



Benefits of and Factors that Influence Teacher Collaboration in Professional Practices

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Abstract: *Collaboration as an idea has been embraced at the world of work, including educational institutions. In the teaching profession, teachers are urged to collaborate in the performance of their responsibilities as the practice is essential for efficient job performance. A plethora of studies conducted globally on diverse aspects of teacher collaboration lend credence to this point. Literature, however, falls short of some aspects of the phenomenon as studies have not focused on them. To fill the gaps identified in the literature, this study was conducted to gauge the benefits of collaboration among teachers of junior high schools in the Central Region of Ghana, and the factors that hinder teacher collaboration in the schools. The study followed the quantitative dimension of research as well as cross-sectional survey design. A questionnaire was employed to gather the data which was subsequently analysed, using both descriptive and inferential statistical analytical tools. The study disclosed that the majority of the teachers recognise that collaboration helps them to exchange and gain new general knowledge and subject-matter ideas, improve their competence in instructional delivery, become efficient and effective in the performance of their duties, and improve students' learning outcomes. The study also revealed, however, that factors such as the nature of the subjects taught, workload, time, school leadership and attitudes of colleagues serve as hindrances to making them experience a more intense collaboration in their professional practice. The implications of the study for schools, and training institutions, among others, to create, support and maintain teacher collaboration have been given.*

Keywords: *Teacher collaboration, professional practice, benefits of teacher collaboration, factors that affect teacher collaboration.*

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1. Introduction

Teachers are reckoned as a make or break in the teaching and learning process as they impart the requisite knowledge and skills for students' consumption, provide guidance to students, and direct the teaching and learning process intending to make effective learning occurs. Teachers constitute an integral part of the educational system as they are major implementers of the school curriculum (Author, 2022). In supporting this standpoint, Akpan (2013) posits that teachers contribute immensely to either the success or failure of any educational system underscoring stakeholders' concerns about their actions and inactions in the course of their professional engagement. These pivotal roles are well executed if teachers possess the requisite knowledge, competencies, values and attitudes that are not only acquired from their professional training and continuous professional development programmes, but also through their interactions and relationships with their colleagues at work.

The school context or environment provides an avenue for teachers to collaborate on the various aspects of their work. As teacher collaboration brings about a lot of benefits, they ought to possess collaborative skills that they can leverage to acquire more knowledge and competence for their teaching and learning responsibilities. Given its relevance, collaborative skill is incorporated into the 21st century skills that globally, both teachers and students are supposed to possess, in this time and age, to enhance the execution of their professional practice and studies respectively. Pre-service teachers also need to possess collaborative skills as they are essential for their future teaching or professional engagement. Based on this idea, Cook (2005) avers that training institutions are essential environment for students to acquire collaborative skills for their future endeavours. When teachers possess collaborative skills and use them in their teaching responsibilities, it inures to their benefits, that of the students, and the schools (Reeves, et al, 2017). When teachers possess collaborative skills, they can interact effectively with their colleagues in the performance of their professional responsibilities accounting for the growing research interest in teacher collaboration and to add to the body of literature.

In the work setting, it is a common practice for staff to interact to share ideas, skills, and values and attitudes relating to their job. The interaction may be formal or informal, but whatever form it takes stands to bring about positive dividends. Teaching is a profession that collaboration among teachers is highly encouraged, believing that as knowledge grows, new developments emerge, and unexpected circumstances occur that teachers need to acquire new ideas and acumen in order to be relevant in the system. Unequivocally, new ideas and skills may not be acquired via workshops, seminars, symposia, conferences, and other professional development programmes (Author, 2019) alone, but also from collaboration with colleagues. Teacher collaboration is a means that teachers utilise to broaden their knowledge and horizon on new developments to position themselves well to exquisitely perform their duties and responsibilities. In

schools where teachers highly collaborate in various aspects of their work, the rippling benefits are felt by diverse stakeholders of education and the opposite is true where the stakeholders are denied the achievement of the goals set for the educational system if teachers do not collaborate to perform their tasks.

The idea that teacher collaboration benefits stakeholders of education has triggered systematic investigations across the length and breadth of the globe with the developed world receiving the lion's share, while sub-Saharan African has not benefited much. There is evidence in scholarly literature that studies have examined various ways that teacher collaboration benefits the educational system: teacher instructional delivery and students' learning outcomes (Avila, 2016; Rockoff, 2017), teacher collaboration and teacher effectiveness in classroom and school (Ozoh & Ladan, 2015), teacher collaboration and teachers' professional practices (Bush & Grotjohann, 2020, Xie, et al, 2023), teacher collaboration and teacher morale (Goldstein, 2015), teacher collaboration and teachers' learning and development (Rockoff, 2017; De Jong et al., 2021), and teacher collaboration and handling of students' social, emotional, psychological, and other problem behaviours (Leonard, 2022).

