

Extending Collective Teacher Efficacy to Instructional Leadership: A Review of Literature

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Abstract

Quality education has become a global goal and governments have over the years made efforts towards achieving it; however, quality in our basic school system especially remain a challenge confirmed by varied literature. Although teachers' role in enhancing quality education through the provision of effective instruction cannot be overemphasized, that aspect of the school system seems less explored and developed.

This paper reviews literature on teacher efficacy- an important source of professional attitude. The paper explores the relationship between Collective Teacher Efficacy (CTE) and Instructional Leadership (IL)- an important aspect of school leadership that enhances instructional quality and learning outcomes. The review draws from peer reviewed journal articles, relevant books, credible websites, and media, purposively sampled to answer the main research question; "To what extent is CTE associated to IL?"

The paper also seeks to consolidate literature on school-based enabling factors of CTE, and examines the scope of evidence on the role of CTE in improving school. Emerging themes in the review include the fact that, leadership and environmental factors do have enormous influence on teachers' efficacy beliefs, and members of such faculties often engage in Continuous Professional Development and collaborative activities that enhance performance.

There is also a growing consensus that, CTE has become an important aspect of teacher quality that drives instructional quality and enhances resilience and confidence in both students and teachers in changing and challenging learning times. Research however has not been explicit on the link between CTE and IL although the two concepts could have reciprocal benefit. Further research to establish this relationship is highly recommended.

Key Words

Collective teacher efficacy, Learning outcomes, Instructional leadership, Efficacy beliefs, Self-efficacy, School climate, Learner -centered environment

Introduction and Background

Education has been identified globally as the backbone of successful economies because of its multi-dimensional benefits. The quality of a nation's education informs her quality of human capital: It is potent for reducing poverty, enhancing healthy living, reducing civil unrest and increasing productivity and income. Education is both a discipline and a practice; it has its own theory and practice (Siegel, Phillips, & Callan, 2008). In theory, it is a multi-disciplinary concept (Dearden, 2011): thus, it has many branches such as the Sociology of Education; Psychology of Education; Philosophy of Education; History of Education. Other branches of Education are Pedagogy (methodology of teaching), Economy and Management of Education, Early Childhood Education, Special Education, and Educational Technology Bignold et al. (2013).

In reference to education as a practice, Price-Mitchell (2014) defines education as the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs and habits. One of the novel definitions of education in Price-Mitchell (2014), "*Insights from the World's Greatest Minds*" is that of Bob Beauprez, former member of the United States House of Representatives :Education is a shared commitment between dedicated teachers, motivated students and enthusiastic parents with high expectations.

The term education has also been defined as the wealth of knowledge acquired by an individual after studying particular subject matters or experiencing life's lessons that provide an understanding of something (Collison, 2020). Education in practice requires instruction of some sort from an individual or composed literature. The most common forms of education results from years of schooling that incorporates studying of a variety of subjects at the same time acclimatizing them to their tacit place in society.

Education provides students with skills for communication, social interaction and work discipline that can create pathways to both independence and obedience (*BC Open Textbook: Introduction to Sociology- 1st Canadian Edition. Chapter 16*). Schools can be agents of change or conformity (Watson, 2014); thus, teaching individuals to think outside of the family and the local norms into which they were born, including self-acquired knowledge and behaviours. Education is therefore delivered through many methods such as teaching, training,

story-telling, discussion and direct research. Ramarajan (2018) intimates that, education can take place in formal and informal settings; thus, any experience that has a formative effect on the way one thinks, feels or acts may be considered educational.

Education plays a major role in the growth and progress of a society. It is one of the things that can make or break a culture's advancement (Idris, Hassan, Ya'acob, Gill, & Awal, 2012). If citizens of a society are educated, they can provide significant contributions in the fields of arts, literature, science, technology and more, and help establish a well-rounded and stimulating community. Some important benefits of education, identified by Darling-Hammond, Flook, Cook-Harvey, Barron, and Osher (2020) are that, it helps people develop critical thinking and problem-solving skills; thus, the ability to improve inter-personal skills and allow people to work with others effectively, and for conflict resolution and good decision-making, it creates more job opportunities and enables people to earn higher income. Education is viewed as one of the most important drivers for ending poverty and boosting shared prosperity (World Bank, April 28, 2014). Education is delivered in purpose, allows those being educated to learn in context (Cantor, Osher, Berg, Steyer, & Rose, 2019; Osher, Cantor, Berg, Steyer, & Rose, 2020), and socializes learners to their society, and beyond.

Education in practice is all about learning; thus, the learner becomes the focal point and the centre of every action towards a change in behaviour and attitude - everything that contributes to making a person a better individual: The United Nations Children's Fund (UNICEF) recognizes the importance of the school in providing education, and making children and individuals productive members of society; they suggest that in all aspects of the school and its surrounding community, the rights of the whole child, and all children to survival, protection, development and participation are at the center. According to UNICEF (2000), learning strengthens the capabilities of children to act progressively on their own behalf through the acquisition of relevant knowledge, useful skills and appropriate attitudes; and which creates for children, and helps them create for themselves and others, places of safety, security and healthy interaction.

The importance of education, particularly in modern times cannot be overemphasized because it is the backbone of national development and advancement. The importance of quality education is reflected in Goal 4 of the United Nations ("Sustainable Development Goals," 2020), "Ensure inclusive and quality education and promote lifelong learning for all". The discourse on quality education all over the globe has the elements of access and quality, including input, systems, inclusiveness and equity as crucial requirements in the attempt to reach every child, although even adults are not denied education if (when) it is needed. The global concern for quality education has been embraced by Ghana, and this is strategically enshrined in the ("Education Strategic Plan 2018-2030,").

The education expenditure of Ghana as a percentage of GDP has ranged between 6-8% between 2011 and 2016, while education expenditure as a percentage of government expenditure hovers around 22%-27%, minus funding from other bodies (Business.com- GhanaWeb, (November 13, 2017). Despite the level of expenditure on the education sector, reports on the performance of the basic school system have not been encouraging. The Basic School period is the minimum time of schooling needed for every child to acquire basic literacy, numeracy and basic problem - solving skills (Casely-Hayford et al., 2013) through various prescribed disciplines. Basic Schooling provides the opportunity for children to build the foundation for life-long learning; for a knowledge – based economy and social development.

It is important to note that, Ghana records significant improvement in the area of access and enrolment at the Basic education level: For instance, the (*Education Sector Analysis*, 2018) reports improvement in enrolment since 2010/11. Net Enrolment Ratio (NER) -Number of children enrolled in school at the required ages increased substantially across all three levels of basic education: Example, at the Kindergarten (KG), NER increased from 60% in 2010/11 to 80% in 2015/16, at the Primary, NER increased from 78% in 2010/11 to 92% in 2015/16, and at the Junior High School (JHS), NER increased from 46% to 50%.

