Leadership, proactive behavior and innovative work behaviors of teachers in Barkin-Ladi

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Abstract
Purpose: This study examines the effects of leadership styles and proactive behavior on the innovative work behaviors of private school teachers in Barkin, Ladi, and Plateau states.
Research Methodology: The study drew a sample of private schoolteachers in Barkin-ladi using a quota sampling technique. The sample numbered 201, being male (82) and female (119), between the ages of 15 and 64 years, with different levels of educational qualification. The scales deployed in measuring innovative work behaviour, proactive behavior, and leadership styles were already standardized scales that were designed to measure the constructs in school settings.
Results: The study found that the sampled teachers exhibited all leadership styles: transformational, transactional, and laissez. Leadership styles and proactive work behavior had a significant effect on teachers' innovative work behaviors. There was no significant interaction effect between leadership style and proactive work behavior on innovative work behavior.
Limitations: The sample size of this study was limited because the actual population was uncertain.
Contribution: This study shows that transformational and transactional leadership styles, as well as proactive work behaviors, are important to provoke teachers' innovative work behaviors in private schools in Barkin-ladi.
Novelty: The study has been able to show the teacher plays the role of the leader in the class and his innovative teaching behaviour is provoked by proactive behaviours and transformational/transactional leadership styles.
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1. Introduction

Innovation can be understood as the transformation of an idea into a new or an improved product or process. Business expertise considers innovation as the most dynamic component in producing highly competitive and innovative products and services (Li, Gill, Wang, Safdar, & Sheikh, 2022; Salessi & Etchevers, 2020). An organization that thrives in innovative work behaviors usually takes advantage of its competitors. Thus, innovative work behavior is vital for any organization that seeks to outperform its competitors.

Nowadays, the need to encourage innovations among employees in work organizations has become paramount for organizations to thrive; much more developing and encouraging innovative work behaviors among leadership. Murniasih (2023) argued that leadership serves as the basic skeletal system that upholds a body, referring to a team or organization. The right type of leader is often required to bring innovations to the organization. Consequently, studies (Armsrong, 2012; Mostafa, 2023; Murniasih, 2023) have varied leadership styles to ascertain which particular style facilitates innovative

work behaviors in organizations. In particular, Armstrong (2012) stressed that no one leadership style is better than the other, but that styles are dependent on some factors that an individual looks out for in an organization. Accordingly, factors that may determine the applicable leadership styles may include organization type, nature of the task, and characteristics of the individuals in the leader's team. This suggests that innovative work behavior may be enhanced by certain leadership styles.

Salessi and Etchevers (2020) opined that innovative work behaviors in teaching practice constitute a set of actions of opportunity exploration, idea generation, idea promotion, and idea realization, similar to other forms of innovation in an organization. However, the teacher. Due to individual differences among students, there is a high demand for frequent innovation in teaching practice. The teacher's ability to lead students by responding to their different needs is likely to be enhanced by the rate at which the teacher is innovative. Schleicher (2012) further stressed that an innovative teacher will always be looking for new and appropriate methods, techniques, or approaches to enhance students' understanding of the subject being taught. Gkontelos, Vaiopoulou, and Stamovlasis (2022) argue that constant knowledge acquisition, the interdisciplinary and multicultural character of classrooms, and high societal expectations point out the need for the development of innovative practices by teachers.

Furthermore, it seems that proactive individuals are more innovative at work than less proactive persons. Trifiletti, Capozza, Pasin, and Falvo (2009) accounted that innovativeness at work demands that employees to be proactive, to take action in order to identify and solve their work problems. This indicates that proactive behavior at work is likely to jeopardize innovative ideas on the job. Hence, a teacher who demonstrates proactivity on their job may exhibit a high level of innovation in their teaching job. Typical characteristics of proactive individuals include the ability to identify and solve problems, look for new opportunities, enter action, and persist until they attain a change (Trifiletti et al., 2009). These are the typical characteristics required by teachers in Nigerian schools. The level of assimilation of problems and problem-solving skills of a teacher in the classroom can provide a great advantage. Gultom, Suroso, and Gasjirin (2022) linked proactive behavior with employees ability to generate innovative work behaviours, implying that higher proactive behavior tend to lead to more innovative work behaviours.