Literature also unveils that studies have been conducted on factors that prevent teachers from collaborating in the course of their professional practice (Svendsen, 2016, Hargreaves & O'Connor, 2018, Kollect, 2019, Rahman, 2020, Kollect & Schuster, 2021). A scrutiny of literature unveils that most of the prior studies are from the Western world with very little from the sub-Saharan Africa, especially in Ghana. So, to bolster and strengthen the previous studies and to close the contextual gap, the study was conducted in a region in Ghana with many junior high schools which have teachers from diverse socio-cultural orientations. In the country, the authorities in charge of the pre-tertiary education sector, the Ghana Education Service (GES), has a mantra of posting teachers to where their services are needed (GES cited in Author, 2020), hence, the basic schools in the region have a mix of teachers from different cultural orientations, which can affect their collaboration. We, therefore, set out to unravel the benefits that the basic school teachers derive from collaboration and the factors that affect their collaboration in their professional practice. Again, the study was conducted to narrow the methodology gap, which exists in the literature. The inferential statistical analysis performed in this study strengthens the findings, which is a huge contribution to knowledge and literature. The study also enriches literature with outcomes from a different geographical area, Ghana, to broaden the discussion of teacher collaboration.

1.1 Research Questions

This study was guided by these research questions:

1. What benefits do teachers in the basic schools in the region derive from collaboration?
2. What factors affect teacher collaboration in the basic schools in the region?

2. Literature Review

2.1 Theoretical Framework: Social Interdependence Theory

Social Interdependence Theory, originally propounded by Deutsch (1949) and substantially extended by Johnson and Johnson (1989, 2005), underpinned the study. The theory holds that the way individuals' goals are structured relative to one another determines whether they work together, against each other, or independently of each other. Deutsch (1949) distinguished cooperative goal structures, in which the attainment of one person's goal is bound up with the attainment of others' goals, from competitive structures, in which one person's success is tied to another's failure. Johnson and Johnson (1989, 2005) built on this foundation to explain the conditions under which cooperation among people in institutional settings, including schools, produces positive outcomes.

The theory identifies three forms of interdependence that can exist among members of a group such as teachers in basic schools: positive interdependence, negative interdependence, and no interdependence (Johnson & Johnson, 2005). Positive interdependence exists when individuals perceive that they can only attain their own goals if the other members with whom they are linked also attain theirs, a condition that gives rise to promotive interaction, whereby colleagues encourage, facilitate, and support one another's efforts. Negative interdependence, by contrast, exists when one person's success can only be achieved at the expense of another's, producing oppositional interaction, while no interdependence describes a situation in which individuals work independently of one another with no bearing on one another's outcomes. It is further specified that five conditions that must be present for positive interdependence to translate into effective cooperation: positive interdependence itself, individual accountability, promotive interaction, appropriate interpersonal and small-group skills, and group processing (Johnson & Johnson, 1989, 2009; Author, 2019).

Applied to the context of this study, Social Interdependence Theory offered a coherent explanation for the benefits that teachers derived from collaborating with their colleagues. When teachers perceive that their professional goals, such as improving instructional delivery or students' learning outcomes, are bound up with the goals of their colleagues, positive interdependence is activated, and promotive interaction follows in the form of the exchange of subject-matter knowledge, teaching skills, and feedback described by the respondents. The theory, therefore, accounted for why teachers who engaged one another reported gains in teaching competence, efficiency, and professional development, since these gains are expected products of promotive interaction under conditions of positive goal interdependence.

The theory equally illuminates the factors found to hinder teacher collaboration. Trust, which Johnson and Johnson (1989) identify as integral to the promotive interaction that sustains cooperative relationships, is central. Where colleagues do not trust one another, the mutual encouragement and open exchange that positive interdependence requires break down, leaving teachers to work as though no interdependence exists between them. Similarly, unsupportive school leadership and negative attitudes among colleagues weaken the conditions, particularly individual accountability and group processing, that convert shared goals into productive cooperation. Heavy workloads and the perceived autonomy attached to particular subjects can likewise push teachers toward independent, or in some cases oppositional, orientations to their work, consistent with the negative or absent interdependence that the theory associates with poorer collaborative outcomes. The Social Interdependence Theory, therefore, provided the lens through which the benefits and hindrances of teacher collaboration examined in this study were interpreted.

2.2 The Concept of Teacher Collaboration

Nyuyen and Ng (2020) conceptualise teacher collaboration as a process that entails stages, ranging from short and spontaneous conversations in the staff common room to a more focused team work, or working together towards the achievement of an aim. Nasir and Mydin (2023) regard teacher collaboration as an activity that entails collaborative work and pondering talk to enhance teaching practices and improve student learning. Teachers' interaction concerning teaching and learning activities, which leads to the enhancement of student learning is termed as collaboration. That is, in the daily life of teachers in school, they discuss, share, and exchange ideas and other resources geared towards the enhancement of proficient teaching and better learning outcomes. They also collaborate in the diverse aspects of their teaching processes which requires experience, expertise, and knowledge, some of which could be garnered from colleagues who are on top of those areas.

