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Review of the Professional Standards for School Principals in Cambodia: Functions and Content Analysis

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Abstract

This article explores Cambodia's Professional Standards for School Principals (PSSP), focusing on functions and content in fulfilling principals' roles and responsibilities during the ongoing educational reforms. The official PSSP, along with relevant supporting documents from the Ministry of Education, Youth, and Sport (MoEYS) of Cambodia, were analyzed. The documents' priority actions, strategies, and objectives were carefully examined using content analysis. The findings showed that the standards' functions and contents were crucial in supporting and guiding principals' professional roles and responsibilities, ensuring alignment with international and regional standards. However, the standards expressed rigid functions and content, reflecting concerns over local practices under the decentralization reform. Additionally, the standards outlined principals' roles and responsibilities across the five leadership competencies—personal excellence, strategic thinking and change management, managerial leadership, leading learning and teaching and community-based engagement—but some roles have expanded in response to ongoing developments and requirement in education, particularly growing socio-political affairs, integrating digital technology in school system, teaching and learning activities, and increasing external stakeholder engagement. This study illuminated the alignment of standards, policies, and principals' obligations, fostering discussions on improving educational standards in Cambodia and elsewhere. However, this study is solely

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based on documents, survey reports, and research articles lacking various triangulation data from stakeholders. Further research should expand the scope of the study on the implementation of the standards and principals' practices and challenges at school levels by using scientific methods.

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Introduction

School principals play a significant role in influencing student achievement by shaping the school environment, promoting a favorable climate, and leading the teaching and learning processes, even though they do not directly deliver classroom instruction (Coelli & Green, 2012; Gurr, 2015; Leigh Sanzo et al., 2011; Leithwood, 2006). Specifically, principals influentially introduce new curricula and teaching techniques such as student-centeredness, and problem-based learning (Sreypouv, 2022). Similarly, principals using instructional leadership style primarily improve the school culture and working conditions for teachers and staff (Cruickshank, 2017). When teachers of the 21st century require high skill and competence different from those of the 20th century, then principals need to be aware and equip themselves with relevant 21st-century skills to guide teachers toward the teaching and learning for 21st-century education (Mthanti & Msiza, 2023). Fast societal changes, including demographic shifts, technology advancements, teachers' working conditions, social unrest, and



worldwide pandemics, drive the evolution of the principal's responsibilities (Davis Jr & Nixon, 2024).

Many countries worldwide, the United Kingdom, United States, Australia, African countries Japan, Russia, China as well as ASEAN (the Philippines, Thailand, Vietnam...), have introduced principal standards recognizing the criticality of their roles and responsibilities for high performance impacting student achievement (AITSL, 2014; DoE, 2020a; NBPEA, 2015; DoBE, 2014; JASEA, 2009; Fedorchuk, 2019; MOE, 2013; Innotech, 2015)

In the Cambodian context, known as one of the post-new war countries which faced several challenges in education (Kheang et al., 2018), the pursuit of educational quality was impeded by the catastrophic events of the Khmer Rouge regime (1975-1979), which inflicted significant damage on educational infrastructure and resulted in the deaths of several educators (Dy, 2013; Dy & Ninomiya, 2003). The 2014-2018 Education Strategic Plan identified two major issues: poor learning achievement and unequal access to education (MoEYS, 2014b). These intertwined challenges affect various levels of education and implement such stakeholders, teachers, and school principals. Therefore, the Professional Standard for School Principals (PSSP), initiated by the Ministry of Education Youth and Sport (MoEYS), to ensure qualified principals for effective school leadership in response to the regional and global educational contexts (MoEYS, 2017). The PSSP reflects core school leadership competencies such as instructional leadership, managerial leadership, and stakeholder engagement, which are consistent with international principal standards as aforementioned above.

However, standards for principals often lead principals to lose direction in performance, add extra unnecessary roles, or encounter

overlapping legal responsibilities (Mommers et al., 2024); for example, some principals find themselves “doing work that was not part of their job description” (Ogina, 2017, p. 160). More specifically in Cambodia, at the school level, principals seemed to lose the direction for school development and change management, unable to ensure adequate school operation influenced by internal and external factors, and unable to lead the school in line with the local and international education development trend, due to unclear terms of reference for principals outlining relevant standard roles and responsibilities (Om, 2019; Jones and Nagel, 2022). Recently, there was a lack of analyzing and reviewing the relativeness of principal standards and principals’ professional roles and responsibilities (Jones & Nagel, 2022; Kheang et al., 2018; Om et al., 2019; Seng, 2022).

Therefore, this study is to explore the functions and content of PSSP and how they support and guide principals’ roles and responsibilities for high performance. The study addresses the following research questions:

1. What are the functions of PSSP and how do they support the principals’ roles and responsibilities?
2. What is the content of PSSP and how does it guide the principals’ roles and responsibilities in practice?

The current policy review has significant implications in identifying how the PSSP tailored roles and responsibilities in educational reform. Reviewing the educational policies, specifically the PSSP, significantly highlighted the key competencies that are necessary for principal performance related directly to effective school leadership. A full understanding of the principal standard is essential to support the effectiveness of principals which influence student achievement. This



study will become a part of evidence reflecting the support of principal standards to principal roles and responsibilities in the situation of change in education in Cambodia.

Literature Review

Functions of standards for school principals

The significance of standards for school principals has been recognized as a strategy to enhance the effectiveness of their professional preparation and development (Ingvarson et al., 2006) and to improve performance management, thereby contributing to the quality of education (UNESCO, 2010). Moreover, depending on the intended objectives, professional standards for principals can play crucial roles (Dinham et al., 2013). However, the purposes of the development of these standards vary across countries. The use of standards might be a discrepancy, relatively depending on how the standards were developed. Recently, two distinct models have been identified: external regulated and self-driven (Pont, 2013). The externally regulated model reflects the need for authorities and systems to regulate the principals' work, while the self-driven model focuses partly on the professional development of principals themselves.

Central governments do not always define the standards for principals. By reviewing the standards for principals in some countries, professional or academic associations take the lead, proposing standards through discussions with various stakeholders, which are then adopted by educational authorities. For example, in the United States, Japan, Thailand, and Australia, professional associations of principals, teachers, and academic institutions have spearheaded the consultation process for developing standards (AITSL, 2014; JASEA, 2009; NBPEA, 2015; TC, 2013). Conversely, in



countries like the United Kingdom, the Philippines, China, Vietnam, Russia, and South Africa, the ministries of education have initiated the development of standards, leading consultations among stakeholders before approving and implementing them (DoBE, 2014; DoE, 2020a, 2020b; Fedorchuk, 2019; MOE, 2013; MoET, 2018). Based on the reviewed standards, the functions varied depending on political, social, and cultural contexts in each country; for example, the standards for principals in China emphasized the essential political function in school policy decisions (MOE, 2013; Liu et al. 2017). In this respect, Dinham et al. (2013) reflected that standards were politically influenced by national initiatives and supportive funds politically influenced standards. While top-down approach standards ensure a consistent framework and uniformity aligning to national educational goals or requirements, some engagements were overlooked from local context requirements. Conversely, the bottom-up approach standard paid much attention to individuals or local needs and diminished broad-based standards (Militello et al., 2013). Some tension might happen to practicing principals while one-size-fits-all standards and the realities of demand required in actual practice are different. Standardization and regulation also tend to lead to hierarchical leadership, which diverts their leadership from collaborating with other pertinent stakeholders, such as students and instructors.

Moreover, there were arguments on how standards will be developed and used to guide professional learning frameworks, self-reflection to inform the promotion and appraisal process, or for performance appraisal purposes (Dinham et al., 2013). The technical function of the standards was found to vary depending on intended purposes. Performance appraisal standards are concerned more with accountability and measuring the effectiveness of principals.



In contrast, professional guide standards are used as professional development frameworks, growing skills rather than strict performance measurement. As evidence, some ASEAN countries used performance standards, like Vietnam, where the standards for principals primarily and directly focus on assessment and recruitment processes through providing (MoET, 2018), while in Thailand, the standards define the required professional knowledge and competencies, as well as the criteria for acquiring a principal's license (Pilanthananond, 2007; TC, 2013). However, in some countries, such as Australia, the United States, the United Kingdom, and South Africa, the standards for principals were guiding tools for providing a framework guiding roles and responsibilities, outlining expected goals, promoting professional development, cultivating future leaders, assisting recruitment and selection, and informing performance reviews (AITSL, 2014; DoBE, 2014; DoE, 2020a; NBPEA, 2015). Based on the reviewed standards, the use of the standards was strongly aligned with political, social, and cultural perspectives and technical operations that might contribute directly and indirectly to principalship.

Content of Standards for School Principals

Most of the standards were developed based on the demands of school leadership within specific contexts, taking into account the principals' roles and responsibilities (Ingvarson et al., 2006; Lambert & Bouchamma, 2019), the daily work of educational leaders, and the future leadership needs (NBPEA, 2015). Certain elements of these standards were consistent with effective leadership practices identified in various studies. Leithwood and Sun (2012) suggested that the core leadership practices or competencies include setting direction, developing people, improving instructional programs, redesigning



organizations, and building relationships. These competencies were considered to provide content validity for the standards for principals (Ingvarson et al., 2006; Pont, 2013). In this respect, Berkovich and Bogler (2020) attempted to group four imperatives of school administration: moral, instructional, managerial, and socio-political standards, which influence principal standard policy. The contents of the standards play important roles in guiding principals' practices and professional improvement. One way to change the principal practice is to "change the professional standards that are supposed to guide practice" (Militello et al., 2013, p. 86). This infers that the school leadership practices might be different in the individual context of education that require content of the standards specifically guide principals' professional roles.

Regarding the reviewed standards from various countries and regions, the contents guide principals' roles and responsibilities to ensure effective leadership practices are strongly aligned with their specific contexts. In highly developed countries like OECD countries, the education system is oriented towards developing 21st-century skills and competencies for leaders, educators, and students to prepare for advanced education by 2030. Consequently, principal standards in these countries are framed with guiding vision and mission, creating organizational conditions, promoting school-based harmony, developing oneself and others, and leading pedagogical management (Pont, 2013) while in African countries, the standards for principals have traditionally focused on several key areas: directing and developing schools, managing quality, leading teaching and learning, improving the curriculum, securing accountability, and promoting staff wellness. Additionally, principals are expected to manage the school as an organization, collaborate with and serve the community,



handle human resources, and oversee extracurricular activities (DoBE, 2014).

In addition, the ASEAN framework for principals proposed a few leadership competencies including strategic thinking and innovation, personal excellence, managerial leadership, instructional leadership, and stakeholder networking (Innotech, 2015). This framework has significantly influenced and linked to the standards for principals in ASEAN member countries, reflecting a shared vision within the region. However, it is intended to complement rather than replace the national standards of each member country. Each nation maintains its standards tailored to its local context.

Based on the reviewed standards, their content is diverse and complex, reflecting the specific educational contexts, though there are some common elements. As illustrated in Table 1, the outline of standards for principals from various countries shows several fundamental leadership competencies that are consistently present. Each leadership competency was derived from multiple theoretical perspectives, as elicited in the description.



Table 1.

Essential contents of professional standards for school principals from different countries

Leadership Competencies	Descriptions
Strategic thinking and innovation	Focusing on improvement through creativity and innovation, strategic decision-making, and building a future vision for an organization (Cortes & Herrmann, 2021; Haycock, 2012; Leithwood & Sun, 2012)
Leading teaching and learning	Leadership for learning that cooperates with the quality of teaching and learning focus of instructional leadership contributing to student learning and school improvement (Day et al., 2020; Heck & Hallinger, 2014; Leithwood & Sun, 2012)
Managerial leadership	Managerial decision-making and problem-solving skills in implementing plans and strategies highly political and adaptive to changes that involve a large variety of activities during the day job (Grace, 2005; Postuła, 2024; Yukl, 1989)
Developing self and others	Principals, together with others, create a professional learning community that contributes to continuously improving teaching and learning, engaging in professional development (Day & Sammons, 2016; Leithwood & Sun, 2012)
Engaging and working with the community	creating productive relationships with parents and broader communities and building sustainable partnerships between the school and communities (Leithwood, 2006; Ngobeni, 2024)

Source: Author's work

Based on the reviewed standards, the significant elements that should be included in the standards must be connected to what principals need to know, understand, and perform effectively in their professional roles and responsibilities in their specific school contexts.



Notably, these reviewed key elements of the standards, presented in Table 1, provided essentially conceptual foundation and reference points in supporting and guiding principals in general and Cambodian principals particularly, in performing their roles and responsibilities highly effectively. Cambodia has implemented educational reform to support the government's development initiatives, including becoming an upper-middle-income country by 2030 and a “developed country” by 2050 (MoEYS, 2024a). These standards encompassing the knowledge, understanding, and skills principals need, aligning with political, social, and cultural perspectives and the relevant technical operations, provide a knowledge base allowing to review Cambodian PSSP from these international theoretical perspectives. Reflecting on how the duties and responsibilities of principals have been supported and guided in terms of the functions and contents of Cambodian PSSP requires an awareness of several kinds of professional standards.

Methodology

This research employed a qualitative design, utilizing content analysis of document data as described by Cohen et al. (2018). The document selection in this study was mainly based on their significance and contribution to school leadership in the context of study. The first was a primary document, “Professional Standard for School Principals” (PSSP) from MoEYS (2017). Emphasis on school leadership and management effectiveness is getting attention and importance is strongly recommended in national educational policies such as Teacher Policy (MoEys, 2013), educational strategic plan (MoEys, 2014b), and teacher policy action plan (MoEys, 2014a), as well as the education reform programs (Hang-Chuon, 2017). To promote the effectiveness of school leadership and management, MoEYS first established and enacted PSSP in Cambodian education system



(MoEYS, 2017). The PSSP is the main document that links to other educational standards such as, school model standard, teacher standard, and school management standard. Additionally, several school leadership programs (preparation, training, assessment, evaluation of principals, selection... etc.) were referred to the PSSP. The second document, titled “Strengthening Roles and Responsibilities of School Principals for Providing Educational Service in Public Secondary Schools” (No. 36 MoEYS. SNN, August 2023), is a guideline issued by MoEYS (2023a). Due to the recent evolving changes in education, it requires MoEYS to strengthen the principals’ role and responsibility performance. This guideline has a crucial role to support policy implementation and manage principals’ practices. Both documents are public policy resources on MoEYS’s e-library and website.

This analysis included a mid-term review report in 2021 of the educational strategic plans for 2019-2023 and projections to 2025 (MoEYS, 2022b), the annual educational congress report (MoEYS, 2022a), practical survey reports on the implementation of the school model in Cambodia among (MoEYS, 2024c), sub-national timely inspection report (MoEYS, 2024b), informant articles, and regulations related to the implementation of the PSSP. Additionally, the author conducted an online exploratory survey among graduates from leadership training programs for upper secondary principal, to observe their after-training situations.

As Cohen et al. (2018) mentioned, content analysis concentrates on texts, examining and condensing them into summarized form by using previous categories and evolving themes to generate or test a theory. More specifically, the content analysis process involves three phases: preparation, organizing, and reporting results (Elo & Kyngäs,



2008). The author thoroughly read the documents to understand their content, functions, and main topics. In the process of organizing the data, the author examined the key words, phrases, sentences, or pieces of pages to consider whether they are suitable to be analyzed. Next, the author created the categories relied on both deductive and inductive concepts. The author analyzes and simplifies data to generate reliable categories that reflect the study's topic. Such “principals need to conduct professional development via self-study, research, best practices...” (MoEYS, 2017, p. 3), 2, was recorded as “supporting professional development” category. Then, the initial categories were thoroughly evaluated. After evaluating whether the coded contents aligned with the categories or whether the categories were problematic, the author either developed new categories, changed current categories, or eliminated the extracts from the analysis. The author had discussed with other research fellows and senior researchers in the academic conferences to ensure the reliability and validity.

This analysis process was iterative, involving discussions with previous research findings, related policy documents, and other researchers who had investigated similar topics regarding standards for school principals. Moreover, all relevant information leading to revealing the informants’ identity and breaking confidentiality in the data passages was not disclosed.

This current study was conducted in two stages. First, the functions of the standard related to principals’ roles were identified, analyzed, and discussed with previous studies to understand how these functions support the principals’ roles and responsibilities. The second stage focused on analyzing the content of the standard concerning the roles and responsibilities defined by MoEYS (2023a). This investigation



aimed to identify patterns in the functions and contents of widely used standards. Initially, the reviewed standards were coded, resulting in twenty codes for contents and eight for functions. After re-coding, five codes for functions and five for contents were refined. Detailed results and comparisons with relevant standards from the literature will be discussed in the following sections.

Findings

Functions of Professional Standards for School Principals

This study found that the PSSP was widely adopted as professional guidance for principals, delineating five essential technical functions that benefit guiding the principal's professional framework.

Defining leadership areas

The first function involves identifying leadership areas that affiliate with the principals' roles and responsibilities. The PSSP outlines specific competencies correlated with the tasks and duties of principals, detailing the core values and attributes necessary for effective performance. It provides comprehensive insights into the expectations of various stakeholders, from national entities to parents and communities. The PSSP comprises six standards, sixteen components, and eighty-three observable indicators (MoEYS, 2017, pp. 3-8), providing a broad understanding of principal functions. The key competency consists of qualification requirements, capacity and merit, critical thinking and innovation, school management, instructional leadership, and external partnership engagement. The PSSP provided important information related to what principals do to various stakeholders, including teachers, staff, students, parents, inspectors, and the Office of Education.

Supporting professional development

The second function is to support professional development for individuals, schools, and training institutions. The PSSP guides principals' professional development through 1. encouraging and inspiring individual principals to enhance their knowledge and skills based on their needs to perform their duties effectively. As stated in domain 2 of the PSSP, "principals need to conduct professional development via self-study, research, and learning from best practices of other successful principals..." (MoEYS, 2017, p. 3), 2. establishing specific indicators for principals to develop and lead sharing programs within their school communities, such as, "sharing knowledge and experiences and learning from each other through creating sharing programs within the school," and 3. serving as a benchmark for leadership training. One notable evidence of sharing-cum-developing profession is a long-existing and useful technical meeting (Brochum Pachektes) which principals need to lead and comment weekly (i.e. solving technical problems on teaching and learning issues) (MoEYS, 1989). Another evidence of supporting professional development is the completion of leadership training, a prerequisite for the principal position; MoEYS issued some official guidelines to support those who completed the leadership training course to be prioritized as principals or vice principals (MoEYS, 2018c, 2018d).

Guiding performance assessment

The third function was to guide performance assessment. The standard served as a reference for evaluation through two distinct assessment forms. First, there was a self-reflection process where principals evaluated their performance based on personal motivation. This kind

of self-reflection is one of the effective ways to support principals' practices in the daily jobs. No specific guidelines were detailed for specific procedures from the education office while it happens based on principals' motivation. In this respect, the PSSP is used as the main guidance as stated, "having a daily self-reflection for improvement after finishing working 10–15 minutes" (MoEYS, 2017, p. 4).

Second, self-assessment involves using predetermined criteria, procedures, and the participation of both teachers and administrators. The standard emphasizes "self-assessment on working performance for improvement," highlighting the connection between the standard and the assessment tools. Even though the PSSP was not found to be directly used as an assessment tool for principals working performance assessment, these assessments are essential for improving leadership practices.

Defining criteria for selection

The fourth function defined the principal selection criteria in detail. In the first domain of the standard, a comprehensive set of criteria for principal selection was outlined. The selection process was expected to adhere to these standards to ensure the appointment of qualified candidates. The specific criteria for principal selection were pointed out as "at least hold a bachelor's degree or equivalence, completing principals' leadership training, have basic knowledge of information communication and technology (ICT), have the ability to use any foreign language for communication and five-year experiences of teaching" (MoEYS, 2017). It was found that this is the uniformity for all principals stated by these standards. However, the selection process for principals were relied up on several Ministry's guidelines with complexity of procedure (MoEYS, 2015, 2018c, 2018d) to ensure the effectiveness of principals.



Inspiring future school principals

The fifth function aimed to inspire future school principals by offering motivation and expectation, encouragement for professional development, promoting practice, and empowerment. Aspiring principals can enhance their leadership skills through competitive examinations, as noted in the standard: “providing opportunities for educational staff who wish to become principals through competitive examination... receive privilege, bonus, and status...” (MoEYS, 2017 p. 2). For example, principals have the right to accept or refuse and fire contracted staff or teachers. Principals who had the best performance had the opportunity to win the Outstanding Award from the government through annual evaluation by the Ministry (MoEYS, 2016).

Contents of Professional Standards for School Principals

Personal excellence

The main element mentioned in the PSSP was related to the personal excellence of principals. The PSSP stated that “principals follow professional conduct, strengthen team spirit, follow working discipline, have good morality and fairness...” (MoEYS, 2017, p. 3). Regarding this quote, it implies that principals should be professional, accountable, and exemplary for teachers, students, parents, and the community. School principals must practice morality and professionalism to develop trust with teachers, students, and parents. Likewise, leading with personal quality is a critical internal motivator for ensuring effective leadership practices, demonstrated through commitment, self-regulation, and honesty. In addition, the PSSP encourages principals to lead with strong commitment, patience, adaptability and resilience in dealing with difficult situations, as stated

in the PSSP, “being patient and adaptive in hard situations” (MoEYS, 2017, p. 4).

Strategic thinking and change management

The PSSP introduces strategic thinking and innovative skills for principals by encouraging principals to think about the future vision and how to adapt new approaches to enhance their leadership effectiveness. As there was an increase in school autonomy and school-based management practices, principals were encouraged to make decisions for school development. Based on data-based evidence for solving-problem scenarios and innovative ideas to fulfill their duties and responsibilities, as quoted in the PSSP “understanding Ministry's vision, developing school vision, mission and strategic plan (5-year, 3-year and 1-year plan)” (MoEYS, 2017, p. 4), principals are suggested to set up long, medium and short-term plan and goals for schools by aligning with state policy and the needs of the school community. To make principals more advanced in the profession, technology in education has the potential for transformation and innovation to improve administration, teaching, and learning as mentioned in the PSSP that “using modern technology for school management and professional networking” (MoEYS, 2017, p. 5). As a leader of school changes, principals were expected to design an environment where teachers, staff, and students could explore new methods to improve both their teaching and learning and effective school management system.

Managerial leadership

The PSSP focused on three roles for effective school management: administration, personnel, and budget management as stated in the PSSP “school management is crucial to ensure effectiveness and



quality of educational services by focusing on improvement staff management, financial management and administration” (MoEYS, 2017, p. 5). These areas encompass the majority of roles and responsibilities within the management framework. Principals are tasked with addressing all school challenges, including managing resources, providing effective and quality educational services, administration, staff, and finances. Like other institutions, schools require principals with strong managerial skills to ensure the effective operation and allocation of resources for teaching and learning.

In Cambodia’s complexity and change in leadership, principals’ roles and responsibilities extend beyond traditional administration, staff, and financial management. The PSSP indicated that “principals need to lead students to support society and community’s activities including, environment, hygiene sanitation, road traffic, anti-illegal drugs and human trafficking, gardening, traditional ritual, cultural work art, information, and boy scout” (MoEYS, 2017, p. 5). Principals are expected to be involved in leading social work, which is part of principals’ tasks. Leading social affairs is time consuming task that makes this aspect become a significant principals’ effort for school improvement and provide students social skills.

Leading learning and teaching

The PSSP proposed four main components to guide teaching and learning: managing learning and teaching, conducting research, engaging in teacher professional development, and performing internal inspections which mainly contributed to improving quality of instructional leadership as a group of quotes in the PSSP:

“Conducting meetings between teachers, staff, and communities in reviewing, improving, developing and implementing of the curriculum”,

“Researching and seeking good methods for teaching and learning effectively”,

“Facilitating and encouraging knowledge and experience-sharing activities (through creating programs for those who have more experiences share with those who have fewer experiences) and create opportunity for teachers to have study visit”, and

“Monitoring and evaluating the teaching and learning for improving student achievement” (MoEYS, 2017, p. 6-7).

Based on these aspects of the PSSP, principals play as instructional leaders to maintain curriculum development and implementation, inspect and feedback for quality teaching and learning, research new methods for effective teaching and learning, and create opportunities for teacher professional development. Recently, roles and responsibilities of principals in teaching and learning activities are increasing, particularly take attention to digital classroom for improving the effectiveness of students’ achievement (MoEYS, 2024d)

Community-based engagement

The PSSP highlights three fundamental external groups principals must closely collaborate with local authorities, parents, and relevant stakeholders. According to the MoEYS’s PSSP, the principal is defined as a “school and community development agent” (MoEYS, 2017, p. 7). With the widespread implementation of the school-based management policy (MoEYS, 2018a), schools have increasingly

involved parents, local communities, and development partners in supporting school activities. The PSSP also encourages the ownership among local communities for their children's education and school development as stated in the PSSP “communities have a crucial role in the school development process through participating in developing school planning, mobilizing resources, following up school progress” (MoEYS, 2017, p. 7).

Based on the data, Cambodia's PSSP's content consists of five areas that serve as the primary frameworks connecting the roles and responsibilities of principals, as succinctly illustrated in Table 2. Therefore, principals' roles and responsibilities were increased to oversee, manage, and plan for more effective educational services at the school level.



Table 2.

Professional Standards for Principals and Leadership Roles of Principals

Leadership competencies of PSSP	Leadership Roles
Personal excellence	Ensuring ethics and professional conduct Leading self-improvement and continuous professional development programs Being resilient and adaptive Ensuring personal effectiveness
Strategic thinking and Change management	Developing the strategic direction for the school Making effective decision Leading changes and innovation for school
Managerial leadership	Managing school resources and the school system Managing staff performance Managing school programs and projects Managing relevant social affairs (security, health, safety, environment, culture)
Leading learning and teaching	Leading teaching and learning programs Leading curriculum implementation and improvement Establishing a positive learning environment Leading inspection programs and evaluating teachers' performance Distributing planning and learning outcome Leading digital education and research in teaching and learning programs
Community-based engagement	Establishing productive relationship/ network Promoting involvement from stakeholders Ensuring sustainable collaboration with stakeholders Fostering a sense of ownership in the communities

Sources: Professional Standard for School Principals (MoEYS, 2017)

Discussion

The PSSP adheres to specific criteria for principal selection, while the standard itself cannot be directly and effectively used in selection and appointment. Several guidelines supporting the principals selection process were aligned with the criteria defined by the PSSP (MoEYS, 2015, 2018c, 2018d). Due to the socio-political context (Dy & Ninomiya, 2003; Tan, 2007), these criteria can be flexible regarding the availability of qualified candidates in specific schools or areas. For instance, the highest-scored candidate can be selected even though his/her criteria did not meet the standard defined, principals holding high school certificates and higher education degree were only 10 043 out of 13 791 schools in the kingdom (MoEYS, 2023d). There are several possible explanations for this case of finding. The minimum requirement of bachelor's degree reflects the scarcity of higher educational qualification among the potential or would-be principals in Cambodian education. Another implication might be that the PSSP recognizes and defines inclusivity while maintaining the basic standard in selecting principals.

By law, local governors act as representatives for all ministries, overseeing the implementation of policies and standards established by these ministries (NAC, 2008). In addition, following decentralization reforms in Cambodia, the authority to recruit staff for sub-national units was transferred to local administrations (RGC, 2013; MoEYS, 2016). However, the government remains concerned about the local administrations' ability to recruit qualified principals. In a public speech on Teachers' Day, October 5, 2023, the Prime Minister of Cambodia addressed this concern:

"... now we have delegation [authority]...Certainly, we want to delegate the rights to...[governors]. We do not withdraw these rights

back, but we need to have a mechanism because principals need to manage plans from the national level... and governors are not experts in the field of education, so it's difficult to select..." (Manet, 2023).

Coupled with the PSSP reviewed, the standards reflected the school principals' roles as local school leaders who link the gaps between national policy and grassroots' implementation; moreover, principals are expected to demonstrate collaboration skill to work with different stakeholders and implement the educational reform at school level. Regarding the online survey among graduates from leadership training program for upper secondary principals, it highlighted that there have been ambiguities on the selection and recruitment process for principals and some of the ministry's guidelines (MoEYS, 2015, 2018c, 2018d) were not fully implemented at local levels. The inaccurateness of the selection process has still occurred as one participant mentioned that "there is partisanship, bribery and in contrast implementation of guidelines No. 6042 and No. 29".

This finding aligns to international contexts in which the standard guide local administrators to know the demands of principals' roles and helps them make informed decisions and use their selection criteria (AITSL, 2014; Pont, 2013).

Reflecting on principal standards in the ASEAN countries like Vietnam and Thailand, the specific selection criteria have been incorporated into their standards. Yet, some aspects are flexible. For instance, in Vietnam, candidates are generally required to have five years of teaching experience, but this requirement is reduced to four years in disadvantaged areas (MoET, 2020a, 2020b). In Thailand, a license-based system governs principal selection (TC, 2013), whereas Cambodia currently lacks a licensing system for this purpose. Cambodia's approach is somewhat unique.



The PSSP was a professional guide standard that provided a framework for preparation and professional development—different from the performance assessment standard, which is strict in performance appraisal. The PSSP methodically encourages creating sharing and learning programs at the school level and self-reflection in practice. The review of PSSP revealed that principal’s profession is somewhat extent limited for them to effectively discharge their roles and responsibilities. This deficit is uncovered by both provincial survey reports within 51 public schools from preschool to secondary schools and national survey reports among 416 primary schools. Principals were reported as not fully implementing the internal inspection, and self-assessment as well as failing to engage with local communities in enhancing school development (MoEYS, 2024b, 2024c). Even though, the PSSP aligned with other principal standards in different countries, including South Africa, the Philippines, and some OECD nations, where the standards were used to guide assessments and professional development. In other practices such as in the Vietnamese case, the standard served as an assessment tool with specific assessment scales (MoET, 2018).

Lastly, the PSSP stated several benefits for principals' positions, including empowering, growing their profession, and promoting status, aiming to effectively attract, inspire, and empower current and future principals. Attracting qualified candidates to be principals is one of the significant contributions to quality school leadership.

To address the challenges of school leadership in the Cambodian education context, as poor-resourced and socio-economic disparity, qualified principals require the essential ability to manage the changes and resources. By way of illustration, Seng (2022) showed how qualified principals implement policy effectively, they need to



understand the context of school and local community requirements. This function is aligned with the cases of Australia which strongly inspire future principals to develop their talent and succession (AITSL, 2014).

Overall, the standard's functions supported the principal's roles as outlined in the study. They were consistent with the functions of standards proposed by several countries, both developing and developed countries, as well as the Western and communist world. However, in the Cambodian context, there are various types of schools located in different areas—urban, rural, remote, and disadvantaged regions (MoEYS, 2014c)—as well as varying socio-economic and school cultures (Seng, 2022) that require principal standards to consider to be revisited and avoid one-size-fit-all.

In the Cambodian context, personal quality, ethics, and professional conduct are especially prioritized, as they help principals address daily challenges and build trust within the school community. There are several possible explanations for this notion. To date, the majority of effective school development plans depend on levels of participation from parents, communities, and relevant stakeholders, both intellectual participation and resource contribution (Jones & Nagel, 2022; Seng, 2022). Therefore, building trust is the concrete foundation attracting more participation. Successful principals earn trust "*tom nuk chett*" and strong belief among teachers, students, parents, communities, and stakeholders based on their personal qualities (Seng, 2022). Similarly, many standards in different settings prioritize ethics and professional conduct, including the United Kingdom, the United States, China, Japan, and South Africa (DoBE, 2014; JASEA, 2009; MOE, 2013; NBPEA, 2015).



