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The Relationship between Deans' Instructional Leadership, Lecturers' Collective Efficacy, and Students' Achievement in Higher Education: A Conceptual Framework

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Abstract
The present study introduces a conceptual framework illustrating how deans' leadership can influence students' educational outcomes within vocational education by leveraging the collective efficacy of lecturers. Rooted in social cognitive theory, this framework underscores the pivotal role of social influences in shaping individuals' attitudes and behaviours. It posits that deans' instructional leadership has the potential to strengthen lecturers' shared beliefs, thereby enhancing students' learning capabilities and academic performance. The framework further suggests that such leadership may

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affect academic success through multiple mechanisms, including the cultivation of a conducive learning environment, the promotion of student engagement, and the encouragement of educational self-regulation. Overall, it highlights the significance of instructional leadership within the context of learning and higher education, advocating for the empowerment and sustained support of educators.

Keywords: Instructional Leadership, Collective Efficacy, Students' Achievement, Conceptual Framework

Introduction

Higher vocational education (HVE) constitutes a vital component of higher education, with a specific focus on fostering local and national economic advancement (Yang, 2022). Higher vocational colleges (HVCs) are instrumental in delivering HVE, with their primary aim being to equip students with the requisite skills and qualifications for the labour market (Lin & Xie, 2019). Within both higher education institutions (HEIs) and HVCs, student achievement is a paramount concern, as these institutions aspire to develop individuals who can function effectively as global citizens (Shields, 2017). Despite its significance, the relationship between leadership and student achievement remains intricate and inconclusive in empirical literature (Özdemir & Yalçın, 2019). Nonetheless, extant research offers valuable insights that encourage continued scholarly inquiry into this nexus.

In recent years, instructional leadership has garnered considerable attention in educational leadership discourse, emerging as a dominant paradigm in the 21st century. This development has been catalysed by education reforms driven by a global emphasis on student learning, accountability, and the effects of globalisation (Hallinger, 2010; Zheng, 2024). Instructional leadership refers to leadership behaviours that prioritise the enhancement of teaching and learning outcomes, relegating administrative functions to a secondary role (Shaked, 2020). As a result, this leadership model is frequently described as "leadership for learning" Effective leadership within educational institutions necessitates consideration of various environmental variables that influence student performance. Karadag (2020) delineates three core attributes of effective educational leaders: direct engagement in student learning, systematic assessment of teaching practices and learning processes, and the cultivation of a supportive institutional climate for both staff and students. These attributes illustrate that leaders in educational settings perform multifaceted roles—educator, evaluator, and climate architect—with a unified objective of guiding others towards institutional success (Chipunza & Matsumunyane, 2018).

The position of faculty dean plays a pivotal role in shaping the direction and performance of academic staff and students alike in pursuit of institutional goals. Faculty deans in HVCs occupy senior management roles akin to those of vice-chancellors and actively participate in governance and decision-making (Chipunza &

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Matsumunyane, 2018). Each faculty operates with distinct aims aligned with its academic discipline, necessitating professional judgement and decision-making from its leadership. Although a centralised governance model may not suffice alone, it does not negate the importance of coordinated leadership. Faculty deans are still responsible for guiding, administering, and reforming their faculties in line with institutional strategic plans, quality assurance benchmarks, and performance indicators (Caverzagie et al., 2018).

Thus, the role of faculty deans encompasses providing leadership to academic staff, thereby facilitating the attainment of institutional objectives—particularly enhancing student academic performance. While learning is ultimately an individual pursuit, it is significantly shaped by contextual factors such as leadership quality, institutional climate, and instructional practices. Yet, the link between leadership and student achievement remains complex and lacks definitive empirical resolution (Özdemir & Yalçın, 2019). Hence, exploring mediating variables—such as the role of lecturers or the educational environment—that bridge leadership and student achievement becomes essential. This study proposes a conceptual framework aimed at elucidating how deans' instructional leadership may influence both academic staff and student outcomes.

Literature Review

Theory of Instructional Leadership

This theoretical framework exerts considerable influence on effective school administration, pedagogical strategies, and student academic outcomes (Harris et al., 2019; Kabeta et al., 2015; Walker & Qian, 2022). The notion of instructional leadership was initially conceptualised by Shaked (2024). Since the 1970s, school leaders have been recognised for their contributions to fostering academically effective and continuously improving learning environments (Culduz, 2024; Harris et al., 2019). The primary aim of leadership within educational settings is to elevate academic achievement by enhancing students' knowledge, refining their learning competencies, and cultivating a scholarly culture that encourages enthusiasm for learning, intellectual curiosity, and inquisitiveness (Culduz, 2024). Over the years, the interpretation of instructional leadership has transitioned from a narrow to a more comprehensive perspective. Emerging during the 1980s (Irungu, 2020), its early, exclusive form was largely associated with school principals who focused primarily on setting educational goals, supervising instruction, and overseeing teaching processes—activities that indirectly influenced student performance. However, this sequential, top-down approach often conflicted with more participatory models that gained traction during the same period, such as school decentralisation and professional empowerment (Lisene, 2024). Critics of the traditional model contended that a universal and all-encompassing theory of leadership was impractical,

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particularly as principals are expected to perform diverse roles that go beyond academic leadership (Rautakivi & Yolles, 2024).