The professional practice which is widely known as the pedagogy, methodology, or the art and science of teaching is an area teachers can collaborate to acquire more competence to enhance the execution of their professional responsibilities. Ozoh and Ladan (2015) seem to support this idea when they assert that teachers' constant interaction in school serves as a fertile ground for them to discuss their classroom practices and other related issues. Nasir and Mydin (2023) concur with this standpoint that collaboration offers a chance for reflective dialogue on professional practice for teachers to improve their work performance. As new ways of instructional delivery evolve, technologies emerge, and classroom management techniques are developed, via collaboration, teachers can become acquainted with and employ them in their instructional delivery. As some teachers are more adept in the use of instructional resources than others, it is only ideal that teachers collaborate in order to gain knowledge and skills in using up-to-date and state-of-the-art technologies.

to teach. In addition, teachers in the same field of study have the privilege to gain or share new ideas in their discipline with colleagues to bolster and enhance students' learning achievement. For instance, Mathematics teachers can collaborate to discuss and share ideas on the topics they teach, so as Science teachers, Social Studies teachers, Religious and Moral Studies teachers, and French teachers, among others, at the junior high school can respectively collaborate to garner more knowledge towards effective delivery of lessons. Contents of the various subjects may not be static and as new ideas emerge, through collaboration, teachers who are very good in them would be of help to those who lack those ideas. It is gathered from the arguments thus far that teacher collaboration is essential for both pedagogical and content knowledge of teachers (Shakenova, 2017), hence teachers need to collaborate on these broad areas of teaching.

2.3 Benefits of Teacher Collaboration

Teachers collaborate in the course of their work due to the benefits that emanate from the professional practice. Both anecdotal and empirical evidence gives credence to the need for teachers to collaborate in the various aspects of their professional engagement. Literature is replete with the argument that teacher collaboration does not only inure to the benefit of the actors involved but also their students, schools, and the entire educational systems. In the view of Vangrieken et al. (2015), teacher collaboration benefits are at different levels such as teacher level, student level, and school level. It is gleaned from the literature that the variants of benefits of teacher collaboration include enhancing one's teaching, increasing teacher job performance, teacher job satisfaction, and reducing stress, among others.

Ozoh and Ladan (2015) observed that teacher collaboration benefits both teachers and students. As teachers interact with colleagues and gain valuable knowledge and skills from it, their ability to deliver sharpens, which goes a long way to improve students' learning outcomes. Via collaborative efforts, teachers engage in knowledge sharing, asking essential questions, seeking explanations on teaching practices, and leveraging on student information to promote effective learning chances (Bryk et al, 2015). Through these activities via collaboration, teachers' effectiveness in the execution of their responsibilities is enhanced to improve learning outcomes (Nasir & Mydin, 2023). The practice offers opportunities for teachers to share experiences, ideas, and activities with colleagues, which go a long way to improve teaching and learning. In supporting this point, Shakenova (2017) avers that teacher collaboration influences teacher learning through the sharing of ideas, which in turn affects students' academic performance via the enrichment of subject matter knowledge and instructional skills. These ideas support the fact that teacher collaboration can influence instructional practices and promote student academic success, signalling its potency in facilitating classroom practices and school improvement, accounting

for the recognition of teacher collaboration as a meaningful aspect of teachers' work (Eschiter, 2016).

The knowledge discussed and shared through collaboration is of mutual concern for those involved (Suntisukwongchote, 2006), which enhances teachers' knowledge and competencies to deliver in the classroom and school. Via collaboration, teachers are likely to have adequate time to reflect on their teaching practices, and then, appraise to determine whether what they are practising works, and whether they have to change or reinforce their behaviours and actions in the school (Reeves et al., 2017). In corroborating this idea, Hargreaves and O'Connor (2018) posit that when teachers practise collaboration, it helps them to generate useful ideas and practices for their jobs, leading to the improvement in students' academic achievements; teacher collaboration contributes to the enhancement of student performance (Kraft & Papay, 2014). Burton (2015) also contends that when effective collaboration takes place, teachers' knowledge and skills are shared and instructions improved, which make them hold a positive belief about the collective efficacy of their colleagues and students (Avalos-Bevan & Bascope, 2017). Sengpoh (2019) contends that teacher collaboration is not only a vital means of improving student learning outcomes, but also teacher professional development. Thus, both teachers and students benefit, if the former do collaborate in the performance of their work.

In furtherance to the value of teacher collaboration, Ronfeldt et al. (2015) specifically undertook a study to ascertain the relevance of teacher collaboration to students' performance in Mathematics. The study unveiled that collaboration has positive effects for both teachers and students. The study further disclosed that teacher collaboration benefits students and teachers in ways such as instructional strategies and curriculum, instructional approaches to individuals or groups, and approaches to assessment. Similarly, the study conducted by Moller, et al (2013) revealed that the collective pedagogical culture of teachers inured to the benefit of students as it enhanced students' achievement of good results in Mathematics. The teachers who had good collaborative pedagogical culture realised massive improvement in students' scores as opposed to the teachers who did not have that culture in school. Murad, et al (2023) also found that collaboration among English teachers contributed greatly to the enhancement in students' academic achievement.