In the context of educational changes, schools gain more autonomy, principals take more responsibility for various tasks, and challenges are increased. School directors fail to manage change and maintain excellent school operations due to internal and external reasons and to lead schools in line with local and regional educational trends (Om et al., 2019). School challenges are communal issues that require collective problem-solving; a study by Seng (2022) mentioned that school vision should be developed through a shared and participatory approach involving teachers, students, parents, community members, and stakeholders. This finding aligns with standards from various countries and emphasizes the importance of shaping the direction and vision of schools (DoBE, 2014; Fedorchuk, 2019; JASEA, 2009; NBPEA, 2015; Pont, 2013).

This review showed that a set of significant content areas such as instructional managerial leadership and stakeholder engagement play critical roles in guiding principals to perform daily practices effectively. Recently, the principals' roles related to social work, the well-being of teachers and students, and external stakeholders' engagement were increasing. This point might be related to educational reform attempting to promote human resource development contributing to the country's development plan for 2030 and 2050 (MoEYS, 2024a), as well as existing challenges faced by principals such as lack of resources (buildings, classrooms, toilets, hygiene and sanitation system and budget constraints), and low national and community support (MoEYS, 2024b, 2024c). In this regard, Reid's (2021) assertion is that the anticipated roles of principals will increasingly focus on health, safety, and security, supporting the emotional and mental well-being of students and teachers, and cooperating with parents and guardians.



Even though, the PSSP has strongly supported and guided the principals' roles from policy perspectives, in real context, principals still face several challenges such as limitations in integrating technology innovation into school and learning systems and failing to increase support from stakeholders, particularly in disadvantaged areas. An example, only 13% of teachers and principals thought they could do their jobs during the COVID-19 pandemic school closure; and MoEYS needs to set up specific supporting mechanisms such as developing e-learning manuals, obvious standards for e-learning classes, providing high-quality e-learning material for marginalized students and disadvantage areas (MoEYS, 2021). To achieve the objectives of the PSSP, MoEY needs more effort and commitment to provide facilities and sufficient resources at the school level.

The PSSP's content is aligned with the international and regional principal standards since Cambodia attempted to link its educational development to regional and international standards. The principal standard is a policy highly dependent on school diversity (i.e. school cultures, geographical areas, and socioeconomic); therefore, its content requires extensive engagement with diverse groups of stakeholders. The essential notion is that standards need to consider local leadership requirements, effective professional practices from individual schools' contexts, applicable standards, and the knowledge and skills of principals.

Conclusion and Implications

This study aims to present how the standards for principals can effectively support and guide principals' professional roles and responsibilities within the broader context of educational reform. The findings revealed that the PSSP's framework aligns closely with many



international standards for principals, particularly the ASEAN framework for school principals. Beside the function of defining criteria for selection, the standard's functions strongly supported the principal's key roles as professional development and performance assessment. Additionally, one of these functions helps principals realize all that they should know and perform their roles effectively. It was also indicated that the PSSP guided the principals to develop personal excellence believed influencing on their leadership practice. The principals' personal quality has a significant contribution to a trustful environment for participation from various stakeholders. Likewise, the standard encourages principals to focus on the strategic vision and plan and adapt to the changes, particularly the increasing roles and responsibilities.

However, significant gaps remain in the integration of these standards with local administrative policies and their implementation at the school level. The discussion showed the significance of flexibility in the principal standards to adapt to Cambodian diverse contexts that require in-depth consultation with a wide range of stakeholders to address all the requirements and integrate aspects of effective principal. Therefore, this study suggests that policymakers should align the PSSP to the broader educational reform policies, and implementers localize implementation by considering the school diversity and context-specific requirements. Promoting collaborative partnerships with relevant stakeholders in reviewing and refining the PSSP periodically is also suggested.

This study was a single article conducted in the context of the study to give the significance of the principal standard policy supporting leadership roles of principals in practices. Theoretically, these findings are valuable contributions to the field of educational leadership,



particularly principal leadership. These findings provided a critical foundation for standard developers and policymakers in education to improve future relevant policies. Moreover, it helps principals to strengthen and improve their professional leadership rather than merely based on the implementation of the imposed standards.

Limitation and Future Research Direction

One of the limitations of this study is insufficient according to its selectivity (Cardno, 2018) while some documents were not included such as other subsidiary documents, procedure, and report documents that established the PSSP. The second limitation is the lack of data triangulation in terms of interviews, and survey data from various information sources or policymakers which provided more comprehensive perspectives. This study focused on the context of Cambodia and the supporting data of the PSSP implementations depended solely on the survey reports from provincial and national levels.

Therefore, future research should extend the scope of study to explore more the implementation of the standards based on the individual functions, such as principal preparation, development, and actual practices of principals, using rigorous scientific methods with data source triangulation, to deeply comprehend the strength and limitation of the standards.

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Project-Based Mentoring and K-12 Collaboration for Sustainable Development in Pre-Service Teacher Education

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Abstract

This study combines project-based learning with mentorship. Utilizing a sustainable development project (i.e., SEED Bank Project), this study aims to achieve multiple goals. While it attempts to promote pre-service teacher education by assigning pre-service teachers as mentors to high school students, the study critically examines the impact of a Seed Bank project to its stakeholders. The conceptual framework begins with a description of Project-Based Mentoring (PBM) and the role of Seed Bank project as a Project-Based Learning (PBL) opportunity and then examines the effectiveness of the project through the lens of PBM theory. A phenomenological case study was undertaken with nine pre-service teachers and nine high school students during the 2023–2024 academic year. The context and product evaluation areas of the CIPP (Context, Input, Process, Product) Model, along with the impact and

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process evaluation dimensions of Stake's Responsive Evaluation Model (REM), were selected to analyse the study's findings. The findings of the research highlight the importance of (a) the complementary use of PBL and mentorship to create a win-win context for enriched educational outcomes, (b) the significance of e-mentoring, peer mentoring, and reverse mentoring, and (c) the importance of university & K-12 collaborative projects to advance educational and sustainable development outcomes.

*mentoring, reverse
mentoring*

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Introduction

By designing a win-win experiential learning environment where one party (i.e., pre-service teachers) engaged in mentoring, and the other party (i.e., high school students) engaged in project implementation (i.e., Seed Bank), this multi-stakeholder 'university-society (K-12 school)' cooperation project carried out a multi-folded purpose. First, using the combination of Problem-Based Learning (PBL) and Project-Based Mentoring (PBM), both high school students and pre-service teachers interests in United Nations-Sustainable Development Goals



(UN-SDGs) were aimed to be nurtured. Second, pre-service teacher education was promoted through a well-structured mentoring training. Third, by assigning pre-service teachers to high school students as mentors for the development of the SEED Bank project, a unique PBL opportunity has been provided for high school students. Fourth, through this project, some significant Industry 4.0 skills (both cognitive and non-cognitive) in both pre-service teachers and high-school students were aimed to be promoted. To sum up, while this project aimed to help both high school students and pre-service teachers enhance their knowledge and interest in UN-SDGs with a unique experience (i.e., development of Seed Bank), it also provided pre-service teachers an opportunity to enhance their mentoring competencies and networks. The project intentionally combined PBL in the field of UN-SDG-Target-2.5¹ with a unique mentoring experience and expands our understanding of how Project-Based Mentorship (PBM) can be utilized to train pre-service teachers, equipping them with essential mentorship skills through hands-on mentor-mentee interactions. By engaging both mentors and mentees in real-world problem-solving, the study not only enhances their pedagogical development but also fosters a sense of social responsibility.

Research Questions

The effectiveness of the project was evaluated through the lens of PBM theory, with research questions addressing four key aspects: the context and product evaluation areas of the CIPP (Context, Input,

¹ UN-SDG-Target-2.5: “End hunger, achieve food security and improved nutrition, and promote sustainable agriculture-Enhancing genetic diversity in food production (UNDP, 2020)



Process, Product) Model, and the impact and process evaluation dimensions of the Responsive Evaluation Model (REM).

1. In what unique ways, the participants' awareness was raised and their skills were developed in the project? (CIPP- Context evaluation)
2. What are the views of participants on the facilitators and the challenges of the process phase of the PBM? (REM- Process evaluation)
3. Through the Seed Bank project, what unique needs of the participants and the community were met? (REM- Impact evaluation).
4. What are the views of the stakeholders on the project outputs? (CIPP- Product evaluation)

Importance of Research

This research is significant for several reasons, particularly in its innovative integration of PBM with the UN-SDGs in the context of pre-service teacher education. While existing studies explore PBL and mentoring in educational settings, most focus on these approaches in isolation (e.g., Almulla, 2020; Du et al., 2024; Hartman et al., 2018). This study, however, uniquely combines both frameworks, creating a multifaceted, experiential learning environment for pre-service teachers and high school students. By embedding the Seed Bank initiative within the UN-SDGs framework, the project provides a hands-on approach to teaching sustainability, environmental responsibility, and community engagement. This distinguishes the study by demonstrating how PBM can serve as a powerful tool not



only for skill development but also for fostering awareness of global challenges such as climate change and biodiversity loss.

Furthermore, this research contributes to the relatively underexplored area of PBM's impact on pre-service teacher development. Traditionally, pre-service teachers receive limited exposure to mentorship roles during training. Research suggests that beginner teachers often enter the profession with misconceptions about the challenges they will face, assuming their university education has fully prepared them (Callahan, 2016; Mokoena & van Tonder, 2024). Hine and Thai (2019) further argue that the practical teaching experiences provided in teacher education programs are insufficient in fully equipping pre-service teachers with the skills necessary for self-directed and effective teaching. This project offers them an opportunity to develop crucial mentoring competencies, which are often overlooked in conventional teacher preparation programs. Additionally, it highlights the value of interdisciplinary, real-world projects that blend academic learning with community-based outcomes.

The study also employs established evaluation frameworks, including Stufflebeam's CIPP (Context, Input, Process, Product) Model and Stake's Responsive Evaluation Model (REM), enabling a comprehensive and systematic assessment of the project's effectiveness. This methodological approach enhances the relevance of the findings, offering new insights into how PBM can effectively address both local educational needs and global sustainability goals.

In sum, this research offers a novel perspective at the intersection of Project-Based Learning (PBL), mentoring, the UN-SDGs, and pre-service teacher education. It contributes valuable insights to the field while presenting a unique model for integrating education with global

development initiatives, demonstrating how PBM can be a powerful tool for both professional growth and civic engagement.

Conceptual Framework

The study intentionally integrates PBL with mentorship (PBM) and examines the effectiveness of PBM using selected dimensions from Stufflebeam’s (2003) CIPP Evaluation Model and Stake’s (1975) Responsive Evaluation Model (REM) (see Figure 1). The conceptual framework begins with an overview of PBM, followed by an explanation of the Seed Bank Project as a PBL opportunity. It then explores the context and product evaluation areas of the CIPP Model and the impact and process evaluation dimensions of Stake’s REM, as these specific dimensions have been chosen to analyse the study’s findings.

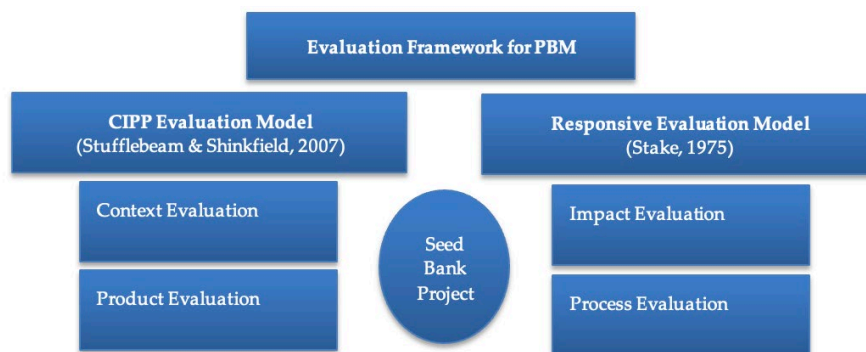


Figure 1. Evaluation Framework for PBM

Project Based Mentoring (PBM)

In the 21st century, traditional direct instruction alone is no longer sufficient to equip students with the skills needed for the modern era. Instead, it offers a more effective approach to developing 21st-century



competencies in students, preparing them for the demands of the information age (Bell, 2010; Clark, 2020; Land et al., 2012). Through PBL, learners actively engage in higher-order thinking activities such as planning, researching, analysing information, and creating meaningful products. Additionally, they collaborate and exchange ideas with others, applying their knowledge to real-world contexts (Blumenfeld et al., 1991). The mentorship program in this study was grounded in PBL approach and specifically aligned with the PBM model which was developed and trademarked by Alper (2017). PBM builds upon PBL theories but uniquely incorporates a mentor-mentee dynamic, fostering collaboration on real-world projects (Alper, 2021). While PBM involves knowledge transfer, it differs from traditional educational models. Instead of information flowing from educators, theoreticians, or textbooks, it is passed from a hands-on practitioner to a novice (Alper, 2021). The core philosophy is simple yet impactful: *learning from doers and learning by doing* (Alper, 2021). This approach enhances experiential learning, allowing mentees to gain practical insights and problem-solving skills through direct engagement with mentors in authentic, project-driven environments.

In PBM model, mentees acquire required knowledge and competencies by working for an extended period to address an authentic challenge with guidance from their mentors (Buck Institute for Education, 2019). Mentoring requires regular meetings, continuous engagement, and a significant time commitment from both mentors and mentees (Michailidi & Stavrou, 2021). With the mentor acting as a guide, the mentee can take ownership of a project and experience real-world problems that prepare them for the world (Alper, 2017). During the process, the mentees learn from their shortcomings and failures. In this model, mentors and mentees together share a mutual goal. They



plan the project's framework and decide on a timeline for successful completion together (Alper, 2021). In this model, the student should assume all the responsibility and be the executer of the master plan. By engaging in real-world scenarios and having a mentor by their side, students become more able to deal with real-world obstacles with ease (Alper, 2021). This presents a win/win situation for both parties. Prensky (2014) argued that character-based skills such as persistence, honesty, self-confidence and determination are the most valuable 21st-Century skills and considered as extremely important traits in the labor market. Heckman & Kautz (2014) argued that these traits can best be learned through projects. Moreover, Joplin (1981) argued that learners who participate in mentorship programs benefit from "learning by doing," which has been shown to create a highly effective learning experience for students. As reported by Alper (2021), NFTE (2014) studies showed that learners who are exposed to a mentorship program had better perceptions of the educational program and outperformed their unmentored peers in many aspects, including their comfort level in expressing themselves, ability to access career-related knowledge and skills, and character development.

PBM gives mentors an opportunity to be real educators. During the program, mentors have a good chance to learn how to communicate effectively or manage expectations and disappointments properly. By sharing real-world experiences with their mentees, they learn how to motivate people and keep them engaged when they are about to give up. Cohen (2001) suggests that benefits of mentorship extend far from the original reason of the collaboration. PBM offers great psychological and practical rewards to the mentors. First, it gives mentors an opportunity to share their knowledge and experience by keeping them



engaged in uniquely rich diversity of perspectives in various settings. Second, it gives them a purpose, a schedule, and a value (Alper, 2021).

The Role of Seed Bank Project as a High-Impact Project-Based Learning (HI-PBL) Opportunity

The Seed Bank Project was initiated to support the participants' interests in UN-SDGs. In this study, the Seed Bank project was utilized as a powerful tool— a High Impact Project-Based Learning (HI-PBL) opportunity— to advance one of the most transformative agendas of the UN-SDGs while equipping students with essential Industry 4.0 knowledge and skills. Sustainable development is an increasingly important topic due to the seemingly rapid depletion of natural resources around the world. UN-SDGs were adopted by the United Nations including Turkey in 2015 as a call-to-action for people worldwide to improve the planet and the quality of human life around the world by the year 2030. As part of the 2030 Agenda for Sustainable Development, Turkey included the issue of “awareness-raising activities on environment and nature protection, sustainable production and consumption aimed at increasing the environmental awareness of the society” in the 2019-2023 11th Development Plan as an Article (no: 713.3) (T.C. Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı, 2019). This alone shows how important this issue is both at the national and international level. Since UN-SDGs are one of the hotly debated issues in recent years, this research aimed to initiate a SEED Bank project in a high school as a part of a K-12 & university collaboration using PBM model.

PBL is an engaging, effective, and enjoyable approach to developing the deeper learning skills essential for success in college, careers, and civic life (Buck Institute for Education, 2019). Researchers suggested that PBL cultivates participants' both cognitive (such as knowledge



and skill) and non-cognitive competencies (such as determination and persistence) (Bhuyan et al., 2020; Rijken & Fraser, 2023; Zhao & Wang, 2022). In order to engage learners with a memorable and complete learning experience, this model puts a project at the center of learning (Alper, 2021). The project should focus on realistic problems and must prepare participants for real world outcomes (Sayuti et al., 2020). As a result, participants develop deep content knowledge as well as critical thinking, collaboration, initiation, and communication skills (Buck Institute for Education, 2019). PBL fosters students' curiosity and helps students become responsible citizens by preparing them for 21st century challenges (Krajcik & Czerniak, 2018).

Method

This study employs a phenomenological case study design to explore mentorship roles and social interactions in mentor-mentee practices aimed at supporting the professional development of pre-service teachers. The CIPP Evaluation Model (context and product evaluation areas) and Stake's (1975) Responsive Evaluation Model (impact and process evaluation areas) serve as analytical frameworks to assess both the contextual factors influencing mentorship and the outcomes of these interactions. The case study approach is utilized instrumentally, allowing for a detailed examination of PBM model as a mechanism for fostering professional growth. By treating PBM as an instrumental case, the study provides a structured analysis of mentorship dynamics, instructional strategies, and the broader implications for teacher education programs. Simultaneously, the phenomenological approach is employed to capture participants' lived experiences, particularly their experiential learning throughout the development of the SEED Bank project. This approach enables a deeper understanding of how pre-service teachers perceive and internalize mentorship practices,



emphasizing the subjective meanings they assign to their professional growth. By integrating both instrumental case study and phenomenological inquiry, this study offers a holistic perspective on mentorship in teacher education, bridging structured program evaluation with participants' personal experiences.

REM vs CIPP Evaluation Model

This study integrates different aspects of two evaluation models—Stake's (1975) REM and Stufflebeam's CIPP Evaluation Model—to create a complementary assessment framework. To evaluate the effectiveness of the SEED Bank Project, the context and product evaluation areas of the CIPP Model were combined with the impact and process evaluation dimensions of REM. This approach was selected to prioritize the project's influence on stakeholders and the alignment of its processes with their needs, rather than focusing solely on predefined outcomes. Stufflebeam's CIPP Evaluation Model (2000) provides a comprehensive framework for assessing programs through four key areas: context, input, process, and product evaluation. Context evaluation helps identify and understand the diverse needs of the target population, ensuring the program aligns with those needs (Sankaran & Saad, 2022). Input evaluation examines the allocation of resources and assists in planning decisions and strategy development to achieve project objectives. Process evaluation focuses on whether the program is being implemented as intended, asking, "Are we doing it correctly?" or "Did we do what we said we would?" (Haji et al., 2013). Finally, product evaluation measures, interprets, and assesses the program's outcomes.

Stake's Responsive Evaluation Model (REM) (1975), in contrast, prioritizes the needs and perspectives of participants over the original intentions of the program. In this model, stakeholders play a central



role in defining the outcomes they consider meaningful. Special attention is given to individuals who are typically excluded from knowledge creation and project implementation (Van Heijster et al., 2021). REM begins by addressing the concerns of various stakeholders to assess the quality and value of a program. Rooted in the naturalistic paradigm, it emphasizes evaluating the educational process rather than predefined outcomes. By conducting an evaluation that directly responds to stakeholders' needs, the findings become more relevant (impact evaluation) and more likely to be used for program improvement (process evaluation) (Curran et al., 2003). REM aims to refine interventions during implementation, ensuring they remain aligned with practical realities while incorporating stakeholder input.

The choice of an evaluation model depends on the program's objectives. The CIPP model is designed to equip decision-makers with actionable insights, distinguishing itself through its emphasis on context in evaluating teaching, learning, and development (Stufflebeam & Shinkfield, 2007). It serves as a tool to adapt programs to better meet organizational needs. In contrast, REM focuses on assessing the impact and process of an intervention rather than solely measuring results, ensuring that evaluation remains responsive to stakeholder experiences and concerns.

Procedure

This study received ethics approval from both the Institutional Review Board at the university where the lead researcher is employed, and the Research Initiative Committee of the partner K-12 school system before data collection began. Two groups of students were selected for participation: pre-service teachers from the university, who served as mentors, and high school students from the partner K-12 school, who were mentees. Participation was entirely voluntary, with no penalties



for refusal and no incentives provided. Each participant received an informed consent form, which outlined the study's purpose and methodology and requested permission to record interviews. The study followed a structured timeline that incorporated both mentorship training and experiential learning through the SEED Bank project.

Mentor Training Programme

The mentor training program was adapted from the NSF-funded *Entering Mentoring* curriculum (Greenberg, 2018) and designed to equip pre-service teachers (mentors) with essential mentoring skills before engaging with high school students. The training covered the following key areas (see Figure 2).

Getting Started. In the first session, pre-service teachers' perceptions of mentoring were explored, and the significance of PBM was discussed.

Establishing Expectations. Participants were oriented to the process and the expectations of PBM.

High-Quality Communication. The importance of building and maintaining effective mentoring relationships with mentees was discussed.

Assessing Understanding. Strategies for enhancing and assessing mentees' understanding were discussed.

Mentoring Ethically. Ethical considerations in mentor-mentee relationships, along with mentors' roles and responsibilities in addressing these issues, were discussed.

Developing a Mentoring Philosophy. In the final session, mentors were asked to share their mentoring philosophies with their peers.

These interactive sessions were conducted in an informal, conversational format, allowing mentors to discuss their expectations and challenges. Mentors had one month to complete the training and respond to a short-answer question: “Provide a short description of what you plan to do as a mentor.”

Getting Started	Exploring perceptions of mentors about mentoring and PBM
Establishing Expectations	Introduction to PBM Process & Orientation
High-Quality Communication	Relationship building and maintaining
Assessing Understanding	Discussion of strategies for enhancing and assessing mentees’ understanding
Mentoring Ethically	Discussing of ethical issues and responsibilities
Developing a Mentoring Philosophy	Sharing mentoring philosophy

Note. Adapted from *Entering Mentoring* curriculum (Greenberg, 2018)

Figure 2. Implementation of Mentor Training Programme

To maximize the effectiveness of mentorship, the study employed three complementary mentoring approaches: e-Mentoring, Peer Mentoring, and Reverse Mentoring. E-Mentoring provided virtual support and knowledge exchange, allowing pre-service teachers and high school students to engage in flexible online mentoring sessions beyond scheduled in-person meetings. These interactions facilitated discussions on UN Sustainable Development Goals (UN-SDGs), mentorship principles, sustainable agriculture, and project logistics. This approach ensured accessibility and continuity, enabling mentees



to seek guidance outside of formal sessions while also fostering digital collaboration skills essential for modern educational environments. Peer Mentoring focused on collaborative learning and shared experiences, with pre-service teachers engaging in reflective discussions and problem-solving within their university cohort. This allowed them to refine their mentoring strategies before working directly with high school students, reinforcing their confidence and pedagogical skills. Additionally, Reverse Mentoring introduced a student-led learning dynamic, where high school students shared their perspectives and expertise on youth engagement strategies and sustainability projects. By recognizing the knowledge of younger mentees in specific domains, this approach challenged traditional power structures in mentoring. It empowered mentees by validating their contributions, fostering an interactive and reciprocal learning environment, and equipping pre-service teachers with insights into student-centered teaching approaches. By integrating these mentorship types, the program promoted inclusive, dynamic, and transformative mentorship experiences.

Implementation of Seed Bank Project

The SEED Bank Project was implemented as a High Impact Project-Based Learning (HI-PBL) experience, following the Gold Standard PBL framework (Larmer et al., 2015a, 2015b) (see Figure 3). This approach provided a structured yet flexible learning environment that emphasized real-world problem-solving, inquiry-driven exploration, and meaningful student engagement. The project was structured around the following core elements.



Learning Goals (Key Knowledge, Understanding, and Success Skills)

- Mentors and mentees developed a deep understanding of sustainable agriculture and BM-SDGs.
- They engaged in active problem-solving, developing practical solutions for agricultural sustainability.

Real-Life Problem

- The project addressed an authentic issue: the need to preserve and distribute seeds to promote biodiversity.
- Learners explored practical applications of their knowledge, ensuring real-world impact.

Sustained Inquiry

- Participants continuously questioned and refined their approaches.
- Mentors guided mentees through research-based problem-solving, promoting critical thinking.

Learner Voice and Choice

- Mentees were encouraged to express their ideas, make decisions, and modify project elements.
- They played an active role in shaping the Seed Bank's design and implementation.

Reflection

- Both mentors and mentees engaged in ongoing self-assessment, discussing challenges and progress.

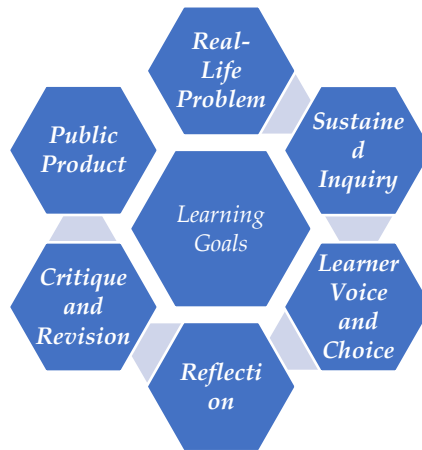
- Structured reflection sessions helped participants internalize their learning experiences.

Critique and Revision

- Participants received peer and expert feedback on their project designs.
- Mentors helped mentees revise and improve their strategies before implementation.

Public Product

- The project culminated in a final presentation, where mentees shared their work with school administrators, community members, and agricultural professionals.
- This phase validated mentees' contributions, highlighting the broader relevance of their work.



Note. Adapted from the Gold Standard PBL framework (Larmer et al., 2015a, 2015b).

Figure 3. *Project Design Elements*

SEED Bank Project Implementation & The Phases of Mentorship

The mentorship and SEED Bank project followed a structured, phased approach to ensure effective mentor-mentee engagement and successful project implementation. This process was divided into four key phases, each designed to build foundational knowledge, foster collaboration, and support hands-on learning experiences (see Figure 4).

Phase 1 (Weeks 1–4)	Phase 2 (Weeks 5–6)	Phase 3 (Weeks 7–8)	Phase 4 (Weeks 9–10)
•Mentor Preparation	•Cross-School Collaboration & Exploration	•Fieldwork & Mentorship Implementation	•Project Execution & Reflection

Figure 4. *Phases of Mentorship & SEED Bank Project Implementation*

Phase 1: Mentor Preparation (Weeks 1–4)

- Pre-service teachers received training on mentorship principles and UN-SDGs, with a specific focus on Target 2.5 (maintaining genetic diversity in agriculture).
- They engaged with e-mentoring discussions and peer mentoring within their cohort.
- They conducted independent investigations and presented findings under faculty supervision.

Phase 2: Cross-School Collaboration & Exploration (Weeks 5–6)

- Pre-service teachers partnered with high school mentees, engaging in exploratory activities at the K-12 school.



- Reverse mentoring emerged as mentees shared their prior knowledge on agriculture, sustainability, and local environmental initiatives.
- Researchers and professionals in sustainable agriculture provided additional guidance.

Phase 3: Fieldwork & Mentorship Implementation (Weeks 7–8)

- Pre-service teachers visited the partner school, where they initiated the mentoring process and explored potential sites for the SEED Bank project.
- They assessed school resources, worked collaboratively with mentees, and designed project implementation strategies.

Phase 4: Project Execution & Reflection (Weeks 9–10)

- Pre-service teachers developed and delivered a 15–20-minute mentorship presentation on the Seed Bank project, where they introduced themselves, shared their interests, and outlined their plans for the project. This presentation helped facilitate mentor-mentee pairing by ensuring better alignment based on shared goals, interests, and expertise, ultimately enhancing the effectiveness of the mentorship experience.
- A discussion session followed, where mentors and mentees were paired based on shared interests and project goals (see Table 1 for mentor-mentee pairings).
- The project concluded with a reflective evaluation, where mentors and mentees discussed their experiences throughout the project.

Table 1.

Mentor-mentee pairings

Pair	Pseudonym (for mentor)	Gender and Grade Level (for mentor)	Pseudonym (for mentee)	Gender and grade level (for mentee)
1	Huma	Female / Junior	Sami	Male / Grade 11
2	Hakan	Male / Senior	Rifat	Male / Grade 10
3	Lale	Female / Senior	Rana	Female / Grade 12
4	Itir	Female / Junior	Meltem	Female / Grade 11
5	Nihan	Female / Senior	Sena	Female / Grade 10
6	Pino	Male / Junior	Ebru	Female / Grade 12
7	Figen	Female / Senior	Simay	Male / Grade 11
8	Tufan	Male / Junior	Sinem	Female / Grade11
9	Ipek	Female / Junior	Cihan	Male / Grade 11

Participants

Pre-service teachers (mentors) met four inclusion criteria. They must have

- enrolled in an undergraduate program with a major in the Faculty of Education during 2023-2024 Academic Year.
- agreed to attend a five-hour mentoring training, and
- agreed to commit a minimum of five hours per month for on-site project activities and to fulfill face-to-face mentorship requirements.
- agreed to commit a minimum of five hours per month to fulfill e-mentorship requirements.

The ages of pre-service teachers ranged from 20 to 27 years old (M = 22.88). Three university mentors were male, and six were female.



High school students (mentees) met four inclusion criteria. They must have

- agreed to commit a minimum of four hours per month for on-site project activities
- agreed to commit a minimum of four hours per month to benefit from e-mentorship service.

The ages of high school students (mentees) ranged from 16 to 18 years old ($M = 16.77$). Three mentees were male, and six were female.

Data Collection

The study was conducted during the 2023–2024 academic year and utilized a diverse range of data sources, including interview and focus group transcripts, reflection papers, and observation reports. To monitor the mentor-mentee relationship, bi-monthly interviews were conducted, beginning in October. A semi-structured interview approach was employed to explore key aspects of the program, focusing on:

- (a) The most valued outcomes of the program from the stakeholders' perspectives.
- (b) The practical implementation of mentoring.
- (c) The opportunities and challenges associated with Project-Based Mentorship (PBM).
- (d) The products of the program.

This multi-faceted data collection approach provided comprehensive insights into the effectiveness of PBM and its impact on participants.



The interviewers used probes and follow-up questions to gain a deeper insight into each participant's experiences. They made a concerted effort to foster open-ended discussions and ensure that participants felt their input was valued and significant. Sonix.ai was utilized to transcribe the audio recordings. Additionally, the first author reviewed each transcript while replaying the corresponding audio recording. After the author's review, the transcripts were also shared with participants to verify their accuracy. Once the transcripts were confirmed as accurate, the first author conducted an initial multi-step thematic analysis (Patton, 2002; Yin, 2009).

Data Analysis

The analysis of qualitative data employed the content analysis method. Content analysis involves systematically classifying data through coding to identify key categories. When there is prior knowledge of the topic, it helps in formulating ideas about the expected categories and codes that might emerge. By using pre-established theoretical categories related to existing theories, content analysis can process large volumes of qualitative data and distill it into a summarized form by identifying and coding these pre-existing (and potentially new) categories.

All authors thoroughly reviewed the interviews to identify common themes and patterns and to achieve a shared understanding (Patton, 2002). The first author led the development of codes through a repetitive process involving literature review and evaluation of interview data. Codes were designed to address the issues and align with concepts from the conceptual framework. Using MAXQDA Pro software, relevant text and words were identified to answer the research question. Once no new codes were found, the coded data were exported to Microsoft Excel for analysis of similarities and



overlaps. The data were then reduced and consolidated, and final codes were organized into major thematic categories. The authors reached consensus on the findings after reviewing additional documentation related to the PBM program, including training materials, program expectations, timelines, mentor-mentee meeting agendas, and observation forms. For triangulation, the mentoring processes and experiences reported by mentees and mentors were verified by the program facilitators (researchers).