Subsequent research led to the development of a more inclusive interpretation of instructional leadership, often referred to as shared or distributed leadership. This model extends leadership responsibilities beyond school principals to include other staff members, such as department heads and teachers. It is characterised by a collective commitment to strengthening teaching quality and coherence in pedagogical practices to facilitate effective learning outcomes (Harris et al., 2019). Within this framework, instructional leadership involves not only academic tasks but also managerial responsibilities, including the articulation of academic goals, evaluation of instructional strategies, curriculum design, recruitment and support of high-quality educators, and the strategic allocation of resources to support classroom instruction (Hou et al., 2019; Walker & Qian, 2022).

Neglecting the managerial competencies associated with educational leadership results in a limited understanding and suboptimal implementation of leadership roles, often causing role ambiguity among school leaders and diminishing their capacity to influence student achievement. Ultimately, the leadership behaviours demonstrated by school administrators exert both direct and indirect effects on teaching and learning. These behaviours encompass activities such as classroom instruction and observation, as well as the broader educational environment, including school culture, curriculum alignment, and pedagogical methodologies. One of the most widely adopted theoretical models in instructional leadership is the Principal Instructional Management Rating Scale (PIMRS), which originated in the United States. This model comprises three core domains: defining the educational institution's mission, overseeing the instructional programme, and fostering a supportive and effective learning environment. These dimensions are further delineated into ten specific functions of instructional leadership (refer to Figure 1).

According to (Hallinger, 2010), academic personnel are primarily responsible for executing the routine educational operations within schools. Consequently, the leadership dimension should not be confined to senior leaders, such as principals, but must also encompass their role in facilitating, communicating, and effectively implementing the school's mission (Sony & Naik, 2020). To proficiently manage instructional leadership programmes, several core responsibilities must be acknowledged. These include the evaluation and supervision of teaching practices, curriculum coordination, and monitoring student progress. Such responsibilities necessitate collaboration with teaching staff and a concentrated effort on advancing instructional quality and curriculum development. Through the execution of these duties, instructional leaders can instigate a continuous cycle of educational enhancement. For instructional goals to be effectively translated into classroom practice, leaders must actively engage in supporting and observing instructional

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delivery. This involves guiding and assessing classroom practices.

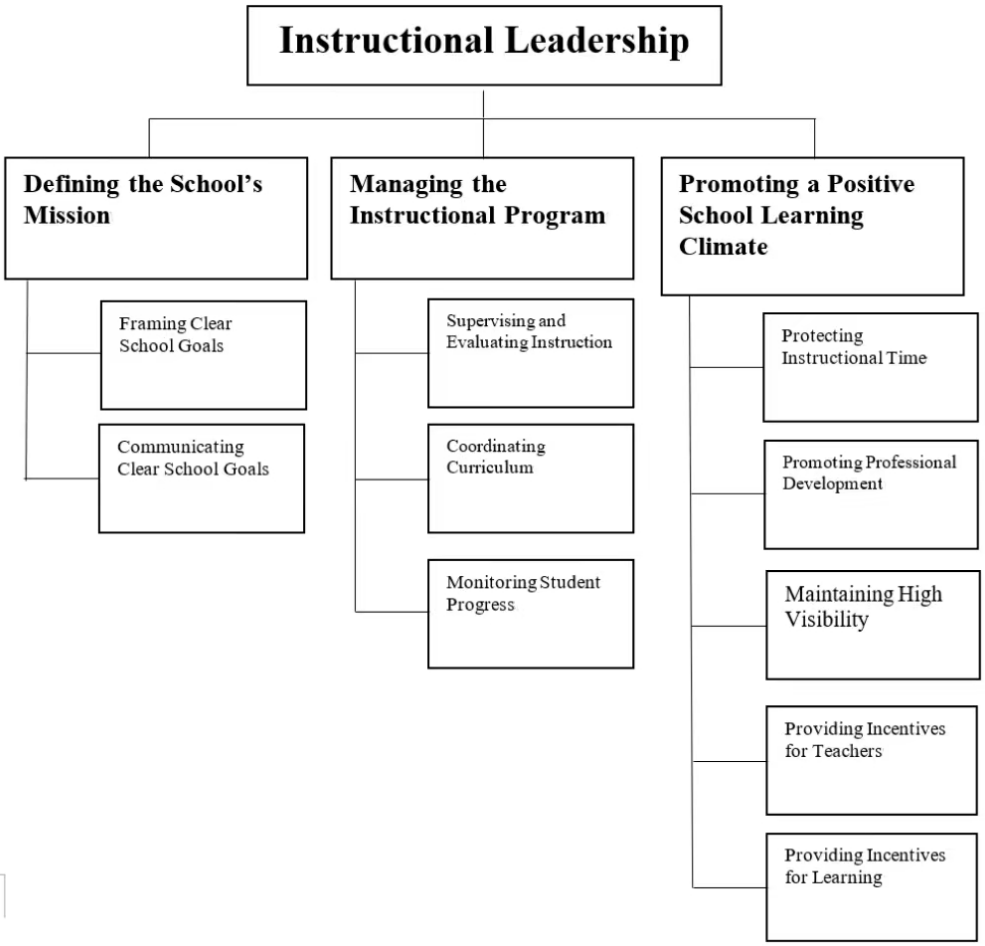

Figure 1: The PIMRS Model (Wei et al., 2018).