Methlagly (2022) observes that teacher collaboration helps to improve teachers' classroom teaching practices to enhance teaching and learning outcomes. In a related development, teacher collaboration is recognised to be of essence in the handling of students' behaviour problems. Via collaboration, teachers share ideas, experiences, and resources to improve their reflective practices, and how to handle students with problem behaviour, as well as those from socio-economically-disadvantaged backgrounds (Woodlanda, et al, 2013). Other variant of the benefits of teacher collaboration is increasing teacher job satisfaction (Mostafa & Pal, 2018, OECD, 2014a).

A study unveiled that due to the positive impact of teacher collaboration on their work, teachers value it (Ghedin & Acquario, 2020). Avalos-Bevan and Bascope (2017) also found that teachers value and appreciate collaboration in performing their professional responsibilities. The myriad of benefits of teacher collaboration disclosed in systematic investigations that strengthen Kollet and Schuster's (2021) assertion that teacher collaboration is a major factor that contributes to school and classroom improvement. When teachers discuss, share, and exchange ideas that pertain to the subject-matter or content, pedagogy, and classroom management, it aids them to deliver well, hence, they value teacher collaboration. There is, however, dearth of literature on studies on teacher collaboration in the Ghanaian context, which made it worthwhile to systematically study the subject in the study area. Undertaking the study in this context adds a socio-cultural twist to knowledge on teacher collaboration at the basic level of education.

2.4 Factors that Hinder Teacher Collaboration

Despite the benefits of teacher collaboration, studies have alluded to the fact that not all teachers practise it. Moller, et al. (2013), for instance, uncovered that less than 20% of teachers surveyed frequently collaborated with their colleagues, demonstrating very low collaboration among the teachers. A study conducted by Nasir and Mydin (2023) also found a moderate to low level of collaboration among the teachers involved in the study. The low collaboration among teachers may be due to certain factors and as Yuon and Majid (2017) posit, there are problems in teacher collaboration. In other words, infrequent teacher collaboration in schools is a result of multiple factors, which have been classified into a) personal and professional factors, which include openness to varied opinions, volunteering, a sense of responsibility, motivation, and relationship with peers; b) social atmosphere, which is supported by respect, common goals, the ability to listen to each other, and; c) organisational factors, which include teachers' schedule, deployment of resources, distribution of tasks, and support from management (Silva & Morgado, 2005).

Studies have found several factors that affect teacher collaboration. For instance, Collinson and Cook (2013) found that inadequate time and feeling overwhelmed accounted for the teachers not having time to share ideas with colleagues. Teacher attitude is also reckoned to be a factor that affects teacher collaboration in school. The kind of attitude teachers put up would either drive colleagues to or away from them. Sadiq and Salina (2007) discovered that the attitude of teachers is a factor that affects collaboration among teachers. A study disclosed that negative teacher attitude leads to an unco-operative work culture (Agbetorwoka, et al, 2019). In supporting this point, Murad, et al (2023) observe that attitude is relevant in teacher collaboration. Whereas positive attitude exude by peers would fuel teacher collaboration, the opposite would be the case if some teachers exhibit negative attitude towards that. It is unnatural for people to strive for

collaboration if others show negative attitude emphasising Sengpoh (2019) contention that positive attitude stimulates people's desire to share knowledge.

Trust is another vital factor that influences teacher collaboration. According to Ho et al (2012), trust is a strong factor that affects people's desire and intention to collaborate, arguing that when there is trust, people willingly co-operate and share knowledge, challenges, frustrations, and other situations with peers. According to OECD (2020), trust has been found to be essential in teacher collaboration. This contention is supported by Brodie (2021) that, trust is essential in teacher collaboration in course of duty. It was also unfolded in the study by Hargreaves and O'Connor (2018) that trust and mutual respect are the triggers of collaboration among teachers. If teachers trust each other, it is easy for them to work collaboratively to achieve the desired goals. However, when there is no trust, it becomes difficult for teachers to discuss and share important professional issues.

School leadership is also regarded as an important factor that facilitates teacher collaboration, and the lack of it results in the opposite. It is asserted that school leadership helps to create conditions that support teacher collaboration, hence, Jones-Goods' (2018) assertion that school leadership promotes effective teacher interaction and that when authorities renege on that teachers are unable to collaborate in the course of their work. A study by Burton (2015) also discovered the role of school leadership in ensuring teacher collaboration in schools, emphasising the need for those at the helm of affairs to create the requisite and ideal atmosphere for teacher collaboration to thrive. It is also realised that the wider culture, norms, and regulations of an educational institution created by heads serve as catalysts for teacher collaboration to manifest (Rahman, 2020). Arguably, if heads of school desire to have teachers collaborate on the various facets of their professional practice, they need to create a fertile ground for it.

