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The Effectiveness of Educational Leadership on Teacher Performance in High Schools in Phnom Penh, Cambodia

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ABSTRACT

This study examines the impact of teacher professional development (PD) on educational leadership and teacher performance in high schools in Phnom Penh, Cambodia. Recognizing the importance of educational improvements in addressing persistent challenges within Cambodia's education system, this research explores existing (PD practices), identifies effective strategies, and assesses their influence on teaching effectiveness and student outcomes. Employing a mixed-methods approach, quantitative data from a survey of 200 high school teachers, students and school leaders (72% male), diverse in sex, nationality, qualifications, teaching experience, and specialization, alongside qualitative insights from interviews and group of 28 students and 7 School directors and 7 Deputy school Director discussions from both public and private institutions. The survey sample was determined using Yamane's Formula (1976) to ensure statistical representativeness. Findings indicate that 65% of participants view educational leadership as vital to the success of PD programs. In comparison, 80% highlight clear goals, relational support, and an inclusive environment as key elements of effective (PD). Nonetheless, challenges such as limited student engagement (47%), resource constraints (38%), and implementation difficulties (56%) were reported. The study concludes that robust educational leadership and well-structured PD initiatives significantly enhance teacher performance and student outcomes. Accordingly, continuous support and tailored (PD) programs are recommended to address teachers' needs better and advance classroom practices.

KEYWORDS: *Teacher Professional Development, Educational Leadership, Teacher Performance, PD Strategies, Student Outcomes.*

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1. INTRODUCTION

1.1. Introduction

School principals frequently lack leadership and financial management skills in addition to having a limited educational background and having never attended a management training course. Given the needs of `out-of-the-way' schools, the (still) low pay of teachers, and the insufficient supply of core textbooks and learning materials, the basic requirements needed by schools in order to improve education quality are still not in place. Therefore, MoEYS has been undertaking profound reforms, particularly during the past three years. To address the problems outlined above MoEYS set a five years Education Strategic Plan 2019-2023 which includes four phases: phase 1 (Reform at the national level (2014)), (Ministry of Education, Youth and Sport (MoEYS). 2014), phase 2 (School level reform (2015-2018)), phase 3 (System formulation and human resource development reform (2019-2022)), phase 4 (Human resource training reform for the transforming digital economy (from 2022)). (Royal Government of Cambodia, August 2023), Cambodian government also set a pentagonal strategy: Pentagon 1: Human Capital Development which includes: (1) Enhancement of Quality of Education, Sports, Science, and Technology, (2) Technical Skills Training, (3) Improvements of People's Health and Well-being, (4) Strengthening of Social Protection System and Food System, and (5) Strengthening of Quality of Citizenship of a Highly Civilized Society

with Morality, Equity and Inclusiveness. By 2030, Cambodia wants to be classified as an upper-middle-income nation, and by 2050, it wants to be a high-income nation (MOEYS, 2014) consequently, the Royal Government emphasizes the development of human resources to maintain competitiveness in an increasingly open regional labor market (Ibid, n.d.). Since 1979, the education system in Cambodia has been divided into three stages (MOEYS 2015) from 1979 to 1987, general education covered 10 years (4+3+3); from 1987 to 1994, it was 11years (5+3+3); and from 1994 to now, general education has covered 12 years (6+3+3). Cambodian education has advanced significantly in recent years. However, there are still not enough teachers in rural schools, resulting in an overall low-quality education system where pupils are overcrowded despite low enrollment. Because of this, many pupils drop out of school at a young age, are discouraged from studying, and do not acquire knowledge.

