Metacognitive styles. The 'P' value associated with this 'F' value was very small in both cases at 0.05 and 0.01 level of significance.

Table-6: Coefficient between Independent Variables (Learning Styles i.e. Activist, Reflector, Theorist, Pragmatist) and dependent variables (Score of only Planning dimension)

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	22.459	3.859		5.821	0.000
	ACT1	0.243	0.223	0.117	1.092	0.277
	REF2	0.774	0.313	0.259	2.475	0.015
	THEO3	0.673	0.283	0.233	2.374	0.019
	PRGM4	0.371	0.225	0.165	1.646	0.102

a. Dependent Variable: PL1

b. Predictors: (Constant) PRGM4, THEO3, REF2, ACT1

Table-6 indicates the contribution of Learning Styles of pre-service teacher trainees. It has shown from the table that only Reflector (REF2) and Theorist (THEO3) are positively significant at 0.05 level of significance as there the p value is less than alpha level. So, it reveals that Learning Styles i.e., Theorist (THEO3) and

Reflector (REF2) are positively contributing respectively 67% and 77%, the planning metacognitive strategy of pre-service teacher trainees. Further, the results indicate that there is no evidence of contribution Pragmatist (PRGM4) and Activist (ACT1) (respectively 37% and 24%) Learning Styles of pre-service teacher trainees on their planning metacognitive strategy. So, pragmatist (PRGM4) and Activist (ACT1) Learning styles are not significant at both 0.05 and 0.01 level of significant, where the p value is greater than alpha level.

Table-7: Predicting Learning Styles as independent variables about dependent variable Organizing dimension of Metacognitive Strategy of pre-service teacher trainees

ANOVA[a]					
Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1 Regression	4000.553	4	1000.138	20.704	0.000[b]
Residual	5555.314	115	48.307		
Total	9555.867	119			

a. Dependent Variable: ORG2

b. Predictors: (Constant), PRGM4, THEO3, REF2, ACT1

Table-7 indicates overall significance test assessing whether the group of independent variables when used together reliable predict the dependent variable. The 'F' value **20.704** of different Learning styles (i.e. Pragmatist-PRGM4, Theorist -THEO3, Reflector-REF2 and Activist-ACT1) of pre-service teacher trainees with Metacognitive styles. The 'P' value associated with this 'F' value was very small in both cases at 0.05 and 0.01 level of significance.

Table-8: Coefficient between Independent Variables (Learning Styles i.e. Activist, Reflector, Theorist, Pragmatist) and dependent variables (Score of Organizing dimension)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	34.595	3.773		9.170	0.000
	ACT1	0.316	0.218	0.155	1.450	0.150
	REF2	0.182	0.306	0.062	0.595	0.553
	THEO3	0.815	0.277	0.289	2.943	0.004
	PRGM4	0.574	0.220	0.261	2.605	0.010

a. Dependent Variable: ORG2

b. Predictors: (Constant) PRGM4, THEO3, REF2, ACT1

Table-8 indicatesthat only Theorist (THEO3) and Pragmatist (PRGM4) are positively significant at both 0.05 and 0.01 level of significance as there the p value is less than alpha level. So it reveals that Learning Styles i.e. Theorist (THEO3) and Pragmatist (PRGM4) Learning styles are positively contributing respectively 81% and 57%, the Organizing metacognitive strategy of pre-service teacher trainees. Further, the results indicate that there is no evidence of contribution Activist (ACT1) and Reflector (REF2) (respectively 31% and 18%) Learning Styles of pre-service teacher trainees on their organizing metacognitive strategy. So Theorist (THEO3) and Pragmatist (PRGM4) Learning styles of pre-service teacher trainees are not significant at both 0.05 and 0.01 level of significant, where the p value is greater than alpha level.

Table-9: Predicting Learning Styles as independent variables about dependent variable Monitoring dimension of Metacognitive Strategy of pre-service teacher trainees.

ANOVA[a]					
Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1 Regression	4432.000	4	1108.000	29.121	0.000[b]
Residual	4375.592	115	38.049		
Total	8807.592	119			

a. Dependent Variable: MON3
b. Predictors: (Constant), PRGM4, THEO3, REF2, ACT1

Table-9 indicatesthe overall significance test assessing whether the group of independent variables when used together reliable predict the dependent variable. The 'F' value 29.121 of different Learning styles (i.e. Pragmatist-PRGM4, Theorist -THEO3, Reflector-REF2 and Activist-ACT1) of pre-service teacher trainees with Metacognitive styles. The 'P' value associated with this 'F' value was very small in both cases at 0.05 and 0.01 level of significance.

