Abstract: Developing leaders and leadership are key factors to improve learning and teaching in school education. The research review highlights the importance of being informed about the trends of research related to effective leadership at school education, particularly of the principals and teachers, as they play a key role in setting direction and creating a positive school culture including the proactive school mind set, and enhancing staff motivation and commitment needed to foster improvement and promote success for schools in challenging circumstances. It is found that, despite the abundance of literature concerning developing formal leadership, fewer studies have been conducted with academicians in leadership roles that focus on how they develop their leadership in learning and teaching. In the school system, teacher leadership is generally accepted as having a critical role in supporting school improvement. However, most knowledge on teacher leadership comes from the West, and the roles of teacher leadership in the East remain largely unexplored. The paper attempts to compare the trends of research on school leadership in India with the present trends at the international level. The findings from this review will contribute for the future researches and as references on how effective leadership sustains school improvement.

Keywords: School leadership, leadership style, leadership assessment, leadership development

1. INTRODUCTION

Leadership is an important factor in the effective implementation of educational objectives in schools. Research on school leadership suggests that both principal and teacher leadership are important for school improvement. It is neither teachers nor principals alone who improve schools, but teachers and principals working together (Schmidt-Davis & Bottoms, 2011) [1]. Successful leadership is not the result of simply obtaining a position, but rather possessing the knowledge and understanding of successful leadership skills along with the personal ability to effectively implement those skills. Hence, "School leaders need impressive skills to provide effective leadership in our diverse school environments". Such skills are not technical but humanistic, (Sharma 2010)[2]. Decades of research on different leadership styles shows that effective school leadership is the degree of influence or synergy between teachers and principals around the core business of schools, instruction (Urick, 2016)[4]. A noteworthy finding by Wallace Foundation (2011) [3] is the empirical link between school leadership and improved student achievement. School leaders, particularly principals, have a key role to play in setting direction and creating a positive school culture including the proactive school mind-set, and supporting and enhancing staff motivation and commitment needed to foster improvement and promote success for schools in challenging circumstances. Education research shows that school variables if considered separately, have at most small effects on learning. The real payoff comes when individual variables combine to reach critical mass. Creating the conditions under which that can occur is the job of the principal (Wallace Foundation, 2011)[3]. Moreover, the performance of teachers is an important factor that must be considered in efforts to improve the quality of education. Teacher’s performance is affected by many factors (Wenno, 2017)[5]. However, few studies have dealt on the interaction of principal and teacher leadership as separate but linked systems in how they relate to student outcomes. The realization of these initiatives directly depends on the effective school leadership. This places greater emphasis on creating mechanisms for continuous training or support for School Leaders. The potential transition in the dynamics of relationships between the governments, the school administrators, the teachers, the students, the parents and the broader community, would need leaders with skills and knowledge to critically analyse the challenges that arise due to changing times. In line with the needs of education reforms in India, our school leaders are expected to set the tone for growth of their Institutions to create institutions of excellence (rather than copying the best practices of other organisations) and make this growth apparent to all the stakeholders.
2. RATIONALE

The need for a systematic approach to school leadership development in India has become significant in the context of the government policy initiatives in support of Right of Children to free and Compulsory Education Act (2009)[6], the right to quality education, and other educational reforms. The need for a systematic approach to school leadership development gains added significance in the context of the rights-based approach to education which encompasses the right of equal access to education, the right to quality education, and the right to joyful learning environment; the fulfilment of which depends to a great deal on effective school leadership that engages in transformation of schools. Leadership is even more important for the schools working under difficult circumstances with limited resources coupled with increased expectations from parents and community. This calls for equipping school leaders with surfeit of skills and knowledge that enable them to critically analyze the challenges faced by and opportunities available to school in the prevailing conditions (NUEPA, 2014)[7]. Effective national policies are also necessary to professionalize school leadership in India. Lack of effective leadership in Government schools has contributed to indiscipline among students and teachers and falling academic standards (Draft NEP, GOI, 2016)[8]. Despite the emphasis on the effects of school leadership regarding teaching practices and learning outcomes, research on direct instructional leadership is scarce. The findings from this review would contribute to the literature on how teacher leadership sustains school improvement (Pang and Miao, 2017)[9]. Moreover, research findings from various countries and different school systems have revealed powerful impact of leadership in assuring school development as such the need was felt for studying trends of research in the area of effective leadership in the education system at the global and National level. It is hoped that such an effort will pave way for more rigorous examinations of contextually appropriate leadership theories and their relevant application to school leadership practice. The research review is undertaken with the following objectives.