3. Methodology

The study used the quantitative approach in order to survey the views of the respondents relative to the purpose of the study, as well as generate data from a large number of teachers. Descriptive survey design was used with the view to describe the benefits of teacher collaboration, and the factors that inhibit teacher collaboration in the schools. This design helped to gather data from diverse teachers in the selected schools to participate in the study.

The study targeted all teachers teaching in basic schools in the Central Region of Ghana. However, those in the basic schools in the selected municipalities formed the accessible population. To qualify for inclusion in the study, one ought to be a professional teacher who had taught for more than five years at the basic level of education. The lottery method was used to select a number of basic schools and qualified teachers. This sampling method was used to ostensibly provide equal opportunity for all qualified teachers in the schools to be selected to participate in the study.

A Teacher Collaboration Questionnaire (TCQ) was self-developed by the researchers, via the items gleaned from the literature. The instrument was pre-tested in five basic schools within a municipality which was not part of the main study to address the two foci of the investigation. Cronbach alpha was used to check the reliability of the instrument. The reliability co-efficient was $r=.892$ which is high. The comments gathered from the pre-testing were also incorporated into the final instrument.

The research instrument was self-administered to the respondents by the researchers after a careful explanation of the essence of the study, and why they were selected to partake in the investigation. The self-administration of the instrument resulted in a hundred percent return rate. It also afforded the opportunity for the researchers to provide clarification on items that the respondents had a challenge with. Voluntary participation, the right to withdraw from the exercise at any point in time without explanation, confidentiality, anonymity, and other ethical standards were highly observed during and after the data gathering exercise. The analysis was conducted after screening the data gathered. Frequency counts, percentages, and factor analysis were employed to analyse the data, using the SPSS software version 27. For the factor analysis, some tests were conducted to check the non-violation of the assumptions underlying it.

4. Results and Discussion

The results on the demographic information sought to showcase a lucid and succinct overview of the respondents' background are presented first. The demographic information elicited from the respondents are sex, age (age bracket), academic qualification, and length of years in the teaching service, which were analysed using frequencies and percentages. The results of the analysis of the background information of the respondents are presented in Table 1.

Table 1: Demographic Information

Variable		Frequency (n)	Percentage (%)
Sex	Male	99	55.9
	Female	78	44.1
Age	<40years	58	32.8
	41-50years	73	41.2
	>50years	46	26.0
Academic qualification	Diploma	57	32.2
	Bachelor's	84	47.5
	Master's	36	20.3
Years in experience	1-5years	55	24.9
	5-10years	44	31.1
	>10years	78	44.0

Out of the 177 respondents who participated in the study, more than half (55.9%) of them were males, and the rest, constituting 44.1% were females signalling male dominance in the teaching profession in the country. The results also depict that a majority of the teachers who

participated in the study were relatively young as 32.8% of them fell within the youthful age, followed by 41.2% being in the young adult category. The respondents who were above 50 years and are considered old adults constitute about a quarter of the sample. Generally, such a relatively youthful teacher workforce ought to exude and demonstrate collaborative skills in order to garner the benefits embedded in that act.

Regarding the academic qualification of the teachers, a majority (47.5%) possess bachelor's degree in various fields of study, qualifying them to teach at that level of education. In the Ghanaian educational system, the requirement to teach at the basic level of education is a bachelor's degree in a teaching subject (MoE, 2018). The results demonstrate that about a quarter of them had master's degree in addition to their bachelor's degree. However, about 32.2% of the rest of the teachers still hold a diploma, a qualification, which used to be the norm. This set of teachers may be pursuing a bachelor's degree programmes to guarantee their continuous stay in the teaching service as the education service demands all basic school teachers to have a minimum of a bachelor's degree.

With respect to the number of years the respondents had been in the teaching service, a majority (44%) had more than 10 years of work experience, while those with between 1 and 5 years of teaching experience formed 24.9%, and those who had been in the service between 5 and 10 years made up 31.1% of the sample. The results imply that the teachers had been in the teaching service for long to be able to indicate the benefits they derived from collaborating with colleagues in their professional practice and the factors that did not aid their collaboration.

their work, including the fact that it helped them to exchange and gain new knowledge and ideas.

4.1 What Benefits do Teachers in Basic

Table 2: Benefits of Teacher Collaboration

My collaboration with colleagues helps to...	No	Not Sure	Yes
exchange and gain new ideas.	33(18.6)	41(23.2)	103(58.2)
acquire more subject-matter knowledge.	35(19.8)	51(28.8)	91(51.4)
acquire new skills of teaching.	120(67.8)	44(24.9)	13(7.3)
improve my instructional delivery.	33(18.6)	51 (28.8)	93(52.5)
improve students' learning outcomes.	18(10.2)	45(25.4)	114(64.4)
improve my teaching performance.	23(12.9)	58(32.8)	96(54.3)
improve my teaching competence.	8(4.5)	52(29.4)	117(66.1)
improve my teaching efficiency.	12(6.8)	52(29.4)	113(63.8)
improve my teaching effectiveness.	13(7.3)	56(31.6)	108(61)
facilitate my professional development.	13(7.3)	43(24.3)	121(68.4)
enhance my personal development.	124(70.1)	48(27.1)	5(2.8)
improve my professional discipline.	56(31.6)	88(49.8)	33(18.6)
facilitate my progress in the profession.	89(50.3)	63(35.6)	25(14.1)