Other studies have further suggested that proactive behavior at work can be enhanced or reduced by the leadership style adopted by an organization (Mostafa, 2023; Murniasih, 2023). This phenomenon has been pertinent to the leadership of most private schools in Nigeria and by deduction, the Barkin Ladi Plateau State. For some schools, leaders who are proprietors/proprietresses do not encourage job proactivity and restrict the teacher to a particular teaching curriculum and instructional guidelines peculiar to their school. This is an autocratic leadership style. Mostafa 's (2023) study suggests that leading service delivery firms require humility in leadership to excel. Majid et al. (2024) argued that leadership styles should involve some form of flexibility fashioned after specific situation and need of individuals concerned. Furthermore, it appears that the type of leadership style adopted and the approach to leadership influence the major behaviors associated with work. When innovative work behaviors are at the leader's interest, Peerzadah and Mufti (2023) suggest that the ability to create and innovate depends not only on the characteristics of the individuals, but also on their work environment in which the leader plays a significant role. Therefore, this study seeks to ascertain the effects of leadership styles and proactive behavior on the innovative work behaviors of teachers in private schools in the Barkin-ladi local government area of the Plateau State.

2. Literature Review
2.1 Innovative work behaviour
Individual behaviors that seek to generate, introduce, and implement new ideas for an organization are often termed innovative work behaviors. Innovative work behaviors are the product of individual employees towards organizational goals in efforts to offer new products/services, revamp business processes, and establish new working techniques (Peerzadah & Mufti, 2023). De Spiegelaere, Van Gyes, Benders, and Hootegem (2015) defined innovative work behaviours as all behaviours of employee aimed at introducing as well as applying new thinking, procedures, processes, and products into related job.

Meanwhile, teachers' innovativeness has captured the interest of scholars to the extent that it has been distinguished from other forms of employees' innovative work behaviors (Gkontelos et al., 2022; Salessi & Etchevers, 2020). In the light of this, Salessi and Etchevers (2020) conducted a study to develop and validate a scale for teachers innovative work behaviours. The study identified actions that constitute innovative work behavior, such as opportunity exploration, idea generation, idea promotion, and idea realization, and adapted them into teaching practice. This demonstrated that innovation in teaching tends to vary from other forms of innovative work behavior based on individual differences in learning.

Gkontelos et al. (2022) translated a Greek version of Teachers' Innovative Work Behaviour Scale and found significant psychometric properties. The scale is a 44-item self-report instrument consisting of dimensions of innovative behaviors, such as Idea Generation (IG), Idea Promotion (IP), Idea Realization (IR), and Idea Sustainability (IS). With a sample of two studies of in-service teachers who work in public schools, the study found Cronbach's alpha of the scales ranged between 0.917 and 0.944. The study made a distinction between each dimension of the scales and teacher innovativeness in the school context, as occurring sequentially. Accordingly, opportunity exploration concerns how to ameliorate the resulting difficulties in the school context. It refers to teachers' thoughts about their failures and successes, and the need for instant solutions to problems that arise from the attempt to distinguish between "how it is" and "how it should be" regarding a work situation. Carmeli et al. (2006) defined idea generation as being associated with teachers' beliefs about problem-solving and performance improvement, as teachers have to reorganize and classify their new ideas and address them to work-related obstacles. This stage contains the deliberate generation of a novel concept and/or the revision of a previous one, with the aim of solving problems. Furthermore, idea promotion is the next stage, which involves innovative ideas contrasted with the prevailing perceptions within an organisation/school. Reaching the execution stage, new concepts must be properly assimilated to develop a strong positive attitude toward change and strengthen the innovation workflow. Idea realization indicates teachers' perceptions of implementation in practice. For the successful implementation of novelty in the school context, Messmann and Mulder (2012) stressed that it is necessary to develop a careful planning and innovation paradigm, aiming to familiarize participants with its details. Finally, idea sustainability points out teachers' thoughts on the integration of new ideas through the organization, as well as their dissemination on a larger scale outside of it. This stage is crucial, as it aims to adapt novel concepts to positively impact society.