1.2. Statement of problem

In the last five years, high schools have used information and communication technologies to support teaching and learning, increasing from 10 percent in the School Year 2018-2019 to 26.68 percent in the School Year 2022-2023. (Ministry of Education, Youth and Sport (MoEYS), 2023) The use of information and communication technologies to support teaching and learning increased during school closures in the context of COVID-19. At the same time, teaching and learning use various images, including worksheets, Telegram, Zoom, Google Meet, Google Classroom, WhatsApp, Line, E-learning, and Facebook. The lack of ICT trainers is one of the main concerns in the digital educational system. The lack of professional teachers in public schools leads to a flow to private schools, which is a constraint for public educational institutions since the quality of education will not be balanced. As Hong (2023) Stated, "Private education institutions are good, but if we continue to build more, they will be absorbing more and more teachers as well as students from our public schools. There needs to be a balance". He added that the evaluation, in which all stakeholders and relevant departments must be involved, must include the study of teacher and student flow and how to strengthen the quality of education at state-run schools. Low academic management strategies are a concern linked to the impact on school-based management (A rapid assessment was conducted for MoEYS in September 2019) (Ministry of Education, Youth and Sport (MoEYS), 2019). Low academic management strategies can impact school-based management by undermining the overall effectiveness of educational institutions. It can lead to inconsistencies, resource mismanagement, and a lack of focus on critical aspects such as curriculum development and student outcomes. Addressing these concerns requires a comprehensive approach to strengthen academic management practices at various levels of the education system.

1.3. Research objectives

- To identify the current practices of teacher professional development in high schools in Phnom Penh, Cambodia;
- To identify and propose the most effective strategies for optimizing teacher professional development programs in Phnom Penh, Cambodia, in high schools;
- To examine how teacher professional development influences teaching effectiveness and student outcomes in Phnom Penh, Cambodia, high schools.

1.4. Research questions

The study attempts to answer the following four questions.

1. What are the current practices of teacher professional development in high schools in Phnom Penh, Cambodia?
2. What are the most effective strategies for optimizing teacher professional development programs in high schools in Phnom Penh, Cambodia?
3. How does teacher professional development influence teaching effectiveness and student outcomes in high schools in Phnom Penh, Cambodia?

1.5. Significance of the study

Researching how educational reforms influence parents' perceptions is significant for building a collaborative relationship between schools and families. Understanding parental trust in the education system provides insights into the effectiveness of reforms in creating a positive and supportive educational environment (Hoover-Dempsey, K. V., & Sandler, H. M., 1997). This knowledge helps policymakers and educators address concerns and improve communication with parents. Investigating the impact of educational reforms on leaders provides insights into the overall health and effectiveness of the education system. Research in this area informs policymakers about the success of initiatives aimed at creating a qualified and responsive educational system. This study is significant for stakeholders involved with educational institutions' reforms, such as students, teachers, parents, educational leaders, schools, society, and future scholars. In this area helps identify whether

students gain the knowledge and skills necessary for academic success and future employment (Darling-Hammond, L., 2010). Investigating the effects of educational reforms on teachers is vital for assessing the quality of instruction (Fullan, M., 2007). To inform educational leaders and policymakers about investing in teacher qualifications and ongoing professional development to enhance the educational experience (Darling-Hammond, L., 2010).

2. LITERATURE REVIEW

2.1. Key terms

Educational Leadership refers to the comprehensive set of actions, roles, and influences exerted by individuals in formal positions (such as principals, vice-principals, and superintendents) and increasingly, by informal teacher leaders, to guide and improve the educational process. This form of leadership extends beyond mere administration; it involves setting clear visions, fostering a positive school culture, promoting instructional excellence, managing resources strategically, and cultivating collaborative environments where continuous improvement is prioritized. Effective educational leadership is the driving force behind successful school reform and enhancing teaching and learning outcomes. (Leithwood, 2005). A critical outcome influenced by such leadership is Teacher Performance. This term encompasses the quality and efficacy of educators in carrying out their professional duties within the classroom and the broader school community. It includes various dimensions such as instructional quality (e.g., pedagogical expertise, classroom management, and student engagement strategies), commitment to professional development, ability to foster positive student relationships, and contribution to overall school goals. High teacher performance correlates with improved student learning and achievement, making it a central focus for school leaders and policymakers (Taylor & Tyler, 2012). Effectiveness is the ultimate measure of success across educational initiatives, leadership practices, and teaching methodologies.