Findings

The findings were grouped under four pre-determined main dimensions (context, process, impact and product) (see. Table 2).

Table 2.
Summary of Findings

Pre-determined Dimension	Emerging Themes
CIPP-Context Dimension	Internalization of UN-SDGs Mentorship as a Transformative Experience for Pre-Service Teachers Career Aspirations: Affirmation and Reevaluation
REM-Process Dimension	Facilitators (e-mentoring, peer and reverse mentoring) Challenges and Setbacks: Navigating Through Them
REM-Impact Dimension	Networking Developing character-based skills
CIPP-Product Dimension	The Seed Bank Mentor Training Programme



CIPP- Context Dimension

Regarding the first research question, *“In what unique ways were the participants’ awareness raised and their skills developed in the project?”*, the analysis yielded three key findings. First, the Seed Bank initiative played a crucial role in *the internalization of UN-SDGs*, as both mentors and mentees moved beyond theoretical knowledge to actively engage in sustainability efforts, deepening their understanding of environmental responsibility. Second, the mentorship program proved to be *a transformative experience for pre-service teachers*, enhancing their professional competencies by providing firsthand insights into student behavior, communication, and instructional strategies. This experience not only strengthened their mentoring skills but also increased their confidence and preparedness for the teaching profession. Finally, the project had a significant impact on participants' *career aspirations, leading to both affirmation and reevaluation*. While some pre-service teachers found their passion for teaching reaffirmed, others realized that the profession was not the right fit for them, demonstrating the value of experiential learning in shaping career trajectories.

Internalization of UN-SDGs

Findings under this theme revealed that both mentors and mentees significantly enhanced their knowledge of the UN-SDGs and developed essential skills to actively contribute to environmental sustainability. The project provided a transformative learning experience, moving beyond theoretical knowledge to practical engagement. As Huma, a pre-service teacher, observed, participants who had previously only read about environmental sustainability became deeply involved in hands-on activities. She described the experience vividly: *“Lining with carefully labeled jars of seeds on shelves,*



each one representing a species crucial to the region's ecosystem and learning about seed preservation techniques".

This direct immersion in conservation efforts not only deepened participants' understanding of sustainability but also reinforced their commitment to environmental stewardship. The experience extended beyond theoretical discussions, requiring mentees to navigate real-world challenges—from negotiating with school administrators for compost bins to establishing connections with local farmers who shared their expertise.

Both mentors and mentees developed a profound understanding of the Seed Bank's purpose and expressed their dedication to continuing sustainability efforts. This sense of internalization was evident in their reflections. As Rifat, one of the mentees, emphasized: *"With our Seed Bank project, we learned the importance of preserving our agricultural heritage to ensure a bountiful harvest for generations to come. Sustainable development isn't just a fancy term; it's about safeguarding what we have today for tomorrow".*

Similarly, Rana shared how the experience reshaped her perspective: *"I never realized how important it is to protect our local biodiversity".* She went on to state her newfound aspiration to study agriculture and contribute to similar initiatives.

For Meltem, the project transformed sustainability from an abstract concept into an actionable mission: *"I used to think sustainable development was just a lofty goal. Now, I see it as something we can actively work towards, one project at a time. The Seed Bank initiative showed me how we can fight hunger by saving and sharing seeds. It's empowering to know that we are able to make a difference".*



Through these experiences, mentees internalized the significance of sustainability and saw themselves as active participants in addressing global challenges, demonstrating the transformative power of Project-Based Mentorship (PBM) in fostering long-term commitment to environmental and social responsibility.

Mentorship as a Transformative Experience for Pre-Service Teachers

The second research finding regarding the first research question revealed that mentoring experience had a profound impact on pre-service teachers, shaping their awareness of their profession, expectations about student behavior, and overall readiness for teaching. Through direct engagement with mentees, they gained practical insights into mentorship, student psychology, and the diverse needs of learners, all of which contributed to their professional development and preparedness for the teaching profession.

Hakan, one of the pre-service teachers, reflected on how mentoring younger students broadened his understanding of children's diverse abilities and helped him develop a more reflective and adaptive approach to teaching. He described the sense of fulfillment in witnessing his mentees' progress, stating that *"It was a rewarding experience to watch my students grow and succeed with my guidance"*.

Similarly, Lale shared how mentoring enhanced her communication skills and deepened her understanding of student psychology. The experience boosted her confidence in teaching and reaffirmed her passion for education. She remarked on the power of even small efforts, saying, *"It's amazing to see how even the smallest efforts can lead to significant improvements in a student's learning journey"*.

For Itir, mentorship brought a sense of fulfillment and personal growth, allowing her to build meaningful connections with her



mentees. She explained, *“Trying to bring out the best in my mentee added more meaning to my life, expanded my mind, and enriched my ability to bond with others”*.

Career Aspirations: Affirmation and Reevaluation

The mentorship experience also played a pivotal role in shaping career aspirations, helping pre-service teachers clarify their professional goals. While some found their passion for teaching reaffirmed, others realized that teaching was not the right fit for them.

Nihan expressed how mentoring strengthened her decision to become a teacher, reinforcing her belief in education’s transformative power. Conversely, Pino discovered that teaching was not for him, acknowledging the emotional demands and constant responsibilities of the profession. He appreciated the clarity the experience provided, stating, *“Although I enjoyed certain aspects of mentoring, it became clear that teaching demands a level of commitment and passion that I do not possess.”*

Echoing this sentiment, Figen shared how mentoring younger students made her reevaluate her enthusiasm for teaching. She emphasized the value of the experience in making an informed career decision, stating, *“Interacting with younger students in a mentoring role made me understand that my enthusiasm for teaching isn’t as strong as I thought. Yet, it was an essential experience that helped me make an informed career decision.”*

These findings highlight the dual impact of mentorship—while it enhanced professional development for those committed to teaching, it also provided critical self-awareness for those reconsidering their career paths. The structured mentorship process allowed pre-service teachers to experience the realities of teaching firsthand, leading to greater confidence, improved skills, and a clearer sense of professional direction.



REM- Process Dimension

The 'process' dimension of the project revealed both facilitators and challenges that shaped the progression of PBM. As Sami (one of the mentees) highlighted, every success and setback were a learning opportunity, discussed and analyzed with mentors and peers.

Facilitators (e-mentoring, peer and reverse mentoring)

E-mentoring played a pivotal role in the project, offering mentees more regular, flexible, and convenient meetings, which greatly enhanced experience-sharing. Sena noted that e-mentoring allowed consistent support, when in-person meetings were not feasible, a sentiment also echoed by Ebru, who valued the sustained mentorship it provided.

Though peer and reverse mentoring were not formally structured in the program, they emerged organically and became integral to the mentoring process. Rana stressed that peer support was crucial, as encouragement from fellow mentees extended beyond the mentor-mentee dyad. Simay reflected on how peer mentoring helped her recognize the unique strengths and perspectives each participant brought, enhancing collective problem-solving. Similarly, Tufan, who engaged in reverse mentoring, noted that it challenged his assumptions and broadened his understanding of new technologies introduced by younger students. Sami emphasized that the integration of peer and reverse mentoring created a dynamic learning environment where everyone contributed to mutual growth. Huma further highlighted that the project's success was deeply tied to fostering a culture where learning and teaching were shared responsibilities.

These findings demonstrated that the integration of e-mentoring, peer mentoring, and reverse mentoring, combined with a structured PBL



approach, significantly enhanced the mentoring experience. E-mentoring ensured continuous access to mentorship beyond structured sessions, allowing for flexibility and sustained support. Peer mentoring played a crucial role in strengthening mentors' pedagogical confidence and preparedness, as mentees learned from one another through shared experiences. Additionally, reverse mentoring fostered a collaborative and reciprocal learning environment, challenging traditional power dynamics by encouraging mentors to learn from their mentees' perspectives and expertise. Finally, the PBL framework reinforced experiential learning, ensuring that participants engaged in real-world, hands-on problem-solving that made their learning more meaningful and applicable.

Challenges and Setbacks: Navigating Through Them

Despite its successes, the project faced several challenges, as revealed by the findings. Establishing trust and effective communication within mentor-mentee relationships was a gradual process that required consistent check-ins and ongoing dialogue. A key takeaway from the findings was that mutual understanding of expectations is crucial for success, as misalignments often lead to frustration. Hakan highlighted the importance of regular reflection and clear communication of expectations to avoid misunderstandings and disappointment. The findings also emphasized that effective mentoring involves four main components: regular interpersonal interactions, building a strong rapport between mentor and mentee, effective communication, and managing expectations while handling disappointments. Furthermore, logistical constraints, such as coordinating schedules between university and high school students, posed another challenge. However, the findings showed that participants were able to mitigate these difficulties through flexible meeting arrangements and the use of



digital communication tools. Finally, resource limitations, particularly in accessing sustainable farming materials, emerged as another challenge. This was addressed through community partnerships and external funding, which provided the necessary support to overcome these obstacles.

REM- Impact Dimension

Under the 'impact evaluation' dimension, the analysis yielded two main findings highlighting the impact of PBM in developing networks and character-based skills such as persistence, honesty, self-confidence and determination.

Networking

Both pre-service teachers and high-school students developed valuable networks during the process. High school students valued their interactions with their mentors who helped them understand how to navigate obstacles encountered during the project. Likewise, pre-service teachers valued their interactions with their mentees who have given them an opportunity to be real educators. Moreover, as put forward by Rifat (one of the mentors) this project opened a whole new network for all participants involved, connecting students with professionals and peers they wouldn't have met otherwise.

The Seed Bank initiative also fostered partnerships with local farmers, agricultural experts, and environmental organizations, enhancing community engagement and collaboration. Ilayda, as a mentee, delightfully noted that she has gained access to her mentor's extensive network and built relationships with academics, industry experts and peers.



Developing character-based skills

Developing character-based skills such as persistence, resilience, self-confidence and determination are the most valuable 21st-Century skills and considered as extremely important traits in the labor market (Prensky, 2014). Findings revealed that both mentor and mentees invested extremely in those traits. Ipek (one of the pre-service teachers) proudly said their mentees tackled each hurdle with unwavering determination. She explained how they discovered the power of collaboration, and the resilience required to achieve their goals along the way. Sinem (one of the mentees) noted *“Through the Seed Bank project, we all have gained valuable skills in teamwork, problem-solving, and sustainable practices that will benefit us throughout our lives”*.

Lale, one of the pre-service teachers, highlighted how mentoring significantly enhanced her self-confidence throughout the process. Cihan (one of the mentees) said that *“Through mentoring, I learned that persistence is key to overcoming challenges. My mentor’s guidance and support helped me stay focused and determined, even when things got tough”*. Similarly, Rana echoed Cihan’s sentiment and noted that *“Having a mentor who consistently pushed me to step out of my comfort zone helped me build resilience. I learned bouncing back stronger from setbacks and not to be discouraged by them”*. Moreover, most of the participants (both from mentees and mentors) stated that the Seed Bank initiative has fostered a sense of responsibility and stewardship in themselves towards the community and the environment.

CIPP- Product Dimension

Under the ‘product evaluation’ dimension, the analysis yielded that there were two main products in the project.



The Seed Bank

The Seed Bank, established in a high school, served as a tangible and sustainable project outcome designed to promote biodiversity conservation and agricultural sustainability. As a key product of the initiative, the Seed Bank functioned as a repository for locally significant seeds, ensuring their preservation and availability for future use.

The project involved systematic collection, categorization, and storage of diverse seed varieties, with a focus on maintaining genetic diversity and supporting sustainable farming practices. Proper storage methods were implemented to ensure seed viability over time, while a structured management system was developed to track seed distribution and replenishment.

Beyond its immediate function, the Seed Bank acted as an educational tool, encouraging students to engage with real-world agricultural and environmental issues. By integrating knowledge from sustainable agriculture and biodiversity conservation, the project provided a long-term resource for both the school and the wider community. The Seed Bank not only addressed local environmental challenges but also reinforced the importance of self-sufficiency and ecological stewardship through hands-on learning and community involvement.

The impact of the project became even more evident when it was shared with a larger audience. Reflecting on this experience, Sena expressed her feelings, stating, *"When we presented our project to people who found it useful, it really hit home how much our efforts could contribute to the community. Seeing our agricultural project being valued by others made all the hard work worthwhile and showed how it could be applied beyond just our own group"*. Her words highlight the broader significance of the



Seed Bank, not only as a local initiative but as a model for sustainable agricultural practices that can inspire and benefit others beyond the school environment.

Mentor Training Programme

In addition to the Seed Bank, another significant product of the project was the adaptation of the NSF-funded *Entering Mentoring* curriculum (Greenberg, 2018) into Turkish for the Mentor Training Program. This adaptation proved invaluable in providing a culturally relevant framework for mentorship, ensuring that pre-service teachers were equipped with essential skills and knowledge tailored to the local context. By integrating this structured approach, the training program enhanced the effectiveness of mentorship efforts, fostering meaningful mentor-mentee relationships and improving the overall impact of the initiative.

Discussion

This study examined the mentor-mentee relationships, and the competencies acquired through the development of the Seed Bank project, demonstrating how university-K-12 collaborations can simultaneously advance educational and sustainable development goals. Findings revealed that participation in the project deepened students' understanding of local plants, biodiversity preservation, and sustainable farming practices, reinforcing key UN-SDGs. Beyond environmental education, the initiative fostered essential 21st-century and Industry 4.0 skills, equipping students with problem-solving abilities, collaboration, and resilience—critical attributes for future professional environments. Aligning with Alper (2021), the study confirmed that PBM creates an active learning environment where students engage in hands-on project management while also learning



to navigate challenges and setbacks. The mentorship component further contributed to leadership development, enabling mentees to take ownership of their projects under the guidance of their mentors. Participants reported gaining confidence, a stronger sense of community appreciation, and valuable transferable skills applicable to their future careers.

The findings underscore the importance of structured mentoring experiences within university-K-12 collaborations. While K-12 students benefit from hands-on leadership opportunities, pre-service teachers gain professional exposure and firsthand insights into real-world teaching environments. This aligns with Ehrich (2022), who highlights how mentorship can evolve beyond hierarchical models into reciprocal learning relationships. The Seed Bank project demonstrated that mentorship is not merely a one-directional transfer of knowledge but a dynamic exchange, fostering environments that encourage open dialogue and innovation. Consistent with the work of Hayes and Mahfouz (2020) and Malka et al. (2022), this study challenges traditional power structures in mentoring by emphasizing collaborative learning rather than rigid top-down instruction. Additionally, the findings support Hozien's (2023) argument that mentorship models rooted in cooperation and shared responsibility dismantle hierarchical barriers, enhancing both personal and professional growth for all participants. A key aspect of this collaborative approach was the integration of e-mentoring, peer mentoring, and reverse mentoring, which played distinct yet complementary roles in shaping the mentoring experience. E-mentoring allowed for continuous guidance beyond scheduled sessions, ensuring that mentees had flexible access to support. This proved particularly valuable in overcoming logistical constraints and



fostering a sense of consistency in learning. Peer mentoring, which emerged organically, reinforced the idea that learning is a shared responsibility. By exchanging experiences and solutions, mentees strengthened their problem-solving skills while pre-service teachers developed greater pedagogical confidence. Reverse mentoring further disrupted traditional hierarchies by encouraging younger mentees to introduce new perspectives, particularly regarding technology and contemporary approaches to sustainability. This reciprocal exchange broadened mentors' understanding of evolving educational needs and empowered mentees to take on more active roles in the learning process. By fostering an egalitarian approach to mentoring, the project encouraged mentees to voice their ideas, take initiative, and engage more meaningfully in their learning journey, thereby reducing superiority bias (Haidusek-Niazy et al., 2023). These insights have broader implications for both educational and corporate settings, illustrating how participatory mentorship models—particularly those integrating digital tools, peer collaboration, and reverse mentoring—can enhance leadership development and innovation.

This study highlights the potential of PBM in preparing students for modern, technology-driven workplaces. By integrating real-world problem-solving, collaboration, and mentorship, PBM equips students with future-ready skills necessary for navigating complex global challenges. The interdisciplinary nature of the Seed Bank project cultivated competencies essential for Industry 4.0, including systems thinking, digital literacy, and an entrepreneurial mindset. Students learned to approach sustainability challenges with a holistic perspective, apply digital tools for communication and decision-making, and develop leadership and resource-management skills crucial for professional growth. These findings reinforce the



significance of embedding PBM into educational frameworks to enhance students' adaptability and readiness for global workforce demands.

Policy and Practical Implications

The study offers several practical insights for education policymakers, teacher training programs, and institutional leaders. First, the Seed Bank project serves as a model for integrating sustainability initiatives into K-12 and higher education curricula. Policymakers should consider embedding similar mentorship-driven sustainability programs within national education frameworks to promote experiential, UN-SDG-aligned learning. Second, universities should incorporate PBM methodologies into teacher training programs to ensure that pre-service teachers engage in sustainability-focused mentorship experiences. Third, given its effectiveness, the PBM framework should be adapted across diverse educational settings, including both rural and urban schools, to maximize its impact. Finally, educational institutions should collaborate with local communities, businesses, and environmental organizations to strengthen PBM initiatives and provide students with authentic, hands-on learning experiences.

Conclusion

This study highlights the transformative potential of PBM in fostering meaningful mentor-mentee relationships, enhancing education, and advancing sustainability goals. The Seed Bank project demonstrated that structured mentorship programs can effectively integrate UN-SDGs-focused learning into both K-12 and higher education contexts. By expanding such models, educational institutions can nurture future



leaders who are environmentally conscious, adaptable, and equipped to meet the evolving demands of the 21st-century workforce. Moreover, these models can facilitate the establishment of sustainable partnerships with other schools, universities, and community organizations, further strengthening the impact of mentorship in education.

Limitations & Recommendations for Future Research

While this study provides valuable insights, it has certain limitations that must be acknowledged. As a case study, its findings may not be universally generalizable, as the scalability of the Seed Bank project and the PBM framework depends on factors such as institutional support, resource availability, and stakeholder engagement. To enhance adaptability across diverse educational and cultural contexts, future research should examine PBM in a wider range of settings, exploring how project themes can be customized based on local environmental and social challenges to ensure greater relevance and engagement. Additionally, further studies could investigate the long-term impact of PBM on the career trajectories of both mentors and mentees, offering a deeper understanding of its influence on professional development. Another promising avenue for research involves examining the role of digital tools in enhancing mentorship experiences, particularly in facilitating communication, collaboration, and accessibility in remote or resource-limited environments. Although peer and reverse mentoring emerged organically in this study, future programs should integrate them more intentionally to foster inclusive, reciprocal learning. Structured peer mentoring can enhance collaboration and problem-solving, while reverse mentoring allows mentees to share fresh insights, promoting adaptability and innovation.



Another limitation concerns the sample size, as a relatively small participant pool may constrain the generalizability of the findings. Expanding the study across multiple institutions and diverse geographical locations would provide a more comprehensive assessment of PBM's effectiveness. Furthermore, while peer and reverse mentoring emerged organically in this study, future research should explore structured implementations of these approaches to assess their systematic impact on learning outcomes. By addressing these areas, future studies can contribute to refining PBM as a scalable, adaptable, and impactful educational model capable of shaping future-ready learners and professionals.

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The Practice of Transformational Leadership in K12 Private Schools in China: Strategies and Insights for Driving Educational Innovation

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Abstract

This study aims to explore how principals of K12 private schools in China practice transformational leadership and focuses on schools in the Sichuan-Chongqing region. The study focuses on five dimensions of transformational leadership: setting direction, developing people, redesigning the organization, improving instructional program and related practices. To gain insights into the specific performance of these dimensions, the study adopts qualitative research, combined with case studies, and collected data through observations, semi-structured interviews, and document analysis. The findings reveal 15 specific practices under the five dimensions that provide important support for school development. By analyzing the practices of principals in Chinese K12 private schools, fills a gap in research on the application of transformational leadership in private K12 education in China, and provide new perspectives to deepen the theoretical content. Based on the uniqueness of the Chinese educational context, the findings of this study firstly support the

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culturally adaptive and contextualized application of transformational leadership theory. Second, the study provides concrete transformational leadership practices for Chinese K12 private school principals to help them drive school reform and development more effectively. Finally, the study highlights the typicality of the special education context and sample selection in the Sichuan-Chongqing region, which provides a reference for educational reform in similar contexts. The novelty of this study lies in revealing the specific practices of the five dimensions of transformational leadership and demonstrating how they can support sustainable school development, as well as providing actionable recommendations for private principals.

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Introduction

The wave of global education reforms is driving profound changes in school management models, and transformational leadership is becoming increasingly important in education as a leadership style that motivates teachers and optimizes the organizational culture to achieve overall school development and improve teaching quality (Leithwood & Jantzi, 2005). Although transformational leadership has been widely researched globally, the application of its theories in the context of Chinese K12 schools has faced many practical problems. In Chinese K12 private schools, although principals enjoy greater



autonomy in management, they are under pressure from policy constraints, unequal distribution of resources, and conflicting demands from parents and teachers (Wu, 2001). These issues make the implementation of transformational leadership complex and inefficient. In addition, research has shown that principals face the dilemmas of poor role orientation, poor communication with subordinates, and lack of clear leadership strategies when practicing transformational leadership (Li, 2021; Xia, 2014). Some of the leadership styles are disconnected from the actual needs and even lead to stagnation of the change process (Zhang, 2021). More critically, there is a lack of transformational leadership practice frameworks adapted to the Chinese educational context, resulting in a lack of systematic guidance for change implementation (Jiao & Liu, 2017).

Current literature predominantly addresses challenges in educational development and proposes corresponding remedies, yet largely overlooks the status of private K12 education. These issues directly undermine principals' ability to drive school change and improve educational quality, exposing a critical gap in current research: the ways in which transformational leadership is practiced in the Chinese K12 private school context have not yet been adequately researched.

To address this issue, this study aims to answer the research question:

How are the transformational leadership practiced by the principals of Chinese K12 private schools (Setting Directions, Developing People, Redesigning the Organization, Improving the Instructional Program, Related Practices)?

To explore the specific ways in which transformational leadership is practiced in Chinese K12 private schools. By filling this gap in theory



and practice, this study hopes to provide educational administrators with a set of leadership practice frameworks adapted to the local context, which will help optimize the school management model and sustainably improve the quality of teaching and learning.

Literature Review

Transformational leadership theory was first introduced by Burns (1978) and emphasizes that leaders motivate their subordinates to work together to achieve organizational goals by motivating them to go beyond their personal interests. Bass (1985) built on this foundation by proposing key dimensions of transformational leadership, including individualized consideration, intellectual stimulation, and charisma-inspiration, which emphasize the need for leaders to serve as role models and inspire their subordinates to reach for higher goals (Bass & Riggio, 2006, p. 3). (Bass & Riggio, 2006). However, Yang (2013) noted that situational variables may enhance or diminish the effectiveness of transformational leadership, and Bass did not describe its application in educational contexts in detail. Therefore, it is important to explore the practice of transformational leadership in the context of Chinese K12 private schools.

The importance of transformational leadership in the field of education has been increasing with the deepening of education reforms around the world. Leithwood introduced transformational leadership into the field of education, and his research suggested that transformational leadership can significantly enhance the innovative and adaptive capacity of schools (Leithwood & Jantzi, 2000). Leithwood and Sun's (2012) study suggests that transformational leadership can significantly impact school development by setting direction, developing people, redesigning organizations, and improving

instructional programs and related practices. However, the ways and effects of these practices may vary across countries and cultures (Li & Shi, 2005). For example, in regions that emphasize a culture of collectivism and authority, transformational leaders need to focus on communicating and collaborating with faculty and staff to ensure the effectiveness of change programs (Litz & Blaik-Hourani, 2020). Therefore, examining the practice patterns of transformational leadership in Chinese K12 private schools can help deepen the understanding of its application in specific educational settings.

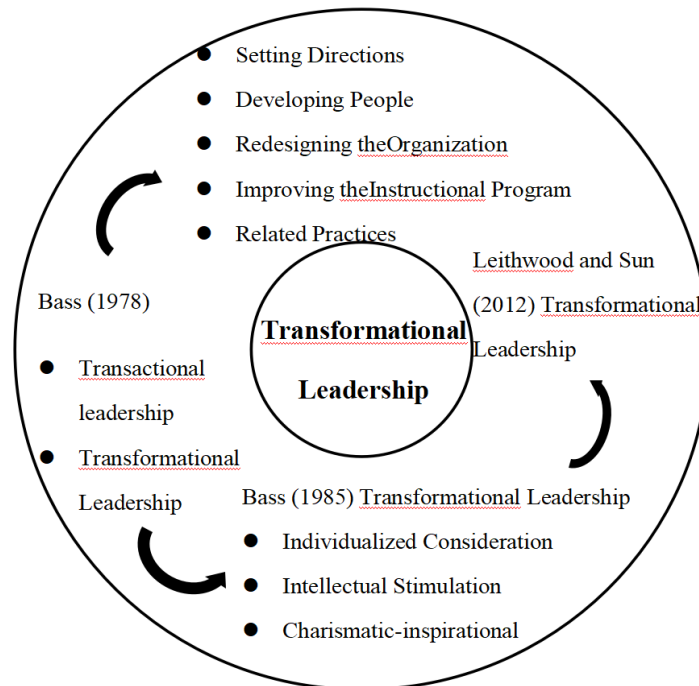


Figure 1. *The Development of Transformational Leadership Theory (Bass, 1978; Bass, 1985; Leithwood & Sun, 2012)*

In many countries, private schools have become synonymous with high-quality education and are favored by elite and affluent families (Cheng, 2020). Overwhelmingly, governments believe that it plays a key role in developing the habits and interests of students once they enter university (Coughlin & Castilla, 2014). The number of students choosing private K12 schools continues to grow not only in the United States but globally (Binelli & Rubio-Codina, 2013). For example, the private K12 education market in Malaysia is dominated by pre-primary and secondary schools which account for nearly 75% of the market, reflecting the importance of private education at different stages (Gurugram, 2022). In developed countries, private schools are more “branded”, with high acceptance rates at prestigious universities, good student quality, and a focus on quality education (Li, Lu & Qian, 2020). The elite education of private K12 schools in the UK has attracted a large number of international students, and between 2007 and 2020, an increasing number of international students will flock to all types of private schools in the UK (Sohu News, 2020).

In China, the international schools are similar to private schools in terms of the nature of their management; they are non-public organizations founded by social forces, charge higher tuition fees, focus on specialized education, and offer different curricula to public schools, e.g., private schools may offer international classes, while international schools usually adopt international curricula (Yuan, 2017). Most international schools in China are private but follow international accreditations (e.g., IBO, CIS) and China's policies, differing significantly from public schools in target audience, curriculum, and regulations.

In May 2021, China introduced new regulations to strengthen the regulation of compulsory education and training institutions,



prohibiting profit-making at the compulsory education level, aiming to reduce the burden on students and parents, and encouraging the development of vocational education. This policy poses new challenges for private K12 schools will increase the difficulty for schools to access capital and operate, which will weaken the willingness of private schools to invest in compulsory education and lead to slower revenue growth (Fitch Ratings, 2021).

After decades of research, transformational leadership has been shown to play a positive role in school transformation and development, and is particularly effective in enhancing teachers' organizational commitment, innovative behaviors, job satisfaction, and performance (Jiao & Liu, 2017; Liu, 2022). Liu (2022) found that visionary incentives and intellectual incentives, in the context of China's traditional collectivist culture, made a significant contribution to teachers' organizational commitment, while idealized influence and personalized care were relatively weak. This suggests that Chinese culture tends to favor group-oriented leadership behaviors but may ignore the variability of individual needs, which poses a challenge for teachers' personalized development (Li, 2019; Liu, 2022).

In addition, Liu and Kong (2020) noted that transformational leadership creates an atmosphere of innovation and stimulates teacher creativity in K12 practices by encouraging innovation and exploration of new approaches. However, whether such innovation incentives are sustainable in resource-constrained school environments requires further research. Zhao and Xi (2018)'s study shows that although transformational leadership is more effective than transactional leadership in enhancing teacher satisfaction, the role of transactional leadership in basic management cannot be ignored, especially as the

balance between satisfying teachers' material needs and promoting values transformation remains unresolved.

Sunwu (2016) and Sun & Henderson (2017) emphasized that the moral modeling and leadership charisma dimensions of transformational leadership are critical to the improvement of teacher performance. Principals earn teachers' trust and inspire their active participation in school management through high moral and charisma. However, these studies have mainly focused on teacher performance and the indirect effects on student learning outcomes have lacked in-depth exploration. Lee's (2022) literature review further criticized that most of the current studies are predominantly quantitative in nature, ignoring the complexity of transformational leadership in different cultural and resource environments, and called for the introduction of more qualitative and mixed-methods studies in the future for a more comprehensive understanding of its practical applications and limitations.

Most studies show that transformational leadership plays a positive role in four aspects: teachers' organizational commitment, teachers' innovative behavior, teachers and students' satisfaction and performance. However, researcher find that among this research in China, there are less relevant researches only focus on private K12 schools in China this filed and the research angle is relatively scattered. However, this study adopted qualitative research for analysis, so as to have a deeper understanding and discover the problem and obtain more abundant data to answer the question. The researcher also found that the study should bring a multi-angle analysis of all dimensions to explore how transformational leadership is practiced in different dimensions. This also shows that this research has very important practical value.

These are some of the typical literature summaries on practices of transformational leadership that researcher mentioned above (Table 1).

Table 1.

Typical Literature Summary on Practices of Transformational Leadership

Research & Authors	The findings	Comments
<u>Liu</u> (2022)	<ol style="list-style-type: none"> 1. Vision motivation and intellectual stimulation have a greater contribution to organizational commitment. 2. Idealization influence and individualized care have relatively small contribution organizational commitment. 3. <u>Transformational</u> leadership behavior significantly affects school organizational innovation climate. 	<p>This study has a detailed analysis of the effects of various dimensions of <u>transformational</u> leadership on teachers' organizational commitment. But the research direction is too single.</p> <p>Besides, the idealization related to personal performance and the contribution rate of individualized care to teachers' organizational commitment is not large. The explanation for why this is happening is not so clear.</p>
<u>Sunwu</u> (2016)	<ol style="list-style-type: none"> 1. <u>Transformational</u> leadership has a positive impact on the performance of primary and secondary school teachers. 2. The two dimensions of the moral model and leadership charm have a greater impact on the work performance of primary and secondary school teachers. 	<p>School principals influence their teachers through their own noble morality and unique charm, so that teachers have trust in principals and are willing to follow them, so that teachers can devote more enthusiasm to their work and produce better performance. This study provides valuable suggestions for the understanding and practice of some dimensions of <u>transformational</u> leadership.</p>
<u>Li</u> (2022)	<p>This study shows that <u>transformational</u> leadership has a significant effect on improving teachers' work enthusiasm and overall school effectiveness, especially on teachers' professional growth. However, in terms of improving student learning outcomes, the impact is relatively small and may</p>	<p>Researcher Li (2022) suggests that more qualitative and mixed-methods research is needed in the future to more fully understand the role of <u>transformational</u> leadership across cultures and educational settings.</p>



Method

This qualitative study conducted a case study of K12 private schools in China's Sichuan-Chongqing region, chosen for its economic and educational significance. The Sichuan-Chongqing region (Sichuan Province and Chongqing Municipality) has similar cultural and social characteristics, and both are China's new first-tier cities, which makes them highly valuable for research (CNR News, 2020). In addition, even though Sichuan and Chongqing are among the top regions in terms of GDP and population, there has been little research on transformational leadership in private K12 schools in the region, and there is an urgent need to fill this research gap (Wang, Meng & Feng, 2022).