2.2 Proactive Work Behaviours

Proactive behavior is considered a self-initiated, future, and change-oriented behavior (Schmitt, Den Hartog, & Belschak, 2016). Being proactive involves seeking a different future, which introduces uncertainty, and means that the outcomes of one's actions are unknown. Urbach and Weigelt (2019) defined proactive behavior as the self-started behavior of employees in the workplace that goes beyond the role and aims to bring about changes in view of future problems in the organization.

Proactive behaviors stem from individuals' proactive personalities (Trifiletti et al., 2009). Proactive personality refers to an individual's inclination to "scan for opportunities, show initiative, take action, and persevere until they reach closure by bringing about change' (Bateman & Crant, 1993). According to Li et al. (2022), a proactive individual needs to gather information, recognize and act on opportunities, and reshape the present situation or relocate to an ideal setting to make substantial changes in their workplace. Typically, a proactive individual is needed whenever there are consistent challenges surrounding job roles or tasks. Moreover, Crant's (2000) review uncovered certain constructs that are related to proactive behaviors in the organizational context, one of which is the proactive personalities of individuals. Others included personal initiative, role breadth self-efficacy, and taking charge. In addition, the study argued that proactive behavior and initiative in an organization are built based on proactive personality, individual job performance, career outcomes, leadership, organizational innovation, team performance, and entrepreneurship.

Trifiletti et al. (2009) proved that there is a link between proactive personality and proactive work behavior. The study was conducted with blue-collar employees in two different sectors: the cosmetic

and mechanical sectors. It showed that proactive personality was positively correlated with aspects of the job that have to do with individual hyperactivity – locomotion and self-efficacy. This suggests that a proactive personality enhances proactive work behaviors.

Furthermore, Khan's (2021) study recounted that one of the results of the COVID-19 pandemic was to compel organizations to make use of social media and digital applications to carry out routine tasks. Consequently, the study observed that there are complications and challenges hindering the harmonic relationship between managers and their subordinates and hence investigated the determinants of proactive leadership work behaviors. Toxic leadership was found to have a significant impact on extra-role behavior, a form of proactive leader behavior in a virtual work environment.

2.3 Leadership Styles

The practice of enabling and persuading followers to achieve shared goals is known as leadership (Yukl 2012). It is crucial to encourage effective functioning of the organization (Gemeda & Lee, 2020). Leadership effectiveness is highly dependent on contextual factors such as style, traits, and behavior (Derue, Nahrgang, Wellman, & Humphrey, 2011; Van Dierendonck & Nuijten, 2011). Today's organizations need effective leaders who understand the complexities of the rapidly changing global environment. According to the Oladipo, Jamilah, Abduldaud, Jeffery, and Salami (2013) the success or failure of proper organisations, nations and other social units has been largely credited to the nature of their leadership style. There are numerous types of leadership styles with different criteria that can be factored into examining leadership styles in research studies. However, this study is focuses on three kinds of leadership styles namely; transformational, tansactional and laissez faire leadership styles

1. **Transformational Leadership:** This kind of leadership style means the leader has the capacity to create a sense of inspiration in followers, so then they are willing to 'look beyond self-interest in favor of the group's objectives by modifying their morale, ideals and values (Bruni, Cortellazzo, Bonesso, & Gerli, 2018). Four dimensions of this leadership style have emerged, and are widespread in the literature. These include inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence. The idealized influence dimension captures the followers who try to imitate the leader, and inspirational motivation relies on the leaders' ability to inspire others. Individualized consideration implies that the leader acts as a coach or mentor, while inspirational motivation relies on the leader's ability to motivate and inspire followers by providing common meaning and challenging tasks (Bruni et al., 2018; Dussault, Frenette, & Fernet, 2013).
2. **Transactional Leadership:** Transactional leadership style is a kind of leadership style that involves an exchange process (between leader and followers) that results in high adherence to the leader's demands. The transactional leadership style does not provide hope to create enthusiasm and commitment from followers (Trottier, Van Wart, & Wang, 2008). According to Thahira, Tjahjono, and Susanto (2020), transactional leadership is hinged on two things - contingent reward and management-by-exception. The leader focuses on high expectations and the ability to recognize the characteristics of achievement effectively.
3. **Laissez-faire Leadership:** Laissez faire style is a kind of leadership style characterised by the absence of effective leadership that avoids decision-making, ignores existing problems, refuses to intervene, and avoids initiative to interact with group members. The leader also avoids giving a clear direction, does not participate in the development of workers, and avoids workers' participation in and incentives (Yukl, 2012). According to Full Range Leadership theory, this style has not been considered effective because these leaders are delayed in action and decision-making, and they ignore leadership responsibilities (Yang, Li, Liang, & Zhang, 2021). Only a few studies have proven the positive outcomes of a laissez-faire leadership style (Ryan & Tipu, 2013; Yang et al., 2021).