The curriculum planning function requires instructional leaders to work collaboratively with academic staff to identify challenges in pedagogy and curriculum by examining content and empirical outcomes. Additionally, leaders ensure curriculum consistency across year levels. These responsibilities were clearly outlined in investigations (Ndweni 2020). Monitoring student progress enables leaders to detect strengths and deficiencies in both student achievement and curricular design, through the analysis of assessment data. Instructional leaders can then collaborate with academic staff to develop actionable solutions that refine goal-setting, curriculum evaluation, instructional quality, and progress tracking. School leaders are expected to cultivate a positive learning culture that upholds high standards, continuous learning, and school improvement. This may involve the establishment of reward systems that are aligned with the school's mission and operational practices. Policies that safeguard instructional time should also be enforced, including the minimisation of disruptions such as public announcements, tardy arrivals, and administrative interruptions. Moreover, professional development initiatives should be promoted and aligned with the school's educational objectives, thereby enhancing both teaching practices and learning outcomes. Maintaining a visible leadership

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presence within the school can further improve student behaviour and classroom instruction. Lastly, incentivising teachers in accordance with school objectives reinforces the connection between performance and institutional goals, thereby amplifying the benefits of improved classroom management and instructional effectiveness.

Two significant reviews on instructional leadership in Malaysia were conducted in 2018. The first, undertaken by Harris et al. (2019), examined 17 studies. Of these, 12 employed a traditional definition of instructional leadership, two used the Outline model, and the remaining three adopted broader interpretations that considered leadership behaviours and practices impacting teacher efficacy and student learning. Notably, only four of these studies employed the PIMRS instrument for data collection. These findings suggest that the body of research on instructional leadership in Malaysia remains in a developmental phase. The second review, carried out by Volk and Zerfass (2020), found that a substantial number of Malaysian studies adopted the PIMRS framework, accounting for approximately 25% of global PIMRS research. However, despite Malaysia being second only to the USA in the number of PIMRS-related studies, its overall contribution to the international discourse on instructional leadership required refinement. Specifically, 73% of the 88 studies analysed were conducted to fulfil academic degree requirements, such as Master of Education theses. Of these, only 13 were formally published, and just three met the criteria for high-quality academic articles.

Most Malaysian studies approached instructional leadership as a singular concept or in relation to only one other variable, resulting in rudimentary conceptual models and reliance on basic statistical analyses, such as bivariate tests. This limited both the theoretical and methodological rigour of the research, restricting its contribution to local and global understanding of instructional leadership and PIMRS frameworks. Further, Malaysian research on instructional leadership exhibited a lack of consistent findings. While prominent constructs such as teacher performance, school climate, and educational outcomes featured prominently in international PIMRS research, they were underrepresented in the Malaysian context. Even studies that utilised more sophisticated methodologies—such as mediation models, multiple regression, and SEM—produced results that lacked consistency both within Malaysia and when compared with global findings.

Teacher's Self-Efficacy Model

The notion of self-efficacy, a psychological construct introduced by Sabouripour et al. (2021), pertains to an individual's confidence in their capacity to effectively perform the behaviours required to attain desired outcomes. It is imperative to highlight that self-efficacy does not measure actual competence in achieving specific objectives; rather, it reflects an individual's belief in their capabilities. Initially, teacher efficacy was conceived as a distinct form of self-efficacy applicable exclusively to educators. It

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was posited that teacher efficacy represents instructors' beliefs in their level of competence, formed through cognitive evaluation of their prior experiences. Given the contextual nature of teacher efficacy, a comprehensive model must also consider the collective dimension. The collective teacher efficacy model—based on a two-component structure—maintains its roots in social cognitive theory. Collective teacher efficacy serves as a distinguishing characteristic of educational institutions, separating schools from other settings such as homes and communities (Donohoo, 2018). Elevated collective efficacy levels enhance teachers' motivation and persistence, fostering a robust sense of commitment and shared responsibility towards academic success. Educators assess what constitutes effective teaching in their context, recognise potential obstacles, and examine the adequacy of available resources to meet desired goals.

The assessment of teaching competence involves a judgement of the faculty's collective capability to meet instructional objectives. This includes educators' perceptions of their colleagues' competence in promoting student learning and overcoming contextual barriers. These evaluations provide essential insights into the school's overall teaching quality. Notably, both components aim to assess a school's potential to facilitate student achievement. However, their interplay forms the construct of collective teacher efficacy. The model encompasses both positively and negatively phrased items, resulting in four categories: positive and negative task analysis, and positive and negative competence assessments. In contrast, Gibson and Dembo's model utilises both positive and negative items but focuses on a singular dimension.

In the context of Chinese higher education, Chang et al. (2011) introduced the Faculty Teaching Efficacy (FTE) model, rooted in Bandura's social cognitive and self-efficacy theories. The FTE model comprises six dimensions: course design, instructional strategies, use of technology, classroom management, interpersonal relationships, and learning assessment. The accompanying FTE questionnaire includes 28 items measured on a four-point Likert scale. Van Breda (2018) advanced the Responsibility for Student Achievement (RSA) model, grounded in Weiner's attribution theory. The RSA model explores teachers' internalised beliefs regarding their responsibility for student success or failure, in conjunction with external influences beyond their control. His findings revealed a significant positive relationship between teacher efficacy and the sense of responsibility for student outcomes, suggesting that educators who internalise responsibility for classroom performance exhibit greater motivation and resilience when working with students.