3. OBJECTIVES

- To analyse the trend of research in school leadership across the globe
- To identify the areas of research focus and methodology
- To examine the findings, and draw inferences for understanding the status of research in India.

4. METHODOLOGY

Research abstract and articles on school leadership available online, particularly involving the principals and teachers are reviewed to analyse the trends, methodology, findings and implications. The review is based on web based articles from 2010 onwards. The article is organised under leadership styles, leadership assessment and leadership development. The trends are discussed in the light of researches in the area in India drawing implications for practice.

A. Leadership styles

Decades of research on different leadership styles shows that effective school leadership is the degree of influence or synergy between teachers and principals around the core business of schools, instruction. While various styles, such as transformational, instructional, shared instructional, point to the similar measures of high organizational quality. Globally, there is increasing pressure on schools to enact change, and the literature indicates that transformational leadership is positively associated with school leaders’ effectiveness at implementing positive reforms (Litz, and Scott, 2017)[10]. Truong and Hallinger (2017)[11] through a phenomenological research in a multi-site case study design investigated the effective school leadership and found that it is associated with strong autocratic and moral leadership. In a study by Eboka (2016)[12] in an ex-post facto design investigated the perception of teachers on the influence of principals’ leadership styles and gender on teacher morale. The findings of the study revealed leadership styles of principals and gender jointly influenced teacher morale. Transformational leadership style and male principals are found to be having a greater influence on teacher morale. In a qualitative study at six Shanghai school on the perspective of teacher leadership at the backdrop of why and how Shanghai schools have been ranked top in PISA-2009 and PISA-2012 which have set successful experiences examples to the world, revealed and confirmed the critical contribution of teacher leadership with specific roles of teacher
leadership emerging from leadership practices to support school improvement (Pang and Miao, 2017)[9]. In another qualitative study design Szczesiul & Huizenga (2014)[13] examines how teachers’ experiences of principal leadership practice influence their capacity to engage in meaningful collegial interactions during structured collaboration. The study found that principal leadership practices matter to teacher collaboration and influences teachers’ sense of efficacy and motivation, both of which are critical to professional learning during collaboration. In the district of Baguala Ambon city (Indonesia) Wenno (2017)[14] a quantitative design study of the effect of principals’ managerial leadership and compensation to the performance of physical science teachers in senior high schools was undertaken. The results showed that between principal managerial leadership and teacher performance there is a very high correlation. Between compensation with the performance have high correlation and the combination of principals’ managerial leadership and compensation with the performance there is a very high correlation. Leadership effects on student learning occur largely because leadership strengthens professional community; teachers’ engagement in professional community, in turn, fosters the use of instructional practices that are associated with student achievement (Wahlstrom, Louis, Leithwood, & Anderson, 2010)[15].

Erturk and Donmez(2016)[16] in a relational survey method studied the relationship between leadership styles of school principals and whistle blowing behaviors of teachers and found that as long as school principals demonstrated transformational leadership behaviors, teachers mostly preferred the internal whistle blowing type of behavior. On the other hand, it was remarked that teachers opted for anonymous whistle blowing behaviors as long as school principals demonstrated laissez-faire leadership behaviors. In a similar research design in Turkey Erani and Özbilen (2017)[17] investigated the relationship between school principals’ ethical leadership behaviour and positive climate practices, a high level of significant positive relationship was found between the school principals’ ethical leadership levels and positive climate practices.

A survey research design at by Sebastian et. al., (2017)[18] in the context of USA indicates that there are 2 pathways through which principal leadership is related to student learning in high schools. One pathway is mediated by teacher leadership, whereas the second pathway does not include teacher leadership. The learning climate is the only organizational factor that links principal and teacher leadership with student achievement. Pan et. al., (2017)[19] in a survey design studied the context of Taiwan on the indigenous practices of principal highlights how principal practices are evolving in a time of changing conception of learning from academic achievement to multiple competencies and the shifting paradigm of power from participatory decision making to distributed leadership. With the shifting of the concept and paradigm of learning, principals in a high power distance society like Taiwan are now facing opportunities as well as challenges to lead teachers to engaging students in inquiry and collaboration. Bhengu & Myende (2016)[20] using qualitative interpretive research explores school principals’ perspectives, and what constitutes leadership for coping with and adapting to policy change within deprived school contexts. The findings suggest that principals’ utilised creative and innovative ways to adapt and cope with change. The study concluded that leadership practices are not fixed, but are fluid, and evolving, where leadership is not about compliance, but is about one’s ability to identify what works at a given context. Leadership is also about being aware of the societal needs. In terms of teacher as a leader Tashi (2015)[21] in a survey research design studied teacher engagement in distributed leadership practices of the distributed leadership in Bhutan. It seeks to investigate the differences in teachers’ perception of distributed leadership based on teacher and school background including gender, experience and qualification, school type and school location. The study found that maximum teacher participation occurred with the distributed leadership practices in shared responsibility and the least engagement within leadership practices.