Table-10: Coefficient between Independent Variables (Learning Styles i.e. Activist, Reflector, Theorist, Pragmatist) and dependent variables (Score of Monitoring dimension)

Coefficients[a]					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
1 (Constant)	27.925	3.348		8.340	0.000

ACT1	0.149	0.193	0.076	0.770	0.443
REF2	0.929	0.271	0.331	3.426	0.001
THEO3	0.897	0.246	0.331	3.650	0.000
PRGM4	0.217	0.195	0.103	1.109	0.270

a. Dependent Variable: MON3

b. Predictors: (Constant) PRGM4, THEO3, REF2, ACT1

Table-10indicates that only Reflector (REF2) and Theorist (THEO3) are positively significant at both 0.05 and 0.01 level of significance as there the p value is less than alpha level. So it reveals that Learning Styles i.e. Reflector (REF2) and Theorist (THEO3) Learning styles are positively contributing respectively 92% and 89%, the Monitoring metacognitive strategy of pre-service teacher trainees. Further, the results indicate that there is no evidence of contribution Activist (ACT1) and Pragmatist (PRGM4) (respectively 21% and 14%) Learning Styles of pre-service teacher trainees on their Monitoring metacognitive strategy. So,activist (ACT1) and Pragmatist (PRGM4) Learning styles of pre-service teacher trainees are not significant at both 0.05 and 0.01 level of significant, where the p value is greater than alpha level.

Table-11: Predicting Learning Styles as independent variables about dependent variable Evaluation dimension of Metacognitive Strategy of pre-service teacher trainees

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4126.164	4	1031.541	24.248	0.000[b]
Residual	4892.203	115	42.541		
Total	9018.367	119			

a. Dependent Variable: EVL4

b. Predictors: (Constant), PRGM4, THEO3, REF2, ACT1

Table-11 indicates the overall significance test assessing whether the group of independent variables when used together reliable predict the dependent variable. The 'F' value 24.248 of different Learning styles (i.e. Pragmatist-PRGM4, Theorist -THEO3, Reflector-REF2 and Activist-ACT1) of pre-service teacher trainees with Metacognitive styles. The 'P' value associated with this 'F' value was very small in both cases at 0.05 level of significance. Thus, it was found that independent variables learning Styles of pre-service teacher trainees i.e., Pragmatist (PRGM4), Theorist (THEO3), Reflector (REF2) and Activist (ACT1) can reliably predict the dependent variable Evaluation dimension of Metacognitive Strategy of pre-service teacher trainees.

Table-12: Coefficient between Independent Variables (Learning Styles i.e. Activist, Reflector, Theorist, Pragmatist) and dependent variables (Score of Evaluation dimension)

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29.657	3.540		8.377	0.000
	ACT1	0.191	0.204	0.096	0.933	0.353
	REF2	0.753	0.287	0.265	2.625	0.010
	THEO3	0.992	0.260	0.361	3.815	0.000
	PRGM4	0.164	0.207	0.077	0.794	0.429
a. Dependent Variable: EVL4						

Table-12 indicates among these four Learning Styles only Reflector (REF2) and Theorist (THEO3) are positively significant

at both 0.05 and 0.01 level of significance as there the p value is less than alpha level. So, it reveals that Learning Styles i.e. Reflector (REF2) and Theorist (THEO3) Learning styles are positively contributing respectively 75% and 99%, the Monitoring metacognitive strategy of pre-service teacher trainees. Further, the results indicate that there is no evidence of contribution of Activist (ACT1) and Pragmatist (PRGM4) (respectively 19% and 16%) Learning Styles of pre-service teacher trainees on their Evaluation metacognitive strategy. So Activist (ACT1) and Pragmatist (PRGM4) Learning styles of pre-service teacher trainees are not significant at both 0.05 and 0.01 level of significant, where the p value is greater than alpha level.

Discussion of results

From the above analysis and interpretation, it can be concluded that Theorist and Reflector learning styles are positively predicting and contributing the planning metacognitive strategy of teacher trainees. Theorist and Pragmatist learning styles are positively predicting and contributing the Organizing metacognitive strategy of teacher trainees. Theorist and Reflector learning styles are positively predicting and contributing the Monitoring metacognitive strategy of teacher trainees, and Theorist and Reflector learning styles are positively predicting and contributing the Evaluation metacognitive strategy of teacher trainees. Results of the present study were supported and correlates directly to the research findings of many studies are Jafarpanah & Farahian (2016), indicated that "significant relationship between learning styles with metacognitive strategy and also there is a significant relationship between learning styles with metacognitive reading strategy". Abu-Ameerh (2014), revealed that "Learning styles of learners significantly explain and

predict all sub-dimensions of meta-cognition". Armbruster, Echoles& Brown (1983) investigated that "Development of metacognition is related to proficiency in learning." Baker (2002) found that "The control component of Metacognition is related to self-regulation of cognitive efforts, and it Comprises on "planning", "efforts", "evaluating", "remedying", and "testing".

MAJOR FINDINGS

The main findings drawn from the analysis and interpretation of results. The findings have been given in the following heading.

a) The four dimensions of metacognitive strategy (i.e. Planning, Organizing, Monitoring, and Evaluating) are positively related with Activist, Reflector, Theorist, and Pragmatist Learning Styles of teacher trainees. So, all the teacher trainees having Activist, Reflector, Theorist, and Pragmatist learning styles have strong ability to make planning, Organizing, Monitoring and Evaluation (metacognitive strategies) of any cognitive task in teaching learning context. There is also significant positive relations were found between overall four metacognitive strategy and learning styles overall of teacher trainees. Therefore Activist, Reflector, Theorist, and Pragmatist learning styles are the significant factors of metacognitive strategies.