In the domain of Higher Vocational Education (HVE), Getahun (2022) identified several determinants of students' academic achievement. These include demographic characteristics, academic factors, satisfaction levels, and even stimulant usage. Furthermore, Wulansari and Kyaw (2022) examined the impact of formative

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assessment on student performance in HVE. Their results indicated that formative assessment, when accompanied by active feedback, significantly enhanced student achievement, thereby emphasising the importance of educators' positive attitudes during the learning process. While these studies offer valuable insights into student achievement in HVE, they do not fully encapsulate the unique objectives of HVCs, which focus on developing work-ready graduates. The emphasis on theoretical learning typical of traditional HEIs may hinder the competitiveness of HVC graduates, who primarily receive academic rather than practical training. Accordingly, further research is warranted to address the distinctive context and objectives of HVCs.

Instructional Leadership and Collective Teacher Efficacy

Numerous empirical studies conducted internationally have provided robust evidence supporting a positive and significant relationship between instructional leadership and collective teacher efficacy. For instance, Al-Mahdy et al. (2018), in their investigation within the Omani context, identified a strong and statistically significant impact of instructional leadership on collective teacher efficacy, reporting a correlation coefficient of 0.61 at a significance level of 0.01. Similarly, Thien (2018) observed a positive and significant influence of instructional leadership on collective teacher efficacy in Malaysia, noting a correlation coefficient of 0.578 at a 0.05 significance level. Furthermore, Fleuren et al. (2010) documented a moderate yet statistically significant positive relationship between these variables, with a correlation coefficient of 0.56 at a 0.05 significance level. They also emphasised the necessity for further in-depth inquiry to gain a more comprehensive understanding of the influence of instructional leadership on collective teacher efficacy. This call for further exploration was echoed by Qadach et al. (2020a), who arrived at a similar conclusion with a correlation coefficient of 0.56 at a 0.001 significance level, recommending further research to uncover the nuanced dynamics of the relationship between instructional leadership and collective teacher efficacy.

Subsequent studies have reiterated the importance of further investigation into this relationship. For instance, Cansoy and Parlar (2018) reached a comparable conclusion, albeit within a broader educational context encompassing primary, middle, and secondary school settings. However, their assessment of principals' instructional behaviours was confined to a single facet of school leadership, employing the Effective School Leadership Scale instead of more specialised instruments such as the PIMRS. Consequently, their conclusions regarding the linkage between instructional leadership and collective teacher efficacy lack specificity due to the absence of detailed metrics. In contrast, a comprehensive meta-analysis conducted by Samaniego (2024) produced more robust findings. Based on these outcomes, Samaniego (2024) concluded that instructional leadership plays a pivotal role in enhancing collective teacher efficacy. Nevertheless, it is essential to highlight that, as a meta-analytic study

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synthesising existing literature, it did not provide a detailed examination of how particular dimensions of instructional leadership contribute to collective teacher efficacy.

H1: Instructional leadership is positively associated with collective teacher efficacy.

Instructional Leadership and Student Achievement

Chen et al. (2022) examined the relationship between instructional and transformational leadership and their impact on Grade 7 student achievement in Germany and China, focusing on areas such as collaborative problem-solving, mathematics, science, and reading. In Germany, 41.3% of school leaders identified as instructional leaders compared to 61.4% in China (Chen et al., 2022). While collaborative problem-solving was highest in Germany, mathematics led in China, suggesting differing national priorities despite the presence of instructional leadership in both contexts (Chen et al., 2022). Chen et al. (2022) attributed the greater prevalence of instructional leadership in China to the hierarchical nature of its education system, where decision-making originates from central authorities, thereby aligning school leaders' responsibilities more with implementation than strategic direction. Consequently, instructional leadership may be more effective within the Chinese system. Nevertheless, Karadag (2020) noted ongoing debate over whether school leadership directly or indirectly influences student achievement. Moreover, some studies e.g., Yalçın and Çoban (2023) found no significant positive correlation between leadership and student outcomes.

H2: Instructional leadership is positively associated with student achievement.

Collective Teacher Efficacy and Student Achievement

Empirical evidence shows collective teacher efficacy strongly predicts student achievement, surpassing socioeconomic status (Ciochina, 2024; Donohoo, 2018; Donohoo & Katz, 2017; Hoogsteen, 2020; Qadach et al., 2020a). The prevailing theory posits that high collective efficacy fosters elevated expectations, motivating teachers to enhance student outcomes (Donohoo & Katz, 2017). However, scholars such as Hoogsteen (2020) have questioned this, noting a recent shift in focus towards identifying the sources of teacher efficacy rather than its effects. An investigation by Bozkurt et al. (2021) revealed a moderate, positive, and statistically significant relationship between collective teacher efficacy and student achievement, particularly in mathematics and science. The authors attributed this finding to the collaborative practices and mutual support among educators, which effectively mitigated students' academic deficiencies (Bozkurt et al., 2021). Similarly, Qadach et al. (2020b) identified collective teacher efficacy as the strongest predictor of student achievement in mathematics and science, surpassing other factors such as job satisfaction. This outcome aligns with the conclusions drawn by Williams (2024), who also identified

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collective teacher efficacy as the most influential determinant of student achievement, outperforming variables such as teacher commitment and interpersonal trust.