Dussault et al. (2013) conducted a study to measure leadership style peculiar in school setting with regular criteria for leadership behaviour. Their study was conducted with a sample of principals and vice principals of schools to validate a self-report leadership questionnaire. The study validated a scale for transformational, transactional and lessiz faire leadership styles for both principals and vice principals of schools in the Province of Quebec, Canada. The scale has subscales for intellectual stimulation, individual consideration, and charisma for transformational leadership. Contingent reward, management by exception, made up the subscale for transactional leadership, and laissez-faire was

measured using direct items. In another study by Riyanto et al. (2021), a transformational leadership style was examined to determine how it affects employee performance through the mediating role of discipline. This study utilized a small sample of 116 participants from a single firm (organization). It was found that transformational leadership exerts a positive effect on employee performance above the other factors measured in the study. Transformational leadership was found to influence performance through discipline.

2.4 Leadership styles and Innovative work behaviour
In a particular study, transformational leadership has been shown to have a remarkable relationship with innovative work behavior. This study examined transformational leadership as a determinant of innovative work behaviors among R&D professionals being scientists in India in an empirical investigation (Peerzadah & Mufti, 2023). The study showed that there is a positive relationship between scientists' transformational leadership styles and innovative work behaviors. In another study conducted by Murniasih (2023) with a retail business company in Indonesia, it was shown that the proactive personality of employees mediates the relationship between transformational leadership and innovative work behaviours. The major indices for transformational leadership were idealized influence, inspirational motivation, intellectual situation, and individual consideration taken from a Multifactor Leadership Questionnaire. The study found a significant positive relationship between transformational leadership and proactive personality, between transformational leadership and innovative work behavior, and between proactive personality and innovative work behavior. The study concluded that transformational leadership fully mediates the relationship between transformational leadership and innovative work behaviours. However, this study's criteria for transformational leadership 'idealized influence' are similar to Dussault et al. 's(2013) transactional leadership criterion for teachers. Therefore, it is hypothesized that *"leadership styles will not exert any significant effect on the innovative work behaviors of teachers in Barkin-ladi"* (H_{01}).

2.5 Proactive work behaviour and Innovative work behaviour
The connection between proactive work behaviors and innovative work behaviors has been profound across the literature in that job proactivity has been considered a basic form of job innovation (Peerzadah & Mufti, 2023). To exemplify this, this study has linked proactivity to job innovativeness. In one of such studies, Nurjaman, Marta, Eliyana, Kurniasari, and Kurniasari (2019) examined the ability of job characteristics to regulate the effect of proactive behaviours and innovative work behaviours. The study sampled bank employees from Java, Indonesia, who had completed a set of survey questionnaires. Job characteristics included skill variety, task identity, tak significance, autonomy, and feedback. However, the study did not specify a specific criterion for defining innovative work behaviour and proactive personality. The findings from the study revealed that proactive behavior has a positive impact on innovative work, and job characteristics interact with proactive personality to exert the same positive effect on innovative work behaviour.