b) Among four learning styles, the Theorist and Reflector learning styles are positively predicting and contributing the planning metacognitive strategy of teacher trainees and Activist and Pragmatist are not contributing and predicting significantly the planning strategy of

metacognition. It signifies that Theorist and Reflector learning styles are the strong predictors and contributors of Planning Metacognitive strategy of teacher trainees and Activist and Pragmatist learning styles of teacher trainees are the poor predictors and contributors of their planning metacognitive strategy.

c) Among four learning styles, the Theorist and Pragmatist learning styles are positively predicting and contributing the Organizing metacognitive strategy of teacher trainees, and Activist and Reflector are not contributing and predicting significantly the Organizing strategy of metacognition. It signifies that Theorist and Pragmatist learning styles are the strong predictors and contributors of Organizing Metacognitive strategy of teacher trainees and Activist and Reflector learning styles of teacher trainees are the poor predictors and contributors of their Organizing metacognitive strategy.

d) Among four learning styles, the Theorist and Reflector learning styles are positively predicting and contributing the Monitoring metacognitive strategy of teacher trainees and Activist and Pragmatist are not contributing and predicting significantly the Monitoring strategy of metacognition. It signifies that Theorist and Reflector learning styles are the strong predictors and contributor of Monitoring Metacognitive strategy of teacher trainees and Activist and Pragmatist learning styles of teacher trainees are the poor predictors and contributors of their Monitoring metacognitive strategy.

e) Among four learning styles, the Theorist and Reflector learning styles are positively predicting and contributing the Evaluation metacognitive strategy of teacher trainees and Activist and Pragmatist It signifies that Theorist and Reflector learning styles are the strong predictors and contributors of Evaluation Metacognitive strategy of teacher trainees and Activist and Pragmatist learning styles of teacher trainees are the poor predictors and contributors of their Evaluation metacognitive strategy.

CONCLUSION

In order to know about the learning styles of students and to foster their ability of cognitive execution and regulation like plan, organize, monitor and evaluate the self-works, the teachers must be well trained. In this way the study would help the teachers to develop teaching strategies that would support the desired learning style for students which will contribute and predict their metacognitive strategies.

There has to be create an environment in training classroom the teacher educators where teacher trainees rely on their own intuitive thought processes to understand their styles of learning which will develop the best practices of metacognitive strategies like planning, organizing, monitoring and evaluating, during training programme and while they develop the lesson plan for practice teaching.

The principles of teacher training institution must take care about the organization of different curricular activities, seminar, conferences, workshop, training programme and capacity building programme for the teacher trainees and also teacher educators.

The study would help the researchers to develop innovative teaching strategies which will foster the process of learning with supporting the desired learning style of students and encourage the students and teacher to practice properly the metacognitive strategies in classroom. Researcher should identify another research gap and develop the model of teaching-learning and encourage the academicians to culture pedagogical which will be fruitful for future learning.

The curriculum developers must take care about the concepts and practices of metacognitive strategies use by the teacher trainees and their learning styles during training programme. They must include those types of curricular activities in course or curriculum of teacher education where the Metacognitive strategies like planning, organizing, monitoring and evaluation skill of teacher trainees will be of best use in course through which the scope of their professional development will be given to them.

The policy makers should make a survey to identify the learning style of our students or teacher trainees and what types of metacognitive strategies they use during training programme or class. Based on the result of the survey, the most popular learning style and metacognitive strategies used by the learners and what are the least popular style in that particular class will be determined. The policy planner also suggest the regulatory and apex body education like N.CT.E, N.C.E.R.T, and NIEPA to promotes and conducts research and innovation in different level of education like school education, higher education, teacher education and provide consultancy services in the sphere of educational planning and administration to Central as well as State Governments, Universities, Board and other similar organizations.

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FUNCTIONING OF INTERNAL QUALITY ASSURANCE CELLS IN ODISHA: PROBLEMS AND IMPLICATIONS

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Abstract : *In 21st century development of higher education and development of a country are closely related. Any country that is developed today in the world is mainly for its quality higher education. Therefore quality assurance in higher education has been one of the major challenges in the development agenda not only in India but also all over the world. In this context IQACs of NAAC accredited colleges are functioning for sustenance and enhancement of internal quality of the higher education institutions. In Odisha only 192 colleges out of 520 UGC affiliated colleges have valid NAAC accreditation status. Therefore, it is significant to explore what are problems and constraints faced by IQACs of different NAAC accredited colleges of Odisha in their functioning.The exploratory survey method was adopted in the present study to identify the problems and constraints faced by IQACs in their functioning. The sample of the study comprised of 12 colleges out of which 6 were autonomous colleges and 6 were non-autonomous colleges, 6 were rural colleges and 6 were urban colleges, 6 were government colleges and 6 were non-*

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government-aided colleges included purposively in the sample of the study. The sample respondents covered 72 members i. e. six from each sample institution. On the basis of pilot study and NAAC prescribed guidelines focus group discussion guide was developed and conducted at institution level. Collected data were analysed by content analysis techniques.The study has revealed that irrespective of the contexts of the colleges IQACs are facing various problems and constraints. However autonomous-urban-government colleges are in better position than non-autonomous-rural-non-government-aided colleges. Appropriate steps need to be taken by policy makers, administrators, quality experts, IQAC members, Principals, teachers, students, alumni and civil society members to solve these problems and constraints in functioning of IQACs which can sustain and enhance institutional quality.