Saarivirta & Kumpulainen (2016)[22] in a literature review Finnish context focusing on school autonomy, leadership and student achievement found that there exists a shortage of studies connecting school leadership to student achievements. School leadership in Finland has been investigated in previous research, especially from the perspective of shared or pedagogical leadership, but vast majority of the studies have focused on teachers and educational staff, not directly on students. An evident reason for this is inaccessible information on school-based data and the nature of education being a “public good”, which is supposed to meet the same standards across the country. In a structural content model of leadership development Turgunbaeva et.al., (2016)[23] analyzed literary sources that cover the development of leadership relevant for the modern society in Kazakhstan. This model
includes the following components: objectives, tasks, theoretical and methodological frameworks, principles, types of activity, criteria of the formation of leadership, indicators of the formation of leadership, and the expected results. The study also includes recommendations which will simplify the work of specialists for developing leadership in junior schoolchildren by giving them the opportunity to observe the respective process, predict results, and make timely corrections. Paulsen et al., (2016)[24] by using distributed leadership model explored the relationship between school leadership practices and teacher empowerment in the Finnish policy culture and the results indicate that moral leadership exerted by school principals support teachers’ sense of empowerment both in work domain and classroom domain. The model shows the value of school principals facilitating teachers in decision-making processes paired with showing a strong moral basis in their relationship with teachers. The findings recommend school leaders to put emphasis on facilitative, ethical, and authentic practices in immediate relationships with their teachers. The study provides empirical evidence regarding the partial relationships between principal leadership practices and teacher empowerment. Urick (2016)[4] surveyed the different effective leadership issues through a sample of representatives of administrators who responded to a comprehensive set of leadership measures around a time of school restructuring reforms in the USA context. Based on the theoretical framework, principals should have a similar high influence over resources, safety and facilities regardless of degree of shared instructional leadership since these tasks address foundational school needs. However, principal and teacher influence over these resources differed across levels of shared instructional leadership more than principal-directed tasks of facilitating a mission, supervising instruction and building community.

In a qualitative research design Harris et al., (2017)[25] explored the principals’ instructional leadership practice in Malaysian primary schools. The study revealed that some of the duties and activities associated with being a principal in Malaysia are particularly congruent with instructional leadership practices. In particular, the supervision of teaching and learning along with leading professional learning were strongly represented in the data. Qian, Walker and Li (2017)[26] conducted a qualitative analysis of instructional leadership in the Chinese educational context and explored the ways in which Chinese school principals locate their instructional-leadership practices in response to traditional expectations and the requirements of recent reforms by using the idea of “the west wind meets the east wind”; that is, when they are required to accommodate both imported reform initiatives and traditional expectations. The paper contributes to the sparse existing research on principals’ instructional leadership in non-western cultural and social contexts.

B. Leadership Assessment

Studies that focused on self-assessment and assessment of team by the leader are covered under this section:

In a qualitative case study Kalman & Arslan (2016)[27] examined primary and middle school principals’ evaluations of their own instructional leadership behaviours, and thereby pay closer attention to the ideal instructional leadership behaviours suggested in the related literature and the realities of principals’ instructional leadership behaviours in a Turkish context. It was found that some of the school principals painstakingly tried to improve school-related factors which may potentially increase positive student outcomes. However, they were not able to display some instructional leadership behaviours such as change management, promoting teachers’ professional growth, collaborating with teachers and forming a positive learning environment due to multifarious reasons. The study concludes by presenting implications for the development of school principals as instructional leaders in Turkey. Goff et al., (2014)[28] in a survey method studied the extent to which principals’ self-ratings of leadership effectiveness coincide with their teachers’ perceptions of their leadership effectiveness at USA context. Although there is zero difference in the overall sample, teachers and principals within any given school seldom share the same perspective. Principals’ self-efficacy was a strong predictor of principals rating themselves higher than the teachers. Interestingly, the more time a teacher spent with a principal, the less congruence they shared. This research has identified rather large disparities in perceptions of leadership between teachers and their principals. Such a gap suggests that teachers have information and perspectives on school leadership distinct from the principals’ information and perspectives. This research provides evidence that structured teacher feedback may provide a useful avenue for principals seeking additional perspectives on their leadership effectiveness.