Gultom et al. (2022) tested the influence of proactive behavior on innovative work beahaviour alongside other factors, such as psychological empowerment and job characteristics. Job characteristics were examined as moderating variables, while psychological empowerment was examined as the second independent variable. This study was conducted among employees of the Indonesian Financial Services Authority (IFSA). It was found that proactive behavior had a positive effect on innovative work behaviour and was moderated by job characteristics. Li et al. (2022) examined parallel open innovation and perceived insider status in the relationship between proactive personality and innovative work behaviour. The study took her sample from an online survey of IT industries in China. Proactive personality was found to have a positive impact on innovative work behaviors and open innovativeness. Therefore, this study hypothesized that *"proactive wwork behavior will not exert a significant effect on the innovative work behaviors of teachers in Barkin-ladi"* (H_{02}).

2.6 Leadership styles and Proactive Behaviour
Leadership styles are often associated with the level of proactiveness of individual leaders in organizations. Studies on leadership styles and proactive behaviors have been consistently carried out

with employees in leadership positions of organizations, with the exception of a few that tend to infer leadership styles from the position of followers (e.g., Javed, Hassan, and Arshad (2021).

One of the studies conducted in Pakistan among followers working in the service sector proved that transformational leadership is related to proactive work behaviors (Javed et al., 2021). The study's criteria for transformational leadership were idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, while proactive work behaviors were proactive, innitiative, voice, and taking charge. Ite findings show that psychological empowerment mediates the relationship between leadership styles and proactive behavior. Thus, psychological empowerment reduces the strength of the relationship between leadership styles and proactive behavior.

Murniasih (2023) tested the role of proactive personality in transformational leadership and innovative behavior in a single retained business company. The study sample size included 177 survey responses. A positive relationship was found between transformational leadership and proactive personality. In addition, proactive personality mediates the relationship between transformational leadership and innovative work behaviour. Riyanto et al. (2021) found that behavioral attributes and reflective personality are important aspects of leadership. This characteristic of leadership appears to be related to proactive behavior. Consequently, the study hypothesized that *"leadership styles will not interact significantly with proactive work behaviors to affect the innovative work behaviors of teachers in Barkin-ladi"* (H_{03}).

3. Methodology
3.1 Design
The study is a 3×2 factorial design examining the independent variables – leadership styles (transformational, transactional, and laissez-faire) and proactive work behavior (high and low)–and the dependent variable being innovative work behavior.

3.2 Population and Sample
The researcher sought appropriate statistics for the study population from the Plateau State Ministry of Education, who reported that there were 26 private secondary schools in Barkin Ladi. The Ministry informed the researcher that the schools cumulatively had about 226 teachers, but were uncertain about the total population of teachers. Therefore, the sample for the study was drawn following the criteria for survey studies, as in Bhattacherjee (2012). The study participants were numbered. A total of 201 private secondary school teachers in the Barkin-Ladi local government of the Plateau State were selected using quota sampling. The sample represents male and female teachers with little teaching experience.

3.3 Instruments
The study first utilized a Teacher Leadership Style Scale adapted from Dussault et al. (2013), which measures the leadership styles of school principals and vice principals. It has subscales of intellectual stimulation, individual consideration, charisma (transformational leadership), contingent reward, management by exception (transactional leadership), and laissez-faire leadership. The scale consists of 21 items. A sample item of the scale is "I get students involved in the problem-solving process." It is scored on a six (6) point Liker scale ranging from "strongly disagree (1)" to "strongly agree (2)". It had a confirmatory factor between 0.52 0.84. It was shown to have a significant Cronbach between 0.45 to 0.80 for principals and between 0.92 and 0.98 for vice principals. The researcher replaced wordings on a scale that expressed leadership on staff with leadership on students. Leadership style was identified as the predominant style in teachers.

A proactive behavior scale was adopted to measure teachers' proactive work behavior. The scale was developed by Frese, Fay, Hilburger, Leng, and Tag (1997). It has two sub-levels, promotion-oriented initiative and prevention-oriented initiative, with a sample item as "I actively attack problems." It is made up of 10-items, five for each prevention-oriented and promotion-oriented innovative behavior. The scale is scored on a six (6) point Liker scale ranging from "strongly disagree (1)" to "strongly agree (2)". The scale had a Cronbach's alpha of 0.79.