Initial screening of schools was conducted at the beginning of the study through the Multifactor Leadership Questionnaire (Bass & Avolio, 1992) to ensure that participating schools possessed the important attributes of transformational leadership. Screening criteria included leadership scores and the length of time the school had been in operation (over five years). Schools with at least five years of operation were selected for the following reasons: According to Organizational Life Cycle Theory, a five-year history of operation indicates that a school has entered a stable stage of development, and its leadership practices are more representative (Greiner, 1998). The effects of transformational leadership need to be observed over time, and five years is an important point in time to demonstrate the long-term impact of leadership (Rost, 1993). At the same time, psychology's 10,000-hour theory suggests that this length of time is enough practical experience to reflect the maturity of the leader (Ericsson et al., 1993). The researcher chose case studies, so a large sample was not applicable to this study, and the role of the MLQ was limited to screening the



study participants and was not used for hypothesis testing, so the study remained qualitative.

In terms of data collection, the study used three methods: semi-structured interviews, observation and document analysis to ensure the comprehensiveness and depth of the study. Interviews were conducted with principals, senior teachers and general teachers, where senior teachers and general teachers were recommended by the principals through the snowball sampling based on the criteria of having more than five years of experience, excellent performance and active participation in school affairs to ensure that the interviewees were able to provide information that was closely related to the topic of the study (Lokot, 2020). Observation was recorded on a location basis to verify the consistency and authenticity of the interview data, while document analysis included materials such as school policy documents, reports and press releases to provide objective contextual support for the study. The study was cross validated across different data sources through the principle of triangulation (Heale & Forbes, 2013), thus enhancing the credibility and reliability of the study.

For data analysis, this study used thematic analysis to identify key themes and impacts of transformational leadership. The interview guide, based on Leithwood and Sun's (2012) leadership model, focused on five core dimensions and was validated by experts to ensure in-depth exploration of leadership practices. Through initial coding, themes were extracted from interview data and observation notes, followed by cross-case comparison and triangulation with literature. Based on data saturation theory, three schools in the Sichuan-Chongqing region were selected as study sites. The final themes highlight the practice of transformational leadership in private K12 schools in this region.

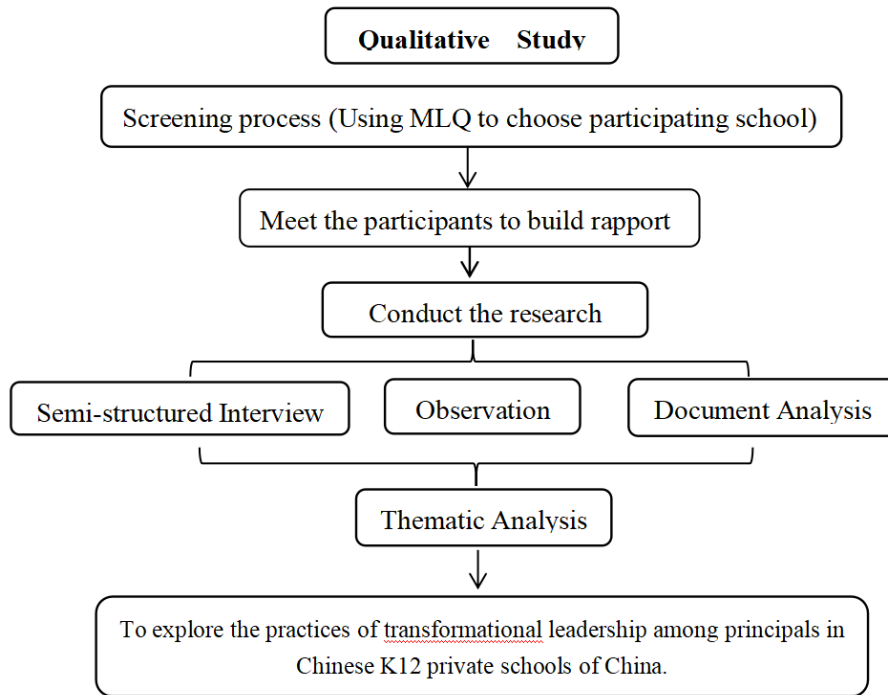


Figure 2. *The Research Process in This Study*

Results

Setting Directions

Develop a Shared Vision and Building Goal Consensus. In Chinese K12 private schools, the construction of shared values is one of the key practices for principals to implement transformational leadership. This study found that by fostering a shared vision, principals not only enhanced the cohesiveness of the school community, but also improved teacher and student engagement and the collaborative climate of the school organization. This is consistent with studies by Wang and Gao (2016) and Leithwood & Jantzi (2000), indicating the



important role of shared values in shaping school culture and enhancing organizational transparency. However, the existing literature focuses more on macro-level cultural influences and lacks exploration of specific ways of practicing them, especially in the unique context of Chinese K12 private schools.

This study further found that the combination of short-term goals and long-term vision is key in principals' transformational leadership practices. Clear short-term goals provide immediate results through measurable outcomes, while the long-term vision provides a stable direction. This practice not only increased school management efficiency, but also balanced short-term needs with long-term development planning in the face of resource constraints and policy pressures (Song, 2024). Existing research has paid less attention to the specific role of integrating short-term and long-term goals, and this study fills this gap by providing a practical reference for principals to implement transformational leadership in complex educational environments.

Hold High Performance Expectations. Setting high performance expectations was found to be an important component of transformational leadership practices in private K12 schools in Sichuan and Chongqing, China, and was found to be effective in improving the quality of education and fostering the overall development of students. This study found that by setting rigorous performance standards, principals motivated teachers and students to strive for excellence and drove overall school performance. This is consistent with Schleicher's (2020) study, which suggests that high standards not only inspire potential, but also promote academic achievement and the overall development of students' social, emotional, and civic awareness. However, the existing literature focuses more on the positive effects of

high performance expectations on educational outcomes and less on the specific ways in which they can be practiced in specific cultural contexts and resource-constrained situations (Leithwood & Jantzi, 2005; Zhang, 2023).

This study further found that by implementing high performance expectations in private K12 schools in Sichuan and Chongqing, principals were able to effectively balance the challenges of policy constraints and uneven resource allocation, and that these schools used rigorous standards and selection procedures that not only enhanced teachers' teaching and research, but also attracted and retained excellent educators (Yang & Chen, 2024). This practice not only enhances the quality of education, but also meets parents' and students' expectations for quality education and enhances the competitiveness and reputation of the school (Cai & Xie, 2021).

This study fills the gap in the existing literature by emphasizing the characteristics of the practice of high performance expectations in private K12 schools in Sichuan and Chongqing, and reveals how rigorous goal setting and effective incentives can drive school development under transformational leadership. This not only provides a deep understanding of transformational leadership practices in the Chinese educational context, but also offers a clear path for principals to implement high performance expectations in complex educational contexts.

Focus on Comprehensive Student Development. The study found that principals not only focus on the overall development of the school, but also promote the balanced development of students in the areas of ethics, intellect, physique, aesthetics, and labor by introducing the concept of holistic education. This is consistent with Wang's (2007) proposal of a "comprehensive goal planning system" that provides



clear benchmarks for student growth through clear vision and goal setting (Leithwood & Jantzi, 2000). This study further found that principals incorporate the shift from traditional test-based education to quality education into their leadership practices in promoting a well-rounded education that centers on fostering critical thinking and creativity in students (Robinson, Lloyd & Rowe, 2008).

Unlike the existing literature, this study reveals how transformational leadership in the context of Chinese K12 private schools can address practical issues such as unequal resource allocation and conflicting needs of parents and teachers through flexible incentives and cultural reshaping (Zhang, 2021). By integrating holistic development goals with school culture, principals not only enhance the relevance of their leadership behaviors, but also effectively address the limitations of the traditional test-oriented approach. In addition, this leadership practice provides a clear direction setting for student development through clear direction setting, thus remedying the problem of the inadequacy of current theoretical frameworks in practical application (Jiao & Liu, 2017).

This finding combines transformational leadership with the transformation of quality education policy for the first time in a Chinese K12 private school context, demonstrating how principals can reshape their school development goals through a holistic approach to education under policy constraints and resource pressures, and providing a new perspective for principals to optimize their school management and improve education quality.

Developing People

Provide Individualized Support. Individualized support is a crucial practice in school transformational leadership. Principals must

prioritize each student's unique needs to drive transformation in school systems and culture, emphasizing individual development. The finding of this study is relevant to the study conducted by Liu and Kong (2020). The study suggests that personalized care is particularly important for transformational principals. Offering personalized support, rather than the standardized education of the industrial age, involves designing and implementing educational strategies tailored to students' distinct needs, interests, and learning styles. Data collection, analyses, and artificial intelligence technologies facilitate individualized support, ensuring all students access suitable educational resources for their development. Individualized support is integral to school transformational leadership, demanding a focus on individual student needs to improve school systems and culture effectively. Besides student-centered support, personalized support for teachers is equally vital. Principals also provide teachers with professional development opportunities and resources to foster innovation in teaching and learning. A supportive work environment that accommodates teachers' professional needs and interests enhances their job satisfaction and promotes their professional growth, ultimately benefiting students.

Provide Intellectual Stimulation. Principals demonstrate openness by providing opportunities for collaborative thinking among employees. Intellectual stimulation involves enhancing cognitive abilities and creativity through various methods and strategies (Wodehouse, 2022). In educational settings, this entails challenging teachers and students to think innovatively and explore new teaching and learning approaches. Chinese schools have always attached great importance to teachers' career planning and development. When Xin and Sun (2024) talk about how schools can promote their own development through



planning, he suggests that the three dimensions of "school organizational planning and development", "principal career planning and development", and "teacher career planning and development" should be emphasized. To foster teaching quality and professional competence, principals establish professional development programs, organize training workshops, support innovative projects, and offer continuous feedback and support to help teachers reflect on and enhance their teaching practices. These efforts promote both individual and team development, ultimately contributing to overall educational excellence.

In private K12 schools, transformational principals enhance teacher effectiveness and professional growth through intellectual stimulation. The finding of this study is similar to the finding of a study conducted by leadership expert Michelle Ray (2020), the study emphasizes the importance of providing opportunities for critical thinking and challenging entrenched ideas, enabling individuals to reach higher levels of potential and self-leadership (Ray, 2020). The principals of private K12 schools challenge assumptions, encourage innovation, and provide necessary resources for teachers to evaluate and improve their teaching practices through regular training, workshops, and teacher learning communities. Principals offer concrete feedback and support, motivating teachers to continually refine their teaching methods, leading to greater job satisfaction and professional competence, and contributing to overall school development.

Leader Sets an Exemplary Moral Standard. Transformational leadership has globally influenced the field of education by setting ethical standards. This leadership practice emphasizes that a principal's role is not only to guide and motivate the team, but crucially to establish benchmarks through their own ethical behavior. The finding of this

study is similar to the finding of a study conducted by Tong (2012). The study argues that in the current society, traditional moral concepts are under attack and schools are facing such challenges. Therefore, the reconstruction and improvement of moral standards in school moral education is a top priority. This promotes a positive and just learning and working environment (Bass & Riggio, 2006). In education, ethical standards set by principals directly impact the professional conduct of teachers and the moral development of students.

This is especially significant for private K12 schools in China, where principals' ethical behavior shapes school culture and directly impacts the school's brand image and reputation in a competitive education market. Yang (2019) analyzes "authentic leadership", which advocates that principals use sincerity as a criterion to enhance self-awareness, demonstrate their inner moral concepts, balance their relationships with others, and present their true selves to others, with the aim of enhancing the trust between principals and followers, and enhancing the humanistic nature of ethical management. By practicing high ethical standards, educational principals inspire teachers to strive for professional excellence and cultivate responsibility, integrity, and innovation among students (Yuan, Li, Xu & Yang, 2024). Such an educational environment fosters students who are equipped to adapt to future societal challenges. However, ethical leadership is interpreted and understood differently across contexts. Previous research has identified a gap in understanding ethical leadership, with few studies exploring effective strategies for school principals to make better ethical decisions (Maxcy, 2002). This study addresses this gap, representing a breakthrough in this area of research.

Redesigning the Organization

Enhance school Culture and Humanistic Care. The goal of education is not only to impart knowledge and skills but also to cultivate lifelong learners who are innovative, critical thinkers, cooperative, ethically responsible, and globally minded. Achieving this goal hinges not only on the content and teaching methods but also on the school's culture and atmosphere. Private K12 schools, therefore, practice transformational leadership to strengthen school culture and promote humanistic care, adapting to societal changes and educational needs, thereby enhancing competitiveness and educational impact. Transformational leadership stimulates and fulfills the higher-level needs of followers, fostering personal and organizational transformation and development (Usman, 2020). Yang (2021) defines humanistic caring as a people-centered approach that values human nature, providing both spiritual and material support to ensure teachers' well-being and dedication to their work. Integrating humanistic care into school management fosters communication and mutual respect between teachers and students, contributing to the stability and growth of K12 schools (Yang, 2021). The school culture focuses on guidance, cohesion and motivation. Humanistic care places more emphasis on emotional support, mental health and personality development.

Moreover, school culture not only reflects human activities but also encompasses physical objects and the overall environment, which are equally important considerations. Lian (2013) highlighted in a case study the importance of modernizing school facilities with local elements and life aesthetics. This includes creating safe and open school environments, designing diverse and interactive learning spaces, and integrating natural elements into the school environment.



Such efforts optimize school spaces for educational activities that exemplify teaching through words, actions, and circumstances, thereby embedding humanistic care into school culture (Lian, 2013).

Building Structures to Enable Collaboration. Redesigning the Organization is more feasible for K12 private schools in China. This means they can make decisions and implement changes more quickly, without having to go through cumbersome administrative processes. The reconfiguration of the organizational and leadership structure of the school, the central work of the school to be able to better serve the training of students, and for the whole of school education to re-examine its internal and external relations is particularly important (Li, 2024). In addition, private schools are more likely to attract and retain innovative teachers and administrators, thus providing the talent to support organizational change. Harvard West Academy, it has successfully reorganized its school structure, optimized resource allocation and established more effective collaborative leadership through the implementation of transformational leadership. By encouraging teachers to participate in the decision-making process, school principals have improved teachers' job satisfaction and student achievement (Youthinks Academy, 2020).

Transformational leadership enhances the quality of education by stimulating teacher creativity and initiative, and fostering collaboration among teachers. In K12 reforms in the Philippines, principals drive educational change by building structures to support the development of a more effective collaborative leadership. principals drive educational change by building structures to enable collaborative customized blended learning models and community practices (Oracion et al., 2020). The absence of a clear collaborative structure may lead to poor information transfer and unclear



responsibilities, which in turn affects the overall efficiency and management level of the school, and makes it difficult to form team cohesion and cooperative spirit, which is not conducive to the harmonious development of the school.

Engaging Parents and the Wider Community. In strengthening family education, transformational principals can create a more supportive and enriching learning environment for students by promoting home-school co-operation, which is crucial for students' holistic development. In addition, family education plays a pivotal role in the growth and lifelong development of adolescents, and the formation of synergy between family education and school education is crucial to improving the quality of school education (Zhao, 2023).

For example, Professor Qing Gu of the School of Education at University College London points out that successful schools do not just improve students' test scores, but also teach them positive values while nurturing their personal abilities (Hu, 2020). Through measures such as holding parent workshops and establishing home-school communication platforms, schools are able to attract and use family resources more effectively to support the improvement of teaching and learning programs. The Harvard Family Research Project (2016) is a well-known example, through research, resource sharing, and policy advocacy, the project emphasizes the important role of family engagement in enhancing students' academic achievement and social-emotional development, providing practical guidance and strategies for schools and families (Harvard Family Research Project, 2016).

Due to the special nature of school organizations, schools should become an important force in maintaining social harmony. This requires schools to effectively assume social responsibility and comprehensively understand the rich connotation of school social



responsibility. The practice of social responsibility refers to an individual's or organization's positive response and contribution to the problems and needs of the society through its own behavior and activities, and is an individual's or organization's moral and social behavior (Chen, 2013). For example, Phillips Academy in the United States, a private K12 school that aims to cultivate people with a sense of social responsibility and leadership, and the school fosters students' social responsibility and leadership in particular by providing a diverse, internationalized, and humane learning environment. He also strengthens students' ethical standards and morals by establishing a school culture that is centred on social responsibility that guides students' values and codes of conduct (Fierberg & Jackson, 2017). The school also enables students to pay attention to the problems and needs of the society and practice the concepts and actions of social responsibility by advocating and organizing students to participate in various community service projects, such as educational counselling, environmental protection, and charitable donations.

Many private K12 schools have implemented the "Home-School Co-Education" program to actively promote the improvement of family education. Schools organize regular parent meetings, lectures and workshops to enhance parental participation and support for students' learning and development. Strengthening family education is particularly urgent (Meng, 2018). Communication problems exist not only between principals and teachers, but also between schools and parents. Effective channels of communication between home and school and encouragement of parental participation in school activities promote equity and improve the quality of education.



Improving the Instructional Program

Good Quality and Effective Instructional Program. The traditional "Focus on instructional development" (Leithwood & Sun, 2012) focuses on a prescriptive and standardized approach to teaching and learning, which helps to ensure stability and consistency in teaching and learning. However, high-quality and effective instructional programs go a step further by emphasizing individualized and diverse teaching strategies to meet the needs of diverse students. Private K12 schools enable students to apply what they learn in real-world problem solving, fostering their critical thinking and creativity. This not only increases students' interest and motivation, but also significantly improves learning outcomes. A quality and effective teaching program refers to a series of teaching strategies and methods that are designed and implemented through careful design and implementation with the aim of maximizing student learning outcomes and teaching efficiency (Zhang, 2023). This type of teaching program focuses not only on the transfer of knowledge, but also on the development of students' understanding, application, analytical and creative skills. It includes clear learning objectives, differentiated instruction based on students' needs, the creation of a positive learning environment, comprehensive assessment of students' learning progress, and an emphasis on continuous professional development for teachers.

High-quality and effective instructional programs are designed to comprehensively support students' academic growth and holistic development. First and foremost, high-quality teaching and learning programs provide clarity of purpose and structure, enabling teachers to design course content and teaching activities in a more focused manner. This clarity reduces teachers' work stress and increases their self-confidence and sense of accomplishment. Research has shown that

teachers are more likely to maintain high levels of professional engagement and enthusiasm when working within a clear instructional framework (Ekmekci & Serrano, 2022). The researcher's findings of good quality and effective instructional program, a practice that lacks relevant research in China, it is a gap, which is enriching for the practice of transformational leadership.

Innovative Curriculum and Teaching Methods. The importance, necessity and feasibility of transformational leadership in implementing innovative teaching programs, curriculum and pedagogy in private K12 schools is evident. This type of leadership encourages school principals and teachers to adopt innovative ways of thinking in order to adapt to the ever-changing needs of education and improve student learning outcomes (Hu, 2020). Transformational leadership can drive innovation in schooling, including improvements in curriculum design, teaching methods and assessment strategies. This is essential for developing students' critical thinking, creativity, and problem-solving skills. Private K12 schools in China have shown great dynamism in teaching program innovation and curriculum improvement. Yang and Xiao (2012) using the new curriculum standards pushes K12 English teachers to explore in new classroom teaching methods. These schools are using their flexibility to innovate educational content and methods, taking into account the specific needs of Chinese students and international educational standards. For example, some schools have introduced STEAM education programs aimed at fostering innovative thinking and practical skills among students. In addition, through collaboration with international schools and educational organizations, these schools provide students with opportunities for international exchange and learning, further expanding their horizons and experiences.



Expand Digital Education and Internationalization. Transformational leadership plays a key role in the implementation of improved teaching and learning programs, the expansion of digital education and the internationalization of education in private K12 schools. This type of leadership focuses on motivating and enhancing the motivation of staff and guiding them to work together to achieve the school's vision and goals (Zhou, Liu, Xie & Zhang, 2022). According to June 2013, the Ministry of Education emphasized in a meeting on education informational: "Take education digitization as a major strategic task at present, seize the opportunity, concentrate resources, go all out, speed up the promotion, keep making breakthroughs at stages, keep forming a series of highlights, and promote the digitization of China's education as a whole to approach the international advanced level, so as to make this work become the current most colorful educational work, become a glorious milestone in the history of the development of education" (Zhang, 2015). This can be seen that digitalize education and the internationalization of education are inseparable, and are the current mainstream and consensus in the domestic society and worldwide. The need for digital education lies in its ability to provide a more personalized and flexible approach to learning that meets the learning needs of diverse students (Shang & Li, 2023). Internationalized education, on the other hand, is about developing students' global perspectives and intercultural communication skills, which are essential for their success in a globalized world. Transformational leadership not only drives the implementation of these pedagogical reforms, but also creates an environment that supports innovation and inclusiveness in schools.

Internationally, Farleigh Primary School in the United Kingdom has enhanced the quality of teaching and learning through digitization by



providing students with free educational laptops, which provide new modes and content for classroom teaching and after-school extended learning with the help of educational applications and web-based databases. By introducing transformational leadership, a private school in Singapore has successfully integrated digital learning tools and an internationalized curriculum into its teaching program, significantly improving student learning outcomes and global competitiveness (Zhou, Liu, Xie & Zhang, 2022). In China, the K12 education system is undergoing rapid changes, especially in private schools. The spread of digital and international education is largely driven by transformational leadership. By implementing transformational leadership strategies, some leading private schools have introduced international curriculum and advanced IT resources, which not only improve the quality of teaching and learning, but also provide students with a broader global perspective.

Related Practices

Contingent Reward. Transformational leadership has emphasized the importance, necessity and feasibility of compensation and incentives in its practical application, especially in terms of strategic resources and performance innovation (Puni, Mohammed & Asamoah, 2018). The necessity and feasibility of compensation management in China's K12 education environment has also been widely discussed. For example, it has been argued that a sound compensation management system and a competitive compensation system should be established according to the internal and external characteristics of the enterprise, so that it can be gradually scientific, systematic and standardized, and can truly serve to mobilize the motivation and creativity of the enterprise's employees (HRD, 2023). In China, private K12 schools face particularly fierce competition for talent, and contingent reward is not



only an important means of attracting talented teachers, but also a key factor in inspiring long-term commitment and improving teaching quality. Therefore, establishing a fair and competitive compensation system is necessary to ensure the quality of education and promote long-term school development (Meng & Liu, 2019). In summary, transformational leadership is seen as an important strategic resource to enhance performance and innovation in both international and Chinese K12 private schools. By contingent reward, it can effectively stimulate the potential of employees and contribute to the overall development of the school. These perspectives and practices emphasize the central role of transformational leadership in educational innovation.

Management by Exception. The most important sign of positive expectation-managing leadership qualities is that the principal makes arrangements, knows when something is wrong, focuses on mistakes and deviations, pays close attention to rule violations, and instructs subordinates on how to make corrections (Antonakis et al., 2003). Some studies have found that managerial communication, learning opportunities, and work hour flexibility all positively affect commitment. Related research further suggests that management's perception of employee commitment affects their treatment of employees, which in turn affects commitment. Therefore, exception active management has a positive impact on employees' organizational commitment and it is vital that managers are actively involved in the growth and development of their employees. Exception passive management may have a negative impact on employees' organizational commitment, especially in terms of affective commitment (Abera & Marvadi, 2023). The researcher found out through a research survey. In China, private K12 schools usually

have more flexibility to implement such management strategies to meet individual student needs and to correct teacher misbehavior. But the researcher's findings of management by exception, a practice that lacks relevant research in China, is a gap, which is enriching for the practice of transformational leadership.

Seek Policy Support. Policies can address the imbalance in educational resources, reduce the education gap between urban and rural areas and between different regions, and ensure that students have access to equitable educational opportunities, with the quality of online teaching in rural areas, particularly in less economically developed areas, being significantly lower than in urban areas (Zhang, Sheng & Song, 2018). This is the kind of problem that relies on policy to solve. Through the effective use of policy resources, schools are able to access the necessary funding, technology and expertise to support the implementation and development of educational programs. Such support not only helps to upgrade the school's hardware facilities, but also enhances teachers' professional development and students' learning experience (Wang, 2009).

Internationally, private schools in many countries have been successful in obtaining policy support through building a good relationship with the government, thereby facilitating school innovation and development. For example, the Finnish education system encourages schools to co-operate with the government in developing educational projects and innovative programs, a model that has proved to be very successful (Fen, 2021). The experience of Finnish schools suggests that through collaboration between transformational principals and policy makers, resources can be effectively integrated and utilized to support educational innovation. In the Chinese market, with the gradual liberalization and

internationalization of education policies, private K12 schools have more opportunities to introduce and practice transformational leadership for school innovation and development. To summarize, transformational leadership has shown its importance, necessity and feasibility in seeking policy support to advance strategic resource management and performance innovation in private K12 schools, both internationally and in China.

Summary of the results

This study centers on the transformational leadership practices of K12 private school principals in China, and explores the specific practices that these principals have adopted in promoting school development. The dimensions comprise five dimensions: setting directions, developing people, redesigning the organization, improving the instructional program, and related practices. The dimensions comprise 15 practices.



Figure 3. *The Practices of Transformational Leadership of Chinese K12 Private Schools in China*



This study to answer: How are the transformational leadership practices implemented by the principals of Chinese K12 private schools? This study focuses on the practice of transformational leadership in K12 private schools in China. It highlights the principal's setting directions, developing people, redesigning the organization, improving the instructional program and related practices. The specific and unique practice path in the five dimensions of practices fills the gap of existing Chinese literature in the field of private education.

In terms of setting directions, the principal emphasizes focusing on comprehensive student development, combining quality education with high performance goals, and integrating the concept of all-round development into the core strategy of the school, which has not been deeply explored in previous studies. Among developing people, the leader sets an exemplary moral standard to realize the organic integration of moral demonstration and personalized incentive, especially in the face of diverse teacher teams and resource differences, showing the unique advantages of private schools. In terms of redesigning the organization, the findings of the pain study highlight how enhancing school culture and humanistic care and engaging parents and the wider community, It is pointed out that the principal's dual practice in shaping the humanistic caring atmosphere and strengthening the home-school cooperation not only enhances the internal cohesion of the school, but also expands the external support network and promotes the home-school communication. In improving the instructional program, the principal promotes teaching innovation and the introduction of global curriculum by expanding digital education and internationalization. It reflects the flexibility of private



schools in curriculum design and the rapid response to education modernization. Different from the existing research, this study reveals how private schools, in the face of resource competition and international demand, provide diversified learning paths for students through concrete practice. In addition, in related practices, seek policy support reveals how principals ensure the sustainability of change through policy orientation in multiple contexts, which makes up for the limitations of existing research on the insufficient attention paid to the policy response mechanism of private schools.

Discussion and Conclusion

This study explores how principals in Chinese K12 private schools practice transformational leadership, focusing on five key dimensions and identifying twelve specific practices. Through a review of the literature, the researcher found that while transformational leadership theory has been widely validated in educational reforms globally, its application in Chinese K12 private schools lacks targeted practical guidance. By employing interviews, observations, and document analysis, this study reveals how K12 private school principals in China promote sustainable school development within a unique educational context.

The study identifies several practices specific to K12 private schools, contributing to areas of transformational leadership that have remained underexplored. The novelty of this research lies in its empirically grounded and context-specific foundational framework for transformational leadership in Chinese K12 private schools, addressing the current theoretical gap. These practices provide actionable strategies for principals and establish a foundation for



future research into the challenges and strategies of transformational leadership in private K12 schools.

This study not only fills the research gap regarding leadership in Chinese K12 private schools but also highlights the practical pathways and effectiveness of transformational leadership in addressing complex challenges. This has significant implications for the future development of private education, particularly in the context of global educational reforms, by providing insights into how school governance and educational innovation can be simultaneously enhanced.

However, a limitation of this study is that the sample focuses on private K12 schools in specific regions of China, lacking broader comparative analysis. Future research could further explore leadership differences across various types of private schools. This study calls on future scholars to pay greater attention to leadership differences among private schools, particularly in resource- and policy-constrained environments, to explore sustainable leadership strategies and innovative practices. Nonetheless, this study not only addresses the leadership research gap in Chinese K12 private schools but also provides practical insights into the pathways and effectiveness of transformational leadership, offering important implications for enhancing school governance and educational innovation in the face of global educational reforms.

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Examining the Relationship Between School Principals' Self-Directed Learning Readiness and Competency-Based Job Performance Perceptions

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Abstract

This study examined the relationship between school principals' readiness for self-directed learning and their perception of job performance. The study covers public and private secondary school principals affiliated with the Ministry of National Education serving in Istanbul in the 2021-2022 academic year. The data obtained from 316 randomly selected principals were expanded with data collected from 406 principals. The data were transferred to the SPSS 28™ program, missing and incorrect data were checked, 22 data were eliminated with extreme value analysis, and then normality tests were performed. The analyses show that there is a high level of positive relationship between the level of school principals' self-directed learning readiness and their perceptions of job performance. The level of school principals' self-directed learning readiness and job performance perceptions are generally at a medium level and are positive in terms of sub-dimensions. It was found that female school principals have higher levels of self-directed learning readiness and job performance perceptions than males. It was determined that private school principals received higher scores than public school

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principals. No significant difference was found according to age and education level, but differences were observed according to age groups in the dimension of desire to learn. In line with the research findings, the recommendations of the study includes organizing education programs to improve school principals' self-directed learning skills, developing digital education materials such as podcast, short videos, blogs, bulletin related to school principals' professional development, organizing conferences and seminars related to issues that principals face in the school systems, using social-media groups to enhance communications and support principals' job performance.

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Introduction

The global changes and transformations experienced in the world have affected many organizations, making it necessary for organizational members to constantly update their skills and knowledge (Guglielmino & Roberts, 1992; Wang et al., 2021). One of these organizations undoubtedly includes educational institutions, employees at educational institutions should continuously develop their knowledge and skills in response to ongoing changes and transformations. Self-directed learning stands out as an important skill



that supports professional development and facilitates individuals' adaptation to changing needs. In adult education, employees' resort to self-directed learning which is defined as the management of the learning process by the individual and defined by Malcolm Knowles (1975):

“It [self-directed learning] is the individual’s ability to define their learning needs with or without the help of others, to establish learning goals, to identify the resources required for learning, to select appropriate learning strategies, and to evaluate the results of their learning” (Knowles, 1975, p. 18).

Individuals must be highly prepared for self-directed learning to be effective (Long & Redding, 1991; Long & Confessore, 1992) and should have the necessary attitudes, skills, and personality traits (Wiley, 1983). Self-directed learning enables individuals to acquire lifelong skills and develop learning strategies, which is becoming an increasingly important skill in adult education (Knowles, 1975; Brockett & Hiemstra, 1991). Many studies (Caruso, 2018; Lejeune et al., 2021; Vithayaporn et al., 2021; Wang et al., 2021) show a positive relationship between self-directed learning and job performance.

In educational institutions, it is of great importance for school principals to adopt self-directed learning in order to effectively adapt to organizational transformation processes (Knowles, 1975; Long & Confessore, 1992). Gümüşeli (2014) emphasizes that school principals should be aware of the ever-changing nature of their roles and competencies under the influence of global changes. In this context, self-directed learning is becoming an indispensable requirement for the professional development of school principals.



On the other hand, competencies have a critical impact on performance, therefore competency-based job analysis are important for organizations (Author & Author, XXX), The list of school principals' standards and expected performance indicators developed by Pont (2013) for the study of the Organization for Economic Cooperation and Development [OECD], but there was no scale that examines the school principals' own perceptions of their performance based on their competencies, therefore, a measurement tool is developed by Çamur & Gogus (2023) to examine school principals' competence-based job performance.

Literature Review

Research on the preparation and development processes of school principals has increased over the last 15 years (Ringling et al., 2021). The OECD's 2018 TALIS survey found that 99% of school principals participated in professional development and 90% said it was critical to their careers (OECD, 2020). Additionally, Hess and Kelly (2007) reported that 96% of school principals believed that informal learning methods such as work experience and peer mentoring were more effective than formal training.