Ersozlu (2016)[29] studied the reflective leadership levels of school principals by science and math teachers’. The study found that in order to success in school organizations, each employee in the school should make an effort for
development and effective operation of the school organization. According to the research findings, it is understood
that science and math teachers consider school principals’ reflective leadership traits to be at middle level. With
regard to gender, age, branch and years of experience; no difference is found in teachers’ perceptions on reflective
leadership of school principals. In a study by Sharma, (2010)[30] the rating of teachers on selected attributes of
leadership of the principals of excellent schools in three Asian countries (China, Malaysia and India) on principals’
leadership attributes based on gender, tenure and nationalities it was found that there is a positive rating for
principals which is indicative of strength of leader-follower relationship between principals and teachers. One of
the interesting findings that has emerged out of this study is that rating of principals by teachers from three
countries China, Malaysia and India has no difference on basis of gender, tenure and nationalities. This clearly inners
that if a school principal is really an excellent leader, he would be viewed excellent by all teachers irrespective of
gender, tenure and nationalities as such.

Huber et al., (2017)[31] studied the role of school leadership vis-à-vis the curriculum through an overview of school
leadership in Germany and the study inclined towards the concept of organizational education as a perspective for
viewing school leadership in conjunction with the curriculum wherein the study gave a reflective look ahead and
ponder possibilities and desiderata of school leadership in the context of curriculum.

C. Leadership Development

Leadership development efforts is a catalyst for qualitative improvement of school. Leadership is second only to
classroom instruction as an influence on student learning (Wahlstrom et al.)[32]. Tubin (2017)[33] in a secondary
analysis of data examined Leadership Identity Construction Practices in Israel found that all the participant
principals used a variety of leadership-claiming practices which, alongside their role embeddedness, help explain
how their leadership identity is constructed in their everyday practice. Cobia et al., (2016)[34] in a qualitative
design examine factors impacting program quality in leadership development programs as a means to inform the
Shelby County School System of effective practices in leadership development. The study explore two school
systems identified through a comprehensive review of research as having exemplary leadership development
programs for quality implementation in the school system. In a quantitative research Kean et al., (2017)[35]
ascertain the relationship between principal leadership practices and teacher commitment in Malaysian context.
The study found that teacher commitment was high, especially in commitment in teaching work. The study also
identified significant predictors of principal leadership practices such as continuous improvement of instruction,
cooperation and collaboration could enhance teacher commitment.

A conceptual explanatory research by Mampane (2017)[36] elaborated on the importance of training HoDs about
leadership and management skills by more experienced facilitators, for taking teacher leadership role South African
public schools. The skills developed by HoDs would assist in producing a pool of highly qualified and committed
teaching workforce in the field of education. Salo et al., (2015)[37] explores the concept of instructional leadership
and principals’ perceptions of the practices of instructional leadership based on narratives written by principals
from Norway, Sweden and Finland on successful and unsuccessful efforts of guiding teachers’ work in the
classroom. It is focused either on identifying overall leadership practices or on measuring the effect of various
intangible school level variables, such as school climate, on student learning. Interestingly, principals’ narratives on
instructional leadership lack an explicit vocabulary of didactics, examples of face-to-face guidance of teaching as
well as direct professional relationships for strengthening teaching practices.