Similarly, according to the (*Education Strategic Plan*, 2018-2030), gender parity at the national level seem to have been achieved at all sub -levels of basic education albeit the imbalances identified when looking at gender parity across regions. This disparity could be against boys or girls. It is also worth acknowledging that, although completion rates have improved, there seems to be a completion disparity of about 37% between higher income and lower income communities in relation to JHS education.

The Learning Crises

Despite the remarkable improvement across many spheres of education, especially in enrolment, quality remains a huge challenge. Reports at the Basic level reveal a generally poor academic performance of basic school pupils. Most of these reports are based on students' performance in core subjects such as English Language, Science and Mathematics, either from in-school assessments, standardised examinations across regions or the Basic Education Certificate Examination (BECE).

The ("Ghana 2016 National Education Assessment Report of Findings,") reveal that, fewer than 25% of pupils in P4 and P6 were considered competent in Mathematics and only 37% were competent in English. The nationwide aggregates note important differences across regions: North East, Northern, Upper East, Upper West, and Savannah regions had the lowest average scores.

In 2017, the *UNESCO Institute of Statistics factsheet* (2017b), cited in ("World Development Report (WDP 2018),") also found that, in Sub-Saharan Africa, almost 90% of children aged 6-14 are not meeting minimum proficiency levels in reading, and nearly 85% are not meeting these levels for Math. These are much higher than the world's averages of 56% for math and 58% for reading.

The *Education Sector Analysis* (2018) also acknowledges learning outcomes as an area of concern with wide variations in the Basic Education Certificate Examination (BECE) results across regions and by gender. In particular, the northern regions: North East, Northern, Upper East, Upper West, and Savannah regions, (formally, Upper east, Upper west and Northern regions) perform poorly- with the lowest averages, compared to Greater Accra.

The unpleasant trend continues to raise questions as to 'What factors might be leading to the poor learning standards?' A UNICEF report by Adamba, Nowlin, and Ring (2017) reveal a seeming lack of capacity and resources as major constraints to quality education delivery in Ghana. More recently, the ("World Development Report (WDP 2018),") revealed a learning crisis in Sub-Saharan Africa. The report points to one of the three dimensions of the crises as the fact that, schools are failing learners with struggling education systems- They [lack/ing] one or more of the four key school-level ingredients for learning: Prepared Learners; Effective Teaching; Focused Inputs, and the Skilled Management and Governance that pull them together.

Although the WDP (2018) report throws more light on what pertains in most basic school systems in the country, same report including varied literature discussed subsequently do not clearly state the extent of relationship between teachers' efficacy beliefs and Instructional leadership -an important ingredient for effective instructional processes.

This paper thus, reviews relevant literature on Collective Teacher Efficacy-a construct believed to be an aspect of teacher quality for teaching effectiveness. The paper investigates what is known about the relationship between Collective Teacher Efficacy (CTE) and Instructional leadership-an important dimension of school leadership. The paper attempts to answer the following questions: a) How applicable is the efficacy theory in school context? b) What are the main factors that influence CTE? and c) To what extent is CTE associated to Instructional leadership?

Objectives

The paper seeks to:

- i. discuss the extent to which efficacy theories may be applied to school context for improved performance
- ii. identify the main drivers of CTE
- iii. Ascertain the extent of relationship between CTE and instructional leadership.

Methodology

Literature used for the research are sampled purposively to answer the research questions. The sampling involves articles that fall within the themes under discussion. The selection of articles is keenly done with special preference to those published within the last five years; therefore, literature older than five years are less preferred except when such literature is unique in relevance. Such original prepositions are clearly propagated, and sometimes used to corroborate similar ideas.

A large portion of the literature reviewed are drawn from peer reviewed journal articles, and relevant books. Reference is also made to varied reports from funded projects, policy documents, government reports downloaded from credible journals and websites and the media.

The paper first reviews relevant theories on self-efficacy and collective efficacy. Effort is made to expand discussions and implications of the theories in modern day delivery of education.

A broad perspective of related literature is discussed thematically, focusing on methodologies applied in the various research and comparing findings. Emphasis is also laid on corroborated findings as well as those with contrasting views, particularly studies that associate principal and teacher leadership roles with teacher efficacy and the resultant effects on student learning.

The Self-efficacy and Social cognitive theories

Studies on the efficacy construct have always made reference to the efficacy theories propounded by Bandura (1977). Self-efficacy (SE) was developed as part of a larger theory- Social Learning theory, Fatoki and Oni (2016) which had progressed into the Social Cognitive Theory.

The emergence of these theories subsequently attracted several researches, most of which confirm the original ideas of Albert Bandura, the Canadian - born American Psychologist: Examples of such works are, Bandura (2008); Slaugenhoup (2016b) ; Bell (2016) and Tugsbaatar (2019). Self-efficacy is defined by Bandura (1977) as the belief in one's capabilities to organize and execute the courses of action required to produce given attainments.

The underpinning thought in the Self-efficacy theory is that, a human being is motivated to successfully execute an action if they believe in their own capacity to succeed. That is to say, individuals are more likely to engage in activities for which they have high Self-efficacy, and less likely to engage in those they do not. The theory reveals the direct correlation between a person's perceived self-efficacy and behavioral change; hence,

self-efficacy beliefs provide the foundation for human motivation, well-being and personal accomplishment. Self-efficacy is simply the belief that one's actions can produce the outcomes one desires.

The efficacy construct can be viewed as a personal construct (self-efficacy) and a group construct (Collective Efficacy). Collective efficacy according to Bandura (1997) is the group's shared belief in its conjoint capabilities to organize and execute courses of action required to produce given levels of attainments. The self-concept, as rightly observed by Gardner and Pierce (1998) emerged as an important component of organizational paradigms; thus, triggering its emergence as an important educational requirement Bandura (1993) for increased student achievement and academic performance.

According to Henson (2001), Bandura's other works (Bandura, 1982, 1986, 1993, 1996, 1997) continued to develop and defend the idea that our beliefs in our abilities powerfully affect our behavior, motivation and ultimately our success or failure. The efficacy theory which was very potent in organizational growth also saw the obvious impact on schools, which Bandura (2007) rightly described as an important school property which should be nurtured.