Keywords: *IQAC, NAAC, Autonomous and Non-Autonomous College.*

Introduction

It is widely recognised that the quality higher education promotes comprehensive and multi-level development by enhancing human and technical capabilities of the society. Higher education is the apex level of education, which produces knowledge leaders, technicians, teachers, professors, engineers, doctors, lawyers, scientists and other similar professionals to determine the progress of human society. The institutional and technical determinisms are the key to development and quality improvement in higher education. Quality assurance in higher education has been one of the major challenges emerged on the development agenda not only in India but elsewhere in the world. The National Assessment and Accreditation Council (NAAC) plays the vital role in quality assurance of higher education in India. NAAC has proposed to

establish an Internal Quality Assurance Cell (IQAC) as a post accreditation quality sustenance measure in every accredited higher education institution. The present study focuses on problems and constraints faced by Internal Quality Assurance Cells (IQAC) with reference to quality improvement practices in NAAC accredited colleges of Odisha.

Technical change and institutional change are key components of development. Higher education plays an important role in facilitating these changes by incorporating all of the various demographics of the population. Higher education has been found to be significantly related to the human development index and greater for the disadvantaged groups (Joshi, 2006). At the same time lack of quality higher education creates inverse situation in the society. Quality of higher education indicates fitness for the purpose. Improvement in quality of higher education will enhance the level of human development and greater human development influence life expectancy and GDP per capita (Tilak, 1994). Quality assurance in higher education has been one of the major challenges in the development agenda not only in India but also all over the world.

The various policy initiatives of the Government of India such as establishment of University Grants Commission, NAAC and NBA and the process of accreditation, linking development grants with accreditation are the indications of official concerns and efforts for quality management (Mukhopadhyaya, 2012). As per the guideline of NAAC every accredited institution should establish an Internal Quality Assurance Cell (IQAC) as a post accreditation quality sustenance measure. Since quality enhancement is a continuous process, the IQAC would become a part of the institution's system and work towards realisation of the goals of quality enhancement and sustenance. Efforts are being made on the part of NAAC accredited colleges to promote internal quality

enhancement practices in respective institutions (Sahoo and Srivastava, 2015). The National Knowledge Commission Report (2006) and the Yashpal Committee Report (2009) on renovation and rejuvenation for structural reforms of higher education are of noteworthy to visualize the futures expansion of higher education in India. We must foster a conception of quality which may be applied to every degree of ability and to every socially acceptable activity. A missile may blow up on its launching pad because the designer was incompetent or because the mechanic who adjusted the last valve was incompetent. The same is true of everything else in our society. It is in this context of fast changing global development in the domain of higher education the learners' need to have updated knowledge resources and adequate knowledge for their utilization (Das, 2012).

The 12th five year plan suggests a range of reforms in higher education to change the role of the Central Government from "command and control" to "steer and evaluate" giving more autonomy and accountability to the state and to the higher education institutions themselves with the goal of improving quality. In the context of Odisha immediate attention on the part of regional government is required not mere as the concurrent responsibility but as an unaltered major player of regulating and development of higher education institutions (Dansana, 2013). So, according to demands and needs there has been substantial development in higher education in different regions of India. To respond to the present situation the State of Odisha has taken many initiatives in the recent times. It has well organized system of higher education supported by internal and external agencies. There are 520 degree colleges in Odisha, out of which 472 colleges come under section 2 (f) and 12 (B) of the UGC Act, 1956 and 48 colleges come under section 2 (f) only but are not included under section 12 (B) of the UGC Act, 1956, (UGC, 2018 [A]). Out of these total degree colleges 44 are autonomous colleges (UGC, 2018[B]). Up to 27th November 2017 there

were 14 university and 192 colleges in Odisha having valid NAAC accreditation status. (NAAC, 2017[A and B]).

\ Internal Quality Assurance Cell is UGC sponsored scheme to be established in all its affiliated colleges with the financial support to plan, guide and monitor quality enhancement and assurance activities at institutional level. IQACs are functioning to attain excellence in NAAC accredited colleges in the state of Odisha. This paper is based on research conducted in 12 NAAC accredited colleges in Coastal Odisha. Here an attempt has been made to present problems and constraints faced by IQACs of NAAC accredited colleges of Odisha in quality improvement practices.

The present study has been conducted with the objective to explore the problems and constraints faced by IQACs of NAAC accredited colleges in their functioning.

Methodology

All NAAC accredited colleges of Odisha having IQACs were considered as the population of the study. In this study each sample unit was a college. The faculty members and co-ordinators of IQACs were the sample respondents. The sample of the study comprised of 12 colleges out of which 6 were autonomous colleges and 6 were non-autonomous colleges, 6 were rural colleges and 6 were urban colleges, 6 were government colleges and 6 were non-government-aided colleges included purposively in the sample of the study. The sample respondents covered 72 members i. e. six from each sample institution. On the basis of pilot study and NAAC prescribed guidelines focus group discussion guide was developed and conducted at institution level. Collected data was analysed by content analysis techniques.