The teachers' innovative work scale measured the ability of teachers to generate ideas into the teaching profession, conforming to Gkontelos et al. 's(2022) conception of idea generation as part of teachers' innovative work behavior. Idea generation was measured based on teachers' beliefs about problem solving and performance improvement, as teachers have to reorganize and classify their new ideas and address them to work-related obstacles. The Teachers' Innovative Work Behavior Scale consists of five items. A sample item is "I ask critical questions about current situations at work." The scale is scored on a six (6) point Liker scale ranging from "strongly disagree (1)" to "strongly agree (2)". It has a factor loading between 0.540 and 0.78, and a Cronbach's alpha of 0.825.

3.4 Procedure

The researcher engaged private schoolteachers in Barkin-ladi when they were on holidays and requested their consent to participate in the research by completing a set of questionnaire items. The researcher, with the help of some identified teachers who became research assistants, identified both male and female teachers with little experience in the teaching profession to ensure fair representation in the sample.
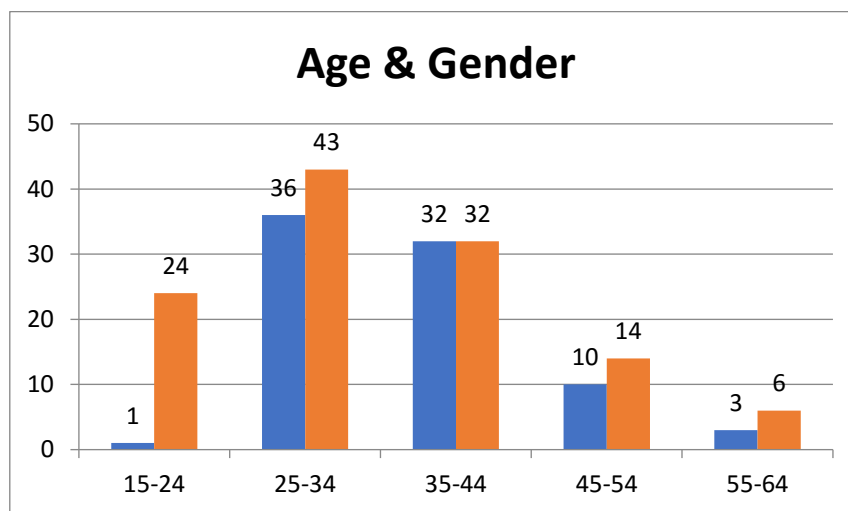
4. Result and discussions

Figure 1: Age and Gender Distribution of Teachers
Source: Demographic data collected in the study.

Figure 1 shows the Age and Gender distribution of teachers in the study, with the majority of teachers (74 –36.8%) between the ages of 25 and 34 years, of which male teachers were 36 and female teachers were 43. A minority of teachers (9 – 4.5%) were between the ages of 55 and 64 years, of which three were male and six were female. The age group of 15-24 years had 1 male teacher and 24 female teachers. Ages 35-44 had equal proportions of male and female teachers, with 32. Female teachers also outnumbered male teachers in the group with age grades of 45-54 years with male teachers being 10 while female teachers were 14.
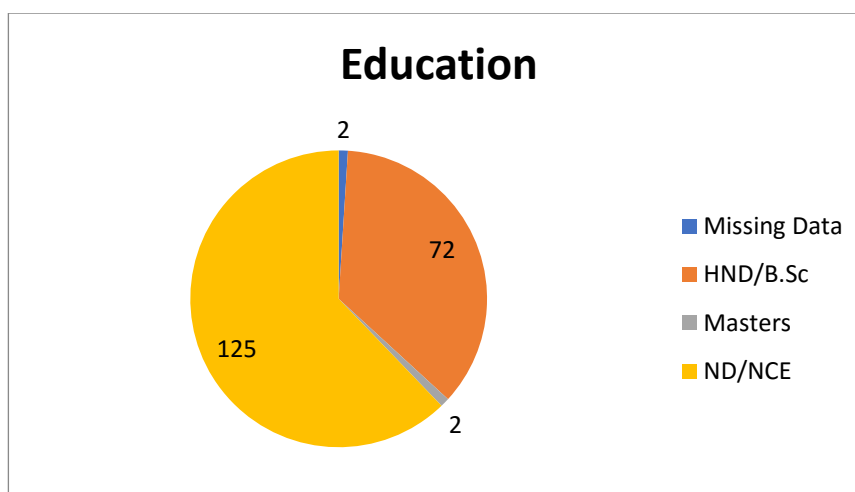
Figure 2: Educational qualification of Teachers
Source: Demographic data collected in the study.