The results displayed in Table 2 indicate that the teachers reckoned that the collaboration they forge with their colleagues in school benefit them in some areas of their work and professional development as well as where the practice did not seem to benefit them. The results show that a majority (58.2%) of the respondents recognised that the collaboration they had with their colleagues served as a conduit to exchange and garner new knowledge for their work such as classroom management and how to handle students with disruptive behaviours, among others. Also, more than half (51.4%) of them believe that through their collaboration, they were able to acquire more specific subject-matter knowledge in subject such as English Language, Mathematics, Science, Social Studies, among others, taught at the basic level of education. Moreover, a majority (52.5%) held the belief that teacher collaboration aided their instructional or lesson delivery with a few (18.6) holding a contrary view. A few (28.8) of them also were not sure of this idea. In addition, a vast majority (64.4%) of the respondents held the opinion that the collaboration they had with their colleagues in school aided to soar up students' learning outcomes. Those who were not sure of this idea, and those who did not hold the belief were only 25.4% and 10.2% respectively. The majority of them believed that the ideas they gained from collaboration helped them to deliver well to the understanding of students and eventually improved students' learning outcomes. Not all, a majority (54.3) of the teachers contended that teacher collaboration assisted in improving their teaching performance in general, as opposed to those who were not sure (32.8%), and those who held a contrary view (12.9%).

From the study, the majority of the teachers recognised the contribution of teacher collaboration in various aspects of

This is consistent with Ozoh and Ladan's (2015) assertion that teacher collaboration offers the opportunity for teachers to share experiences, new ideas, and activities to benefit their work; helps to acquire subject-matter knowledge; and improves their instructional delivery, efficiency and effectiveness. Studies have also discovered that teacher collaboration influences teacher effectiveness (Nasir & Mydin, 2023), and improves their competencies (Bush & Grotjahn, 2020).

The myriad of benefits of teacher collaboration expressed by the respondents of this study corroborate the work of Onyekwere's (2013) which asserts that teacher collaboration is a vital means to achieve institutional goals. Xie et al. (2023) also disclosed that teacher collaboration has effects on teachers' teaching practices. In many aspects of their work, the teachers reckoned the role of collaboration in enhancing students' academic achievement. The findings of Harpe (2014) also revealed statistically significant relationship between teacher collaboration and students' achievement, re-inforcing the potency of teacher collaboration in improving learning outcomes. The constant interaction teachers experience in school gives myriad of ideas that help them to deliver instructions well to the understanding of their students. The finding supports Louis and Kruse's (2015) contention that teacher collaboration contributes to improving instructional practices and promote students' success.

Furthermore, a vast majority (66.1%) realised that teacher collaboration helped to improve their teaching competence while only 4.5% disagreed and 29.4 were not sure of that gain. The results also showed that the majority (63.8%) believed that collaboration helped to improve their teaching efficiency with only 6.8% who had a dissenting

view and 29.4% who were not sure of that. Again, the table indicates that while 61% of the respondents agreed that collaboration aids to improve their effectiveness, 7.3% did not agree and 31.6% were not sure it helps to improve their teaching effectiveness. Lastly, 68.4% agreed that teacher collaboration facilitated their professional development, but 7.3% did not agree to that idea.

The finding that the majority of the respondents recognise that teacher collaboration aids them to be efficient in instructional delivery is in support of Killion (2015) and Ozoh and Ladan (2015) research that the constant interactions of teachers, in several ways, tend to influence their job effectiveness. Their interactions seem as a chance for teachers to discuss their classroom practices and other related activities. This underscores Lui's (2022) contention that teacher collaboration is of great essence as it helps to enhance the professional ability and development of teachers. Teacher collaboration is central to the teaching profession (Avalos-Bevan & Bascope, 2017), and it is also essential for teacher professional development (Cumbo & Selmyn, 2022). The results of the study also give credence to Desta et al's (2023) admonishing that, the importance of teacher collaboration should not be viewed from the

benefits to only students' achievements but also on improvement in the teachers' professional development and school improvement which ties in with the postulation of Vangrieken et al. (2015) that teacher collaboration benefits are at teacher level, student level, and school level. The variants of benefits of teacher collaboration, as the study uncovered include enhancing students' learning outcomes, improving teacher job performance, teacher job satisfaction, and reducing stress, among others.