Findings

The major findings related to problems and constraints faced by IQACs in their functioning has been presented on the basis of emerging contexts as follows:

Context I: Problems and Constraints faced by IQACs in Autonomous-Urban-Government Colleges

The major findings related to problems and constraints faced by IQACs in autonomous-urban-government colleges have been presented as follows:

1. The curriculum of autonomous-urban-government colleges were revised occasionally due to lack of proper planning, lack of human resources and apathetic attitude of the college authority. These colleges have faced problems in effective implementation of newly introduced CBCS curriculum. The vital constraints of the above problem were lack of proper orientation to faculties and large scale vacancy in teaching posts. No regular feedbacks were taken from stakeholders for curriculum updating and revision, as no continuous efforts were taken by authority.

2. Autonomous-Urban-Government colleges faced problems in enrolling students as per students' first choice due to cut off marks in e-admission system. These colleges faced problems in maintaining students profile at department level. Due to lack of office automation/ computerisation it was not easy to share students profile to all departments. It was found in the

colleges that less importance was given on workshop, group discussions, poster making, field study and seminar presentation due to more importance on traditional practice of lecture method. The colleges have ICT enabled resources but it was used occasionally due to lack of well-trained regular faculties.

3. Major problems faced by IQACs of autonomous-urban-government colleges in research, consultancy and extension activities were lack of promotion of research, inactive college research committee, lack of publication output, no consultancy and no collaboration with other organisations. These problems were aroused due to several important constraints such as lack of motivation of the faculties and administrators, lack of inspiration by administration, no special incentives/facilities by college administration, no official policy for structured consultancy, lack of structured planning and lack of interest among the faculties as well as administrators.

4. The major problems faced by autonomous-urban-government colleges in infrastructure and learning resources were lack of canteen facilities, lack of study room for teachers, lack of ICT as learning resources, lack of library automation and lack of sufficient hostel facilities. These problems were aroused due to several important constraints such as lack of interest of the principals, lack of infrastructure, lack of training to the faculties about the uses of ICT, lack of incentive as well as motivation, lack of funds, lack of trained librarian and lack of proper planning.

5. Students of autonomous-urban-government colleges were less aware about the availability of variety of scholarship. The colleges have not maintaining records about students' progress to next higher studies and getting employed. The important constraints were lack of proper guidance in career advancement. Less participation in co-curricular activities by students were also an important problem of these colleges and the related constraints were lack of awareness and interest among the students. Autonomous colleges have placement and career counselling cells, but they were not working properly. Apathetic attitude of the authority as well as lack of manpower was the important constraints of it.

6. The major problems faced by IQACs of autonomous-urban-government colleges in governance, leadership and management were less involvement of stakeholders, lack of execution of vision document, formation of governing body of the college and Irregular submission of AQAR. These problems were aroused due to several important constraints such as no continuous planning, no continuous effort, local political interference, apathetic attitude/negligence.

7. The problems and constraints with reference to innovations and best practices of accredited autonomous-urban-government colleges during the implementation of follow up activities on peer team recommendations were lack of regular functioning of IQACs, lack of stakeholders' relationship and

inadequate study environment of the campus. These problems were aroused due to several important constraints such as lack of interest among the members of IQACs, no assignment to a particular staff to look after the matter and lack of awareness as well as co-operation among the members and coordinators of IQACs.

Context II: Problems and Constraints faced by IQACs in Non-Autonomous-Rural-Non-Government-Aided Colleges

The major findings related to problems and constraints faced by IQACs in non-autonomous-rural-non-government-aided colleges have been presented as follows:

1. The curriculum of non-autonomous-rural-non-government-aided colleges were revised occasionally by the affiliating University. In this matter the above colleges have limited opportunity due to lack of autonomy. Only some senior faculties, who were members of 'Board of Studies' have limited opportunity to participate in curriculum revision process. Non-autonomous colleges have faced problems in effective implementation of newly introduced CBCS curriculum. The vital constraints of the above problem were lack of proper orientation to faculties and large scale vacancy in teaching posts. The above colleges have limited academic flexibility due to lack of diversified courses. The above colleges faced problems in curriculum enrichment due to lack of sufficient quality materials. No regular feedbacks were taken from stakeholders

for curriculum updating and revision, as no continuous efforts were taken by authority.

2. Non-autonomous-Rural-Non-government-aided colleges faced problems in enrolling students as per students' first choice due to cut off marks in e-admission system. Above colleges faced problems in maintaining students profile at department level, only college offices have been maintained students' profile. Due to lack of office automation/ computerisation it was not easy to share students profile to all departments. It was found that less importance was given on workshop, group discussions, poster making, field study and seminar presentation due to more importance on traditional practice of lecture method. The above colleges have lack of ICT enabled resources as well as lack of trained faculty to use ICT enabled devices. The major constraints in teaching-learning & evaluation were lack of well-trained faculty, lack of resources and lack of regular teaching faculties.

3. Major problems faced by IQACs of non-autonomous-rural-non-government-aided colleges in research, consultancy and extension activities were lack of promotion of research, inactive college research committee, lack of publication output, no consultancy and no collaboration with other organisations. The above problems were aroused due to several important constraints such as lack of motivation of the faculties and administrators, no weightage on research for promotion, lack of inspiration by administration, no

incentives/ facilities by college administration, no official policy for structured consultancy, lack of structured planning and lack of interest among the faculties as well as administrators.