Litzk; Scott (2017)[38] in a mixed methodology investigated whether school principals in the UAE practise
transformational leadership, and whether they and their teachers perceived principals’ leadership styles differently
to their western counterparts. This study revealed variation in perceptions between principals and teachers related
to whether principals were practising transformational leadership. The study also suggested for a new model of
transformational leadership is proposed, based on a paradigm that may be more appropriate for Middle Eastern/Islamic contexts. Kelley &Dikkers (2016)[39] by using qualitative design examine the utility of framing formative feedback to improve school leadership with a focus on task-based evaluation of distributed leadership rather than on role-based evaluation of an individual leader. The study found that many challenges in providing actionable, multirater feedback were addressed by using an assessment instrument that focused on measuring
distributed instructional leadership practices. Users reported that task-based multirater feedback provided transparency in communicating a clear theory of action for school improvement and fostered formal and informal conversations around school improvement. The study suggests that focusing on distributed leadership practices may help overcome some of the limitations to the use of evaluation feedback that is targeted to an individual leader. Key features of formative feedback design desired by school principals included transparency in the theory of action underlying assessment items to prime teachers and leaders for collaborative discussions of current and potential practices, and research-based guidance on next steps schools can take to build distributed instructional leadership capacity in their schools.

In a relational survey Avci (2014)[40] studied Effect of Leadership Styles of School Principals on Organizational Citizenship behaviors at Turkey. According to the analysis results, teachers’ average perceptions regarding the transformational and transactional leadership characteristics of principals and the average of acting in organizational citizenship behavior were high. There was a positive highly significant relationship between the transformational and transactional leadership characteristics of principals and the organizational citizenship. Transformational leadership positively affects the level of organizational citizenship more than transactional leadership. Lijuan, Philip & James (2016)[41] in a cross-sectional research design studied the Principal Leadership and School Capacity Effects on Teacher Learning in Hong Kong. Results indicated that multiple dimensions of principal leadership made significant contributions to both school capacity and teacher professional learning. The presence of cooperation, trust, communication, support for students, and alignment, coherence, and structure in schools also affected teacher professional learning. The study reinforces the finding from other studies that it is productive for principals to foster an environment aimed at enhancing teacher professionalism.

5. INDIAN STUDIES

In the Indian context, unfortunately, our priorities have not yet caught up to the research. Principal and teacher’s development remains a low priority in most education policy agendas, programmes and research endeavor, however commendable is the initiative of NUEPA/NIEPA, launching the National centre for School Leadership in the year 2013, to enhance Leadership Capability at School Level for Institution Building to Deliver Quality Education. The NUEPA a premier organization dealing with capacity building and research in planning and management of education not only in India but also in South Asia with was established by the Ministry of Human Resource Development, Government of India in 1962. The National Centre for School Leadership (NCSL) of NUEPA is a recent establishment working on all aspects of school leadership development programme for India. It also works in close collaboration with its international partners like the National College for Teaching and Leadership (NCTL), Nottingham, United Kingdom. Such an effort would contribute to new knowledge in the area of school leadership development. Studies in the area of School leadership though limited, there are crucial work undertaken in this direction by researchers in India. Venkatraman (2011)[42] in an exploratory study studied a comparative analysis of leadership skills in India in both mainstream and alternative education schools. This study focuses on student leadership skills in selected alternative education and mainstream schools in India and explores the implications for enhancing school curriculum in India to better address the changing needs of public education in the context of a global economy. The alternative school students consistently scored higher in all dimensions. The study has provided preliminary insights into selected alternative and mainstream schools in India and how their students compare on leadership qualities. This study provided a brief overview of the alternative and holistic type of curriculum but was limited to selective schools in the sample size.

In a typical study by Cramp (2016)[43] in an international field visit to India explores the outcomes of a school leadership. Importantly, the study found that informal opportunities for learning sliding into the spaces around formal events were often responsible for unexpected and influential perspective transformations and that these opportunities for learning are often undervalued. The research concludes that international study visits where participants agree their own collective agendas and develop a trusted validating community group are more valuable than transmission models of leadership learning. Finally, the article briefly returns to the notion of leadership as a process of humanisation and suggests that, seen in this way, the pursuit of community becomes a more highly valued outcome for leadership learning.
Sehgal et al. (2017)[44] studied Teacher Effectiveness through Self-Efficacy, Collaboration and Principal Leadership. In addition, it explored the role of collaboration among teachers and principal leadership in explaining the above relationship. Results confirmed a positive association between teacher self-efficacy and the three dimensions of teacher effectiveness, namely, teacher’s delivery of course information, teacher’s role in facilitating teacher-student interactions, and teacher’s role in regulating students’ learning. Results also confirmed that both collaboration and principal leadership are positively related to teacher self-efficacy. The results of the study indicate that schools need to focus on enhancing self-efficacy of their teachers and give importance to teacher collaboration and principal leadership in order to improve their effectiveness in terms of delivery of instruction, teacher-student interactions, and regulating student learning.