Teacher Efficacy (TE) is generally defined as a teacher's belief that he/she has the needed capacity to execute his/her responsibilities to produce desired learning outcomes, while Collective Teacher Efficacy (CTE) refers to the group's belief that, they have the needed capability to execute the right actions to produce desired outcomes. A. W. Hoy (2000) defines Teacher efficacy (TE) as teachers' confidence in their ability to promote student learning. With a more general outlook, R. D. Goddard, Hoy, and Hoy (2000) define CTE as the perceptions of teachers in the school that the effort of the faculty as a whole will have a positive effect on students. Goddard et al (2000) also view collective teacher efficacy as a construct measuring teachers' beliefs about the collective capability of a faculty to influence student achievement; in effect, it refers to the perceptions of teachers that the efforts of the faculty or school will have positive effects on student achievement.

As cited in (Maddux, 2012) the basic premise of the self-efficacy theory is that, "people's beliefs in their capabilities to produce desired effects by their own actions" (Bandura, 1997, p.7) are the most important determinants of the behavior they choose to engage in, and how much they persevere in their efforts in the face of obstacles and challenges. The self-efficacy theory as observed by (Maddux, 2012) also maintains that these efficacy beliefs play a crucial role in psychological adjustment, physiological adjustment, psychological problems, physical health as well as professionally guided and self-guided behavioral change strategies; thus, implying that, a person's ability to adapt in a given situation and function as normally as may be expected of him/her, depends largely on his or her efficacy strength.

How is efficacy developed?

The Self-Efficacy theory postulates that, people develop their self-efficacy from four major sources. As postulated by Bandura (2008), cited in (Tugsbaatar, 2019), there are four sources of efficacy information. Below is an illustration of the four sources of efficacy information.

BANDURA'S FOUR SOURCES OF EFFICACY

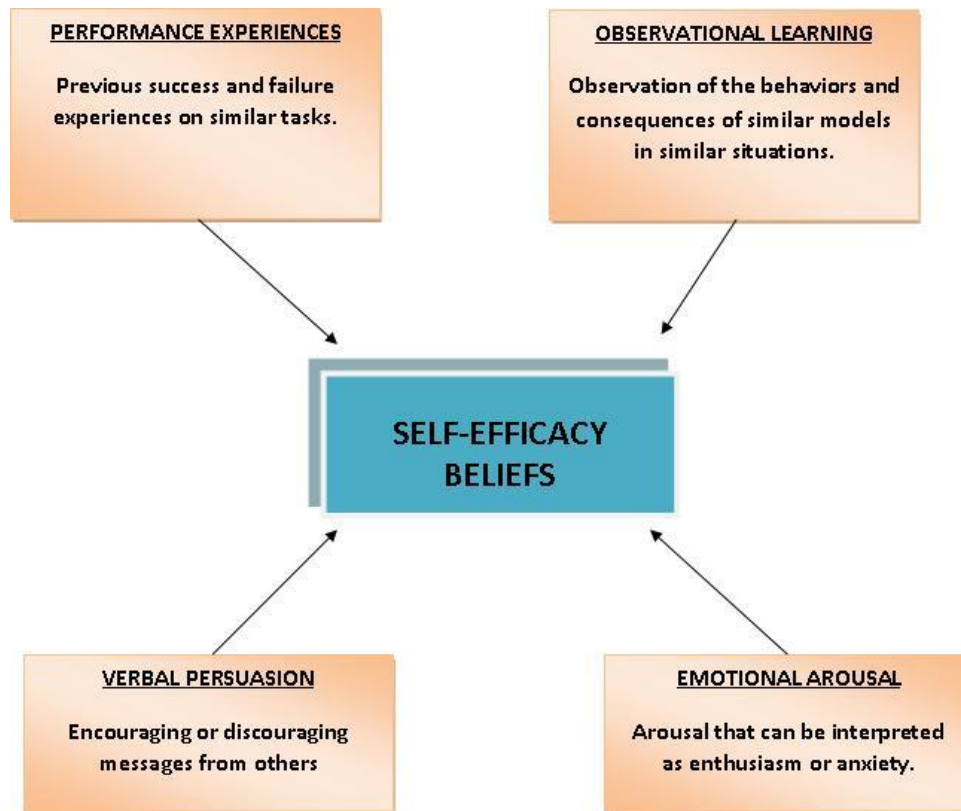


Fig 1, an adopted diagram of Albert Bandura's four sources of efficacy (Tugsbaatar, 2019).

1. Mastery/Performance experiences- known also as “performance accomplishments” (Brown, 1999) or “enactive attainment” (B. J. Zimmerman, 2000) is referred to a person's ability or otherwise to successfully complete a task and does so progressively with relative ease. people need to acknowledge the satisfaction of goals that they achieve in order to reap the pleasure of mastery. D. J. Zimmerman (2003) uses students' past records/results as an example that will typically develop a high sense of confidence in a student regarding his or her capability to achieve desired results. Similarly, Pajares (2003) suggests that, for most people, the most influential source is the interpreted result of one's own performance or mastery experience because success raises self-efficacy; failure lowers it. Equally notable is the fact that, success is achieved by learning from failed efforts. Experienced failure can help build resilience (Tugsbaatar, 2019), which might subsequently enhance self-efficacy.

2. Observational learning or Vicarious experiences, otherwise known as Social modelling refers to observing others perform tasks. Seeing people similar to oneself succeed with consistent effort raises the observer's beliefs in their own ability to succeed. It also involves the social comparisons that individuals make with each other. These comparisons along with peer modeling can be a powerful influence on self-efficacy beliefs -People chose role-models who demonstrate their self-efficacy. It is believed that young people form their efficacy beliefs through the vicarious experience they have with others, especially from observing 'Role models'- positive influence. This can build resilience in students who are able to set goals for themselves, and more so with expert guidance to avoid unwarranted pressure on one's self.

3. Verbal Persuasion or Social persuasion -This relates to conceptions that, the beliefs one develops about one's capacity in a given field are likely to be influenced by the verbal and 'tacit' output they receive from others. Social persuasion is about having others directly influence one's efficacy which provides opportunity for mastery experiences. It is about the feedback one gets from others about one's capability: People become particularly influenced when they are accepted by persons that are regarded as “credible persuaders” (B. J. Zimmerman, 2000). For example, children and students develop their self-confidence when they know they are accepted by their parents, teachers, and other experts etc.-The confidence and trust help to build their efficacy: thus, the belief, they can produce desired results in a given field or task if they try. Teachers who have knowledge about self-efficacy

and her efficacious themselves would do very well in building students' confidence through appropriate and consistent feedback they give to their students on their performances.