In addition, Avci (2024) , employing hierarchical linear modelling, determined that a one-unit increase in collective teacher efficacy corresponded to an 8.16-point improvement in student grade point average (GPA) scores. Recent empirical inquiries have expanded the scope of investigation by examining collective teacher efficacy within higher education contexts. For instance, Abedini et al. (2018) proposed a collective teacher efficacy model tailored specifically to English Language Teaching (ELT) environments, thereby extending the concept from school settings to tertiary institutions. Their four-factor model encompassed dimensions such as "efficacy in collaboration with colleagues," "efficacy in decision-making," "efficacy in instruction," and "disciplinary and coping efficacy" (Abedini et al., 2018). The reviewed literature consistently supports the notion that collective teacher efficacy serves as a robust predictor of student achievement. Nevertheless, it is important to highlight that most studies have concentrated on traditional academic metrics—such as subject-specific performance or GPA scores—within primary and secondary education contexts. Given that student achievement encompasses broader dimensions, particularly in post-secondary education, future research should investigate whether collective teacher efficacy remains a significant determinant of alternative forms of academic success across diverse educational environments.

H3: Collective teacher efficacy is positively related to student achievement.

Collective Teacher Efficacy as a Mediator between Instructional Leadership and Student Achievement

Given the above rationale, the relationship between instructional leadership and student achievement is more likely indirect, as instructional leaders primarily influence teachers through interpersonal interactions aimed at enhancing student outcomes (Apkarian & Rasmussen, 2021; Glickman et al., 2009; Shaked, 2020). Several mediating factors have been identified in this relationship, including instructional climate, school safety, student engagement (Özdemir & Yalçın, 2019), teacher citizenship, teacher task performance (Karakose et al., 2024), and academic culture (Liu et al., 2022). This section focuses on the mediating role of collective teacher efficacy. Goddard et al. (2021) found that collective teacher efficacy mediates the link between instructional leadership and student achievement, with direct relationships observed between all variables. However, as the study focused on principals' efficacy beliefs, the mechanisms through which specific leadership practices influence this mediation remain unclear. Bozkurt et al. (2021) found that 54% of the variance in student achievement was explained by school culture, principals' instructional leadership, and collective teacher efficacy. While mediation was not directly tested, the findings support the potential mediating role of collective teacher efficacy in this relationship.

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H4: Collective teacher efficacy mediates the relationship between instructional leadership and student achievement.

Figure 2 illustrates that leadership in isolation may not exert a substantial influence on student achievement. However, the collective teacher efficacy emerging from effective leadership may reflect the impact of a dean's instructional leadership on academic staff. Ultimately, the practice of instructional leadership and the strengthening of collective teacher efficacy are directed towards enhancing student achievement.

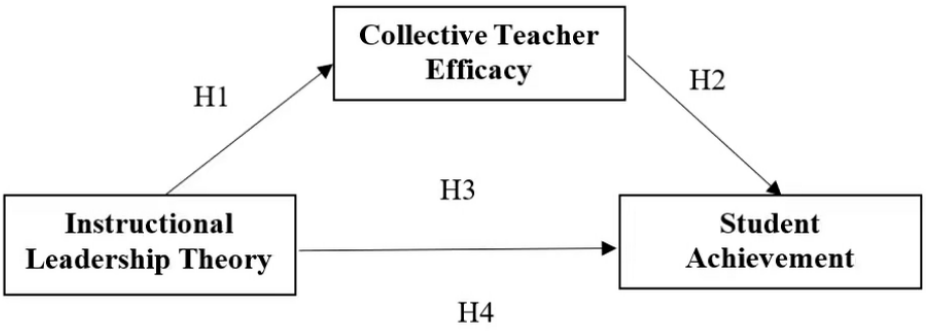

Figure 2: Proposed Conceptual Framework of the Study

Discussion

The interplay between instructional leadership, collective teacher efficacy, and student achievement can be explained through three key aspects. Firstly, instructional leaders primarily shape teacher practices via interpersonal engagement, aiming to enhance learner outcomes (Apkarian & Rasmussen, 2021; Glickman et al., 2009; Shaked, 2020), though findings on direct effects remain mixed (Özdemir & Yalçın, 2019). Hence, this study suggests that collective teacher efficacy serves as a mediator between deans' leadership and student success. Secondly, leadership fosters teacher efficacy through role-modelling—offering vicarious experiences and verbal reinforcement—which strengthens belief in teaching competence and indirectly benefits student learning Fei (2022) . Leaders also facilitate professional collaboration and promote shared instructional goals, reinforcing a cohesive school culture Nadeem (2024). Finally, collective teacher efficacy, or the shared confidence in influencing student learning, significantly predicts academic achievement (Donohoo, 2018; Donohoo et al., 2020). A strong sense of team identity leads teachers to collaborate on instruction and student support, ultimately enhancing outcomes (Donohoo, 2018; Qadach et al., 2020a).