4. The major problems faced by non-autonomous-rural-non-government-aided colleges in infrastructure and learning resources were lack of canteen facilities, lack of study room for teachers, lack of ICT as learning resources, lack of library automation and lack of sufficient hostel facilities. The above problems were aroused due to several important constraints such as lack of interest of the principals, lack of infrastructure, lack of training to the faculties about the uses of ICT, lack of incentive as well as motivation, lack of funds, lack of trained librarian and lack of proper planning.

5. There was less participation of students in various societies in non-autonomous-rural-non-government-aided colleges due to lack of interest and awareness among students. In these colleges students were deprived of getting the opportunity of scholarship due to lack of awareness among them. Another problem of these colleges were students' progression from UG to PG or next higher studies. The important constraints of the above problem were lack of proper guidance in career advancement. Less participation in co-curricular activities by students were also an important problem of these colleges and the related constraints were lack of awareness and interest among the students. Non-autonomous-rural-non-government-aided colleges have

no placement and career counselling cells. Apathetic attitude as well as lack of human resource were the important constraints of it.

6. The major problems faced by IQACs of non-autonomous-rural-non-government-aided colleges in governance, leadership and management were less participation of stakeholders, lack of execution of vision document, formation of governing body of the college and Irregular submission of AQAR. The above problems were aroused due to several important constraints such as no continuous planning, no continuous effort, local political interference, apathetic attitude and negligence of the co-ordinator of IQACs.

7. The problems and constraints with reference to innovations and best practices of accredited non-autonomous-rural-non-government-aided colleges during the implementation of follow up activities on peer team recommendations were lack of regular functioning of IQACs, lack of stakeholders' relationship and Poor environment of the campus. The above problems were aroused due to several important constraints such as lack of interest among the members of IQACs, no assignment to a particular staff to look after the matter and lack of awareness as well as co-operation among the members and coordinators of IQACs.

Conclusions

Irrespective of contexts of colleges, problems and constraints are found across seven quality dimensions of NAAC. Major problems are Irregular updating of curriculum, less use of ICT enabled devices, less importance on group discussion, poster

making, seminar etc., inactive college research committee, apathetic attitude of the stakeholders, lack of publication output, incomplete library automation process, lack of hostel facilities, less participation of students in co-curricular activities, limited academic audit, no vision documents, irregular submission of AQAR, lack of interest among IQAC members. The major constraints of the above mentioned problems are lack of structured planning, inequality in salary, service insecurity, improper policy for professional growth, lack of infrastructure, lack of funds, lack of proper orientation, large scale vacancy, apathetic attitude of college authority, more importance on traditional methods of teaching, lack of motivation, no special incentives, lack of trained librarian, negligence attitude and inconsistent tenure of IQAC coordinators.

The present study has many seminal implications for policy makers, administrators, quality experts, IQAC members, Principals, teachers, students, alumni and civil society members. These implications again need to be examined and practiced with reference to different contexts and quality dimensions of higher education.

Though the IQACs of autonomous-urban-government colleges are functioning in a more regular manner than non-autonomous-rural-non-government-aided colleges, still it needs to be more active to create exemplary quality culture. They require to give importance on regular updating of curriculum, use of ICT enabled teaching learning devices, orienting faculty members with updated knowledge and skills, organise doubt clearing/tutorial classes for slow learners, create achievement motive among the students, enhance computerisation of institutional administration, examination and accounts related activities, involve stakeholders in quality improvement process, motivate faculty members to undertake

major and minor research projects. The IQACs must be more particular about documentation of quality related activities and disseminate the same by uploading it in their institutional websites. The authority of the institutions seeks the assistance of alumni and government authority for internal quality improvement process of the institutions. Necessary step needs to be undertaken by appropriate authority to fill up the vacancies of both teaching and non-teaching posts on regular basis without any compromise, because productive functioning of any institution highly depends upon its human resources. In the rapidly changing scenario of people needs and demands, every college needs to explore the possibility of introducing more need-based diversified courses supplemented with job oriented professional subjects and quality infrastructure.

Non-autonomous-rural-non-government-aided colleges are at impoverish and dwindling state when it comes to fulfil the criterions of required supports and the functional status of IQACs. The IQACs of these colleges should be more active and devoted towards internal quality improvement practices in their institutions and keep target to achieve institutional autonomy by demonstrating their status. The IQACs of non-autonomous colleges should be careful for proper implementation of newly introduced CBCS curriculum, take proper steps for orientation of the faculty members, improve their library facilities and make it automation, computerisation of official works, encourage faculty members to undertake more research projects, encourage stakeholders to involve in internal quality improvement practices, avoid the narrow politics in academic matters, organise special coaching for competitive examinations. All the quality related activities of the institution should be documented properly and disseminated with other institutions. The institutional website should

be maintained and updated time to time including all the quality related activities. Necessary steps should be taken to recruit required number of faculty on regular basis.

Moreover, the regional government requires to pay immediate attention in terms of extending necessary support for proper functioning of higher education institutions. There is no doubt that these institutions are instrumental in the process of ensuring 25% Gross Enrolment Ratio (GER, 2016-17) in higher education but the prevailed functioning situation of non-autonomous-rural-non-government-aided colleges suggests for need of necessary supports from the State government or other agencies of the State, otherwise possibility of substandard education and wastage of potential human resources cannot be averted in large scale.