4.2 What Factors Affect Teacher Collaboration in the Basic Schools in the Region?

This question sought to unravel the factors hindering teachers' collaboration in the schools. Factor analysis was conducted to achieve the goal. Prior to performing the Principal Component Analysis, the suitability of the data was determined. Analysis of the initial reliability and intercorrelations co-efficient were computed and the assumptions underlying the principal axis factoring (PCA) and Oblique rotations (Battlett's Test of Sphericity and KMO) were also checked as suggested by Field (2013). The outcomes of these tests are presented below

Table 3: Correlation Matrix

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
Correlation													
C1: Nature of the subjects taught	1.00	.448	.229	-.004	.204	.265	.305	.199	.010	.061	.010	-	-.106
C2: Workload		1.000	.399	.251	.445	.259	.285	.251	.104	.044	-	.011	.016
C3: Trust			1.00	.428	.292	.161	.279	-	.274	-	-	.115	.171
C4: School leadership				1.000	.394	.341	.285	.069	.287	.098	.124	.037	.056
C5: Attitude of colleagues					1.00	.344	.350	.182	.063	.131	.060	.041	-.207
C6: Inferiority complex						1.00	.463	.172	.198	.285	.151	.131	.071
C7: Pride of some teachers							1.000	.170	.241	.141	.162	.169	-.028
C8: Selfishness of teachers								1.00	.192	.050	.084	-	.038
C9: Nature of the school system.									1.000	.334	.193	.267	.224
C10: Nature of the school programmes.										1.00	.223	.166	.059
C11: Inadequate knowledge of collaboration											1.00	.503	.008
C12: Lack of opportunity												1.00	.345
C13: Lack of motivation													1.000

Extraction Method: Principal Component Analysis.

The results in Table 3 demonstrate the correlation of all the variables. The correlation matrix or analysis reveals that most of the co-efficients were above .3, which is the rule of thumb (Pallant, 2011). In other words, the analysis of the inter-item Pearson Correlation evinced low to high association between almost all the items, ranging from 0.01 to 0.50. These results indicate that the magnitude of the correlation among the variables was enough to permit factor analysis. Another step was taken to verify the assumptions by conducting the Bartlett's test and Kaiser-Meyer-Olkin Adequacy as shown in Table 4 below.

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.640
Bartlett's Test of Sphericity	Approx. Square	Chi-Square	526.312	
	Df		78	
	Sig.		.000	

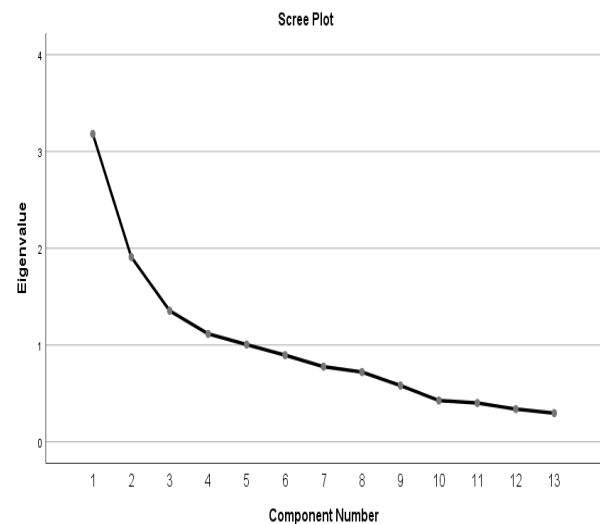
In Table 4, it is observed that the KMO is 0.640, > 0.5 signifying adequacy of the sample. The KMO and Bartlett's test is 526.312 with a significance value of 0.000. This demonstrates that the outcome of the KMO analysis is .640, which is bigger than .6, the accepted value (Pallant, 2011). This result is an indicative of the fact that there was a high correlation among the variables and that the data was suitable for factor analysis.

Table 5: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.181	24.469	24.469	3.181	24.469	24.469
2	1.910	14.691	39.160	1.910	14.691	39.160
3	1.354	10.417	49.577	1.354	10.417	49.577
4	1.115	8.578	58.155	1.115	8.578	58.155
5	1.005	7.729	65.884	1.005	7.729	65.884
6	.896	6.889	72.773			
7	.776	5.970	78.743			
8	.721	5.542	84.285			
9	.582	4.473	88.758			
10	.427	3.282	92.040			
11	.401	3.082	95.123			
12	.338	2.600	97.723			

The results of the Principal Component Analysis are presented in Table 5 below, indicating the factors and their loadings. From the Total Variance Explained table, the initial eigenvalues show 5 factors with high loadings. That is, the Bartlett's PCA discloses that only 5 items had eigenvalues more than 1 (3.181, 1.910, 1.354, 1.115, 1.005). Cumulatively, the five items account for or explain 65.9% of the variation while the rest account for only 34.1%. The 5 factors explain the greater part of the total explained variance in teacher collaboration in the schools.

To give further understanding and clarity to the major items with high loadings, the Scree plot is presented. The Scree plot confirms the decision to retain the five factors extraction. The findings gleaned from the analysis portray that the major factors that serve as hindrances to intense teacher collaboration in the schools are the nature of the subjects taught in the schools, work or teaching load, trust, school leadership, and attitude of teachers.