4. Emotional arousal or Status of physiology-Our emotions, moods, and physical states influence our interpretation of self-efficacy. According to Bandura (2008), positive or negative emotions are magnets that influence one's sense of self-efficacy: positive moods enhance efficacy, whereas negative moods- depression, despair or a sense of despondency diminishes it. Bandura (1993) explains that it is not the negative emotions such as stress, anxiety or fear per se that can negatively affect performance, but the faulty interpretations that we make about the purported causes of those psychological states- for example, students may give wrong judgements to the causes of the 'normal' states of tension that usually accompany certain important academic events (like exams), as an indication of incompetence and inefficiency.

It is worth noting that, Self-efficacy is not a 'trait' that one possesses or does not possess in a fixed quantity from birth; it is rather a 'generative capability' (Bandura, 1997) : *It is developed and shaped through time and experience and could thus be subject to change and enhancement.* That is the reason individuals and organizations must stop at nothing in an effort to improve personal and collective efficacy for enhanced performance.

Self-efficacy beliefs therefore have proven to serve several human accomplishments and well-being; for instance, they influence the choices people make and the courses of actions they pursue. As already discussed, a sense of Self-efficacy helps determine how much effort a person will expend on their activity, how long they will persevere when confronting obstacles and how resilient they will be in the face of adverse situations; the belief is that people with *a strong sense of personal competence* approach difficult tasks as challenges to be mastered rather than as threats to be avoided (Pajares & Schunk, 2001).

Among others, Self-efficacy beliefs also influence an individual's thought patterns and emotional reactions. Self-efficacy beliefs can be personal or collective; because individuals operate collectively as well as individually. It is both a personal and a social construct (W. K. Hoy, Smith, & Sweetland, 2002). Humans need it in order to function properly and to improve situations healthily.

The Social Cognitive Theory

The Social Cognitive theory later emerged as a necessity to explain the inter-woven nature of interactions between a person's 'agentive' position and his/her environment due the power of cognition; thus, a human being is not a receptacle of environmental changes but an agent of active change.

The Social Cognitive theory was indented to cater for a missing element in behaviorists' studies on motivation at the time; that is the inner workings of a cognitive approach to motivation, and the lack of situational awareness in psychoanalysis (Bell, 2016): As such, an underpinning fact in the theory considering the individual as an agent of environmental interactions and corresponding response could not be overemphasized. That is to say, individuals do not simply respond to environmental influences but rather, they actively seek and interpret information. Individuals "function" as contributors to their own motivation, behavior and development within a network of reciprocally interacting influences (Bandura, 1999; Slaughenhou, 2016b). The reciprocal nature of the influences on human functioning (Schunk & Dibenedetto, 2016), suggest that, individuals as agents contribute to their personal well-being by improving their emotional, cognitive, or emotional processes, increasing their behavioral competencies or altering their environmental conditions.

It is also known that, others assist other agents to improve their personal conditions: For example, in school, teachers are responsible for promoting academic learning of their students. Teachers also do play an important role in helping students to increase their self-efficacy and generally improve themselves in all developmental areas, growing up. (Schunk & Dibenedetto, 2016) are explicit about the possibility of teachers using social cognitive theory as a framework, to help improve their students' emotional states and help correct faulty beliefs and habits of thinking – how a student views himself or herself as well as raise their own academic skills or competencies, and self-regulate (behavior). Teachers can also alter classroom structures (environment) to ensure instructional success.

The theory emphasizes how cognitive, behavioral, personal and environmental factors interact to determine motivation and behavior Crothers, Hughes and Morine (2008), cited in (Bell, 2016). (Bandura & Wood, 1989) observed that, while it may seem that one factor is the majority or lead reason, there are numerous factors that play a role in human behavior. They add that, the influencing factors are not of equal strength, nor do they all occur concurrently - For example, in an organizational setting, employee performances (behavioral factors) are influenced by how the workers themselves are affected (cognitive factors) by organizational strategies (environmental factors). This relationship is interwoven and has overlapping effects.

The interaction among the factors mentioned above are represented in the Triadic Reciprocal Determinism Model (shown below) as portrayed by Wood and Bandura (1989) cited in (Slaughenhou, 2016b).

Bandura's Triadic Reciprocal Determinism

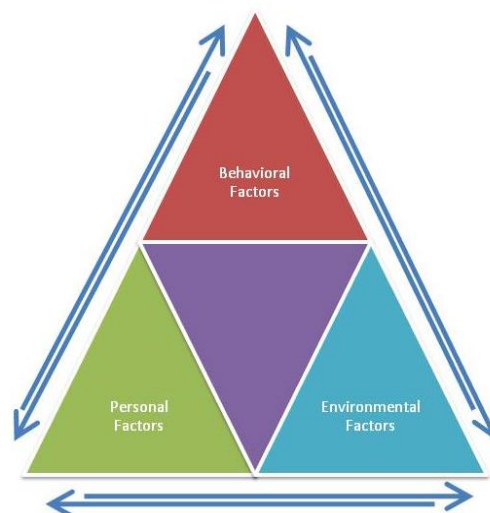


Fig 2, Bandura's Triadic Reciprocal Determinism diagram as cited in (Slaughenhou, 2016b)

Given that human behavior and motivation are goal-oriented, the social cognitive theory identifies *four processes of goal realization*, thus, self-observation, self-evaluation, self-reaction, and self-efficacy. The four components are interrelated and they each have an effect on motivation and goal attainment. Below is a brief look at the four components as adopted:

1. Self-observation: Observing oneself; although not sufficient for motivation, as observed by (B. J. Zimmerman & Schunk, 2001) it is believed to be one way of assessing one's progress towards goal attainment as well as motivating behavioral changes: regularity and proximity have been noted as two important factors to consider with regards to self-observation. It therefore means that, observation of behavior should be done continually and also, while the behavior is on, or shortly after. This is quite a difficult thing to do given that, one might not be able to fully observe one's self especially during the said action, as that could divide one's attention between performing the action well, and observing one's self perform: It takes high -level consciousness to do the two successfully at the same time. Self-observation may be successful only after the action when it is re-played either on the mind or by an external tool-could be by other humans or by any recording devise .When observation is done after the action, then the purposes of evaluation are just right because, the feedback one generates for one's self helps in the process of evaluation to meet the eventual goal.

2. Self-evaluation: An evaluation of one's current performance as against a desired performance, standard or goal. This is guided by set standards and goals which must be specific and of essence as advised by (Schunk & Zimmerman, 1994). Rationale is that, a person will only see the need to increase their efforts after they have evaluated their own performance if the goal to achieve is important to them. Teachers and other adults may regularly evaluate themselves against personal or professional standards in order to self-assure themselves of better things to come. Self-evaluation could be a very potent way to help children, learners or students meet targets they set for themselves or targets teachers and other adults set for them. Self-evaluation brings about sober reflection on one's response to external stimuli for modification or reinforcement.