Figure 2 shows the highest educational qualifications of the teachers sampled by the local Barkin-ladi government. Of the total population of sampled teachers in the study, 125 (62.2%) had a National Certificate in Education (NCE) or National Diploma (ND). Teachers with a Higher National Diploma (HND) in the B.Sc. (Bachelor of Sciences) were 72 (35.8%) and Teachers with Master's degree were only 2 (1%) of the study's sample. However, the study recorded two (1%) missing scores of teachers' qualifications, representing teachers who did not indicate their qualifications or failed to indicate them properly.

4.1 Test of Hypotheses
The study hypotheses were tested using two-way Analysis of Variance (ANOVA) as a Factorial ANOVA to determine the main effects of the independent variables (leadership styles and proactive behavior) on the independent variable and the interaction effects of the independent variables on the dependent variable. Results are shown on Table 2

The teachers in this study were found to exhibit the three types of leadership styles examined in the study at different proportions. Table 1 shows the descriptive statistics of the leadership styles.

Table 1. Descriptive Statistics of Leadership Styles of Teachers

Leadership Styles	Number of Teachers	Proportion leadership style	Percentage Proportion
Transformational	201	4.8097	40.02
Transactional	201	4.9444	41.14
Leissez-faire	201	2.2637	18.84

The 201 sampled teachers in the study were found to exhibit transformational, transactional, and laissez-faire leadership styles in different proportions. The most expressed leadership style in the study was the transactional leadership style (41.14%). Teachers were also shown to demonstrate transformational leadership in almost the same proportion as transactional leadership (40.02%). However, the individual teacher analysis shows that some teachers exhibit both forms of leadership styles in equal proportions (see Table 3). The least common leadership style exhibited by teachers was the laissez-faire leadership style (18.84%).

Table 2. Tests of Between-Subjects Effects on Innovative work behaviour

	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	32.393ᵃ	4	8.098	22.241	.000	.312

Intercept	1815.982	1	1815.982	4987.416	.000	.962
LeadershipStyle	3.549	2	1.774	4.873	.009	.047
ProactiveBehaviour	11.542	1	11.542	31.698	.000	.139
LeadershipStyle* ProactiveBehaviour	.538	1	.538	1.478	.226	.007
Error	71.366	196	.364			
Total	4944.480	201				
Corrected Total	103.759	200				
a. R Squared = .312 (Adjusted R Squared = .298)						

Table 2 represents the test of between-subjects effects (Two-way ANOVA) for the study variables, thereby testing the hypotheses made in the study. Table 2 shows that there is a significant main effect of teachers' leadership styles on innovative work behaviour (df = 2, 201, p=.009); hence, we reject null hypothesis one (H_{01}). Table 3 shows the mean score of leadership styles on innovative work, and Table 4 shows a comparison of the mean scores with Tukey HSD. It also shows a significant main effect of teachers' proactive work behavior on innovative work behaviour (df = 1, 201, p= .000); hence, we reject null hypothesis two (H_{02}). Table 5 shows the mean scores of proactive behavior on innovative work behaviour. There was no significant interaction effect between teacher leadership styles and proactive behavior on innovative work behaviour (df = 1, 201, p= .226). Therefore, we accept null hypothesis three (H_{03}).

Table 3. Mean Score Leadership Styles on Innovative Behaviour

Leadership Style	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Transformational	4.438	.071	4.297	4.579
Transform/Transaction	5.040[a]	.156	4.733	5.347
Transactional	4.821	.100	4.623	5.018

In Table 3, three (3) forms of leadership style were found among the teachers. These are transformational leadership styles with a lease mean on innovative work behavior (4.438), transactional leadership style with a mean score on innovative work behavior of 4.821, and transformational/transactional leadership style, which produced the highest mean score on innovative work behavior (5.040).