Research (e.g., Argün, 2021; L. M. Guglielmino et al., 1987) has shown that individuals with a high level of self-directed learning skills exhibit higher performance in jobs that require problem solving, creativity, and change. In addition, it has been supported by scientific studies that learning provides a competitive advantage in organizations and that appropriate learning environments can increase individual and organizational performance (Ellinger et al., 2004; Pfeffer & Veiga, 1999). The relationship between self-directed learning skills and job performance has also been emphasized in studies of many large

companies (Ellinger et al., 2004; Guglielmino & Guglielmino, 1994; Pfeffer & Veiga, 1999).

The professional development of school principals plays a critical role in improving the quality of education systems. Studies (OECD, 2008; Jiang et al., 2017) show that the development of principals is directly related to school success. While formal training programs are common, informal learning opportunities are becoming increasingly important (Gomez et al., 2020). International literature emphasizes that informal learning of school principals is as effective as, or even more effective than, formal learning (Jiang et al., 2017; Gomez et al., 2020; Ringling et al., 2020; Zhang & Brundrett, 20109).

In Turkey, studies on self-directed learning are generally limited to teacher candidates and university students. Karataş (2013) and Bakaç & Özen (2018) examined the levels of teacher candidates' readiness for self-directed learning. In these studies, the "Self-directed Learning Readiness Scale" developed by Fisher King and Tagua (2001) and adapted to Turkish by Şahin & Erden (2009) and the "Technopedagogical Education Competence Scale" by Kabakçı-Yurdakul et al. (2012) were used. There is no study examining the relationship between self-directed learning and performance with school principals in Turkey. In the international literature that examine the relationship between self-directed learning and performance, Chien Yu (1998) found a low positive relationship among high school principals, while Guglielmino and Hillard (2007) discovered a strong positive relationship. Zsiga and Webster (2007) emphasized that self-directed learning skills will increase the success of students and employees.

There are a limited number of studies in the literature examining the relationship between self-directed learning and job performance (Yu,



1998; Lejeune, Beausaert & Raemdonck, 2021). The fact that there is no research addressing this relationship in Turkey increases the originality and importance of this study. This study aims to make theoretical and practical contributions to the literature by examining the effect of self-directed learning on the professional development and job performance of school principals.

Study Context

In countries where school administration is not a professional profession, a teaching background is a sufficient criterion to become a school administrator. Therefore, school administrators appointed without formal education develop their professional skills through in-service experience. For educational organizations to achieve their goals, school administrators need to be competent in many areas. Examining the competency-based job performance indicators of school administrators is of great importance in terms of determining expectations and professional development needs (Çamur & Gogus, 2023).

As the study context, the background information related to appointment of school principals in Türkiye, job descriptions and professional development opportunities should be understood to make connections with this study results. The appointment process of school principals in Turkey is based on the regulations determined by the Ministry of National Education. Principals are selected in line with their teaching experience, relevant exams, and knowledge of educational management. Interviews, written exams, and performance criteria are taken into consideration during the appointment process (Dağtekin et al., 2022). The duties of school principals include administrative and pedagogical responsibilities. In this context, school management, teacher training, monitoring student achievement, and

management of the school budget are included, while relations with external stakeholders are also an important dimension. The main function of principals is to support the pedagogical development of teachers and to ensure the quality of education of the school (Balyer, 2012; Gümüşeli, 2001; Tahaoğlu & Gedikoğlu, 2009).

According to some studies (Ağaoğlu et al., 2002; Celep et al., 2010; Çelik, 2002; Korkmaz, 2005; Özmen, 2002; Receptoğlu & Kılınç, 2014; Turan & Şişman, 2002; Varış, 1996; Yavaş et al., 2014), professional development opportunities for school principals are generally limited to in-service training programs and seminars. These programs organized in Turkey are mostly not sufficient and comprehensive, and it is emphasized that more training should be provided, especially for new educational management and leadership skills (As cite in, Turhan & Karabatak, 2015, p. 84).

In Turkey, school administration is generally shaped based on a teaching background and a process devoid of professional standards is followed. This situation causes administrators to start their duties without receiving formal education and develop their competencies through experience. However, the rapid change in education demands comprehensive competencies that include knowledge, skills and attitudes from administrators. While Hornby and Thomas (1989) associate administrative competencies with effective leadership (As cite in, Woodruffe,1993), Pont (2013) defined “Professional” and “Behavioral Standards” for school principals in the OECD report. Lambert and Bouchamma (2019) presented four competency standards from Canada, the USA and Australia as a guide. In Turkey, Güngör (2001) conducted studies on administrative standards, but no scale was developed. Yazıcı and Akyol (2021) created a measurement tool covering ethics, autonomy and professional development, but no



study has been conducted to adapt Pont's standards to the Turkish education system.

Many studies examining employee performance (Aycil Sürer, 2022; Cüce, 2020; Seyidođlu, 2019) have focused on various factors affecting performance. One of these is self-directed learning, which allows individuals to manage their learning processes by developing knowledge, skills, and attitudes. Self-directed learning, which is an unstructured process without time and space limitations, is critical for high performance in organizations. While the literature emphasizes the importance of individuals using informal learning methods (self-directed, social, random), there is no study on this subject on school administrators in Turkey. In this study, the relationship between school principals' readiness for self-directed learning and their perception of competency-based job performance was examined. Job performance was assessed with a scale developed based on Pont's (2013) Occupational and Behavioral Standards and published by the authors (Çamur & Gogus, 2023).

This gap in Turkey reveals that the effect of self-directed learning on job performance should be addressed in detail, especially in the context of school principals. Considering the findings that self-directed learning supports the professional and personal development of individuals and increases job performance (e.g. Guglielmino & Roberts, 1992), it is of great importance to examine this relationship in leadership roles in the education sector. However, there is no study on this subject in Turkey. This gap necessitates investigating the relationship between the "self-directed learning readiness" levels of school principals and their "competence-based job performance perceptions". Answering this question will help to increase theoretical

knowledge and take practical steps to understand the effects of self-directed learning in educational administration.

The study was conducted in Istanbul. Istanbul attracts attention with its immigration and various advantaged and disadvantaged regions. In this context, state and private secondary school principals in Istanbul were selected as a sample. The research aims to compare the professional development and job performance of school principals in state and private schools. Due to the size of Istanbul and the large number of secondary school principals, only the secondary school level was selected; this level was representative of other levels of education since some school principals also work in primary or high school departments.

Aim and Importance of the Research

This study aims to examine how self-directed learning supports the professional and personal development of employees in educational organizations and how it can increase job performance. Self-directed learning allows school principals to identify deficiencies in their work and to improve themselves through continuous learning. While there is only one study on this subject in foreign literature (e.g. Yu, 1998), no similar research has been conducted on school principals in Turkey. This study aims to contribute to the literature and fill this gap. The five research questions of the study are as follows:

- 1) What is the level of the school principals' "self-directed learning readiness"?
- 2) Do school principals' "self-directed learning readiness" differ significantly according to age, gender, education level, and type of school they work in?



- 3) What is the level of competency-based job performance perceptions of school principals?
- 4) Do school principals' competency-based job performance perceptions differ significantly according to age, gender, education level, and type of school they work in?
- 5) Is there a significant relationship between school principals' "self-directed learning readiness levels" and their "competency-based job performance perceptions"?

The purpose of this study is to examine the self-directed learning readiness levels and competency-based job performance perceptions of school principals within the framework of Knowles' learning theory. The following objectives are addressed in the study:

- 1) The examination of self-directed learning levels focuses on the capacities of individuals to effectively manage their learning processes.
- 2) The evaluation of competency-based job performance perceptions aims to measure professional competency perceptions.
- 3) It will be analyzed whether self-directed learning levels and job performance perceptions differ according to demographic variables.
- 4) The relationship between self-directed learning and job performance will be tested in the context of the positive correlation stated in the literature, specific to Turkey and the education sector.



This study aims to make significant contributions to the literature as it is the first research conducted in this field in Turkey.

Method

Research Ethics and Research Model

Before commencing the study, the necessary translations and research permissions regarding the list of standards for school principals were obtained from the OECD on March 12, 2022, with request number 600073264. Permission to use the scale and change the items for the Self-Directed Learning Readiness Scale was obtained from the author. Ethical permission approval numbered 151 dated March 9, 2022 was received from the Istanbul Okan University Ethics Committee. Institutional permission for the research numbered E-59090411-44-48181511 dated April 20, 2022 was obtained from the Istanbul Governorship Provincial Directorate of National Education. Signed informed consent forms were obtained from the participants of the study. In this doctoral thesis study (Çamur, 2023), two independent studies were conducted, and both qualitative and quantitative studies were applied, and two designs, referred to as simultaneous design (Creswell, 2011), were used. Since the thesis was too long to be compiled into a single article, the qualitative and quantitative parts of the study were prepared as two separate articles. In the quantitative research design of this presented research, the scale was developed by the authors (Çamur & Gogus, 2023) to assess the performance of school principals. Then, the authors employed the 'relational screening model' to investigate the relationship between school principals' *'readiness for self-directed learning'* and their *'perception of competency-based job performance'*.

Participants

The general universe of this research consists of all secondary school principals working in public and private secondary schools affiliated with the Ministry of National Education throughout Turkey. The study universe is limited to public and private secondary school principals in Istanbul in the 2021-2022 academic year. The relevant numerical data were taken from the 2019/20 Official Statistics of Formal Education of the Ministry of National Education, and it was determined that there were a total of 1791 principals in Istanbul, 1146 of whom were public and 645 of whom were private secondary school principals. The sample group consisted of a total of 316 secondary school principals selected from this study universe by random sampling method.

The sample size of the study was calculated with the following formula for the universe number of 1791 (Yazıcıoğlu & Erdoğan, 2004).

$$n = (Nt^2(pq)) / (d^2(N-1) + t^2(pq))$$

$$\text{For } N=1791; \quad n = \frac{1791 \times (1.96)^2 \times (0.5 \times 0.5)}{(0.05)^2 \times (1791-1) + (1.96)^2 \times (0.5 \times 0.5)} \approx 316$$

In the formula; n = Number of individuals to be sampled (minimum)

N = Number of individuals in the universe

p = Frequency of occurrence (probability) of the event to be examined (0.5)

q = Frequency of non-occurrence of the event to be examined ($1-p$)

t = Theoretical value found in the t table at a certain degree of freedom and the determined level of error (1.96).



d = Symbolized as + deviation, which is intended to be made according to the frequency of occurrence of the event (0.05).

The reliability level was taken as 95%, d : 0.05; t : 1.96; Based on the assumption that the research hypothesis will occur with equal probability under all conditions, both p and q values were accepted as 0.5 and for $N= 1791$, at least $n= 316$ school principals were found. In other words, according to this formula, in order for the sample group to represent the universe and for the generalization of the findings to be high, the sample group should consist of at least 316 school principals.

In the study, a survey was applied to 406 school principals in order to examine the relationship between school principals' readiness for self-directed learning and their perception of job performance. After the data were transferred to the SPSS 28™ program, missing and incorrect data were checked and extreme values were determined by Z value calculations. The data of 384 participants were analyzed by removing 22 extreme values outside the ± 3 range.

Demographic information of the 384 participants is presented in Table 1. As presented in Table 1, among the 384 participating secondary school principals included in the data analysis, 268 (69.8%) are male and 116 (30.2%) are female. The majority of principals fall within the age range of 35-44 (38.8%). Among them, 218 (56.8%) hold undergraduate degrees, while 166 (43.2%) hold postgraduate degrees. 269 (70.1%) of them were working in public schools, while 115 (29.9%) were working in private schools. Additionally, 273 (71.1%) school principals, whose number of students was 351 and above, participated.



Table 1.

Demographic information of participating secondary school principals

Demographic Information	Category	f	%
Age	25-34	67	17.4
	35-44	149	38.8
	45-54	131	34.1
	55 Years and above	37	9.6
Gender	Male	268	69.8
	Female	116	30.2
Education Status	Bachelor's degree	218	56.8
	Graduate education	166	43.2
Principal Duty Year	1-5	171	44.5
	6-10	106	27.6
	11-15	57	14.8
	16-20	18	4.7
	21 years and above	32	8.3
Duty Year Before Becoming Principal	1-5	63	16.4
	6-10	129	33.6
	11-15	101	26.3
	16-20	60	15.6
	21 years and above	31	8.1
Type of School	Public school	269	70.1
	Private school	115	29.9
Number of Students in the School	50-150	49	12.8
	151-250	34	8.9
	251-350	28	7.3
	351 and above	273	71.1
Number of Teachers in the School	25-50	208	54.2
	51-75	106	27.6
	76-100	45	11.7
	101-125	25	6.5

Data Collection Tools and Data Collection

Data collection was carried out using Google Form and face-to-face survey applications. The Self-Directed Learning Readiness Scale developed by Fisher et al. (2001) was used as a tool. The Turkish adaptation of the scale was made by Şahin and Erden (2009), and the five-point Likert-type scale consisting of 52 items has three factors: self-direction, desire to learn, and self-control (Bakaç & Özen, 2018). According to the research objectives and thesis jury feedback, 11 items were removed from the scale (3 items from self-management, 4 items from desire to learn, 4 items from self-control). The reliability level of the revised 41-item scale was determined as 94.5% (Cronbach's Alpha: 0.945), and the reliability rates for the sub-dimensions were found as 89.7% for self-management, 86.5% for self-control, and 82.5% for desire to learn. These results show a high level of reliability (Nunnally, 1975). The results show that the Self-Directed Learning Readiness Scale used in this study meets the reliability and construct validity criteria for the sample group.

In this study, an original scale was developed to measure the competency-based job performance perceptions of school principals. Pont's (2013) list of school principals' competencies was translated into Turkish and a 41-item, six-factor scale was created. The developed scale was validated with high reliability (Cronbach Alpha: 0.959) and a 59.66% variance explanation rate. The scale includes six factors such as pedagogical management, organizational conditions, communication, adaptation and professional development, monitoring and guidance, and financial resource management.

For this current study, the Cronbach's Alpha reliability test results for the two scales 'self-directed learning readiness' and 'competency-based job performance perceptions' as well as the sub-dimensions of these

scales, are presented in Table 2. When examining Table 2, it is evident that the reliability level for the self-directed learning readiness scale is 93.1%, and for the competency-based job performance perception, it is 96.5%. When considering the sub-dimensions, reliability levels vary between 70.9% and 93.2%. These values in Table 2 demonstrate that the reliability of school principals' responses to both the sub-dimensions and the entire scale is high. As the scores obtained from the scale increase, school principals' perceptions of the dimensions in question become more positive; conversely, as the scores decrease, perceptions tend to become more negative.

Table 2.

Reliability analysis results for two scales and their subscales

Scale	Cronbach Alfa	Number of Items
Self-Directed Learning Readiness	0.931	39
Self-Management	0.859	16
Willingness to Learn	0.852	12
Self-Control	0.796	11
Competency-Based Job Performance Perception	0.965	41
Pedagogical Management: Evaluation and Leadership in Learning and Teaching Processes	0.932	14
Creating Organizational Conditions, Developing School and Staff	0.877	10
Communication and Values	0.853	6
Creating Harmony in the School and Professional Development	0.846	6
Monitoring and Guiding	0.825	3
Provision and Management of Financial Resources	0.709	2

Data Analysis

In the study, data obtained from 406 school principals were transferred to SPSS 28TM program and missing and erroneous data were checked.



In normality and extreme value analyses, 22 values outside the ± 3 range were removed and descriptive statistics were calculated with 384 data with z values between -2.87 and 0.9955.

One of the research questions was whether the perceptions of school principals regarding self-directed learning readiness and competence-based job performance differed according to age, gender, level of education and type of school. One-way multivariate analysis of variance (MANOVA) was applied to examine the effects of these variables. Hair (2009) emphasizes that MANOVA is suitable for analyzing independent variables with two or more groups and that this method is effective in reducing Type-I errors that may be caused by repeated tests.

One of the important diagonal tests of the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups, called Box's test of equality of covariance matrices, indicates that we cannot reject the null hypothesis (Box's $M=0.87117$, $F=1.024$ and $p=0.421$). The results provide us to covariance matrices are equal across the groups.

Levene's Test of Equality of Error Variances was applied to assess the homogeneity of variances for both the Readiness for Self-Directed Learning and the Competency-Based Job Performance Perceptions Scale. The test evaluates the null hypothesis that the error variance of the dependent variable is consistent across groups. The results confirmed that the variances of the dependent variable were indeed equal across the groups, supporting the assumption of homogeneity. Finally, Structural Equation Modeling was applied through the Lisrel program to determine the "relationship between the level of school principals' readiness for self-directed learning and their perception of competency-based job performance".

Findings

The results of school principals' scores on the self-directed learning readiness and competency-based job performance perceptions scales are presented in Table 3. In determining the levels based on arithmetic averages, cut-off scores and corresponding comments were established using calculations that considered the range and interval equality formula suggested by Tekin (2003). When Table 3 is examined, in the readiness for self-directed learning scale; the score range of 3.38-3.92 indicates Negative Perception, the score range of 3.93-4.46 indicates Medium Level Perception, and the score range of 4.47-5 indicates Positive Perception. In the Competency-based job performance perceptions scale, the score range of 3.46-3.97 indicates Negative Perception, the score range of 3.98-4.49 indicates Medium Level Perception and the score range of 4.50-5 indicates Positive Perception.

Table 3.

Results regarding the interpretation of the two scale scores used (n=384)

Dimensions	Average	Standard Deviation	Perception Level Range	Perception Level Comment
Readiness for Self-Directed Learning	4.326	0.348	3.93-4.46	Medium Level but very close to the Positive Perception
Self-Management	4.442	0.353	4.01-4.50	Intermediate
Willingness to Learn	4.163	0.438	3.73-4.36	Intermediate
Self-Control	4.335	0.386	3.91-4.45	Intermediate
Competency-Based Job Performance Perceptions Scale	4.457	0.386	3.98-4.49	Medium Level but very close to the Positive Perception
Pedagogical Management: Evaluation and Leadership in	4.404	0.448	4.39-5	Positive Perception



Learning and Teaching Processes				
Creating Organizational Conditions, Developing School and Staff	4.546	0.396	4.51-5	Positive Perception
Communication and Values	4.594	0.407	4.57-5	Positive Perception
Creating Harmony in the School and Professional Development	4.371	0.481	4.34-5	Positive Perception
Monitoring and Guiding	4.426	0.501	4.34-5	Positive Perception
Provision and Management of Financial Resources	4.281	0.618	4.18-5	Positive Perception

In Table 3, school administrators' self-directed learning readiness levels (4.326) are at a medium level, and their competency-based job performance perceptions (4.457) are at a medium level but very close to positive. It is seen that among the three sub-dimensions of the self-directed learning readiness scale the dimension with the highest mean is self-management (4.442) followed by self-control (4.335) and the dimension with the lowest mean is willingness to learn (4.163). It can be said that the school principals' self-directed learning readiness level is at a medium level for the whole scale and for three sub-dimensions. For the six sub-dimensions of the school principals' competency-based job performance perceptions scale, the communication and values dimension (4.594) has the highest average, followed by creating organizational conditions (4.546), monitoring and guiding (4.426), pedagogical management (4.404), respectively, according to the averages, creating harmony within the school (4.371) dimensions and the sub-dimension with the lowest average is the provision and management of financial resources (4.281). The competency-based job performance perceptions are at a medium level but close to positive, and they have a positive perception in all six sub-dimensions.

One research question was whether school principals' self-directed learning readiness and competency-based job performance perceptions vary significantly by age, gender, education level, and type of school. One-way multivariate analysis of variance (MANOVA) was used to test the effects of age, gender, educational status and school characteristics on the Readiness for Self-Directed Learning and Competency-Based Job Performance Perceptions Scale, and the results are presented below. For binary categorical variables, Hair (2009) indicated that both ANOVA and MANOVA can handle two-group situations and can also handle analyses where the independent variables have more than two groups. In this regard, it is appropriate to conduct a MANOVA without allowing the tests to be repeated and thus increasing the Type-I errors.

One of the important diagonal tests of the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups, called Box's test of equality of covariance matrices, indicates that the null hypothesis cannot be (Box's $M=.87.117$, $F=1.024$ and $p=0.421$). The results provide that covariance matrices are equal across the groups. Levene's Test of Equality of Error Variances (see Table 4) was applied to assess the homogeneity of variances for both the Readiness for Self-Directed Learning and the Competency-Based Job Performance Perceptions Scale. The test evaluates the null hypothesis that the error variance of the dependent variable is consistent across groups. The results confirmed that the variances of the dependent variable were indeed equal across the groups, supporting the assumption of homogeneity.

Table 4.

Levene's test of equality of error variances

	<i>F</i>	<i>df₁</i>	<i>df₂</i>	<i>Sig.</i>
Readiness for Self-Directed Learning	1.793	31	352	.007
Competency-Based Job Performance Perceptions Scale	1.552	31	352	.033

df: Degrees of freedom

The multivariate test results (see Table 5) assess the effects of *gender, education level, school type, and age* on two dependent variables: Readiness for Self-Directed Learning and Competency-Based Job Performance Perceptions. Breakdown of the multivariate test results using different statistics (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root) presented below.

Table 5.

Multivariate tests results

	<i>Effect</i>	<i>Value</i>	<i>F</i>	<i>Hypothesis df</i>	<i>Error df</i>	<i>Sig.</i>	<i>Partial η²</i>
Gender	Pillai's Trace	.022	3.960	2.000	351.000	.020	.022
	Wilks' Lambda	.978	3.960	2.000	351.000	.020	.022
	Hotelling's Trace	.023	3.960	2.000	351.000	.020	.022
	Roy's Largest Root	.023	3.960	2.000	351.000	.020	.022
Education Level	Pillai's Trace	.003	.487	2.000	351.000	.615	.003
	Wilks' Lambda	.997	.487	2.000	351.000	.615	.003
	Hotelling's Trace	.003	.487	2.000	351.000	.615	.003
	Roy's Largest Root	.003	.487	2.000	351.000	.615	.003
	Pillai's Trace	.010	1.697	2.000	351.000	.185	.010

School Type	Wilks' Lambda	.990	1.697	2.000	351.000	.185	.010
	Hotelling's Trace	.010	1.697	2.000	351.000	.185	.010
	Roy's Largest Root	.010	1.697	2.000	351.000	.185	.010
Age	Pillai's Trace	.015	.872	6.000	704.000	.515	.007
	Wilks' Lambda	.985	.872	6.000	702.000	.515	.007
	Hotelling's Trace	.015	.873	6.000	700.000	.514	.007
	Roy's Largest Root	.015	1.703	3.000	352.000	.166	.014

The Wilks' Lambda test statistics reveal a significant multivariate effect of gender on the dependent variables, with a p -value of 0.020 and an F -value of 3.960. The Partial Eta Squared (Partial η^2) is 0.022, indicating that approximately 2.2% of the variance in the dependent variables is explained by gender. This suggests that while the effect is statistically significant, it is relatively small. In contrast, education level does not have a significant multivariate effect, as indicated by a p -value of 0.615 and an F -value of 0.487. The Partial Eta Squared is 0.003, meaning that the effect of education level is negligible and accounts for only 0.3% of the variance in the dependent variables. Similarly, school type does not show a significant effect, with a p -value of 0.185 and an F -value of 1.697. The Partial Eta Squared is 0.010, indicating a small effect size, though it is not statistically significant. Age also does not have a significant multivariate effect, with a p -value of 0.515 and an F -value of 0.872. The Partial Eta Squared is 0.007, suggesting a minimal effect size. In summary, gender demonstrates a significant but small effect on the combined dependent variables, while education level, school type, and age do not show any statistically significant effects.

Table 6 presents the results of a MANOVA. The test examines the effect of independent variables (gender, education level, school type, age) on two dependent variables: Readiness for Self-Directed Learning and



Competency-Based Job Performance Perceptions Scale. The analysis reveals that gender has a statistically significant effect on both Readiness for Self-Directed Learning and Competency-Based Job Performance Perceptions. Specifically, for Readiness for Self-Directed Learning, the F -value is 6.194 with a p -value of 0.013, indicating that gender has a meaningful impact. Similarly, gender significantly affects Competency-Based Job Performance Perceptions, with an F -value of 7.697 and a p -value of 0.006. Conversely, education level does not show a significant effect on either variable. The F -value for Readiness for Self-Directed Learning is 0.101 ($p=0.750$), and for Competency-Based Job Performance Perceptions, the F -value is 0.107 ($p=0.744$), both indicating no meaningful impact of education level. Regarding school type, the F -value for Readiness for Self-Directed Learning is 2.355 ($p=0.126$), suggesting no significant effect, while for Competency-Based Job Performance Perceptions, the F -value of 3.384 ($p = 0.067$) approaches significance but does not meet the conventional threshold of 0.05. Age does not show any significant effect on either variable, with an F -value of 1.057 ($p = 0.367$) for Readiness for Self-Directed Learning and an F -value of 0.138 ($p = 0.937$) for Competency-Based Job Performance Perceptions. In summary, gender is a significant predictor of both Readiness for Self-Directed Learning and Competency-Based Job Performance Perceptions, while education level, school type, and age do not have a statistically significant impact.

Table 6.

Tests of between subjects effects

Source	Dependent Variable	Type III Sum of Sq	df	Mean Square	F	Sig.
Gender	Readiness for Self-Directed Learning	.705	1	.705	6.194	.013



	Competency-Based Job Performance Perceptions Scale	1.066	1	1.066	7.697	.006
Education Level	Readiness for Self-Directed Learning	.012	1	.012	.101	.750
	Competency-Based Job Performance Perceptions Scale	.015	1	.015	.107	.744
School Type	Readiness for Self-Directed Learning	.268	1	.268	2.355	.126
	Competency-Based Job Performance Perceptions Scale	.469	1	.469	3.384	.067
Age	Readiness for Self-Directed Learning	.361	3	.120	1.057	.367
	Competency-Based Job Performance Perceptions Scale	.057	3	.019	.138	.937

Before examining the application of the Structural Equation Model (SEM) to determine the relationship between school principals' self-directed learning readiness levels and competency-based job performance perceptions, Table 7 gives the Pearson correlation analysis results between the dimensions of the two scales.

Table 7.

Pearson correlation analysis results between the dimensions of the two scales

	Self-Management	Willingness to Learn	Self-Control	Self-directed Learning Readiness	Pedagogical Management	Creating Organizational Conditions	Communication and Values	Creating Harmony Within the School	Monitoring and Guiding	Provision and Management of Financial Resources	Competency-Based Job Performance
Self-Management	--										
Willingness to Learn	.665**	--									
Self-Control	.743**	.721**	--								
Self-directed Learning Readiness	.904**	.888**	.899**	--							
Pedagogical Management	.717**	.686**	.679**	.775**	--						
Creating Organizational Conditions	.678**	.559**	.603**	.686**	.784**	--					
Communication and Values	.642**	.482**	.537**	.621**	.707**	.652**	--				
Creating Harmony Within the School	.664**	.676**	.659**	.743**	.845**	.759**	.609**	--			
Monitoring and Guiding	.577**	.498**	.559**	.607**	.665**	.642**	.525**	.611**	--		
Provision and Management of Financial Resources	.396**	.380**	.378**	.430**	.461**	.459**	.377**	.510**	.284**	--	
Competency-Based Job Performance	.759**	.686**	.706**	.801**	.954**	.896**	.788**	.898**	.733**	.553**	--

** Indicates significant correlation coefficients with 99% reliability

When Table 7 was examined, it was determined that there was a positive and high relationship between school principals' self-directed learning readiness and their perception of competency-based job

performance ($r=0.801$). In terms of sub-dimensions, the level of self-directed learning readiness had the highest relationship with the pedagogical management dimension ($r= 0.775$). Competency-based job performance perception had the highest relationship with self-management, one of the sub-dimensions of the self-directed learning readiness ($r=0.759$). When looking at the relationship results between two scales and all sub-dimensions, there were positive and significant relationships with all dimensions. In summary, it has been determined that there is a positive and high relationship between school principals' self-directed learning readiness levels and their competency-based job performance perceptions.

Structural Equation Model (SEM) was applied to determine the relationship between school principals' self-directed learning readiness and competency-based job performance and the results are given in Table 8.

Table 8.

SEM goodness of fit values for self-directed learning readiness and competency-based job performance

<i>Fit Index</i>	<i>Statistics</i>	<i>Acceptable Values</i>	<i>Good Fit Values</i>
RMSEA	0.072	$0.05 \leq RMSEA \leq 0.10$	$0 \leq RMSEA \leq 0.05$
$\chi^2/s.d.$	3.001	$2 \leq \chi^2/s.d \leq 5$	$0 \leq \chi^2/s.d < 2$
SRMR	0.060	$0.05 \leq SRMR \leq 0.10$	$0 \leq SRMR \leq 0.05$
NFI	0.99	$0.90 \leq GFI \leq 0.95$	$0.95 \leq GFI \leq 1.00$
GFI	0.96	$0.90 \leq GFI \leq 0.95$	$0.95 \leq GFI \leq 1.00$
AGFI	0.96	$0.85 \leq AGFI \leq 0.90$	$0.90 \leq AGFI \leq 1.00$
PGFI	0.91	$0.85 \leq AGFI \leq 0.90$	$0.90 \leq AGFI \leq 1.00$
CFI	0.99	$0.90 \leq CFI \leq 0.95$	$0.95 \leq CFI \leq 1.00$

Degrees of Freedom =3071, $\chi^2 =9219.25$,

p -Value for Test of Close Fit (RMSEA < 0.05) = 0.00

When the fit index values are examined, it is seen that the indices are within good or acceptable limits. The draft model created based on these results fits well with the existing data set. The PATH diagram drawn to determine factor loadings and impact levels is given in Figure 1. The resulting SEM equation is as in equation (1) below.

$$(\text{competency-based job performance}) = 0,85 * (\text{self-directed learning readiness})$$

$$\text{Errorvar.} = 1.00, R^2 = 0.73 \quad (1)$$

When equation (1) is examined, it is seen that there is a positive and significant relationship between school principals' self-directed learning readiness levels and their competency-based job performance perceptions ($p:0.005 < 0.05$ and standardized $\beta = 0.85$), when R^2 in the model is examined, the independent variable has a high power to explain the change in the variance of the dependent variable. When the PATH diagram (Figure1) is examined, it is seen that the factor load values in SEM vary between 0.35 and 0.74; the fact that these values are high indicates that the items in the scale have a medium and high level of relationship with the dimension they belong to.

After examining multiple models to determine the relationships between three sub-dimensions of the self-directed learning readiness and sub-dimensions of the competency-based job performance perceptions, all the path diagrams are presents in Figure 2, 3, 4, and 5 and details of the SEM models and regressions are presented in the thesis. The factor load values in SEM vary between 0.46 and 0.86 for the PATH diagram of self-management (see Figure 2). The factor load

values in SEM vary between 0.35 and 0.86 for the PATH diagram of willingness to learn (see Figure 3). The factor load values in SEM vary between 0.24 and 0.86 for the PATH diagram of self-control (see Figure 4). The Figure 5 presents four SEM results in a single graph. The names corresponding to the scales and the dimensions of the scales are given in abbreviated forms in the Figures 1, 2, 3, 4, and 5 as below.

- The abbreviation “hazir” refers to “self-directed learning readiness”.
- The abbreviation “isperf” refers to “competency-based job performance perception”.
- The abbreviation “özkont” refers to “self-management”.
- The abbreviation “izreh” refers to “monitoring and guiding”.
- The abbreviation “finkay” refers to “provision and management of financial resources”.
- The abbreviation “pedyon” refers to “pedagogical management: evaluation and leadership in learning and teaching processes”.
- The abbreviation “ildeg” refers to “communication and values”.
- The abbreviation “orkos” refers to “creating organizational conditions, developing school and staff”.
- The abbreviation “okiuyum” refers to “creating harmony in the school and professional development”.
- The abbreviation “ogris” refers to “willingness to learn”.



- The abbreviation “ozyoneti” refers to “self-control”.