3. Self-reaction: reacting to one's performance (positive) can be motivating. That is to say, one's response to one's own performance can enhance one's efficacy belief to push further for a higher goal. Also, a negative reaction on one's performance from self-evaluation might as well motivate one to put in more effort in order to reach the goal, depending on how importantly they consider the said goal. (B. J. Zimmerman & Schunk, 2001) talk of two self-evaluation standards - absolute and normative; Example, a grading scale may be considered as a fixed or absolute standard, and a social comparison such as evaluating one's behavior or performance against other individuals can be considered normative. In either of these, one's response (be it internally or otherwise), informs motivation and subsequent behavior. It is therefore, crucial for young people specially to learn how to effectively handle feedback on their actions or performance-whether negative or positive.

4. Self-efficacy: It refers to people's judgements about their capability to perform particular tasks. Self-beliefs are critical elements. As expressed by Pajares (2003), of all the beliefs that people hold about themselves and what affects their day-to-day functioning and standing, at the core of the social cognitive theory, are self-efficacy beliefs, which can be defined as the judgments individuals hold about their capabilities to learn or to perform courses of action at designated levels. In simple terms, Self-efficacy beliefs are the self-perceptions that individuals hold about their capabilities.

Self-efficacy is 'Resilience' (Ackerman, 2019). While experiences of success certainly make up a long portion (mastery experiences) of Self-efficacy development, failure is possible. The assertion is that, those with a high level of self-efficacy are not only more likely to succeed but they are also more likely to bounce back and recover from failure: This is orchestrated by resilience. Resilience impacts self-efficacy, and Self-efficacy produces resilience and re-assurance even in seeming failure. Resilience does not only influence self-efficacy but drives the motivation or urge to perform a task or produce a desired outcome.

Conclusively, as identified in the self-efficacy and social cognitive theories discussed above, both theories provide a number of ways that can be applied in the work setting. The self-efficacy theory suggests that, increasing the self-efficacy of employees will boost motivation and performance, and employees' self-efficacy can be developed through the four sources of efficacy (Bandura, 1997), discussed earlier.

Building on three of Bandura's (1982) cited in (Slaugenhoup, 2016a) earlier ideas on why self-efficacy of employees might affect both learning and performance, a number of reasons have been identified: For instance; -self efficacy affects the goals that employees choose. For example, employees with low levels of self-efficacy are more likely to set lower goals for themselves. In like manner, the low levels of self-efficacy can adversely affect employees' collective efficacy- A group's shared belief in its capability to produce desired results in areas that matter to them. Self-efficacy impacts learning as well as the effort that employees exert on the job. For example, when an employee has high self-efficacy, they are more likely to work harder on the task, learn higher skills and to achieve even bigger results.

-self-efficacy will not only motivate people to learn a task, but will be a pointer to other people's desire to develop and build resilience to reach the mark. Employees with high efficacy will be more confident in their delivery of service than employees with low self-efficacy. In that light, efficacious people will better serve as role-models that promote Bandura's "Vicarious experiences" or "Social modelling" as a likely powerful source of efficacy after "Mastery experiences"- that is, learning by observation. Learning organizations prove dynamism by the amount of influence employees exert on each other through various collaborative networking that occur among them on a daily basis at the work place, including those Continuous Professional Development (CPD) programs periodically organized for employees.

-Modern day organizations and employers would go for potential employees with a sense of self-efficacy and take steps to develop such employees' capacities to do beyond the ordinary. It is potentially indicative of employee and organizational progress and job satisfaction. In the case of school, teachers with high efficacy do not only promote learning; they also accept responsibility for student learning outcomes to a high extent.

-self-efficacy will influence the *persistence* with which a person will attempt to learn a new and difficult task. For example, employees with high self-efficacy are thought of as not only confident, but also *resilient*, and therefore will persist in their efforts when learning a new and challenging task. That therefore means, teachers with high efficacy would put in needed effort to learn new skills and competencies to meet their job demands in changing times- whether in policy or in practice. Such teachers would also press-on to find appropriate solutions to instructional challenges rather than give up. Efficacious teachers would also support students with learning difficulties or self-management challenges to discover appropriate solutions rather than watch them give up or become worse off.

-Teachers with high self-efficacy are most likely to develop efficacious students. This is because, such teachers over the period must have acquired expertise to handle the different challenges with students from different backgrounds, which then makes them accept their students more, and when students feel accepted by their teachers (experts), they build self-confidence, and with the expert guidance, they will be able to self-regulate and manage their personal challenges. All these positive interactions can only develop in a student, self-love and a positive outlook to life's situations, including their ability to learn.

Collective teacher Efficacy and school improvement

Since the introduction of the efficacy and social cognitive theories, many studies, as observed by (Henson, 2001) point to teachers' efficacy beliefs as important attitudinal qualities informing decision – making and determining instructional outcomes and school progress. Collective Teacher Efficacy (CTE) is a vital school property that has high correlation with attainment of school goals, and crucial for academic outcomes (R. D. Goddard et al., 2000). As indicated by Jenni Donohoo and Katz (2017), CTE influences student achievement indirectly through a constellation of productive patterns of behaviors on the part of the adults in the building: For example, as cited in Donohoo and Katz (2017), Rauf, Ali, Alowi and Noor (2012) observe that in schools where there is a shared sense of efficacy, teachers have more positive attitudes towards professional development; exhibit

deeper implementation of evidence-based instructional strategies (Cantrell & Callaway, 2008; Parks, Solmon, & Lee, 2007) and have a stronger focus on academic pursuits (W. K. Hoy et al., 2002). They would use positive behavior management practices (Gray, 2018) to manage their students.

A qualitative case study conducted by Wyatt (2015) addressing the question of *'Degree of fit between teachers' reported self-efficacy beliefs and their practical knowledge'*, examined two teachers. The study was based on earlier researches that culminated into the need and powerful argument for the use of interpretive research to explore precisely "what teachers' perceived self-efficacy interpretations mean to them" (Wheat, 2005, p.761 in (Wyatt, 2015). This was done by exploring their cognitions while keeping in mind a working definition of TSE. The study extensively observed the practicality of TSE and real practice. However, quite contrary to most earlier findings, the qualitative case study revealed that, efficacious teachers may not always have practical teaching knowledge as is being 'misunderstood' by the numerous claims that, most efficacious teachers are able to influence students' academic achievement. These findings corroborate findings made by Coe et al (2014) which identified pedagogical knowledge and Quality instruction as factors with the strongest evidence of impact on student outcomes.