Table 4. Tukey HSD comparing mean differences on leadership styles

(I) LeadershipStyle	(J) LeadershipStyle	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Transform	Transf/Transac	-.5508[*]	.17086	.004	-.9543	-.1473
	Transact	-.6769[*]	.09040	.000	-.8904	-.4634
Transf/Transac	Transform	.5508[*]	.17086	.004	.1473	.9543
	Transact	-.1261	.16591	.728	-.5179	.2657
Transact	Transform	.6769[*]	.09040	.000	.4634	.8904
	Transf/Transac	.1261	.16591	.728	-.2657	.5179

Based on observed means; Tukey HSD
The error term is the Mean Square(error) = .364.
*. The mean difference was significant at the .05 level.

Table 4 compares the means of the significant differences found between leadership styles on innovative behaviors. This shows that the means of leadership were significantly different for innovative behavior, except for transactional leadership and transformational/transactional leadership (p=.728).

Table 5. Mean score proactive behaviour on innovative work behaviour

Proactive Behaviour	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
High	4.997	.063	4.872	5.122
Low	4.283[a]	.110	4.066	4.501

Table 5 shows the mean score of teachers' proactive behavior on innovative behavior to further explain the significant effect of proactive behavior on innovative work behaviour. This shows that teachers with high proactive behavior scored higher on innovative work behaviour (4.997) than teachers with low proactive behavior (4.283).

The first findings of the study revealed that leadership style has a significant effect on innovative work behaviour. This implies that the type of leadership style applied determines the level of teachers' innovative work behavior. Three levels of leadership styles were examined: the predominant leadership style of the teachers. This includes transactional, transformational, and transactional and transformational leadership styles. The findings, as seen in Table 4, reveal that the significant difference lies between transactional and transformational leadership, which later produces more innovative work behaviors than transformational/transactional and transformational leadership, where the former produces more innovative work behaviors. There is no difference between those who apply transactional leadership and transformational/transactional leadership in equal proportions. This finding supports other studies, such as Khan (2021), who found a strong positive relationship between transactional and transformational leadership and innovative work behavior. It also supports Peerzadah and Mufti's (2023) finding that transformational leadership has a significant positive effect on innovative work behaviour.

The second finding of the study showed that proactive behavior has a significant effect on teachers' innovative work behavior. This implies that teachers who engage in proactive behavior at work tend to engage in innovative work behaviors. The comparison of mean scores shows that those with higher proactive behaviors scored more on innovative work behaviours than those with lower proactive behaviors. This finding supports Gultom et al. (2022), who found proactive behavior to affect innovative work behavior in Indonesian financial firms.

The study showed that leadership styles and proactive behavior do not significantly interact to affect teachers' innovative work behavior. Although leadership styles and proactive behavior individually affected teachers' innovative work behavior, they did not significantly interact to affect their innovative work behavior. This supports previous studies that linked leadership styles to proactive work behavior through a mediator (e.g., (Javed et al., 2021), thus limiting the possibility of interactions.

5. Conclusion
5.1 Conclusion
This study has shown that the application of transactional and transformational leadership styles by teachers can effectively lead to innovative work behavior. However, the application of both leadership styles by teachers evokes more innovative work behaviors. In addition, the study has shown that highly proactive behaviors lead to higher innovative work behaviors of teachers. Leadership styles and proactive behavior can individually lead to high levels of innovative work, but both factors do not interact to determine the innovative work behaviours of teachers.

5.2 Limitation
This study has a limitation in terms of sample size and sampling technique, in which non-random sampling was applied. This is because the study population was unknown. Furthermore, the leadership styles examined were grouped and examined as transformational and transactional, which could be further broken down into other leadership styles.

5.3 Suggestion

It is therefore suggested that secondary school teachers in Barkin-ladi L.G.A apply a blend of transformational and transactional leadership styles in leading their class to provoke innovative work teaching behavior. Other factors that may stimulate creativity and innovation among private schoolteachers are also recommended. The Management of private schools can also support teachers' innovation by providing qualitative mentorship and training programs for teachers to apply transactional and transformational leadership styles.

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