According to result of four SEM equations, Figure 5 shows that the dimensions of self-control (özkont), willingness to learn (ogris), and self-management (ozyoneti) each have positive and significant relationships with the six sub-dimensions of competence-based job performance (ısp perf). Self-control has the strongest relationship with creating harmony within the school (okiuyum) ($\beta=0.97$) and the weakest relationship with management of financial resources (finkay) ($\beta=0.60$). Similarly, willingness to learn has the highest relationship with creating harmony within the school (okiuyum) ($\beta=0.97$) and the lowest relationship with management of financial resources (finkay) ($\beta=0.60$). The dimension of self-management (ozyoneti) also has the highest relationship with creating harmony within the school (okiuyum) ($\beta=0.96$) and the lowest relationship with management of financial resources (finkay) ($\beta=0.60$). The results of the high factor load values imply that there are high relationships between three sub-dimensions of the self-directed learning readiness and six sub-dimensions of the competency-based job performance perceptions as the answer of the fifth research question.

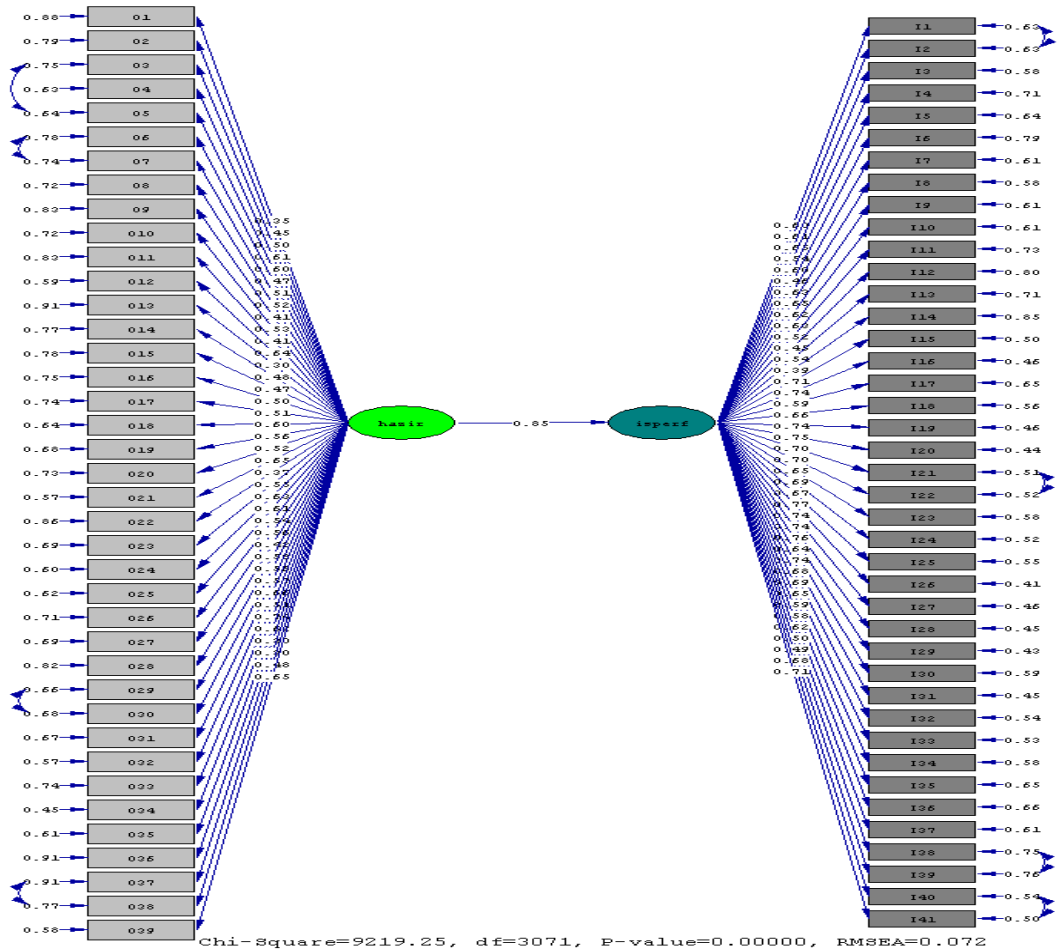


Figure 1. The effect of school principals' self-directed learning readiness levels on their competency-based job performance perceptions path diagram

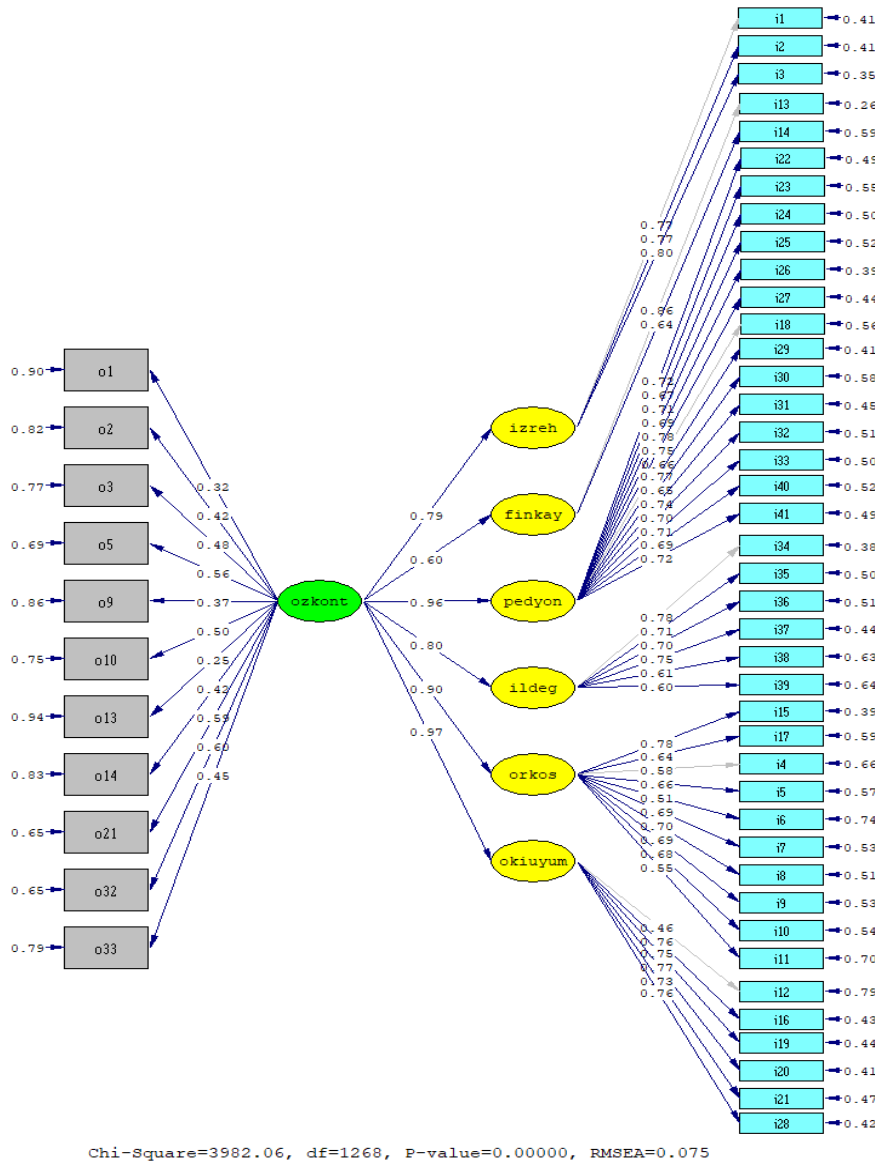


Figure 2. Path diagram for self-management and sub-dimensions the competency-based job performance perceptions

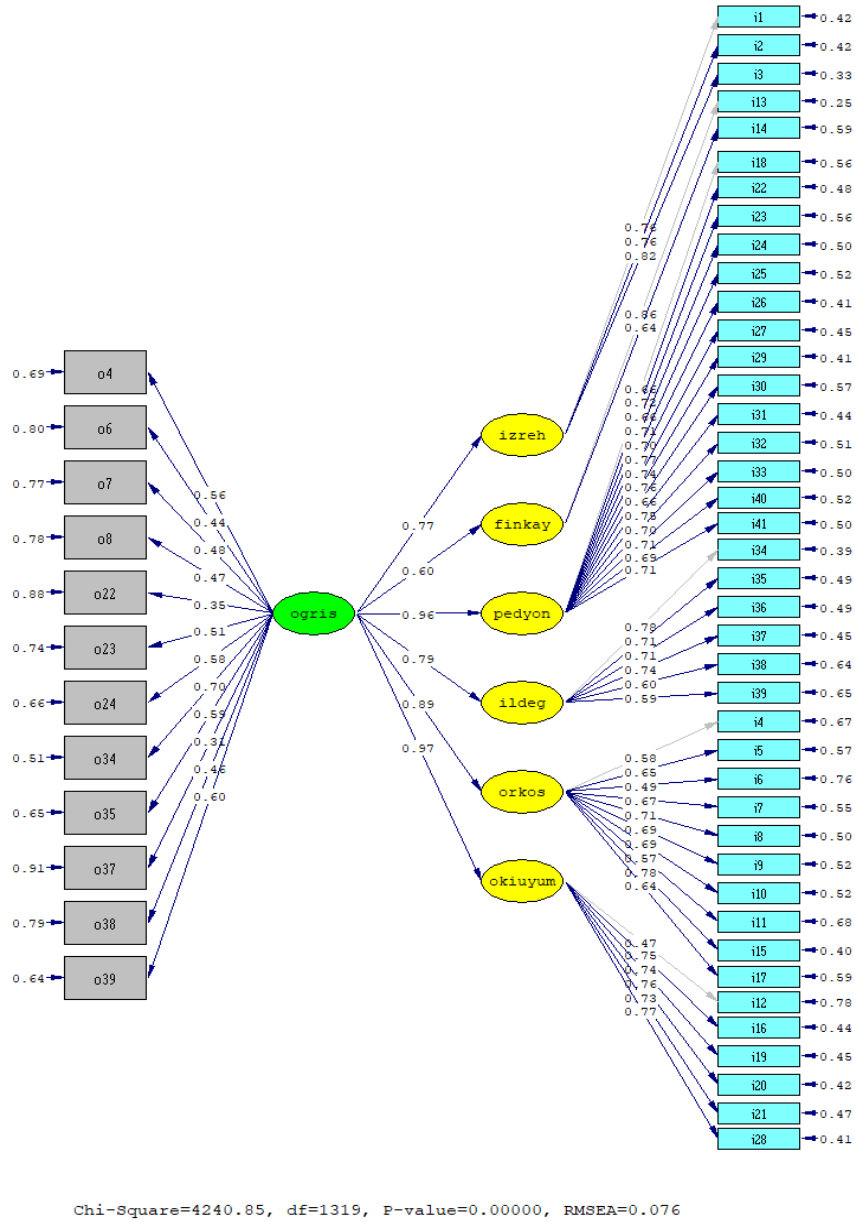
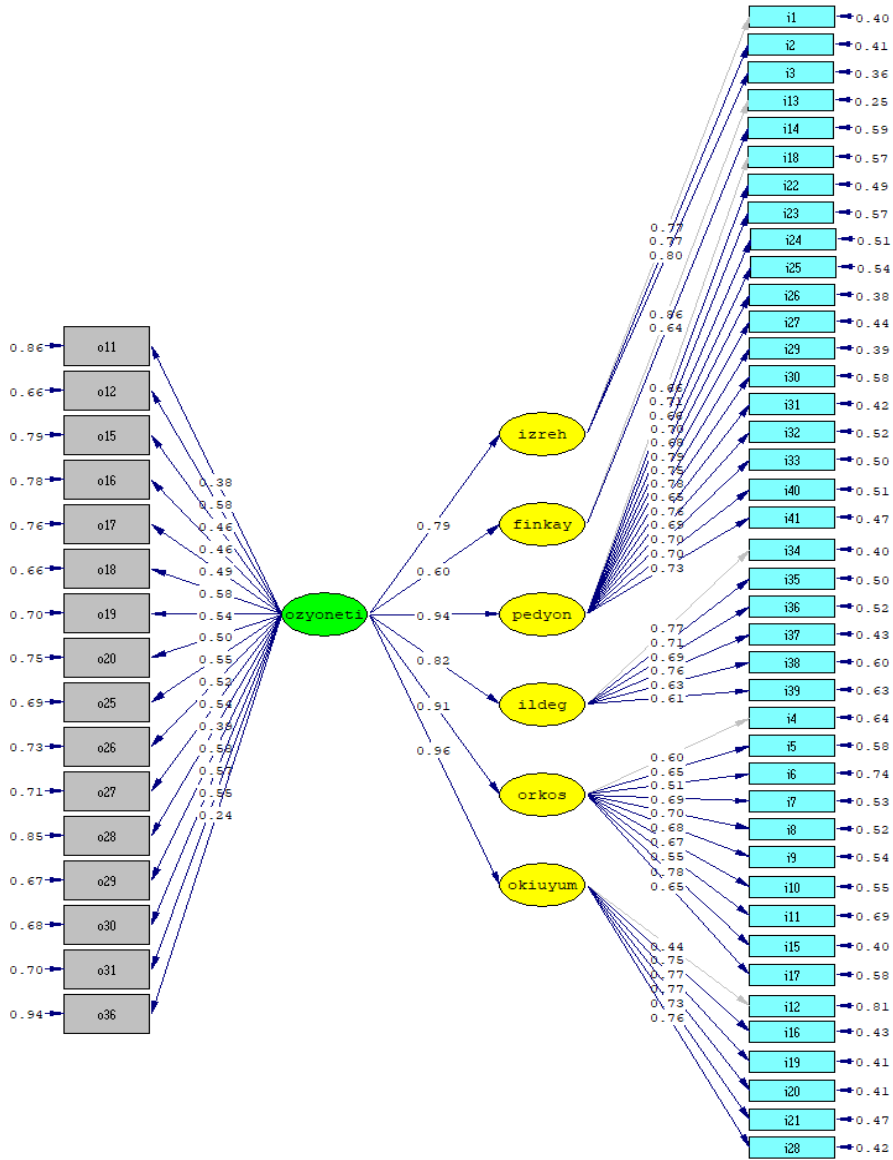


Figure 3. Path diagram for willingness to learn and sub-dimensions the competency-based job performance perceptions



Chi-Square=5546.21, df=1533, P-value=0.00000, RMSEA=0.083

Figure 4. Path diagram for self-control and sub-dimensions the “competency-based job performance perceptions”

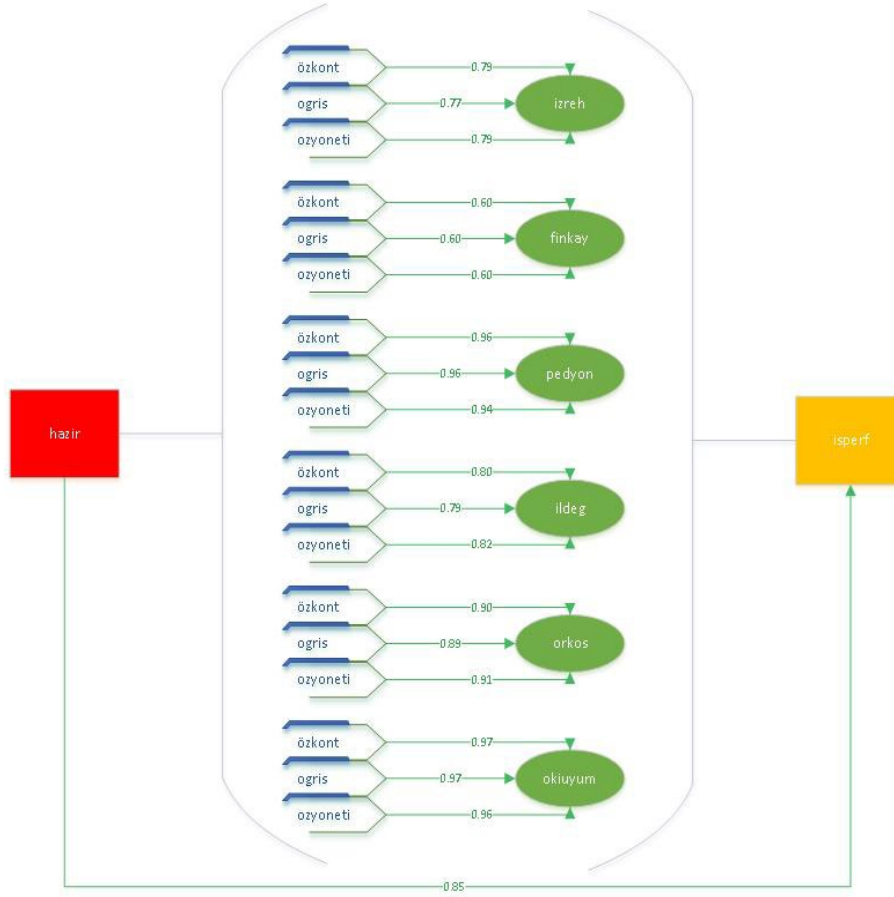


Figure 5. The relationships between sub-dimensions of the self-directed learning readiness and sub-dimensions of the competency-based job performance

By considering multiple positive high relations in the Figure 5, the Figure 6 presents an infographic to show the relationships between sub-dimensions of the self-directed learning readiness and sub-dimensions of the competency-based job performance and to summarize multiple positive high relations in a whole.

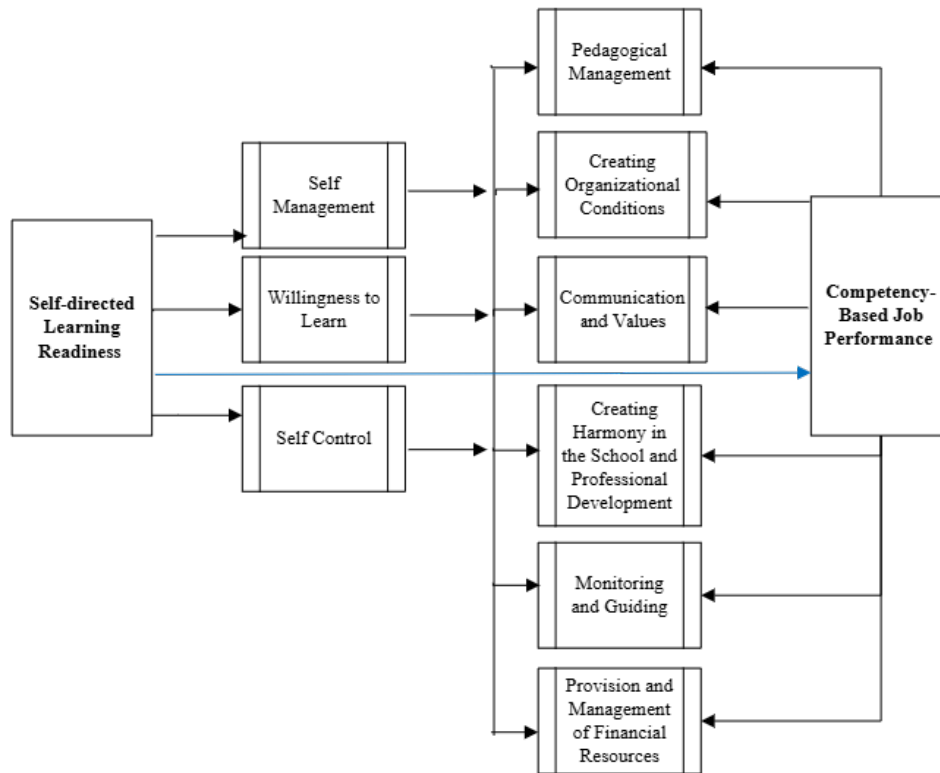


Figure 6. Infographics for the all-figured relationships between sub-dimensions of the self-directed learning readiness and sub-dimensions of the competency-based job performance”

Discussion

In the study, it was found that the school principals' readiness scores for self-directed learning were at a moderate level. This situation can be associated with the fact that the principals do not have sufficient awareness of self-directed learning and its importance. Although there are various international studies on self-directed learning of school principals in the literature (e.g. Yu, 1998; Taylor, 2019; Guglielmino & Hillard, 2007), no research on this subject has been found in Turkey.



Considering the studies conducted abroad, especially since the 1960s (Robinson & Persky, 2020), it is striking that the research on school principals in Turkey is limited until 2023. Raising the awareness of principals about self-directed learning can increase their readiness levels. In addition, self-directed learning is an important tool for individuals to continue their professional development and gain lifelong learning skills.

As a result of the research, it was found that the competency-based job performance perceptions of school principals were at a moderate level. There may be several reasons why school principals' competency-based job performance perceptions are moderate. The best examples of these reasons are given in the study titled *Factors Limiting the Instructional Leadership of School Principals* by Gümüşeli (1996). When the study is examined, the most important factors are; legal and bureaucratic restrictions and insufficient time to spare for teaching-related issues (Griffin, 1993). Another important factor is the inadequacy of principals' curriculum and teaching knowledge (Hallinger & Murphy, 1987). Additionally, McEvan (1994) added lack of vision, determination and courage to these (Hallinger & Murphy, 1987; Griffin, 1993; McEvan, 1994 as cited in Gümüşeli, 1996). There are studies in the literature that reveal similar problems (Deniz & Ağalday, 2023; Sarpkaya, 2021). Another reason is that school principalship is not seen as a profession, and those who are successful in teaching will also be successful in management. Aydın (1997) states that in the Turkish education system, success and seniority in teaching are accepted as criteria in principal appointments. This situation creates a contradiction in terms of not taking into account the necessary qualifications in administrator appointments (Aydın, 1997 as cited in Ağaoglu et al., 2012).

In the study, it was found that the perception of job performance of school principals according to age groups was the highest in individuals aged 55 and over, and the lowest in the 25-34 age group. Tmkaya and Asar (2017) also stated that perceptions of competence increased as age increased. Although this reflects a situation where experience increases with age, there are also examples that show that age does not provide greater competence in every area. Oğuz (2007) found that young principals produced more effective solutions in conflict management, while older principals avoided problems. This reveals that experience is important but may not be sufficient on its own.

Studies show that female school principals have significantly higher self-directed learning and job performance scores than men. This finding shows that women are more successful than men in professional development and learning processes (Artsın, Koçdar, & Bozkurt, 2019; Guglielmino et al., 1987; Swart, 2018; Yılmazsoy & Kahraman, 2019). Guglielmino et al. (1987) determined that women's self-directed learning scores are significantly higher than men. This result suggests that women's multiple roles and career-family conflicts require them to exert more effort than men. This situation can be evaluated as women's struggle to exist in society. While Yu (1998) stated that female school principals have higher job performance scores than men, Blackburn et al. (2006) stated that women are more effective in areas such as conflict management, cooperation and professional development support. Studies such as Çelikten (2004) and Banoğlu (2011) also support women's competencies in various areas. In particular, despite the lack of representation and obstacles (Çelikten, Çelikten et al., 2019) the fact that female school principals show higher



self-directed learning and job performance stands out as an important development.

The study found a positive and significant relationship between education level and self-directed learning and job performance. It is seen that school principals with higher education levels are more successful in self-directed learning and job performance. Kızılcec et al. (2017) stated that individuals with a doctorate have stronger self-directed learning skills, while Sarıcalar and Özkan (2021) stated that postgraduate education is positively associated with self-directed learning. However, Artsın (2018) reported that participants with an associate degree had higher self-directed learning skills, and Yalçın (2019) found no significant difference between educational background and qualification. There are similar findings in the literature (Açıklalın, 2000; Çetin, 2001; Doğan, 2006). These results show that although postgraduate education provides knowledge and skills, it is difficult to argue that school principals with postgraduate education are more competent in every field. Yıldırım and Aslan (2008) emphasized that learning through experience plays an important role in the competence of school principals and that this is compatible with informal learning processes (Çamur & Gogus, 2023).

The findings of the study show that private school principals score higher in both self-directed learning and job performance than their counterparts in public schools. This reveals that private school principals contribute more to professional development and job performance, and are also more effective in self-directed learning. Yirci and Aydoğar (2020) state that private school principals have higher innovation management skills, while Çelik and Polat (2017) state that the level of implementation of self-leadership strategies is higher than public school principals. However, some studies also show that the

type of school does not have a significant effect on managerial competencies (e.g., Tümkaya and Asar, 2017; Uysal, 2001).

Self-directed learning is becoming more and more important. Studies (Foucher & Trembay, 1993; Guglielmino & Roberts, 1992; L.M. Guglielmino & P.J. Guglielmino, 1994) show that there is a positive relationship between self-directed learning and job performance and that it provides significant savings in training costs. Therefore, it is important for organizations to encourage self-directed learning and provide the necessary support.

Conclusion and Recommendations

This study revealed a strong and positive relationship between school principals' readiness for self-directed learning and their perceptions of job performance. It was observed that school principals gained competence as they took on learning responsibilities and that these competences improved their job performance. However, it was determined that their readiness for self-directed learning was at a moderate level and their perceptions of job performance based on competence were also at a moderate level. Significant differences were found in perceptions of self-directed learning and job performance according to gender and school type.

In terms of gender, female school principals' level of readiness for self-directed learning and job performance perceptions are higher than males. Although females scored higher than males in all sub-dimensions of both scales, they scored lower only in the provision and management of financial resources sub-dimension.

According to the type of school principals work in, the self-directed learning readiness levels and job performance perceptions of

principals working in private schools are higher than those of principals working in public schools. There is no significant difference in the perceptions of self-directed learning and job performance of principals according to their level of education. There is no difference in self-directed learning readiness levels and job performance perceptions according to age. However, a significant difference was found between age groups only in the desire to learn sub-dimension. The 25-34 age group had the highest mean, while the 45-54 age group had the lowest mean.

The analysis results show that the level of school principals' readiness for self-directed learning is at a medium level. Self-management is the sub-dimension with the highest mean, while desire to learn is the sub-dimension with the lowest mean. Competence-based job performance perceptions are also at a medium level, with the highest mean in the communication and values dimension and the lowest mean in the provision and management of financial resources dimension.

This study is the first in the local literature in Turkey and it is important to conduct similar studies on school principals in different regions. These studies can increase awareness of self-directed learning and its effects on performance. The study found a strong positive relationship between self-directed learning and job performance. In this context, teacher training programs for school principals with a teaching background should be restructured to develop self-directed learning skills. In addition, these skills can be included in teacher and manager training programs as an independent course (Karataş, 2013).

Although the number of female school principals is less than that of males, female principals have a higher perception of readiness for self-directed learning and job performance. In this context, taking measures to encourage more female administrators in the education

system can increase the number of female administrators. In addition, seeking certain minimum qualifications in the selection or appointment of school principals can be effective in increasing professional efficiency. Training programs that develop informal and self-learning skills should be prepared for school principals. Suggestions include organizing education programs to improve school principals' self-directed learning skills, developing digital education materials such as podcast, short videos, blogs, bulletin related to school principals' professional development, organizing conferences and seminars related to issues that principals face in the school systems, using social-media groups to enhance communications and support principals' job performance.

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Ethics Statement: Before commencing the study, the necessary translations and research permissions regarding the list of “standards for school principals” were obtained from the OECD on March 12, 2022, with request number 600073264. Permission to use the scale and modify items for “the Self-Directed Learning Readiness Scale” was obtained from the author. This research adhered to all guidelines outlined in the “Higher Education Institutions Scientific Research and Publication Ethics Directive.” No actions contrary to scientific research and publication ethics, as specified in the directive, were undertaken during the course of this study. This study was conducted in accordance with ethical guidelines and permissions. Ethical approval was obtained under decision number 151 dated March 9, 2022, from the Istanbul Okan University Ethics Committee. Additionally, survey and research permission was granted under permission number E-59090411-44-48181511 dated April 20, 2022, by the Istanbul Governorship Provincial Directorate of National Education. All participants signed an informed consent form, which outlined the research procedures and affirmed their right to withdraw from the



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Predictive Effect of School Leaders Destructive Leadership Behavior on Teachers' Turnover Intention in Primary and Middle Level Schools in the State of Amhara, Ethiopia

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Abstract

The main purpose of this empirical study was to investigate the predictive effect of school leaders' destructive leadership behavior on teachers' turnover intention. A mixed approach with embedded research design was employed. Multi-stage stratified sampling was applied to select 748 teacher respondents. Data were collected using adapted standardized scale of destructive leadership and teachers' turnover intention instrument. Multiple regression and hierarchical multiple regression model were used to analyze the data. The study revealed that there was a strong, positive correlation between destructive leadership behavior and teachers' turnover intention variables, $r = .776$, $n = 748$, $p < .01$. It was also founded that except tyrannical, other predictor variables (i.e., derailed, supportive disloyal and laissez faire destructive leadership behaviors) significantly and positively predict teachers' turnover intention, with

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$\beta=.04$, $p>0.05$ for tyrannical, $\beta=.37$, $p<0.001$ for supportive disloyal, $\beta=.21$, $p<0.001$ for derailed and $\beta=.30$, $p<0.001$ for laissez fair DLBs. 65% of the variance in teachers' turnover intention was accounted for the interplay of tyrannical, derailed, supportive disloyal and laissez faire destructive leadership behaviors. Supportive disloyal destructive leadership behavior accounted for the highest variation in teachers' turnover intention.

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Introduction

Policymakers and educational academics are keeping a close eye on teachers' intentions to retire from the field. As evidenced, for example, by the work of Long et al. (2012), which was mentioned by Imran et al. (2017), the idea of turnover intention attracted the interest of academics and practitioners due to its diverse consequences on the efficient operation of organizations. According to the research of Imran et al., schools must keep their trained teachers on staff in order to ensure that any educational system succeeds. This means that it is important to monitor the intention of teachers to leave the profession. Additionally, it is widely acknowledged that "one of the key drivers for high quality education is skilled, professional, and stable teaching staff" (He et al., 2023). These teachers are essential to providing high-quality education, but their high turnover rate has raised concerns across the globe. Teachers may have plans to leave their positions because they are



working in an atmosphere where there are more career chances and social mobility than ever before, which is the reason behind the concern about teacher turnover in this society.

In Ethiopian context various factors contributes to this issue, as stated by the Ministry in its various yearly educational abstract publications. One of the reasons given for teachers quitting their jobs was an evident lack of leadership (Ministry of Education, 2022). To support this, the Ethiopian education development roadmap mentioned school administration as one of the primary causes of teacher attrition. As a result, one of the reform objectives recommended by the road map is to improve educational leadership.

It is also empirically tested and reported that leadership such like evolving destructive leadership behavior is serving as an incendiary to the problem of attrition. In their investigation of turnover intentions among Chinese rural kindergarten teachers, He et al. (2023) showed a positive correlation between teachers' propensity to leave and destructive leadership. Hattab et al. (2022) conducted a study on the impact of toxic leadership on employee turnover intention in public organizations in Indonesia and discovered that when an organization has a toxic leader, employees want to leave. Moreover, Hyson (2016) conducted a doctoral study on the relationship between destructive leadership behaviors and employee turnover. The study found that both authoritarian and laissez-faire leadership styles were significantly associated with employee turnover, with authoritarian styles accounting for 33% and laissez-faire styles accounting for 57% of the variance in employee turnover, respectively. Furthermore, Naeem and Khurram (2020), two more scholars in the field, conduct an empirical study named "The influence of toxic leadership on turnover intention." The results of the data analysis showed a significant positive



correlation between the intention of employees to leave and toxic leaders. The key takeaway from all of the above empirical findings was that the association between turnover intention and dysfunctional leadership in the study's local schools has not been subjected to scientific examination.