It is important to note that, Wyatt's study had insightful revelations and recommendation for more studies into effective long-term continuing teacher education strategies in helping teachers develop more fitting TSE beliefs. Despite the amazing revelations, the methodology and scope of the qualitative case study, for instance, involving just two teachers may not sufficiently address issues of a nationalistic nature, taking into consideration, the contextual perspectives and complexities.

The growing queries on what actually informs teacher efficiency and teaching effectiveness obviously hikes the quest for more evidence-based revelations. A study conducted by the Visible Learning team, led by John Hattie (2015) was based on synthesis of 1200 meta-analyses relating to influences on student learning achievement. The study was intended to arrive at findings on "what works best" and not "what works", as basis to seek comparisons between different/among different ways of influencing student learning. Using effect-size in their meta-analyses, Hattie's list of 195 factors found that CTE is a very powerful factor with an effect-size of 1.57, that influences student learning achievement, and only second to 'Teacher estimates of achievement'. Hattie's findings seemed to be in sync with earlier claims by Bandura 1993, 1997, 2008; Gardener and Pierce 1998; Goddard et al 2000, 2002. Tschannen-Moran and Barr (2004) also found that, teacher efficacy as a powerful tool for student achievement.

A 'groundbreaking' study conducted by (Hattie, 2016) found CTE to be strongly positively correlated with student achievements: CTE was termed, the new 'number one' influence on student learning. The study was based on Rachel Jean Eell's Meta-analysis of the "Relationship between CTE and student achievement" for a PhD thesis at the Loyola University, Chicago. The Meta-analysis of 26 studies on CTE found a strong correlation between CTE and student achievement, with the weighted average effect-size of r -mean (outlier removed) 0.617 which he converted into Cohen's $d = 1.568$. This fresh discovery further affirms the importance of CTE as vital to instructional effectiveness and accompanying student achievement. Hattie (2016) believes that, if teachers believe they can make a positive difference, then, they very likely will. Although intriguing, the study is not explicit how faculties develop and enhance the efficacy of their members, given the fact that, this discovery could best work for the professional development of teachers, as well as serve for best practice for other faculties.

Building Collective Teacher Efficacy

Earlier studies have been explicit in capturing Bandura's four sources of efficacy information as applicable in CTE (Bandura 1997; Goddard et al 2000, 2000; Hoy et al 2002). However, although these earlier elucidations still work, they can only be said to be foundational and fundamental for self-efficacy. When it comes to collective efficacy, the perception of the group defines what really works in a given context. By this preposition, factors that turn out as influencing the development of CTE may present themselves diversely in differently contexts. It is however worth noting that, certain factors emerge commonly in most cases.

An "Effect-size" study by Jenni Donohoo (2017) postulated six enabling conditions for collective teacher efficacy to flourish: They include: Advance teacher influence, Goal consensus, Teacher knowledge about one another's work, Cohesive staff, Responsiveness of leadership, and Effective system of intervention. Amazingly, Donohoo's postulation largely leaned more towards professional relationship among teachers and administrative conditions likely to influence Collective Efficacy. Interestingly, very little is known about other school-based factors that equally have power to influence CTE.

In an attempt to find out what other school-based factors could equally inform the development of CTE, and based on teachers' perspectives, a study conducted by Zabrina-Anyagre (2017) revealed that, teachers perceive Environmental conditions, Supervisor's role and Caliber of students as three factors that have the most influence on their collective beliefs. Of the three, school 'Environment' (encompassing academic, physical, social and cultural), emerged the factor with the strongest influence on teachers' collective efficacy. 'Supportive leadership', termed, 'Supervisor's role' was second to environment, while 'Caliber of students', referring to learners' background and readiness to learn considered third most powerful factor influencing the development of CTE. The exploratory study which appeared to have a contextual undertone recommended further studies with

a much wider scope and sample. Acknowledging the fluid nature of the efficacy construct, it is clear that, CTE can only be nurtured and refined with time. Moreover, teacher efficacy does not seem to have gained a solid ground in the space of teacher training and practice in many parts of the world, more so in sub-Saharan Africa.

A qualitative study on CTE, conducted by Abedini, Bagheri, Sadighi, and Yarmohammadi (2018) share the views of teachers on the collective efficacy concept. The qualitative study among 30 English Language teachers aimed to examine teachers' perceptions on CTE across different institutions. The common issues that emerged from the thematic content analysis which seemed to have come out with emerging themes according to views generally expressed by teachers encompassed instructional capability, decision making capability, the ability to cope with different situations, ability to communicate effectively, the ability to create a positive climate, the ability to collaborate with colleagues and the ability to keep discipline as benefits of a school with high efficacy among teachers. Others include Job satisfaction, administrative support and shared leadership. It was however unclear which factors contribute to CTE among the institutions studied. It is worth noting however that, the findings of their study further confirm findings from earlier studies (Bandura 1997; Goddard et al 2000, 2000; Hoy et al 2002; Hattie 2015; Schunk and Dibenedetto 2016,) considering CTE as an important school factor which informs teacher' practice and school effectiveness.

Schools are dynamic and their dynamic nature means that, school leaders are always negotiating the new change. Change in the school system is always necessitated by policy direction and interventions to meet the learning needs of students as the priority of education. Change is always necessary for any society that desires improvement and advancement, and it best starts from the school which trains young people to grow into functional members of society. Carter (2017) notes that, the strength of collective efficacy in schools affects how teachers approach the challenges that come with change. Thus, schools with high CTE consistently keep student learning at the forefront, and, teachers are able to maintain learning environments which continually promote student learning as well as develop the whole school into a life-long learning community. According to Carter, schools with high CTE are characterized by teachers who demonstrate these qualities: greater effort and persistence, willingness to have new approaches. Teachers have high expectations of their students which in turn influence students' own expectations, learner autonomy and increased commitment.

Subsequently, Jenni Donohoo and Katz (2019) resound Bandura's sources of efficacy information in their study on efficacy sources. Examining Bandura's four sources of efficacy information, they suggest ways school leaders can develop and enhance CTE among teachers, some of which include, 1. School leaders to develop ways to create environments that tap into mastery as the number -one source of Collective Efficacy (CE) 2. Leaders to find methods to strengthen vicarious experiences and 3. Examination of social persuasions and effective states as additional sources of collective efficacy (CE). Their book heightens the importance of CE, the single most important driver of student achievement and ways to successful enhancement.