In summary, the correlation among instructional leadership, collective teacher efficacy, and student achievement highlights the impact of educational leadership on improving teaching and learning outcomes. Instructional leadership enhances teacher collaboration by reinforcing confidence in collective teacher efficacy (Qadach et al.,

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2020a), hence advancing school effectiveness in facilitating student academic achievement. The mediating function of collective teacher efficacy underscores the significance of instructional leadership in fostering a supportive and collaborative atmosphere that improves student achievement within HVCs.

Significance and Conclusion

This study explores the role of collective teacher efficacy as a mediator between deans' instructional leadership and student achievement. Collective teacher efficacy refers to teachers' shared belief in their ability to collaborate and achieve desired outcomes. It is a key indicator of school effectiveness, as it reflects staff confidence in their collective ability to improve student results. High levels of collective teacher efficacy enhance teacher motivation, commitment, and responsibility, leading to higher expectations and improved student achievement. Instructional leadership has been widely studied in education, with leaders fostering effective teaching and learning practices through role modelling, support, and collaboration. This research aims to deepen understanding of instructional leadership by examining collective teacher efficacy's role in enhancing student success. By fostering a supportive, collaborative environment within HVCs, educational leaders can improve academic outcomes. The study's findings could inform educational policies and practices, contributing to the enhancement of teaching and learning in HVCs.

Conflict of Interest

"The authors declare that there exists no competing financial interest or personal relationships that could have appeared to influence the work reported in this paper."

References

Abedini, F., Bagheri, M. S., Sadighi, F., & Yarmohammadi, L. (2018). The constituent elements of collective teacher efficacy beliefs and their contributing factors in different ELT educational contexts: A qualitative study. *Cogent Social Sciences*, *4*(1), 1-18. https://doi.org/10.1080/23311886.2018.1500768

Al-Mahdy, Y. F. H., Emam, M. M., & Hallinger, P. (2018). Assessing the contribution of principal instructional leadership and collective teacher efficacy to teacher commitment in Oman. *Teaching and Teacher Education*, *69*, 191-201. https://doi.org/10.1016/j.tate.2017.10.007

Apkarian, N., & Rasmussen, C. (2021). Instructional leadership structures across five university departments. *Higher Education*, *81*(4), 865-887. https://doi.org/10.1007/s10734-020-00583-6

Avci, H. (2024). A Multilevel Analysis of Factors Associated with Secondary School Teachers' Perceived Digital Competence. Proceedings of the 18th International Conference of the Learning Sciences-ICLS 2024, pp. 27-34, https://doi.org/10.22318/icls2024.465996

International Journal of Instructional Cases
ISSN: 2399-830x

Bozkurt, S., Coban, O., Ozdemir, M., & Ozdemir, N. (2021). How Leadership, School Culture, Collective Efficacy, Academic Self-Efficacy, and Socioeconomic Status Affect Student Achievement. *Egitim ve Bilim*, *46*(207), 465-482. https://doi.org/10.15390/EB.2021.9338

Cansoy, R., & Parlar, H. (2018). Examining the relationship between school principals' instructional leadership behaviors, teacher self-efficacy, and collective teacher efficacy. *International Journal of Educational Management*, *32*(4), 550-567. https://doi.org/10.1108/IJEM-04-2017-0089

Caverzagie, K. J., Lane, S. W., Sharma, N., Donnelly, J., Jaeger, J. R., Laird-Fick, H., Moriarty, J. P., Moyer, D. V., Wallach, S. L., Wardrop, R. M., & Steinmann, A. F. (2018). Proposed performance-based metrics for the future funding of graduate medical education: Starting the conversation. *Academic Medicine*, *93*(7), 1002-1013. https://doi.org/10.1097/ACM.0000000000002096

Chang, T. S., Lin, H. H., & Song, M. M. (2011). University faculty members' perceptions of their teaching efficacy. *Innovations in Education and Teaching International*, *48*(1), 49-60. https://doi.org/10.1080/14703297.2010.543770

Chen, D., Ning, B., & Bos, W. (2022). Relationship between Principal Leadership Style and Student Achievement: A Comparative Study between Germany and China. *SAGE Open*, *12*(2). https://doi.org/10.1177/21582440221094601

Chipunza, C., & Matsumunyane, L. L. (2018). Motivation sources and leadership styles among middle managers at a South African university. *SA Journal of Human Resource Management*, *16*(1), 1-13. https://doi.org/10.4102/sajhrm.v16i0.985

Ciochina, N. A. (2024). *Collective Teacher Efficacy: Is It the Key to Teacher Retention?* [Doctoral dissertation, Indiana Wesleyan University]. https://www.proquest.com/openview/187cfa5c06aa44de028f855ac55249b8/1?cbl=18750&diss=y&pq-origsite=gscholar

Culduz, M. (2024). The impact of educational leadership in improving the learning experience. Promoting Crisis Management and Creative Problem-Solving Skills in Educational Leadership. In (pp. 168-189). IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-6684-8332-9.ch008

Donohoo, J. (2018). Collective teacher efficacy research: Productive patterns of behaviour and other positive consequences. *Journal of Educational Change*, *19*(3), 323-345. https://doi.org/10.1007/s10833-018-9319-2