Here, given the local context of this study, the first issue with destructive leadership is the level of understanding that exists because of gaps in the literature regarding the nature and implications of dysfunctional leadership attributes. In support to this, Hogan et al. (1990) as cited in Burke (2006) stated that ignoring the dark side of leadership can result in an inadequate comprehension of it, which suggests that in order to have a more accurate understanding of leadership, we must investigate its dark side. The study's underlying hypothesis was put forth by Baumeister et al. (2001), who suggested that bad occurrences have a higher impact on social interactions than positive ones and that bad events are more common than good ones. This suggests that in order to influence beneficial outcomes in an organization, it may be just as important—if not more so—to comprehend and prevent the negative components of leadership than it is to enhance their favorable features. This again implies that educational policy and strategy aspirations of schools success and reduced teacher attrition without proper understanding and prevention of such a leadership behavior is impossible.

Thus, the primary goal of this study was to ascertain whether teachers' intentions to leave primary and intermediate level schools in the Ethiopian state of Amhara are influenced by destructive leadership. Consequently, the study provided answers to the following research queries:



1. Is there a significant relationship between principals' destructive leadership behavior and teachers' turnover intention in the primary and middle schools?
2. How much of the variance in teacher turnover intention can be explained by each dimension of destructive leadership?
3. Which dimension of destructive leadership behavior contributes more for teachers' turnover intention in the primary and middle schools?

Conceptual Framework of the Study

The center of gravities to develop a theoretical relationship between variables of the study were destructive leadership behavior dimensions and turnover intention. The overall development of this theoretical relationship was guided by the destructive leadership model developed by Einarsen et al. (2007) and the empirical work of Hyson (2016).

The destructive leadership model developed by Einarsen et al. (2007) describes destructive leadership behavior along four dimensions; destructive leader behaviors targeting the followers (tyrannical), destructive leader behaviors that target the organization (supportive-disloyal), behaviors targeted to both (derailed) and a passive destructive leadership behavior (laissez faire). For this research problem, this conceptualization can be used so that it would help to see the level of existence (prevalence) of destructive leadership and various manifestations (dimensions) of destructive leadership as reflected in the framework.

The direct relationship between destructive leadership and turnover intention; and the dimensions of destructive leadership and turnover

intention were theoretically predicted based on the empirical report of Hyson (2016).

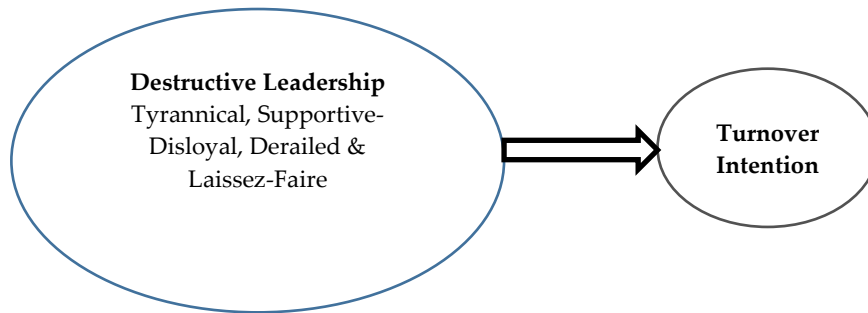


Figure 1. *Theoretical Relationship of Destructive Leadership and Turnover Intention*

Contribution of the Study/ Scholarly Benefit

The conceptual model developed from the empirical data would contribute additional knowledge base to the existing body of knowledge in educational leadership literature. Specifically, there were no previous study about the negative side of leadership conducted in primary and middle level schools' case to the local context of this study. Therefore, the finding of this study would assist to raise further inquiries about destructive leadership prevalence's and its influences on teachers' behavior and other teacher related outcome variables in schools' context. Thus, the study would initiate researchers to undertake further studies worldwide as well as in the Ethiopian schools' context on the negative side of leadership behaviors and to narrow the gaps in the literature.

Literature Review

According to Hyson (2016) there are several opposing theories that explain how and why certain leaders follow destructive leadership behavior while others do not. These theories include the toxic triangle model, the destructive managerial leadership model and the destructive-constructive leadership model. The descriptions and summaries of each model are provided below.

Destructive-Constructive Leadership Model

Einarsen et al. (2007) were the first to research destructive leadership and formulate the model that Aasland et al. (2010) later based to develop this model. Therefor all-encompassing concept of "destructive leadership" is developed by the model's owner.

This model focuses on the three dimensions of a leader's behavior, including whether it is good or harmful to the organization, the subordinate, or both. The actions might be described as "against" or "positive" to an organization or the people who work there. Three main types of active destructive leadership conduct, including tyranny, supportive disloyalty, and derailed leadership behavior, were discovered by the model's creators.

The direct relationship between destructive leadership and turnover intention; and the dimensions of destructive leadership and turnover intention were theoretically predicted based on the empirical report of Hyson (2016).

Destructive Leadership and Turnover Intention

Many studies have shown from the outset that there is a connection between an employee's intention to quit and a leader's destructive leadership style manifested in numerous abusive actions. For example,

a study on the topic of abusive supervision and intention to quit is conducted in India by Pradhan et al. (2020). Examining the relationship between abusive supervision and a subordinate's inclination to resign was the primary goal of their inquiry. The findings also indicated a positive correlation between the intention to resign and abusive supervision. Other researchers have also studied workplace incivility, job fatigue, intentions to leave the company, and job performance, including Rahim and Cosby (2016). They discovered a positive correlation between job rudeness and the intention to leave.

Researchers like Xu et al. (2018) conducted a follow-up study on the relationship between abusive supervision and coworker support and turnover intentions in Ecuador. As in previous studies, the study's findings indicated a positive correlation between abusive supervision and turnover intentions. In an effort to clarify how abusive supervision increases workers' intentions to quit in Pakistan's high-power distance society, Ahmad and Begum (2020) have also investigated the effect of abusive supervision on intention to leave. The findings of this study also indicated that abusive supervision has an impact on intention to leave, both directly and indirectly, in line with the investigations discussed above.

The intention to leave a job was positively correlated with toxic leadership, another aspect of destructive leadership. According to empirical research in this area, toxic leaders may have raised the likelihood that workers would want to leave since their actions could negatively impact workers' well-being and raise discontent, Mehta and Maheshwari (2013). They reaffirm that toxic leadership behaviors have a major impact on the welfare of the organization as well as employees in their study on the effects of toxic leadership on employee job satisfaction and organizational commitment. They went on to say that



it is critical for organizations to not only detect and recognize toxic behaviors but also to respond appropriately to them. It is important to identify toxic managers who need to be replaced, coach those who can change, and place the tough managers in locations where their actions will cause the least amount of harm. The key to maintaining a sustainable competitive advantage in the extremely competitive corporate world of today is having a highly motivated, devoted, and competent staff. Leadership actions undoubtedly have a big impact on each of these categories.

Positive leadership approaches, on the other hand, have a tendency to lessen the appearance of turnover intention. In this regard, Amunkete and Rothmann (2015) conducted research in Namibia on the following topics: psychological capital, job happiness, authentic leadership, and intention to leave. The findings demonstrated that genuine leadership had a negative correlation with leave intention and a positive correlation with psychological capital and job happiness. In a similar vein, Sun and Wang (2017) conduct empirical research on transformational leadership, employee intention to leave, and actual voluntary departure in government agencies. According to the research, transformational leadership fosters a collaborative culture, which serves to both directly and indirectly deter employees from expressing plans to quit.

The literature on the impact of leadership conduct on turnover intentions generally assumed that, as expectations shape the social interactions between leaders and followers, most public organizations would exhibit a similar pattern. The empirical work results of Fosse et al. (2019) are presented here to wrap up this section. They conduct research on harmful leadership styles that are both active and passive. According to their findings, harmful leadership can take both passive



and aggressive forms, and effective measures for mitigating the effects of destructive leadership must take both factors into account.

Materials and Methods

Research Design

This is a quantitative study. It followed positivist paradigm because the nature of this study that is investigating the effect of destructive leader behavior, susceptible followers and conducive environment on the prevalence of destructive leadership properly aligns with the attribute of positivist paradigm. Hence, the concept of positivist paradigm satisfied the current study. To deal with in detail, this study intends to test effect of destructive leader behavior, susceptible followers and conducive environment on the prevalence of destructive leadership through purely quantitative view. After deciding the paradigm that the researcher followed, the next step was selecting the appropriate design that satisfied the study. Therefore, based on the nature of study conducted, the predictive design was selected. To show the argument that urges the researcher to select predictive design is that predictive studies explain the predictions of a well-defined problem through a number of variables believed to be related to a big and complex variable. As a result, the researcher investigated the predictive effect of destructive leader behavior, susceptible followers and conducive environment on the prevalence of destructive leadership using predictive research design.

3.2 Population and Sample

Based on the region's Education Bureau Annual Education Statistics Abstract (2020/2021), there are 5769 government primary and middle-level schools, 50138 (33128 males and 17010 females) teachers, 5769 (589 female) principals, 1509 (453 female) vice principals, and



1999 (1912 male and 87 female) cluster supervisors that were considered as the population in this study. State of Amhara was decided as a study area to be considered intentionally. Because, the problem of this research study were framed based on the researcher's own experience. From 15 (fifteen) zones of the study area representative sample 5 (five) zones which corresponds 30% of whole population were randomly selected using simple random sampling technique of lottery system. A multistage stratified sampling technique followed by convenient sampling was also applied to select appropriate sample units and participants proportionally.

To determine proportional sample size of respondents Cochran formula was used (Cochran, 1977).

The Cochran formula is;

$$N_0 = Z^2 pq / e^2$$

Where:

- e is the desired level of precision (i.e. the margin of error),
- p is the (estimated) proportion of the population which has the attribute in question
- q is 1 – p, and the z-value is found in a Z table.

As a result, the researcher used the assumption that the attribute causing the most variability is shared by half of the study population. Consequently, p = 0.5. 95% confidence and at least 5% error in precision are what the researcher is looking for. The normal tables yield a Z value of 1.96 at a 95% confidence level. Thus, the researcher obtains; from calculating the Cochran formula above;

$$(1.96)^2 (0.5) (0.5) / (0.05)^2 = 385.$$

This is true when the population size (amount) is infinite or not known. But in cases when the population size is finite and known the reduced formula will be used. To this study the total population is 17,795, hence the researcher used the reduced Cochran's formula;

$$n = \frac{n_0}{1 + (n_0 - 1)/N}$$

Where, n_0 is Cochran's sample size recommendation, N is the population size, and n is the new adjusted sample size. Therefore;

$$n = \frac{385}{1 + (385 - 1)/17795} = 377$$

In the end, the design effect is computed as follows: $N = D \times n$, where D denotes the stages of the multistage stratified sampling, n is the adjusted sample size, and N is the design effect. N is equal to 2×377 , or 754. Thus, 754 teachers from each sample study districts were chosen at random to participate in the survey.

Instrumentation

A destructive leadership scale developed by Einarsen et al. (2002) as cited in Hyson (2016) and a laissez faire leadership questionnaire from Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1990), were adapted to measure the prevalence's of destructive leadership behavior.

On the other hand, the instrument used to measure turnover intention was adapted from turnover intent (TI) questionnaire derived from Roodt's (2004) unpublished turnover intention scale as cited in Bonds (2017).

To validate psychometric properties of the measurement tools both the pre-test and pilot test were undertaken.



Psychometric Property Results of the Adapted Instrument

Construct Validity

To ensure the construct validity of the instruments, factor loading analysis was done to determine the factor loading of items in each construct and establish the discriminant and convergent validity of the study's instrument. Composite reliability (CR), also known as Raykov's Rho (r) or component rho coefficient, is a prominent method for evaluating construct dependability in addition to internal consistency (reliability) as determined by Cronbach's alpha analysis (Collier, 2020; Kline, 2016).

According to Collier (2020), the CR possesses an acceptable level of reliability's cutoff value of 0.70, as well as its range. The table below shows that the composite reliability was deemed acceptable. The CR coefficients varied from .85 for supportive disloyal destructive leadership behavior to 0.97 for leader behavior, conducive environment, tyrannical destructive leadership behavior, and turnover intention.

The average variance extracted (AVE) must be more than 0.50 to determine the convergent validity of the latent variables (Collier, 2020). Accordingly, the values of AVE for all constituents of the antecedents of destructive leadership, destructive leadership behavior prevalence, and teacher turnover intention itself were found within the acceptable range $>.50$, indicating acceptable convergent validity across constructs (see Table 2).

Table 1.

Result of AVE, CR and MSV for Construct Validity

S.N	Constructs	AVE	CR	MSV	1	2	3	4	5	6	7	8
1	Tyrannical	0.88	0.97	0.12	0.34	0.25	0.26	0.94				
2	Supportive Disloyal	0.60	0.85	0.55	0.65	0.66	0.68	0.35	0.78			
3	Derailed	0.73	0.92	0.56	0.62	0.61	0.59	0.27	0.72	0.85		
4	Lasses Fair	0.62	0.86	0.56	0.68	0.65	0.69	0.27	0.74	0.75	0.79	
5	Turnover Intention	0.79	0.97	0.57	0.66	0.64	0.75	0.31	0.75	0.71	0.73	0.89

Note. The square roots of the average variance extracted (AVE) are shown in bold. AVE = Average Variance Extracted; CR = Composite Reliability; MSV= Maximum Shared Variance.

The maximum-shared variance (MSV) value should be less than the average variance extracted (AVE) to indicate satisfactory discriminant validity for each concept (Collier, 2020). The findings, therefore, indicated an acceptable discriminant validity of the constructs, with all AVE values that ranged from 0.6 for supportive disloyal construct to 0.88 for tyrannical destructive leadership behavior being greater than the MSV values, which ranged from 0.12 for tyrannical destructive leadership behavior to 0.57 for turnover intention. Additionally, all the observed square roots of AVE in the diagonal were greater than the correlation coefficient in each construct, indicating the confirmed divergent validity. Therefore, both convergent and divergent validity were established based on the aforementioned scientific indicators of AVE, CR, MSV, and the square root of AVE detected in the table.



Table 2.

Instrument Reliability

S/N	Measures	Coefficient Alpha		Number of Items
		Pre-Test	Main Study	
1	Tyrannical	0.96	0.96	4
2	Supportive-Disloyal	0.85	0.92	4
3	Derailed	0.97	0.98	4
4	Laissez-Faire	0.97	0.93	4
5	Turnover Intention	0.86	0.96	8
				24

As indicated above, also in the main study, the overall reliability coefficient for each construct was revealed. Table 2 shows the reliability coefficients for tyrannical ($\alpha = .96$), supportive-disloyal ($\alpha = .92$), derailed ($\alpha = .98$), laissez-faire ($\alpha = .93$), and teacher turnover intention ($\alpha = .96$) indicating excellent reliability coefficients.

Data Analysis

The gathered data were coded, cleaned up, and then preliminary analysis (looking for multivariate outliers, missing values, and verifying multivariate assumptions) was performed. To investigate whether there is a significant association between teachers' intention to leave their jobs and principals' destructive leadership style, Pearson correlation analysis was used. The variance in teacher turnover intention that can be explained by each destructive leadership behavior dimension was found using multiple regression, and the destructive leadership behavior dimension that contributes most to teachers' turnover intention was found using hierarchical regression.

Results

Destructive Leadership and Teachers Turnover Intention

Evaluating the association between teachers' intention to leave their jobs (TTI) and principals' destructive leadership behavior (DLB) in the study area's elementary and middle schools was one of the study's research goals. Pearson The association between DLB and TTI was discovered by correlation analysis, as the table below illustrates. To make sure that the assumptions of normality, linearity, homoscedasticity, and multi-collinearity were all upheld, preliminary studies were carried out.

Table 3.

Correlations between DLB and TTI

S.N	Variables	2	3	4	5	6
1	Tyrannical	.351**	.256**	.266**	.602**	.306**
2	Supportive Disloyal		.674**	.744**	.879**	.745**
3	Derailed			.693**	.830**	.676**
4	Laissez Faire				.847**	.729**
5	Prevalence of DLB					.776**
6	Teachers Turnover Intention					

** Correlation is significant at the 0.01 level (2-tailed).

The results of the Pearson correlation analysis, as shown in table 3, indicate that the intention of teachers to leave their jobs was significantly and favorably correlated with each of the four dimensions of destructive leadership behavior: derailed ($r=.676$, $p<0.01$), supportive disloyal ($r=.745$, $p<0.01$), tyrannical ($r=.306$, $p<0.01$), and laissez-faire ($r=.729$, $p<0.01$). The Pearson product-moment correlation



coefficient was used on the same page to examine the association between teachers' intention to leave their jobs and damaging leadership behavior. As a result, there was a significant positive connection ($r = .776$, $n = 748$, $p < .01$) between the variables measuring teachers' intention to leave their jobs and the prevalence of destructive leadership behavior (DLB), with higher levels of DLB being linked to higher teacher turnover intention.

The Predictive Relationships between DLB and TTI

Determining the extent to which each DL component contributes to the explanation of the variation in teachers' intentions to leave their jobs was the study's other research topic. In order to determine which aspect of destructive leadership behavior best explains the variance in teachers' turnover intention, hierarchical regression analyses were also conducted. Multiple regression analyses were thus used to assess the degree to which each dimension of destructive leadership behavior predicts teachers' intention to leave their position independently.



Table 4.

The Result of Multiple Regression Analysis Predicting Teachers Turnover Intention from Destructive Leadership Behavior

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	0.54	0.10		5.44	0.00		
Tyrannical	0.04	0.02	0.04	1.88	0.06	0.88	1.14
Supportive Disloyal	0.36	0.04	0.37	10.32	0.00	0.38	2.64
Derailed	0.22	0.03	0.21	6.59	0.00	0.46	2.16
Laissez-faire	0.34	0.04	0.30	8.42	0.00	0.38	2.64

a. Dependent Variable: Teachers Turnover Intention

R: 0.804

R Square: 0.646

Adjusted R Square: 0.644

As shown in table 4, teachers' intention to leave their jobs is significantly and positively correlated with the other three predictor variables (derailed, supportive disloyal, and laissez faire DLBs), with the exception of the tyrannical predictor variable, which is reported as $\beta=.04$, $p>0.05$, $\beta=.36$, $p<0.001$ for supportive disloyal, $\beta=.22$, $p<0.001$ for derailed, and $\beta=.34$, $p<.001$ for laissez faire DLBs. When the turnover of teachers was regressed on DLBs that were authoritarian, derailed, supportive-disloyal, and laissez-faire, the interaction between these DLBs explained 64.6% of the variation in the model. Consequently, the interaction of every aspect of harmful leadership behavior can predict 65% of the variance in teachers' desire to leave their jobs.



Table 5.

The Result of Hierarchical Regression Analysis Predicting Teachers Turnover Intention from Destructive leadership

Model	R	R Square	Change Statistics						
			Adjusted R Square	R Square Change	F	F Change	df1	df2	Sig. F Change
1	.745 ^a	0.556	0.56	0.56	932.82	932.82	1	746	0.000
2	.790 ^b	0.623	0.62	0.07	616.70	134.12	1	745	0.000
3	.803 ^c	0.644	0.64	0.02	449.47	43.93	1	744	0.000
4	.804 ^d	0.646	0.64	0.00	339.14	3.55	1	743	0.060

a. Predictors: (Constant), Supportive Disloyal
 b. Predictors: (Constant), Supportive Disloyal, Laissez Faire
 c. Predictors: (Constant), Supportive Disloyal, Laissez Faire, Derailed
 d. Predictors: (Constant), Supportive Disloyal, Laissez Faire, Derailed, Tyrannical

In order to identify the contribution of each dimension of DLB for teachers' turnover intention and which dimension of DLB contributes more for the model, hierarchical regression was computed. As shown in table 5, all the dimensions of destructive leadership were entered hierarchically into the regression equation based on their beta weights and; supportive disloyal destructive leadership behavior accounted for the highest variation to the model. This variable had explained 55.6% of the variance in teachers' turnover intention and it was statistically significant ($F(1, 746) = 932.815, p < 0.001$). Laissez faire destructive leadership behavior was the second highest predictor variable that was entered to the regression equation. The inclusion of this variable increased the proportion of variance in teachers turnover intention by 6.8%, which was statistically significant increase ($F(2, 745) = 616.7$,

$p < 0.001$). Derailed destructive leadership behavior was the third predictor that was entered into regression equation, its inclusion was also increased the proportion of the variance in teachers turnover intention by 2.1%, which was statistically significant ($F(3, 744) = 449.467, p < .001$). Tyrannical destructive leadership was the last predictor that was entered into regression equation, its inclusion was also increased the proportion of the variance in teachers turnover intention by 0.2%, but not statistically significant ($F(4, 743) = 339.143, p > .05$). Therefore, supportive disloyal dimension of DLB contributes more for the model.

Discussion

Destructive Leadership and Turnover Intention

Investigating the relationship between principals' destructive leadership behavior and teachers' turnover intention in the primary and middle level schools of the study area was the other intention of this study. The study founded that, there is a significant positive correlation between destructive leadership behavior and teachers' turnover intention, with high levels of destructive leadership behavior (DLB) associated with high levels of teachers' turnover intention. The current study's findings are in line with or comparable to earlier findings in the field. He et al. (2023) investigated Chinese teachers' intentions to leave their jobs and engage in destructive leadership. Consistent with the findings of the current study, the results showed a positive correlation between turnover intention and destructive leadership. In their home nation of India, Pradhan et al. (2020) conduct research on the topic of abusive supervision and intention to leave. Examining the relationship between abusive supervision and a subordinate's inclination to resign was the primary goal of their

inquiry. The findings also indicated a positive correlation between the intention to resign and abusive supervision. The results of this investigation are consistent with similar earlier empirical reports. In a similar vein, additional researchers like Rahim and Cosby (2016) investigate workplace rudeness, job burnout, intentions to leave, and job performance. They discovered that workplace rudeness was positively correlated with the intention to leave, which is in line with the results of the current investigation.

Similar to the current study, Xu et al. (2018) conducted a follow-up investigation on the relationship between abusive supervision and coworker support and turnover intentions in Ecuador. The study's findings indicated a positive correlation between abusive supervision and turnover intentions. In an effort to clarify how abusive supervision increases workers' intentions to quit in Pakistan's high-power distance society, Ahmad and Begum (2020) have also investigated the effect of abusive supervision on intention to leave. The present study's findings are similar with Ahmad and Begum's research results, which demonstrated that abusive supervision has an impact on intention to leave in both a direct and indirect way.

Significantly, the current study's findings are in line with previous empirical research in the field, which showed that toxic leadership may have raised employees' intention to leave since such leaders may negatively impact workers' wellbeing and raise discontent (Mehta & Maheshwari, 2013). Analogous and pertinent prior empirical studies to the current discovery have demonstrated that abusive leadership can cause subordinates to experience emotional exhaustion, negative emotions (like depression and anxiety), decreased productivity and job satisfaction, intention to leave the company, and other unfavorable outcomes (Mackey et al., 2021). In this context, Woestman and



Wasonga (2015) conducted a study on destructive leadership behaviors and workplace attitudes in schools. The study found that destructive leadership behavior had a negative correlation with job satisfaction, job stress, and leaving consideration. It was also shown that respondents felt stressed out and thought about quitting their jobs, even if they had high work satisfaction levels. Researchers in the same discipline McCallaghan et al. (2019) also conduct research to investigate how diverse climate influences the association between employee attitudes and harmful leadership. The workers answered questions about commitment, authoritarian leadership, diversity in the workplace, job happiness, and plans to leave. The results of the current study are similar with their findings, which revealed that non-destructive leadership predicted lower levels of intention to quit.

The Predictive Relationships between Destructive Leadership Behavior and Teachers Turnover Intention

Finding the dimension of destructive leadership behavior that best explains the variance in teachers' turnover intention as well as determining how much of the variance in teachers' turnover intention can be explained by each of the DL dimensions was the study's final research question. The study found that the interaction of each destructive leadership behavior dimension can predict 65% of the variance in teachers' turnover intentions. It also found that the supportive disloyal dimension of destructive leadership behavior contributes most to the model, explaining 55.5% of the variance in teachers' turnover intentions. This statistically significant relationship was established ($F(1,746) = 932.815, p < 0.001$). This study revealed that predictor variables (i.e., derailed, supportive disloyal and laissez faire DLBs) significantly and positively predict teachers' turnover intention.



One predictor variable, tyrannical destructive leadership behavior didn't significantly predict teachers' turnover intention.

This finding has similarities and differences from the previous empirical works in the field. Hyson (2016) undertakes a doctoral study on the relationship between destructive leadership behaviors and employee turnover. The results of Hyson's study showed that the intention of employees to leave is highly predicted by both authoritarian and laissez-faire leadership styles. The current study's findings of laissez-faire leadership are consistent with the findings of the previously cited Hyson (2016) study in the field. That being said, the current study's findings about tyrannical leadership diverge from Hyson's research. Once more, Hyson found that supportive-disloyal and derailed leadership did not significantly predict any variation in employee turnover; however, the results of the current study showed that these two types of leadership also significantly predict employee turnover intention. Variations in methodological attributes and circumstance may account for these disparities.

Additionally, Hyson, in his study of the above-mentioned empirical work founded that laissez-faire leadership uniquely accounted for 57% of the variance in employee turnover when controlling for the derailed, supportive-disloyal, and tyrannical leadership behaviors in which laissez-faire leadership ($\beta = .514$, $p = .000$) accounts for a higher contribution to the model. The result of the present study is different from the work of Hyson's. The finding of this study differently revealed that supportive disloyal dimension of DLB contributes more for turnover intention in which supportive disloyal leadership uniquely explained 55.5% of the variance in turnover intention and it was statistically ($F(1,746) = 932.815$, $p < 0.001$). Differences in culture,

context, population, sample and methodological attributes may account for such scientific result variations.

He et al. (2023) undertakes an empirical work in titled destructive leadership and turnover intention among Chinese rural kindergarten teachers: The mediation of ego depletion and the moderation of kindergarten affiliation. The results showed a positive relationship between teachers' propensity to resign and destructive leadership, suggesting that destructive leadership was a risk factor for intention to leave, which is similar with the preceding study's finding. Furthermore, He et al. demonstrated that when confronted with damaging leadership, marginalized subordinates never react negatively; instead, their discontent may fester over time and eventually culminate in silent revolt through departure from the business. In the qualitative data collected, the researcher in the present study founded that because of the presence of power imbalances between, school leaders and teachers, teachers abused via the acts and behaviors of school leaders were not responding in the hostile manner rather strive to leave their working school. In the qualitative data it was also founded that there were teachers who resign from the profession of teaching because of the acts and behaviors of school leaders. It was founded that teachers hesitate to display anger or aggressive behaviors, with the fear of mistreatment cause of power imbalances. In this respect, the finding of the present study is similar with the results of the above-mentioned empirical finding in the field.

The current study's conclusions are in line with those of other earlier investigations. In a study on the impact of toxic leadership on turnover intention and counterproductive work behavior in Indonesian public organizations, Hattab et al. (2022) discovered that workers plan to leave their organizations when led by a toxic person. This suggests



how turnover intention is predicted by destructive leadership. A further empirical study named "The influence of toxic leadership on turnover intention" is conducted by Naeem and Khurram (2020). According to the data analysis results, there is a significant positive correlation ($\beta = 0.468$, $p < 0.05$) between employees' intention to leave and toxic leaders. This finding suggests that when a leader demonstrates toxic behaviors, it becomes harder for staff members to stick around, which heightens their desire to quit. This outcome was also consistent with earlier research that looked at the direct or indirect effects of leaders' behavior on workers' intentions to quit. Workers under toxic leaders are more likely to be dissatisfied with their jobs and plan to quit than those under transformative leaders (Labrague et al., 2020). The results of this study support Weberg and Fuller's (2019) finding that leaders can, through their actions, unintentionally or intentionally create a toxic work environment for their subordinates. This can lead to lower individual performance and work efforts as well as a higher turnover rate.

Contrary to destructive leadership empirical works reported different results for the prediction power of positive leadership attributes for turnover intention. Researchers Saeed et al. (2014) have examined the relationship between leaders and followers and found that information sharing and support from leaders significantly reduces followers' desire to leave. However, according to Schmidt (2014), a toxic leader lacks these characteristics. Therefore, the discussion here implies that the results of the present dissertation work were supported by the previously published existing literature and/empirical works and hence, providing valuable guidance to the school leaders in education sector to control the turnover rate of teachers, the management needs to take into account the behavior of



supervisors/leaders and for the development of positive leadership attributes. Because positive leadership behaviors such like transformational leadership had empirically founded that it has negative relationship with turnover intention. After doing research on the relationship between work stress, turnover intention, and transformational leadership, Suryawan et al. (2021) concluded that there is a negative correlation between the three. This empirical study showed that turnover intention will decline with more transformative leadership. Researchers Xiong and Sui (2023) also looked at how transformative leadership affected the intention of the younger, more knowledgeable workforce to leave, and they discovered that transformational leadership was a poor predictor of this intention. In addition to providing clear goal orientation and paying attention to material and interpersonal care to establish an organizational atmosphere, leaders with compelling character and exceptional leadership abilities may also create an environment where employees won't know they're leaving, and vice versa. Hence, to this study, inversely, destructive leadership behavior of school leaders positively predicts turnover intention of teachers, which is to mean that when the destructive leadership behavior of school leaders increases the turnover intention of teachers also increases.

Conclusion

Based on the finding of the study it is inferred that there is a strong, positive correlation between school leaders' destructive leadership behavior and teachers' turnover intention. Based on the data model of this study, 65% of the variance in teachers' turnover intention can be predicted by the interplay of tyrannical, derailed, supportive-disloyal and laissez faire dimension of destructive leadership behavior.



Supportive disloyal destructive leadership behavior contributes more and accounted for the highest variation in teachers' turnover intention.

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Disclosure statement

The authors of this empirical study would like to see their original work published in online. We don't have any conflicts of interest in this regard. To be clear, none of our (the writers') financial interests, personal convictions, or other factors may compromise our objectivity. Furthermore, there are no possible competing interests. No potential conflict of interest to this original research article at all.

Ethics Statement

It is required of researchers to take research participants' ethics into account; it is not an option. According to American Psychological Association (APA) guidelines, human subjects research must adhere to the following requirements: Participants must: provide informed consent, which requires them to be aware that they are part of research and to give their permission; not be misled about the nature of the study; if they are, the deception must not be so severe as to render the informed consents invalid; and not be forced in any way to provide consent in order to participate in the study. Participants' identities and actions must remain anonymous, and the researcher may not disclose them in any way. Debriefing procedures must inform participants of the study's purpose and provide contact information for the researchers to discuss the findings. Finally, participants must not be



put in danger, either physically or mentally. Therefore, in the current study, all of the ethical guidelines mentioned above were closely adhered to during the data collecting, analysis, and reporting phases.

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**The Influence of the National Culture on the
Association Between School Leadership and Teacher
Commitment: A Systematic Review and
Meta-Analysis**

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Abstract

The present study was an attempt to examine the influence of national culture on the association between school leadership and teacher commitment. We systematically reviewed the literature on school leadership and teacher commitment, then followed a meta-analytic process by combining the data from the included studies and finally conducted meta-regression procedures to identify the main cultural predictors of the association between the two variables using Hofstede's (2011) theoretical model of cultural dimensions. Our findings suggest that there is a moderate positive relationship between school leadership and teacher commitment, that certain leadership styles are important in this relationship, and that power distance and individualism have negative influences on this association. Masculinity, uncertainty avoidance, long-term orientation and indulgence dimensions do not influence the association between school leadership and teacher

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commitment. We discussed the research findings and proposed recommendations for future research.

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Introduction

Over the past 50 years, extensive research has been conducted on the themes of leadership and organizational commitment in various fields. One possible reason for that tendency, as Chen et al., (2010) emphasized, may be the significant correlation between leadership styles and organizational commitment. This tendency continues in a similar way in the educational context that researchers, NGOs or governments have largely focused on the association between school leadership and teacher commitment with policy documents and reports to ensure school effectiveness (Beatriz et al., 2008; Biamba & Odero, 2016; OECD, 2013).