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COMMUNITY INCLUSION FOR TRANSFORMATION OF ELEMENTARY EDUCATION: A STUDY OF KATIHARDISTRICT, BIHAR

Jagadish Biswal*

Abstract : *The RTE Act 2009, provide supreme importance to local community participation for transforming the school education, but in reality, there found a wide range of gap between community and school administration to transforming the school. It is most dominantly seen in the State of Bihar where community and school relationship are very poor (Singh, 2016). The present piece of work is an attempt to address the aforementioned gap where the Vidyalaya Shiksha Samiti (VSS) member, community member, headmaster and other stakeholders like BEO, BRP, CRCC, and Bal Sansad were taken as sample of the study. The study was delimited to an elementary school of Ittwa, Hasanganj Block, Katihar district of Bihar. The investigator has conducted five focus group discussion and ten one-to-one with above sample for seeking views on the problems faced by the school education and the way to transform it. After collection of relevant data, the investigator compiles a list of possible solution and rank orders them. Furthermore, for better understanding of community the investigator has*

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spent15days in the community and extensively immerse with their life. As an intervention the investigator also establish a library for promoting quality education with a campaign named as "KABBAD SE JUGAD." After successful outcomes of the intervention, the same has been replicated in 18 other respective schools. Overall, it has also revealed that the community inclusion in school system brings an awareness about their responsibility among community to make the school process more effective.

Keyword: *Community Inclusion; Stakeholders; KABBAD SE JUGAD*

Background of the Study

India live with full of diversity, which is create a unique identity of this country. Diversity is finds in types of food, social life, cultural life, religion, caste, colour, creed, geography and language. From the very beginning, different educationist, social activist, political leader was gives importance to preserve the culture of we feeling less among our citizens. Social inclusion is not a new concept in India. from the very beginning we also focused to include all for their self-growth to Nation growth. Youth icon swami Vivekananda focused on, Education should stand for the unity of mankind and universal brotherhood. The universal of Brotherhood can be filling down the walls of separation and Inequality. Social inclusion can be taken as broader term which is involves feeling accepted within your local community and being able to contribute to society in a meaningful way, through participation in mainstream activities and exercising the basic right. Also played a central role in their sense of social inclusion. In other words, social inclusion is to address the

gap exist in society with reference to caste, colour, religion and different right. In this chapter basically, focused on education domain and How we develop our education system through community Participation.

The elementary education is a foundation of students through they developed towards other area of education. In elementary level child collect experiences from different source- school, Parents, Peer-group and community. Our country believes on democratic participation of citizen for transformation in every sector. Different policy and act also led emphasis on community Participation to transform the education system with reference to Management, curriculum, teacher's appointment and school development plan etc. the RTE Act 2009 rightly said that- in elementary school level a committee should develop which will seek the overall management of school development. The objectives of including the community participation is not only to smooth functioning of school process and Management but to ensure the quality education. As an example, Nepal does not have long history of development of education, after the political changes in 1950; people had a new spirit and zeal for all round development of the country. Thus, people started opening new school in their own initiations. A growing trend in expanding of education facilities was observed. The government had not given fund from the government treasury to the school. The community people did not wait for the government to take initiatives to establish new school and hire teacher in their areas. Most of the school at initial stage were collected different contribution from the community e.g. land, funds, volunteer teachers, construction materials etc. Not in Nepal but also in India, such type of initiatives in Andhra Pradesh taken to involve community members on a large scale through programme such as '*ChaduvulaPanduga*' (Festival of Education). Another example is

'*Alokar Jatra*' from Assam, a Programme where by local communities are involved in conducting a household survey, resulting in a local level database on the educational status of children with positive impact on access and Enrolment. The community plays a pivotal role to address the different issues of school education.

In the context of Katihar District, Bihar, the Vidyalaya Shiksha Samiti are most focused on Fund management aspect insisted of other qualitative aspects of schools. If you put a view on as per ASER 2018, less than 30% students in grade III to V are able to read class -II level text and solve 2-digit subtraction in 25 aspirational districts chosen by NITI Ayoga. it observed that, different issues seem that, after students are Irregular in school. After MDM students are left the school, lack of student's engagement in school. It also seems a huge gap among VSS member and School.

The community has attribute and distribution purposes; there are Individual responsibilities to the community responsibilities to the individual. However, difference in ethnicity,race,religion,socio-economic status and power fuel division which are replicated in and by education system.Through mass awareness, campaign mode, we should allow them to school and other social institution to focus on the shared humanity of a group and ensure that Institution do not further violate the right of members. In doing so, it can be increasing the chances of Inclusion regardless of economic, social and cultural difference.

Thus, the present paper is an attempt to address the gap between VSS member and school for transforming the education system.