Donohoo, J., & Katz, S. (2017). When teachers believe, students achieve. *The Learning Professional*, *38*(6), 20-27. https://www.proquest.com/openview/f6a1f78f5732e03d80e434558701c2d6/1?pq-origsite=gscholar&cbl=47961

Donohoo, J., O'Leary, T., & Hattie, J. (2020). The design and validation of the enabling conditions for collective teacher efficacy scale (EC-CTES). *Journal of Professional Capital and Community*, *5*(2), 147-166. https://doi.org/10.1108/JPCC-08-2019-0020

International Journal of Instructional Cases
ISSN: 2399-830x

Fei, Y. (2022). The Essential of Self-Efficacy in Transformational Leadership for Elementary Schools in China. *Journal of Digitainability, Realism & Mastery (DREAM)*, *1*(05), 31-41. https://doi.org/10.56982/dream.v1i05.48

Fleuren, J. F., Voerman, G. E., Erren-Wolters, C. V., Snoek, G. J., Rietman, J. S., Hermens, H. J., & Nene, A. V. (2010). Stop using the Ashworth Scale for the assessment of spasticity. *Journal of Neurology, Neurosurgery & Psychiatry*, *81*(1), 46-52. https://doi.org/10.1136/jnnp.2009.177071

Getahun, K. A. (2022). A Bayesian Approach to Investigating Factors Influencing Polytechnic College Students' Academic Achievement. *Education Research International*, *2022*, 1-10. https://doi.org/10.1155/2022/6181800

Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (2009). *Supervision and instructional leadership: A developmental approach*. Pearson.

Goddard, R. D., Bailes, L. P., & Kim, M. (2021). Principal Efficacy Beliefs for Instructional Leadership and their Relation to Teachers' Sense of Collective Efficacy and Student Achievement. *Leadership and Policy in Schools*, *20*(3), 472-493. https://doi.org/10.1080/15700763.2019.1696369

Hallinger, P. (2010). Developing Instructional Leadership. In B. Davies & M. Brundrett (Eds.), *Developing Successful Leadership* (pp. 61-76). Springer Netherlands. https://doi.org/10.1007/978-90-481-9106-2_5

Harris, A., Jones, M., Adams, D., & Cheah, K. (2019). Instructional leadership in Malaysia: a review of the contemporary literature*. *School Leadership and Management*, *39*(1), 76-95. https://doi.org/10.1080/13632434.2018.1453794

Hoogsteen, T. J. (2020). Collective efficacy: toward a new narrative of its development and role in achievement. *Palgrave Communications*, *6*(1), 1-7. https://doi.org/10.1057/s41599-019-0381-z

Hou, Y., Cui, Y., & Zhang, D. (2019). Impact of instructional leadership on high school student academic achievement in China. *Asia Pacific Education Review*, *20*(4), 543-558. https://doi.org/10.1007/s12564-019-09574-4

Irungu, C. M. (2020). *Influence of principals' instructional leadership practices on learners' performance in secondary schools in Murang'a and Kirinyaga Counties, Kenya* [Doctoral dissertation, Karatina University]. https://karuspace.karu.ac.ke/handle/20.500.12092/2489

Kabeta, R. M., Manchishi, P., & Akakandelwa, A. (2015). Instructional leadership and its effect on the teaching and learning process: The case of head teachers in selected Basic Schools in the Central Province of Zambia. *International Journal of Science and Research*, *4*(4), 1876-1884. https://www.ijsr.net/getabstract.php?paperid=SUB153255

Karadag, E. (2020). The effect of educational leadership on students' achievement: a cross-cultural meta-analysis research on studies between 2008 and 2018. *Asia Pacific Education Review*, *21*(1), 49-64. https://doi.org/10.1007/s12564-019-09612-1

Karakose, T., Kardas, A., Kanadlı, S., Tülübaş, T., & Yildirim, B. (2024). How Collective Efficacy Mediates the Association between Principal Instructional Leadership and Teacher Self-Efficacy: Findings from a Meta-Analytic Structural Equation

International Journal of Instructional Cases
ISSN: 2399-830x

Modeling (MASEM) Study. *Behavioral Sciences*, *14*(2), 85. https://doi.org/10.3390/bs14020085

Lin, K., & Xie, Z. (2019). Discussion on strengthening the construction of practical training base in vocational colleges and promoting the training of skilled personnel. 2018 International Workshop on Education Reform and Social Sciences (ERSS 2018), https://doi.org/10.2991/erss-18.2019.1

Lisene, L. N. (2024). *Instructional leadership perspectives and practices of heads of departments for science in Lesotho secondary schools* [doctoral dissertation, University of the Free State]. http://hdl.handle.net/11660/12968

Liu, Y., Li, L., & Huang, C. (2022). To what extent is shared instructional leadership related to teacher self-efficacy and student academic performance in China? *School Effectiveness and School Improvement*, *33*(3), 381-402. https://doi.org/10.1080/09243453.2022.2029746

Nadeem, M. (2024). Distributed leadership in educational contexts: A catalyst for school improvement. *Social Sciences & Humanities Open*, *9*, 100835. https://doi.org/10.1016/j.ssaho.2024.100835