The relationship between leadership and collective efficacy

There is a wide scope of research perspective that appears to place much emphasis on the need for more research into specific leadership approaches that influence the development of CTE and the allied benefits of this relationship such as improving student learning, school administration and culture (Jenni Donohoo & Katz, 2019). The quality of leadership approach in a school is the bedrock of educational outcomes. Educational scholars and researchers have widely acknowledged Transformational leadership and Instructional leadership as two main leadership types (dimensions) very important in promoting in-school process and conditions (Day & Sammons, 2013; Goldring, Porter, Murphy, Elliott, & Cravens, 2009; Harris, Leithwood, Day, Sammons, & Hopkins, 2007). Although the two leadership approaches have been proven as crucial for promoting better academic outcomes for students, they are not mutually exclusive. Day and Sammons (2013) suggest that, a combination of strategies can be most beneficial in ensuring school success; hence, while transformational leadership has traditionally emphasized vision and inspiration, instructional leadership has emphasized the importance of establishing clear educational goals, planning the curriculum and evaluating teachers and teaching.

The dilemma as to how instructional leadership must be developed in the discourse of school leadership has in recent times taken a radical turn to focus on the sort of leadership that transforms schools through improved supported instructional practice. Thus, it does not solely depend on one figure (the headteacher), but every member of the faculty through consistent development of capacity both vertically and horizontally (Huber & Muijs, 2010). Enhancing capacity vertically (Matthews & Lewis, 2009) builds teachers professionally and enhances collaboration and peer support. This research therefore focuses on instructional leadership which is also known as learning -centered leadership in other jurisdictions (Dimmock & Tan, 2016; A. Hoy & Hoy, 2003).

Instructional leadership is generally referred to the leadership approach that focuses on employing teacher- support mechanisms to improve instructional outcomes. Instructional leaders are not administrators; they are the center for teacher networking and instructional resource mobilization for effective teaching and learning. Instructional leadership is often viewed on the part of the headteacher (principal) who is required to demonstrate shared leadership (Day, 2011; Day & Sammons, 2013; Hallinger, 2005) while others view it from the dimension of classroom teachers (Fairman & Mackenzie, 2012).

School leadership roles played by headteachers and classroom teachers encompass both formal and informal roles which are very central for staff development and student learning (Espania, 2012; R. Goddard, Goddard, Sook Kim, & Miller, 2015; Hallinger, 2005). Some researchers attribute effectual instructional leadership practice to contextual factors such as students and staff composition and leaders' values and beliefs (Franz Coldren & Spillane, 2007). Others identify lack of instructional materials; poor communication with school staff and stakeholders; in-service teacher training in the areas of instructional effectiveness among others (Dimo, 2017) as important

Bush and Glover (2014) emphasise the importance of instructional leadership or student-centred leadership which has evolved over time in schools as dynamic organizations. It seems to be the most effective when it comes to teacher instruction and student learning; thus, studies have relentlessly sought to find out what shapes instructional leadership. Also, a qualitative study on "the enabling effect of systems thinking on Principals' instructional leadership" by Shaked and Schechter (2019) revealed that, systems thinking contributes to instructional leadership in three main ways; 1. Improvement of school curriculum, 2. Development of Professional Learning Communities (PLCs), and 3. Interpretation of Performance data. Their study also reveals that, other conditions or factors might enable instructional leadership.

Harris and Jones (2017) state that current research into middle leadership demonstrates that principals who empower the middle leadership tier secure improved outcomes for students. This is because middle leaders have a direct influence on the work of teachers hence can take steps to develop CTE. This is the reason (Carter, 2017) recommends that, school leaders (Principals) be encouraged to invest in developing the middle tier of school leadership to exercise their roles beyond basic administrative functions. Middle level leaders are mostly engaged in activities such as coordinating teachers' activities, student assessment and student behavior management measures. Enhancing capacity vertically can enable teachers professionally as well as enhance peer support.

Guido (2018)'s meta-analysis of 30 studies in Viviane Robinson's influential 2011 book- "*Student centred leadership practices differ in terms of impact*" on factors influencing instructional leadership identified 'Leading teacher learning and development' as the practice with the greatest impact (0.84), followed by 'Ensuring quality teaching' (0.42), Establishing goals and expectations (0.42), Resourcing strategically (0.31), and Ensuring an orderly and safe environment (0.27). Guido (2018) notes that, while there is extensive literature on some aspects of school leadership such as structures, progress and processes related to instructional change, how school administrators become instructional leaders and how teachers take on special leadership roles, as well as improve their professional competence (Pambudi & Gunawan, 2019), few researches have focused on the process(s) by which classroom teachers become instructional leaders, and learn to lead from the classroom (Berry, 2019; Nguyen, Harris, & Ng, 2019) without formal leadership roles or titles.

Guido's observation could not have come at a better time than now; an era of globalization when research everywhere is focusing on what and how students can learn effectively in order to be functional global citizens. This by all standards further brands the development and enhancement of school leadership as highly indispensable. School leadership therefore must be viewed beyond titles limited to few individuals at the top who make decisions for the collective, and take a rather thorough and deliberate approach that focuses on teacher professional development that grooms teachers to lead teachers for instructional improvement.

Wright (2020) found that, distinguished learning centered principals purposely exert their influence to improve student learning by being informed of the needs of their students and teachers and by understanding the school culture. They also adapt to the needs of their schools and actively take measures to support and motivate teachers. Learning centered principals understand that, the way in which they can most directly influence student learning, is to support and engage with their teachers because teachers have the most direct influence on students.

Jennifer Donohoo, O'Leary, and Hattie (2020) whose study focused on proximate sources of CTE found a high correlation between empowered teachers and supportive leadership. Earlier, Zabrina-Anyagre (2017) asserted that, supervisors' role (leadership support) is only second to environmental factors when it comes to developing CTE. Although these assertions continue to hammer the importance of leadership in developing and enhancing CTE in given school environments, Donohoo et al (2020) strongly recommend that future work focuses on additional items to more clearly make the distinction between the factors that strongly influence CTE. A larger sample, as already observed, would give a broader understanding of the dynamics of these factors, whether proximate or remote.

Developing teacher leadership is a means of instructional reform; in that, teachers learn new ways to not only manage their students and the instructional process, but more importantly to understand the demands of their profession and to be able to offer impactful support to each other for great outcomes. Teacher leadership extends school administration horizontally and creates a sense of ownership among teachers. Teachers develop self-worth and confidence to lead in curriculum planning as well as facilitate curriculum execution. They are also happy to work and make effort to improve their own conditions of work with inherent satisfaction. Consistent teacher leadership development strengthens collectivity of purpose, thereby pulling synergies among members of the

school community, including students, parents, and the local authorities for the collective good. Teacher leadership as a branch of school leadership will be a very powerful enhancing factor of CTE if it is well nurtured.