A paper by Sapre & Ranade(2010)[45], examines the infusion of management concepts in Indian education and the subsequent and logical shift in emphasis from management to leadership, and considers the reasons for the current interest in leadership. The validity of some of the assumptions implicit in Western literature on management is examined. While reviewing Western literature that considers leadership theories and styles, an examination is made of the indispensable inner moral qualities that make leaders outstanding. Problems and dilemmas inherent in moral leadership are discussed. The concept of moral leadership is clarified using Indian scriptures. India has had examples of visionary leadership in the past that skilfully blended Indian thought with Western ideas to develop an indigenous and progressive system of education. From an overview of the lives and work of three illustrious Indian leaders Vivekananda, Tagore and Gandhi—the essence of moral leadership is suggested. The present situation in India is characterized by a near absence of exceptional value-based leadership, not only in the field of education but also in practically all walks of life. A way of recapturing a vision of moral leadership is suggested.

Findings and Discussion

- Empirical studies on school principals and their impact on student outcomes are limited. The need for empirical research on leadership in educational organizations across more diverse national settings has to be taken up (Troung & Hallinger, 2015)[46]. Overall, it is observed that qualitative studies outnumber quantitative research probably because in depth and intensive procedure is suitable for study of leadership.

- Leadership style has been explored more with clear finding directing towards the role of principal and teachers in bringing transformation in school system. There are a few studies on self-assessment through introspection by a leader and also on assessment by the leader by making use of rating scale. There exists a shortage of studies connecting school leadership to student achievements (Saarivirta & Kumpulainen, 2016)[22].

- Some studies concentrated on the development of leadership, identifying factors contributing to leadership development. Effective schools are used as models to find out the attributes of effective leaders and found commitment, cooperation and ethical standards as some of the factors. A high level of significant positive relationship was found between the school principals’ ethical leadership levels and positive climate practices (Eranil and Özbilen, 2017)[17]. For academic and social achievement of students and change of teachers the study suggested for positive climate practice at school to raise the levels of ethical leadership behaviour of school principals.

- In the Indian context studies on school leadership is limited. However, some studies were found that focus on teacher effectiveness and leadership skills. It is found that Asian countries do have a good number of research on school leadership from which India can draw framework for conducting similar studies.

- The findings of the present study serve the purpose of guiding future research endeavour in the Indian context in addition to providing awareness on effective leadership strategies for schools. There is a need to evolve principals and teachers who utilised creative and innovative ways to adapt and cope with change and that leadership practices are not fixed, but are fluid, and evolving, where leadership is not about compliance, but is about one’s ability to identify what works at a given context (Bhengu & Myende, 2016)[20]. This direction may bring much needed change for our school system moving away from the rigid set of rules and developing proactive mind set.

- Although studies in the instructional leadership literature have vastly examined instructional leadership and its relationship with various variables, few studies have focused on school principals’ evaluations of their
instructional leadership behaviours using a qualitative approach. Given the impact school leadership can have on student outcomes, providing every school with an effective principal should clearly be among the top priorities (Sun, 2011).[47].

- This review contributes to a small but growing body of leadership effects research conducted in global societies. In addition, the study offers insights with relevance for understanding leadership processes in Asian and Western cultures. There is potential to incorporate some of the aspects to the holistic education across other schools in the mainstream area in India. Finding practical ways to thoughtfully and appropriately assess and develop leaders can have an important impact on the quality of leadership, and through that, on the quality of education in our schools.

REFERENCES


AUTHORS' BIOGRAPHY

Dr. Elizabeth Gangmei working as Assistant Professor at Regional Institute of Education, Bhubaneswar, Odisha. She has specialization in the area of tribal education in India and interest of study includes Inclusive Education and Minority Education. She has more than 13 years of teaching experience at post graduate level.

# Corresponding Author. She can be reached at gangmeie@yahoo.com

Dr. Gowramma I P is a Professor at Regional Institute of Education, Bhubaneswar, Odisha. She has specialization in the area of Inclusive Education, Education of Children with Special Needs and learning difficulties. She has more than 20 years of teaching experience at post graduate level. She can be reached at gowriip@yahoo.co.in

Mr. Gautam Kumar is Assistant Professor at Regional Institute of Education, Bhubaneswar. He has specialization in the area of Mathematics Education and ICT integration in teaching-learning. He can be reached at gautamkumar.edu@gmail.com