Ndweni, D. M. (2020). *Perspectives of investigating officers on the roles and responsibilities of forensic social workers in the South African Police Service* [Doctoral dissertation, North-West University (South-Africa)]. http://hdl.handle.net/10394/34975

Özdemir, N., & Yalçın, M. T. (2019). Examination of the relationships between academic achievement and the variables at the levels of school and students in secondary schools: Two-level path analysis. *Egitim ve Bilim*, *44*(200), 93-116. https://doi.org/10.15390/EB.2019.8056

Qadach, M., Schechter, C., & Da'as, R. a. (2020a). From Principals to Teachers to Students: Exploring an Integrative Model for Predicting Students' Achievements. *Educational Administration Quarterly*, *56*(5), 736-778. https://doi.org/10.1177/0013161X20907133

Qadach, M., Schechter, C., & Da'as, R. a. (2020b). Instructional leadership and teachers' intent to leave: The mediating role of collective teacher efficacy and shared vision. *Educational Management Administration and Leadership*, *48*(4), 617-634. https://doi.org/10.1177/1741143219836683

Rautakivi, T., & Yolles, M. (2024). Diagnosing Complex Organisations with Diverse Cultures—Part 2: Application to ASEAN. *Systems*, *12*(3), 107. https://doi.org/10.3390/systems12030107

Sabouripour, F., Roslan, S., Ghiami, Z., & Memon, M. A. (2021). Mediating Role of Self-Efficacy in the Relationship Between Optimism, Psychological Well-Being, and Resilience Among Iranian Students. *Frontiers in Psychology*, *12*, 675645-675645. https://doi.org/10.3389/fpsyg.2021.675645

Samaniego, B. S. (2024). *Effects of Educational Leadership Behaviors and Additional Factors on Teacher Morale* [Doctoral dissertation, University of Arkansas at Little Rock]. https://www.proquest.com/openview/bfa1ed070760da17bdaca361592ae8e3/1?cbl=18750&diss=y&pq-origsite=gscholar

Shaked, H. (2020). Instructional leadership in higher education: The case of Israel. *Higher Education Quarterly*, *75*(2), 212-226. https://doi.org/10.1111/hequ.12274

International Journal of Instructional Cases
ISSN: 2399-830x

Shaked, H. (2024). Instructional leadership during the COVID-19 pandemic: The case of Israel. *Educational Management Administration and Leadership*, *52*(3), 576-592. https://doi.org/10.1177/17411432221102521

Shields, C. M. (2017). *Transformative leadership in education: Equitable and socially just change in an uncertain and complex world*. Routledge. https://doi.org/10.4324/9781315207148

Sony, M., & Naik, S. (2020). Critical factors for the successful implementation of Industry 4.0: a review and future research direction. *Production Planning and Control*, *31*(10), 799-815. https://doi.org/10.1080/09537287.2019.1691278

Thien, L. M. (2018). Transactional Leadership: What Do We Know. In D. Adams (Ed.), *Mastering Theories of Educational Leadership and Management* (pp. 39-46). University of Malaya Press. https://books.google.com/books/about/Mastering_Theories_of_Educational_Leader.html?id=ho5xDwAAQBAJ

Van Breda, A. D. (2018). A critical review of resilience theory and its relevance for social work. *Social Work (South Africa)*, *54*(1), 1-18. https://doi.org/10.15270/54-1-611

Volk, S. C., & Zerfass, A. (2020). Alignment: Explicating a key concept in strategic communication. In *Future directions of strategic communication* (pp. 105-123). https://doi.org/10.4324/9780429295638

Walker, A., & Qian, H. (2022). Developing a model of instructional leadership in China. *Compare: A Journal of Comparative and International Education*, *52*(1), 147-167. https://doi.org/10.1080/03057925.2020.1747396

Wei, G., Lu, J., & Qian, H. (2018). Principal instructional leadership: Chinese PIMRS development and validation. *Chinese Education & Society*, *51*(5), 337-358. https://doi.org/10.1080/10611932.2018.1510688

Williams, J. C. (2024). *High School STEM Teachers' Computer Attitudes Correlated With Duration of Software Utilization* [doctoral dissertation, Grand Canyon University]. https://www.proquest.com/openview/a0a5e306a815328f0db0d3d6f4ab2107/1?cbl=18750&diss=y&pq-origsite=gscholar

Wulansari, R. E., & Kyaw, Z. Y. (2022). The Adventure of Formative Assessment with Active Feedback in The Vocational Learning: The Empirical Effect for Increasing Students' Achievement. *Journal of Technical Education and Training*, *14*(1), 54-62. https://doi.org/10.30880/jtet.2022.14.01.005

Yalçın, M. T., & Çoban, Ö. (2023). Effect of school leadership on student academic achievement: school level path variables. *Current Psychology*, *42*(25), 21249-21262. https://doi.org/10.1007/s12144-023-04886-6

Yang, X. (2022). *Evaluation on the Training Effect of Applied Talents in Higher Vocational Colleges under the Background of Regional Economy* (Vol. 2022). Mathematical Problems in Engineering. https://doi.org/10.1155/2022/8631696

Zheng, J. (2024). *State Formation, Globalization, and Universities: Exploring the Internationalization of Higher Education in China*. Taylor & Francis. https://doi.org/10.4324/9781003559504