Emerging themes

Literature reviewed so far suggest the following themes:

Efficacy theories can be applied to school context

The Self-efficacy theory which emerged from the Social cognitive theory proves to be very potent in school context just as in any other organization. Opaque as the construct might seem, extensive literature attest to the fact that, schools with high efficacy beliefs among teachers do not only guarantee positive attitudes among teachers but also among students; thus, creating a fertile environment for productivity.

Leadership and environmental factors play leading roles in building Collective Teacher Efficacy

Over the past one or two decades, school leadership dynamics have been identified widely as a factor that influences teacher commitment and student learning. Leadership roles discussed in literature have mostly taken the position of the principal or headteacher whose major responsibilities include setting the vision, leading decision making, and planning the curriculum. The importance of leadership in schools has been identified as a force that pulls the wide array of resources together to get the system working to produce desired outcomes. In that wise, leadership support is highly rated among factors influencing efficacy among teachers. In many leadership interpretations, three major approaches have been identified as effective for desired student outcomes; they are, transformational leadership, instructional leadership and distributive leadership, none of which singularly works in all situations, hence, a classical model recommended. Moreover, environmental factors such as the location of the school, emotional and social conditions created and nurtured over time do make a difference in teacher efficacy orientations across schools.

Collective Teacher Efficacy enhances professional development

Schools with high CTE impact teacher collaboration, builds a stronger professional learning community as well as developing teacher leaders. The result of this is increased instructional efficiency. Teacher collaboration makes teachers their own teachers (facilitators of professional learning) because they learn from each other on a regular basis. A school where teachers collaborate very well would less likely record failures in students, because support is provided both vertically and horizontally to maximize student learning. In such schools, teachers work as a team; they see themselves as their own support base rather than competitors: They take responsibility of their students' performance and strive to do better as a team. An environment as this develops among teachers a sense of satisfaction and willingness to risk learning new things for the collective benefit.

Collective Teacher Efficacy influences teacher performance

It has been gathered that, schools with strong teacher efficacy have a propensity to do better in student learning than schools with low levels of teacher efficacy. This assertion is rooted in the original fact that, teachers with high efficacy take on challenges as opportunity to learn rather than see them as a problem; they are ready to learn new skills and knowledge as part of their professional expediency in order to fit in, or move along with changing times. They are resilient and will always try new and better ways of solving a problem, rather than giving up. Teachers with high efficacy beliefs inspire student learning and create equal opportunity for all learners with different backgrounds and capability thereby making them better off. Also, teachers with high efficacy are better able to identify and utilise learning opportunities for students, and are more able to use suitable approaches to get students to learn more effectively- they know what works in given circumstances in their classrooms.

Collective Teacher efficacy influences student efficacy

Efficacy studies have generally claimed that there is a strong relationship between teacher efficacy and student efficacy. It is believed that, teachers with high efficacy beliefs are highly likely to develop students with high efficacy. This is closely linked to Bandura's 'Vicarious Experiences' and 'Social Persuasion' as foundational sources of efficacy information. While vicarious experiences refer to the power of the observations, we make of people we consider as 'role models' what such people think about our capabilities and worth, social persuasion has more to do with how others (peers or people of higher stature) directly influence our efficacy beliefs by the words they speak to us. This provides opportunity for mastery experiences. Students' perception about themselves and their capabilities would change positively under teachers with high efficacy beliefs, and the opposite will happen to students under teachers with low efficacy beliefs.

Collective Teacher Efficacy can be enhanced

A wide range of literature continues to make reference to the four sources of efficacy information propounded by Albert Bandura (1993, 2008) as applicable to both self efficacy and collective efficacy. Collective teacher efficacy is nurtured in schools. Recent studies conducted across continents have suggested factors (mostly school-based) that possibly influence collective efficacy among teachers in particular. This assertion is gaining grounds in research across the globe most probably due to contextual underpinnings. Although the four original sources of efficacy will always be the reference point when discussing the efficacy construct, they seem to be more applicable to self-efficacy and moderate in collective efficacy formation. Collective efficacy might largely depend on the views of the people concerned and in a collective sense rather than individual perceptions. Thus, it is what the individuals think about the collective and not an aggregate of individual's personal efficacy.

Collective Teacher Efficacy creates positive learning environments

CTE is a very important ingredient for positive school outcomes. This is evidenced in the level of impact it has on the instructional environment; talking about setting priorities right and focusing on setting up an atmosphere that is supportive of student learning. CTE does not replace the resources teachers and school workers need in order to accomplish goals, but it creates a positive work environment that is reassuring, no matter the socio-economic state of the school. Despite the fact that, teachers would always desire for the best of resources to enable students learn through a hand-on learning experience, teachers are equally encouraged to work their best in environments in which their efforts are recognised and professional support is certain.

Conclusion and implications

It has been severally stated that, self-efficacy strongly associates with the collective efficacy proclivity of members of a faculty. Schools that have teachers with a high sense of self-efficacy have mostly recorded good collective efficacy levels. Self-efficacy has also been identified to be strongly correlated with teacher efficiency and student learning outcomes. Both Self and Collective efficacy have high propensity to influence student learning; the variance is that, personal/self-efficacy is limited in scope and does not always guarantee group benefit although it plays a mediating role.

It is worth noting that although extensive evidence suggest the important role leadership support plays in CTE, research has not been explicit on the link between CTE and the Instructional leadership propensities of teachers although the two concepts could share mutual benefit. Instructional leadership and CTE have both been widely acclaimed as instruments for effective leadership and instruction..

It is recommended for future research to investigate the relationship between Collective Teacher-efficacy and Instructional leadership among classroom teachers especially. Instructional leadership/Pedagogical leadership/Learner-centred leadership, as may be considered in different contexts and jurisdictions has fast emerged as an effective leadership approach that should be embraced in the management of schools for the attainment of expected learner competencies.

Developing and enhancing the efficacy beliefs of teachers is highly crucial, particularly in modern times when schools are proving to be dynamic, and systems pursuing global educational goals. Change in the school system is always necessitated by policy direction and interventions to meet the learning needs of students as the priority of education; therefore, the need for faculties to develop CTE is highly justified.

High CTE in schools affect how teachers approach challenges that come with change (curriculum review, implementation and resource mobilization). Educational policy must therefore prioritize teacher professional development and enhanced management through shared leadership and augmented CTE.

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