Research Questions

1. What is Social Inclusion in education?

2. How does social context impact the multifaceted structure of school education?

3. What role do community members and other stakeholders play in transformation of school education?

4. What are their perspectives on the reform of school education system?

5. What are the main problems being faced by school education system?

6. What are the implications of community inclusion in school?

Problem Statement

The RTE Act 2009 is give importance on local community participation for transforming the school education, but in reality, there is gap between the community and school administration to transforming the school, particularly in the context of Bihar, community and school relationship is very poor. (Singh,2016). Which is create an obstacle in developing the growth in School. There is a gap seen in Vidyalaya ShikshaSamiti, mostly it seems that, socially, economically &religion-based peoples are dominating in another member. From my 2 month of school observation and stakeholders viewed that, there exist a religion-based blame game in VSS member. If the VSS president is belongs Hindu he denied other Muslim people views in the meeting. In other part due to their lack of inclusive participation, there also other problem has seen, such as- low attendance in school, students left school after MDM etc. Furtherthe minority group of VSS members felt inferiority among them and participate less in school development. If you look up on

Bihar school education Management system, in order to do any developmental work in school without the approval of VSS member you can't spend a single coin from Fund. So, it needs to be addressed the sensitive issues and create an inclusion among the VSS member to rejuvenate the school system.

Methodology

To develop an inclusion among VSS member to transform the school existing situation, the investigator used the first design of action research called Practical action research, is an approach that involves the researcher to examining a school situation with a view towards improving practice. The study had conducted in middle school, Ittwa, Hasanganj block, Katihar district of Bihar. To carried the piece of work researcher used more qualitative approach than quantitative. Focus group discussion, Interview, 15 Days community Immersion and one-on-one has used as tool to obtain the data from multiple stakeholders. Further on the basis of this above tool, a plan of intervention was designed and implemented to create inclusion among VSS member through a library establishment process. Let us discuss the detailed process of intervention for upliftment school system.

Intervention Process

To work upon the above issue investigator fully immerse with the school and find out the problem. In the first step, it always important to build a healthy relationship among all members of community. So, with the help of students, investigator started community visit after the school is over. Started planning to stay community for 15 days in-order to understand their perception upon school and other members. In the first phase of community

immersion, identified a home for stay has very difficult. Majority of people not allowed to stay for fifteen days in their home. Even most of the school students called to their home but their parents indirectly to denied to stay, after 2 days spend in community hall, the village Mukhiya invited to me for stay in his old house. Investigator spend more time in village people and engaged in harvesting wheat. After some days, a mutual relation and trust generated among villagers. Then investigator plan to do a community assembly. The meta objective is to create awareness in community with regards to the development of education. It also an attempt to give a platform to students, teachers and community member to put forward his opinion regarding to develop the existing situation of school. They helped us and provide a common space for organising this event and around 100 villagers had presented.

In phase 2 of intervention a common VSS meeting has conducted at school where we focused to discussed their participation for school development. An action plan has shared to establishment library. In this discussion they viewed that there no fund for library, and No books are available in school. So how can it possible? The valuable discussion has note down and again we sit together for the solution of the previous problem and co-create a campaign called "KABBAD SE JUGAD"

The campaign is focused to collection of books/money from community. We conducted it for 20 days and target is to collect minimum 1000 books. In school campus we decided a specific room for library and the community people painted the room. they also helped to create book shelf through the waste wooden desk and bench. In this campaign our community leaders met with local MLA who donated some books for our school library. Finally, the stakeholder support the library has setup and inaugurated by the help of VSS members.

Results

The action research focused to solve the problems of practitioner which they faced in their respective fields or you may say it focused to develop the existing condition. For this, He plan some intervention and implemented it field. It is important to measure that what type of results he gets from the intervention.

From the intervention one, it creates an awareness among the villagers and VSS member towards their role and contribution for school. In this regards majority of school teachers said that, Most of irregular students are come to school on regular basis and they are engaged in classroom activities.

> One of lady teachers from the school said,
>
> *In the rural area's students are came to the classroom without chalk and slate. She told to their students to bring the chalk and slate. Once a parent came to school and give a pen and notebook to his child. I saw his face, he very happy and get more connected with the classroom activities*

School Headmaster said that this time of more 23 students get admitted from the particular village comparison to other academic years. The daily attendance also increases in school.

Intervention-2

The establishment of library news spread in local newspaper which reach soon in other school of block. The investigator also shared the work which has done in Ittwa school in "GURUGOSTHI" (Block level Monthly review meeting of All Headmaster). After understanding the work plan, most of the seek support from the CRCC to establishment the library in their school.

Now, total 12 school setup library in their respective school of Hasanganj Block, Katihar District, Bihar. Students are said that- this library give an ample opportunity to read more different short stories books. In leisure time we are doing our Homework in library.

one the important thing is that- the library activities has handled by Bal Sansad team. Which develop a democratic leadership among students. They are led the process of issuing the books, maintain the record books etc.

Conclusion

The RTE Act 2009, provide supreme importance to local community participation for transforming the school education, but in reality, there found a wide range of gap between community and school administration to transforming the school. It is most dominantly seen in the State of Bihar where community and school relationship is very poor (Singh, 2016). Day by day, the 70% of community people viewed that government school have not provide good education to our students. It's time to break the mind-set of complaining attitude and ensure your contribution to your local neighbour school. it's our children, lets to something for them. The contribution is use in the sense, not in financial term but if you contribute in by observing the school teaching learning environment or regularly sending your children to school; this enough for us. The same spirit should develop among school authority, they should respect the local culture and situation and built a good rapport among community by inviting in every occasion of school. So that our vision and mission can successfully achieved to develop the public-school education.

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