Teacher commitment is crucial for ensuring the optimal functioning of the educational institution (Dee et al., 2006) and is affected by school leadership as a vast amount of research evidence has suggested (Bellibaş et al., 2022; Nguni et al., 2006). When considering the association between school leadership and teacher commitment, it is important to take national culture into account because the cultural



context can play a key role in this association. The literature includes studies focused on the leadership and cultural contexts (Blair, 2002; Miller, 2018), or commitment and cultural differences (Abd Razak et al., 2010), however, there has been limited research that combines school leadership and teacher commitment while synthesizing results within the context of cultural dimensions (Jackson et al., 2013). Thus, it is necessary to estimate and compare the effects of cultural dimensions on the association between school leadership and teacher commitment using systematic review and meta-regression procedures. By doing so, this study is an attempt to examine the influence of the national culture on the association between school leadership and teacher commitment, and to present a holistic perspective for that association which is crucial for supporting school outcomes.

Theoretical perspective

Teacher commitment and its importance to schools

In organizational research, commitment is a significant area of interest among various work-related attitudes as it has organizational and individual level outcomes including a higher performance, a lower level of employee turnover, and an intention to stay in an organization. (Meyer & Allen, 1997). Therefore, understanding the nature and determinants of employee commitment is crucial for organizations to effectively manage their workforce. The literature on organizational commitment includes various theoretical classifications (Allen & Meyer, 1990; Mowday et al., 1979; O'Reilly & Chatman, 1986; Wiener, 1982). Two of the most prominent classifications are those of O'Reilly & Chatman (1986) and Allen & Meyer (1990), which have been extensively studied. O'Reilly & Chatman (1986) suggested three dimensions of commitment; a) compliance (adopting attitudes and behaviors to gain rewards), b) identification (affiliation desire), and c)



internalization (congruence between individual and organizational values).

Another popular classification made by Allen & Meyer (1990) includes three dimensions as affective commitment, which pertains to an individual's emotional attachment to the organization; continuance commitment, which concerns the perceived costs associated with leaving the organization; and normative commitment, which is a sense of obligation to remain with the organization. When examining organizational commitment in an educational context, teacher commitment is of utmost importance. Educational researchers have extensively studied teacher commitment by considering various classifications and have found that teachers who demonstrate a high level of commitment may possess stronger psychological ties to their school, their students, or their subject areas than their peers (Li et al., 2022; Firestone & Pennell, 1993). Thus, enhancing teacher commitment is an important way of improving the students' learning and contributing to the overall school success (Lee et al., 2011; Li & Karanxha, 2024; Özdemir et al., 2022). As Firestone & Rosenblum (1988), emphasized committed teachers are likely to do more for students, and willing to work hard to raise school performance.

By considering its importance, literature encompasses research findings pertaining to a multitude of predictors of teacher commitment, including, but not limited to, teacher and school characteristics, school leadership, and working conditions. (Firestone & Pennell 1993). In this study, we constructed our data pool by considering teacher commitment as a single dimension, without taking into account the classifications of organizational commitment. We then investigated the association between school leadership and teacher commitment.



School Leadership

School leadership, which is a multifaceted concept that encompasses financial administration and human resources management (Pont et al., 2008), has emerged as a key priority in global educational policy agendas and an essential research area within the field of education studies over the past 50 years (Waters & Marzano, 2006). Effective school leadership, which is crucial for enhancing the motivations and capacities of teachers, as well as the school climate and environment, is a key factor that can significantly influence school outcomes (Beatriz et al., 2008; Zhang, 2015).

Research consistently highlights the key role of school leadership (Leithwood et al., 2020; Pashiardis & Johansson, 2021) by providing evidence including the positive effects of school leadership on various school outcomes (e.g. student achievement, organizational behaviors of teachers) (Hulpia et al., 2011; Leithwood & Jantzi, 2005; Li et al., 2022; Liu & Watson, 2020). As Bush & Glover (2014) emphasized contemporary leadership models have emerged in the education sector, alongside a re-examination of conventional approaches in recent decades. There is a growing tendency towards the flattening of organizational hierarchies through the implementation of democratic decision-making and distributed leadership models. This is occurring concurrently with a decline in popularity of the traditional top-down approach to school leadership (O'Brien & Murphy, 2016). This trend has brought theory adaptations from the leadership and management literature (Avolio, 1999; Bass & Riggio, 2006; Burns, 1978; Leithwood

& Jantzi, 2006) including three of the foremost models (e.g. transformational, distributed and instructional leadership) in the field of educational leadership. In addition to the aforementioned models, the literature also includes other models, such as the integrated model (a combination of transformational and instructional models) (Hallinger, 2003), as well as authentic (Avolio & Gardner, 2005), servant (Patterson, 2003), and ethical leadership (Mendonca & Kanungo, 2006).

Leadership models are not limited to those mentioned, but they are the commonly examined ones in school leadership literature. In the present study, we constructed our data pool by considering all the leadership models examined in school settings. We then investigated whether leadership models are related to teacher commitment.

Hofstede's model of cultural dimensions

Hofstede's (1980) quantification of cultural differences between countries has enabled researchers investigating the impact of culture on organizations' activities and performance cross culturally (Kirkman et al., 2006). Researchers have extensively used this model to analyze work-related cultural values in different countries, and national or international level organizations. Hofstede originally provided country scores for four work-related dimensions of national culture using data derived from surveys conducted at IBM: Power Distance, Individualism versus Collectivism, Uncertainty Avoidance, and Masculinity versus Femininity. Later, the author added the Long-Term versus Short-Term Orientation and Indulgence versus Restraint dimensions using the data from the World Values Surveys (Hofstede, 2010).



Power distance pertains to the hierarchical relations between superiors and subordinates within an organizational structure. Cultures that exhibit a higher degree of power distance tend to have a more rigid hierarchical structure and a greater degree of authority within their organizations (Hofstede, 2001; 2010). *Individualism versus Collectivism* reflects autonomy, individual achievement and freedom to make decisions (individualism) which a minority of people in the world experience while collectivism refers to being part of a community and prioritizing the interests of the society to which one belongs (e.g. extended family) (Hofstede, 2010). Many cross-cultural studies have focused on either individualism/collectivism or power distance because they have important implications for behavior at work, and in particular for leadership processes (Jackson et al., 2013).

The third dimension *Uncertainty Avoidance* indicates the extent to which individuals prefer structured and predictable circumstances, and not comfortable with adapting to unexpected situations (Beugelsdijk & Welzel, 2018). Countries with high uncertainty avoidance scores attempt to manage uncertainty using technology, regulations, and religion. Conversely, cultures with low scores on this dimension tend to be more accepting of ambiguity, with individuals who are more willing to take risks and embrace new ideas (Masry-Herzallah & Da'as, 2021). *Masculinity versus Femininity* reflects gender roles which men are often expected to be assertive and competitive, while women are expected to be modest and caring towards others (Hofstede, 2010). With cultures high in masculinity, men dominate leadership and managerial positions, and fewer women have lower chances of reaching top positions. *Long Term versus Short Term Orientation* refers to focusing on the future (Long term orientation) which includes traits such as being flexible, patient and adapting to

new changing conditions (Hofstede, 2011). Short-term oriented societies focus on achieving results quickly, respect traditions, and have a relatively low tendency to save or invest in the future (Bissessar, 2018). The final dimension, *Indulgence versus Restraint*, reflects a happiness-oriented lifestyle (indulgence), while restraint refers to a culture in which people limit their desires and impulses (Hofstede, 2011).

The current study is an attempt to examine the influence of national culture on the association between school leadership and teacher commitment. The study aimed to answer the following questions:

- a) Is there a positive correlation between school leadership and teacher commitment?
- b) Do the study characteristics positively predict the relationship between school leadership and teacher commitment?
- c) Do the cultural dimensions of the countries predict the relationship between school leadership and teacher commitment?

Method

Research context

We followed a three-step analysis to examine our questions. First, we systematically reviewed the literature on school leadership and teacher commitment by using an explicit search strategy in which studies were identified, screened and included based on predefined eligibility criteria (Gough et al., 2017). Second, we followed meta-analytical process by combining the data from the included studies to find common results on the association between school leadership and



teacher commitment. Third, as the focus of our study, we conducted meta-regression procedures to determine the main predictors of the association between school leadership and teacher commitment, using Hofstede's (2011) theoretical model of cultural dimensions.

Information Sources and Search Procedure

We conducted a comprehensive search of independent studies, yielding results from a diverse array of data sources examining the interrelations between school leadership and teacher commitment published up to December 2023. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) principles for reporting were followed (Page et al., 2021), and flow diagram was presented in Figure 1.

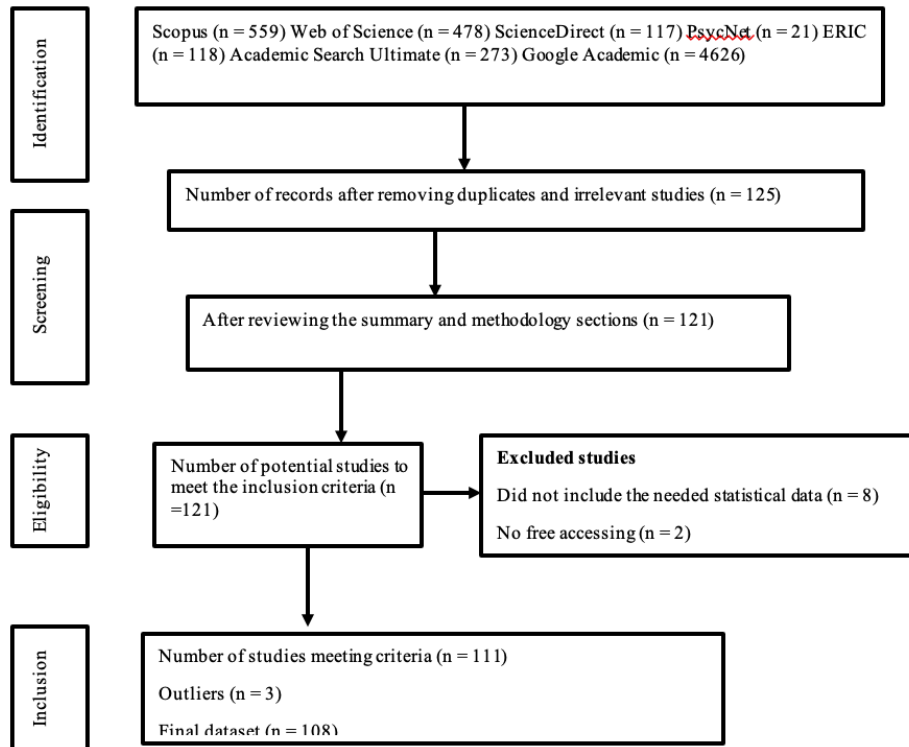


Figure 1. Flow diagram

In the identification stage, we conducted our search on the following databases: Scopus, ScienceDirect, Education Resources Information Center (ERIC), Academic Search Ultimate, Web of Science and PsycNet. The search terms used in the abstracts and titles were combinations of relevant keywords, including, ('leadership' OR 'leader' OR 'principal' OR 'headmaster' AND 'teacher commitment' OR 'commitment'). Additionally, we conducted searches using the same keywords in the Google Academic database to access grey literature on the relation between school leadership and teacher



commitment. At this stage, we identified (n = 6594) studies that had the potential to meet our criteria.

In the screening and eligibility phase, duplicate studies that appear in more than one database or irrelevant studies were reduced (n = 125). After reviewing the summary and methodology sections of the studies, we reduced the number to be included (n = 121). Then, we proposed our eligibility criteria to get a refined dataset: Independent studies were eligible if they 1) focused on the relationship between school leadership and teacher commitment, 2) were published between 2000 and 2023, 3) provided plenty of statistical data to calculate the effect sizes, (e.g. n, r, R, R², F, t), 4) were conducted at kindergarten and K12. We excluded studies conducted in higher education as the context differs from that of K12 schools. Studies that did not include the needed statistical data (n = 8), and not accessible freely (n = 2) were also excluded, and we had a dataset of (n = 111) studies.

In the last stage, we examined the forest plot for outlier analysis by considering confidence intervals of effect sizes (Şen & Yıldırım, 2020). When detecting outliers, we evaluated studies that were at the very high end of their confidence intervals and decided to exclude them because the analysis could be affected by extreme values (Afonso et al., 2024). We identified three studies as outliers (k = 3) and excluded them from the analysis. Finally, our dataset consisted of 108 studies. Table 1 presents the descriptive analysis of the studies included in the dataset.

Table 1.

Descriptive analysis of the data



			Categorical					
Categorical variable	f	%	variable	f	%			
Year			Leadership styles					
2000-2009	3	2.77	Transformational	44	40.70			
2010-2019	29	26.85	Distributed	13	12.00			
2020-2023	76	70.38	Instructional	12	11.10			
			Leadership					
Sampling method			Behavior					
Non-Random	56	51.85	Integrated	3	2.80			
Random*	52	48.15	Authentic	3	2.80			
Scale			Servant					
Mayer and Allen								
(1984)	34	31.48	Ethical	3	2.80			
Modway et al. (1974)	14	12.96	Other *	12	11.10			
Balay (2000)	4	3.70	Level of education					
Celep (2000)	4	3.70	Kindergarten	3	2.78			
Cook and Wall (1980)	3	2.78	Elementary	24	22.22			
Other *	24	22.22	Secondary	34	31.48			
Unknown	25	23.15	High school	18	16.67			
			Mixed*	29	26.85			
Continuous variable			Mean	Std. Dev.	Min.	Max.	Valid	Missing



Power Distance	65.67	14.76	13.00	94.00	102	6
Individualism	29.80	17.42	5.00	91.00	102	6
Masculinity	47.44	8.79	16.00	66.00	102	6
Uncertainty	64.52	20.59	23.00	94.00	102	6
Long term orientation	58.53	26.09	1.00	100.00	101	7
Indulgence	40.32	13.39	14.00	84.00	94	14
Quality scores	9.72	2.88	4.00	14.00	108	

* Referenced categories in meta regression

The dataset comprises studies conducted in 32 countries. Sample size is $n = 202.357$. The range of r values varies between (-.24 to .81). Detailed study characteristics were presented in Appendix 1.

Coding process. We developed a coding scheme which included information on the identification of the study, year of publication, sampling method, level of education, sample size, effect size, participant group, scale, location, the cultural dimension of the country the research conducted, leadership styles and quality scores of the study. We used 'Quality assessment and validity tool for correlational studies' scale developed by Cicolini et al., (2013). The cultural dimensions were classified by considering Hofstede's (2011) model of cultural dimensions. We calculated Cohen's Kappa coefficient as $\kappa = .87$ which presents a high internal consistency. If a study had multiple sample groups, we coded each group as an independent study.

Statistical Model. As the included studies have different characteristics, we performed statistical analyses under the random-effects model, suggested by Borenstein et al., (2021) and Paul & Barari

(2022). We used maximum likelihood model in meta regression analysis.

Calculating effect sizes. Most of the included studies used *Pearson r* as an effect size index. Pearson correlation coefficients, which range from -1 to +1, can cause variance narrowing (Borenstein & Hedges 2019). Thus, we converted the reported *r* values into Fisher's *z* ($r = Fz$) and conducted statistical analysis using (*Fz*) values. We excluded three studies as outliers from the analysis after the outlier analysis of the dataset.

Results

Publication bias

Total heterogeneity amount of effect sizes was ($Q_{(total)} = 5088.70$), and a high level of heterogeneity was found ($I^2 = 97.9$). Figure 2 shows the Funnel Plot chart for publication bias in the data set. The distribution of effect sizes, based on their standard errors, appears to be symmetrical. The analysis of Begg and Mazumdar Rank Correlation regarding the distribution of effect sizes showed no bias (*Kendall's tau* = .003; $z = .04$; $p = .97$) (McShane et al., 2016). However, the results of Egger's regression test indicate the presence of publication bias ($t = 3.97$; $df = 106$; $p = .001$). No publication bias was detected through the Duval Tweedie's Trim and Fill (DTTF) test (Duval & Tweedie, 2000), and the combined results indicate a negligible level of publication bias in our dataset. Figure 2 shows the distribution of effect sizes based on standard errors.

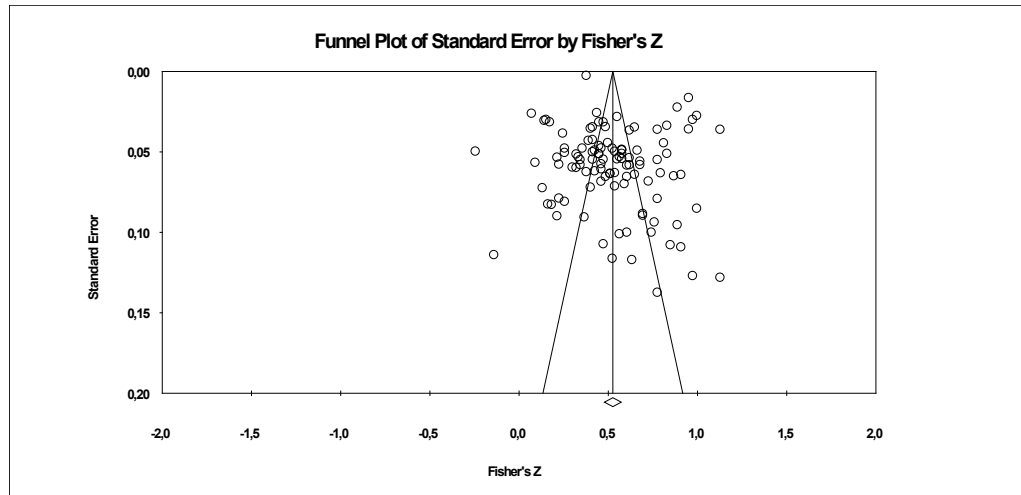


Figure 2. *Funnel plot of standard errors*

When interpreting the funnel plot, the distribution of effect sizes according to standard errors is expected to be symmetric. If it is symmetric, it is interpreted as no publication bias, while if it is asymmetric, publication bias can be mentioned (Jin et al., 2015). The sample sizes of the studies may affect this distribution. The expected situation is a balanced distribution of effect sizes from large or small sample size studies (Borenstein et al., 2021). As can be seen in Figure 2, the distribution of effect sizes is generally symmetric. This can be interpreted as there is no publication bias. The effect sizes with large samples produce approximately consistent results, and clustered in approximately the same region at the top of the graph. In addition, the effect sizes are close to the mean effect size. This can be taken as an indicator that the effect sizes are producing reliable results.

School leadership and teacher commitment

Our analysis revealed a positive average effect size ($ES = .53$; $CI = [.48, .57]$; $k = 108$) between school leadership and teacher commitment, with a moderate relationship. Our finding suggests a positive correlation between school leadership and teacher commitment. We conducted a meta-regression analysis comprising four models on our datasets to examine the second and third questions, and presented the results in Table 2.

Table 2.

Meta regression models

Moderator	Model 1			Model 2			
	β	SE	p	β	SE	p	
Intercept	-7.49	13.17	.56	-10.17	15.26	.50	
Year	.01	.01	.54	.01	.01	.48	
Kindergarten				.35	.15	.02	
Elementary				.11	.70	.13	
Secondary				.03	.70	.69	
High school				-.01	.08	.86	
Nonrandom				-.01	.05	.90	
Meyer & Allen (1984)				-.03	.07	.66	
Modway et al. (1974)				.05	.11	.54	
Balay (2000)				-.08	.13	.52	
Celep (2000)				-.05	.13	.69	
Cook & Wall (1980)				.29	.15	.06	
Unknown				.03	.10	.74	
Quality scores				-.01	.01	.84	
R ²	.01			.15			
Moderator	Model 3			Model 4			
	β	SE	p	β	SE	p	
Intercept	-20.2	14.61	.16	-9.35	15.07	.54	
Year	.01	.01	.16	.01	.01	.50	
Kindergarten	.38	.15	.01	.28	.16	.07	
Elementary	.15	.07	.03	.11	.08	.16	
Secondary	.04	.07	.56	.02	.08	.84	
High school	.01	.07	.95	.01	.09	.90	



Nonrandom	.06	.05	.24	.10	.06	.06
Meyer & Allen (1984)	-.02	.06	.75	.01	.08	.98
Modway et al. (1974)	.06	.09	.44	.06	.09	.50
Balay (2000)	-.01	.13	.9	.03	.14	.82
Celep (2000)	.01	.14	.96	-.05	.14	.70
Cook & Wall (1980)	.16	.15	.28	.25	.17	.13
Unknown	.03	.09	.44	.07	.10	.44
Quality scores	-.01	.01	.91	.01	.01	.68
Transformational	.21	.07	.01	.25	.07	<.01
Distributed	.18	.09	.06	.27	.10	<.01
Instructional	.23	.09	.01	.26	.09	.01
Leadership behavior	.14	.1	.15	.17	.10	.08
Integrated	.45	.15	.01	.35	.17	.04
Servant	-.02	.13	.83	.02	.13	.89
Ethical	.12	.17	.48	.19	.17	.26
Power distance				-.001	.01	.04
Individualism				-.001	.01	.01
Masculinity				.01	.01	.09
Uncertainty avoidance				.01	.01	.21
Long term orientation				-.01	.01	.25
Indulgence				-.01	.01	.06
R ²	.28		.39			

The analysis in Model 1 included publication year, while Model 2 included moderator variables such as level of education, sampling method, scale and quality scores of the study. Model 3 focused on leadership styles, and Model 4 examined the cultural dimensions of the countries. The variance explained in Model 1 was 1% ($R^2 = .01$); in Model 2, it was 15% ($R^2 = .15$), in Model 3 it was 28% ($R^2 = .28$); whereas in Model 4 it increased to 39% ($R^2 = .39$). When using Model 4 as a reference, we observed that the effect sizes varied depending on the leadership styles ($Q = 18.63$; $df = 7$; $p = .01$). This result indicated that integrated ($\beta = .35$; $p = .04$), distributed ($\beta = .27$; $p = <.01$), instructional

($\beta = .26$; $p = .01$) and transformational ($\beta = .25$; $p = <.01$) leadership styles are the significant predictors of the effect sizes. This result suggests that the only certain leadership styles have a positive effect on the relationship between school leadership and teacher commitment.

Considering the variance explained by Model 4, we found that the two of the cultural dimensions, power distance ($\beta = -.001$; $p = .04$) and individualism ($\beta = -.001$; $p = .01$), had a negative effect on the predicted effect sizes. This result suggests that the only two cultural dimensions have a negative effect on the relationship between school leadership and teacher commitment.

Discussion

In this study, we addressed the important role of national culture on the association between school leadership and teacher commitment. Management scholars have extensively researched these two topics over several decades, uncovering significant insights into the association between leadership and commitment. The extensive research is also ongoing in educational settings, given the pivotal role of school leadership and teacher commitment for school outcomes. The adoption of directive, participative and supportive leadership behaviors by school leaders is associated with higher levels of teacher commitment and involvement in the school. Consequently, the behaviors of school leaders exert a significant influence on the commitment levels of teachers (Rusliza & Fawzy, 2016).

The present study initially focused on the relationship between school leadership and teacher commitment. The results indicated a positive, moderate correlation between the two variables. This finding indicates that the two variables exhibit a degree of interdependence. A substantial corpus of literature on leadership and commitment



demonstrates a consistent correlation between the the two variables. Findings from empirical studies consistently indicate a positive effect of school leadership on various school outcomes, including student achievement and teacher commitment (Leithwood & Jantzi, 2005; Li et al., 2022; Liu & Watson, 2020; Selvitopu & Kaya, 2017). For instance, in their study Li et al., (2022) examined the relation between school leadership and achievement through teacher commitment and they confirmed teacher commitment as a full mediator between school leadership and achievement. In a separate study, Hulpia (2011) examined the relationship between school leadership and teachers' organizational commitment. The findings indicated that teachers' organizational commitment was predominantly shaped by the quality of supportive leadership, collaborative leadership practices within the institution, and a participatory approach to decision-making. Our findings are in accordance with a substantial body of research evidence (Bellibaş et al., 2023; Nguni et al., 2006) indicating a correlation between school leadership and teacher commitment.

In the second phase of our analysis, we employed meta-regression techniques to ascertain the extent to which different leadership styles influence the relation between school leadership and commitment. The meta-regression analysis, comprising four models, demonstrated that the effect sizes varied depending on the leadership styles. This suggests that certain leadership styles exert a positive influence on the association between school leadership and teacher commitment. Upon analysis of the data, we found that integrated, distributed, instructional, and transformational leadership styles were the most significant predictors of that relationship, respectively. It is important to note that the number of effect sizes varies considerably, with only three effect sizes for integrated style and 44 effect sizes for

transformational leadership style. The paucity of studies investigating integrated leadership, defined as a combination of transformational and instructional styles (Hallinger, 2003), may be attributed to the preference of researchers to study these styles separately. Conversely, the notion of transformational leadership as an exemplar for educational leadership (Leithwood & Jantzi, 2006) may be a contributing factor to the prevalence of transformational leadership studies.

The literature includes numerous studies that examine the relationship between leadership styles and teacher commitment to test the efficacy of different leadership styles in enhancing school effectiveness (Aydın et al., 2013; Bellibaş et al., 2022; Liu & Werblow, 2019; Zadok & Benoliel, 2023). For instance, Bellibaş et al. (2022) focused on principal leadership typologies and their correlation with teacher self-efficacy and commitment at the level of both the individual teacher and the school institution more broadly. Their findings indicated that the integration of teachers and integrated school profiles were associated with higher levels of teacher self-efficacy and commitment. Furthermore, both levels of integrated leadership profiles were found to be indirectly related to teacher commitment through the medium of teacher self-efficacy, in comparison to other profile groups.

Another style of school leadership is transformational leadership, which has been repeatedly found to be positively associated with teachers' commitment (Leithwood & Sun, 2012). In their study, Aydın et al. (2013) identified a positive correlation between the implementation of a transformational style and the level of commitment demonstrated by teachers. Furthermore, the leadership style of administrators was observed to transition from transactional to transformational, which resulted in an increase in job satisfaction



and commitment levels. In addition, Berkovich & Bogler's (2021) and Liu & Werblow's (2019) studies revealed that transformational and distributed school leadership are positively correlated with teachers' organizational commitment.

The findings of this research indicate that the styles of leadership are significant predictors of the relationship between school leadership and teacher commitment. This finding may be explained by the facilitating roles of different leadership styles in fostering organizational commitment among teachers. This may be achieved by assisting teachers in aligning their personal vision and mission with those of the school (transformational), sharing authority with teachers (distributed), supporting the development of teaching and learning environment (instructional) or integrating them in alignment with the school's goals and objectives (integrated). To summarize our second finding, we determined that distinct leadership styles have various degrees of effects on the relation between leadership and commitment, and it would be beneficial to integrate multiple leadership styles to enhance school effectiveness through teacher commitment.

In the final phase of our analysis, we determined the main cultural predictors of the association between school leadership and teacher commitment by considering Hofstede's (2011) theoretical model of cultural dimensions. We observed that power distance and individualism dimensions exerted a negative influence on the association between school leadership and teacher commitment. The findings showed that as the power distance index, which is an indicator of the hierarchical relations between superiors and subordinates in a given country, increases, the school leadership and teacher commitment association becomes weaker. Cultures with higher scores in this dimension have a strict hierarchy and authority in

their organizations (Hofstede, 2001; 2010). A rigid hierarchy and authoritative structure in educational leadership may have a detrimental impact on the attitudes of teachers towards the school's vision, mission, objectives and learning environment. Our findings indicate that in cultures where the status and authority of school principals are strong, there is a tendency for teachers to display a lack of commitment to the school. Moreover, school principals, as lower-level leaders, may perceive their role as being limited to the day-to-day operational aspects of their position.

In a high-power distance culture, this may result in longer-term issues, such as the sharing of vision and values, being left to higher-level leaders (Avolio et al., 2004), and a lower level of commitment among teachers, which could have unanticipated consequences such as intent to leave, burnout or feelings of insecurity. Qadach et al., (2020) examined the mediating effect of collective teacher efficacy and shared vision on teachers' intent to leave. Their findings indicated that, in schools characterised by a high-power distance, teachers tend to perceive a lower level of shared vision in the school climate, which positively affects their intent to leave. In their study, Masry-Herzallah & Da'as (2021) examined the relationship between cultural values, school innovative climate and organizational affective commitment. The study found that an innovative climate was positively related to teachers' affective commitment. However, no correlations were found between an innovative climate and a low power distance culture. One strategy that educational policy makers may employ to foster a positive school climate and enhance teacher commitment in countries with a high-power distance is to delegate authority or distribute responsibilities among teachers to a certain extent.



The results of our analysis indicate that the individualism versus collectivism dimension exerts a negative influence on the association between school leadership and teacher commitment. Individualism is defined as the pursuit of autonomy, the achievement of individual goals, and the freedom to make decisions. Collectivism, in contrast, is characterized by the prioritization of the collective interests of the group (Hofstede, 2010). Our findings indicate that in cultures characterized by high levels of individualism, the relationship between school leadership and commitment tends to become weaker.

The existing literature includes a number of studies conducted in non-school contexts. These studies have yielded findings that are generally consistent with the findings of the present study with regard to the individualism dimension. Jiang (2015) conducted a study to examine the relationship between individualism and organizational commitment. The study utilized survey data from China, South Korea, and Australia. The findings indicated that individualism was negatively correlated with organizational commitment. In their study, Jackson et al. (2013) found no effect of societal individualism-collectivism on the relationship between transformational/charismatic leadership and affective commitment. Furthermore, the researchers observed that the relationship between transformational/charismatic leadership and commitment is more pronounced in countries where collectivism is highly valued. The results of the aforementioned studies are closely related to our own findings, which demonstrated a negative correlation between individualism and the relationship between leadership and commitment in an educational context. One possible explanation for this phenomenon in educational settings is that the individualistic cultural environment in which teachers operate may lead to feelings of alienation or a failure to align with the goals and



objectives of the school. In cultures where the individualistic culture is more dominant, the ability of teachers to integrate with the school's goals and objectives requires a collaborative approach which can be achieved by enriching the learning environment. School principals can foster collaborative learning environments by encouraging teachers' participation in decision-making and social activities, and by valuing their ideas. Our findings suggest that the other four dimensions of Hofstede (masculinity, uncertainty avoidance, long-term orientation and indulgence) have no influence on the association between school leadership and teacher commitment.

Conclusion

Considering the relationship between school leadership and teacher commitment, it is important to take into account national culture, as cultural context can play a key role in this relationship. The current study was an attempt to examine the influence of national culture on the association between school leadership and teacher commitment. We systematically reviewed the literature on school leadership and teacher commitment, then followed a meta-analytic process by combining the data from the included studies and finally conducted meta-regression procedures to identify the main predictors of the association between the two variables using Hofstede's (2011) theoretical model of cultural dimensions. Our findings suggest that there is a moderate positive relationship between school leadership and teacher commitment that certain leadership styles are important in this relationship, and that power distance and individualism dimensions have negative influences on this association. Therefore, we conclude that policy makers are encouraged to foster a positive school climate and enhance teacher commitment in countries with a high-power distance by delegating authority or distributing responsibilities



among teachers to a certain extent. In cultures where the individualistic culture is more dominant, school principals can foster collaborative learning environments by encouraging teachers' participation in decision-making and social activities, and by valuing their ideas.

Limitations and directions for future research

As with any study, there are some limitations to this review. It is important to note that the studies included in this review were conducted in K-12 education. Future research could examine studies reported in higher education that focus on leadership in academia, the commitment of faculty members and national culture. Secondly, the studies reviewed originated from 32 countries, with the majority of these studies conducted in the Asian region. This may result in a limitation in the generalizability of the results. We recommend that readers exercise caution when attempting to generalize the results. Thirdly, only publications written in English were included in the final analysis. Future reviews focusing on different languages could enhance our understanding of the influence of national culture on the association between school leadership and teacher commitment.



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