The majority of the respondents asserted that the nature of the subjects taught by the teachers was a contributory factor to their inability to collaborate more in the course of their work. At that level of education, teachers do subject teaching and there might be only one teacher handling a subject such as Social Studies, which does not encourage him or her to collaborate with a Mathematics teacher. In situations such as these, teachers tend to work in isolation although they can collaborate on general ideas for other aspects of their work. Consistent with this finding, Desta et al (2023) found that the nature of the subjects taught by teachers did not encourage teachers to profoundly collaborate.

The second factor that the majority of the respondents attributed to their inability to collaborate more in the schools is the teaching or work load. This finding confirms Sadiq and Salina's (2007) study, which also

found that due to time constraint, teachers hardly collaborated in their professional practice.

The teachers' workloads in the form of curricular and extra-curricular activities; the number of hours or credits, and the number of classes taught did not fuel their desire to collaborate with their colleagues. When teachers have a heavy workload to contend with at work, they would not have ample time for their work, let alone to be engaging in collaborative activities. Time, therefore, becomes a factor that affects teachers' ability to collaborate.

The third factor found to affect the teachers' ability to collaborate in the schools was trust. The majority of the respondents indicated that they did not collaborate due to lack of trust of colleagues. This is line with OECD's (2020) study which also found trust to be an adversary to teacher collaboration and that underscores Ho et al's (2012) postulation that when there is trust, individuals willingly co-operate and share their knowledge, difficulties, and frustrations. This also gives credence to Brodie's (2021) contention that trust is essential in teacher collaboration.

The fourth factor that affects teacher collaboration in the schools is school leadership. The study found that school leadership did not promote collaboration and this corroborates OECD (2020) study which revealed that teachers in the schools that had a collaborative school culture collaborated more with their peers than those who did not experience that environment in the schools. Prior studies have also unveiled that school authority is a factor that hinders teacher collaboration (Sengpoh, 2019; DoFour & Marzona, 2011). These studies found leadership as a significant positive factor to teacher collaboration, indicating that school heads play vital roles in creating and driving teacher collaboration.

The fifth factor that the study found to be a contributory factor to teachers' inability to collaborate more in the school is the attitude of colleague staff. While positive attitude of teachers glues and cements teachers' collaboration on the various aspects of their professional engagement, negative attitude discourages teachers from interacting to discuss, share, and exchange ideas to promote the execution of their professional duties. Prior studies have also revealed that the attitude of teachers played a role in their collaboration (Yuen & Majid, 2017, Sengpoh, 2019). It is inferred that to have effective collaboration among teachers in a school, their attitude needs to be favourable (Murad, et al., 2023) strengthening Shin et al.'s (2008) argument that attitude is a major determinant of teacher collaboration and that positive attitude stimulates people's desire to collaborate. These findings on factors that do not promote professional collaboration of teachers in the schools in the region fit the categorisation of Silva and Morgado (2005): personal and professional factors; social atmosphere; and organisational factors, which require the collective efforts of stakeholders to handle.

5. Conclusion and Recommendations

5.1 Conclusion

The study focused on two major phenomena in teacher collaboration; the benefits of teacher collaboration, and factors that affect its manifestation in basic schools. It emerged in the study that teacher collaboration benefits the teachers in several aspects of their professional practices in consonance with the evidences of the benefits of teacher collaboration by previous studies. This implies that if teachers increasingly work collaboratively, it makes it possible for them to benefit the more from colleagues' knowledge, ideas, expertise, and values, which consequently help to improve students' academic achievement, as well as other aspects of their work. The findings hint that teacher collaboration and collegiate relationships perform an essential part in basic school teachers' work; it offers a potent means for improving classroom and school activities as well as to repose more confidence in teachers' professional practices. The collaboration offers teachers the support they require to live up to expectations, stressing the value of good relationship at work. In spite of the array of benefits of teacher collaboration as revealed by the study, certain factors serve as blockade to the teachers' high collaboration, and principally among them are the nature of the subjects taught, workload, trust, leadership, and attitude of colleagues. These findings direct the attention of educational managers and administrators on the need to focus on these factors in order to have high teacher collaboration in basic schools for them to enjoy the dividends that come with the professional practice.

5.2 Recommendations

In order for teachers to collaborate more and derive more benefits from it, it is recommended that:

1. School leaders need to foster teacher collaboration and provide teachers with flexibility to develop collegiate relationships. They also need to create a supportive school environment and culture that facilitate teacher collaboration. Again, they need to recognise teacher collaboration as an essential aspect of professional development for teachers and students' success and a means to achieving school goals.
2. School authorities need to monitor to unfurl teachers who do not collaborate, so as to offer appropriate guidance to help them improve accordingly. Education authorities can also develop training and development programmes for teachers to help convince them to demonstrate their willingness to discuss and share ideas with colleagues.
3. To extend this study, future research should include more basic schools in the country in order to portray the nationwide picture of

teacher collaboration in the basic schools. The study also relied on only a structured instrument to gather data, depriving them of the opportunity to provide vital data which was relevant to the research problem. Future researchers should adopt multiple data collection tools to gather comprehensive data to address the research problem.

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