In an educational context, effectiveness denotes the degree to which an intervention, strategy, or leadership style successfully produces desired or intended results. Applied to leadership, it refers to the capacity of leaders to achieve school improvement goals and positively impact student learning. Teachers' effectiveness is demonstrated through their ability to facilitate significant student growth and foster a conducive learning environment. Thus, effectiveness is the overarching outcome demonstrating that quality has been achieved (Boeve-de Pauw et al., 2015)

Among various leadership theories, Transformational Leadership in education has garnered significant attention for its profound impact on school environments and outcomes. This leadership style is characterized by leaders who inspire and motivate followers (teachers, staff, and students) to achieve extraordinary results, often beyond their initial expectations. It is typically defined by four key components: idealized influence (serving as a role model), inspirational motivation (articulating a compelling vision), intellectual stimulation (challenging assumptions and encouraging creativity), and individualized consideration (attending to the unique needs and development of each follower). In schools, transformational leaders empower teachers, foster a culture of innovation and collaboration, and promote a collective commitment to improving teaching and learning. This style is frequently cited in literature for its capacity to enhance teacher performance by boosting morale, increasing professional efficacy, and encouraging greater engagement in school improvement efforts, thereby directly contributing to the overall effectiveness of the educational institution (Anderson, 2017).

2.2. Model of literature review

2.2.1. Educational Leadership & Quality

The sustained enhancement of educational quality within high schools, particularly in evolving contexts such as Phnom Penh, Cambodia, necessitates a multi-faceted approach encompassing strategic reforms across various operational and pedagogical domains. At the core of this transformation lies the pivotal influence of Educational Leadership & Quality, which refers to effective leaders' critical role in shaping the learning environment and driving academic excellence within schools. Strong leadership directly fosters improved teaching practices, enhanced student outcomes, and the overall excellence of the educational system (Baporikar, 2018). The opposing definitions of teaching quality need to be compared to our own learning experiences and the kind of instructors and educational opportunities we want for our children and grandkids. We must also consider the political implications of the broader goals that different definitions of high-quality instruction are tied to and the interests of those these agendas neglect (Cochran-Smith, M., & Fries, K., 2005). Challenging teachers' responsibilities in society and educational reform may be of utmost importance. Teachers are increasingly seen as the solution to society's problems, including poverty, unemployment, bureaucracy, cultural and linguistic hegemony, and a long history of institutional racism, in addition to all the afflictions of a failing educational system.

2.2.2. Teachers' teaching experience and students' learning outcomes

The learning results for students and instructors at secondary schools in Ondo State, Nigeria, were examined in this paper. The 257 secondary schools in the State made up the research population because it was a correlational survey. There were 110 urban schools and 147 rural schools in this group. Twelve single-sex schools and 245 mixed schools were also included. Using the stratified random sampling approach, 180 schools were selected as a sample from the whole population. The tools used to gather study data were an inventory and a semi-structured interview schedule. The chi-square test, correlation analysis, and t-test were used to analyze the data gathered. The principals and education officials chosen to participate in the semi-structured interview were. Through content analysis, their replies were examined. The results showed a correlation between instructors' teaching experience and students' learning outcomes, as shown by their success on the SSC tests. Schools with more instructors with five years or more of classroom experience outperformed those with more teachers with less than five years of experience in terms of academic performance (Owoeye, J.S., & Yara, P.O., 2011) In light of the findings, the government could encourage experienced instructors to stay on the job by giving them greater incentives and better opportunities for advancement. Teachers' working conditions also need to be changed. The results, however, were at odds with those of Zaku (1983), who discovered that teaching experience had a non-significant standardized partial regression of -0.06 and contributed little to the explained variation in the former Gongola State, Nigeria. The results were at odds with those of Dewalt (1986), who found no appreciable difference in teacher abilities in instructional methods across instructors with and without prior classroom experience.

2.3. Review Methodology

2.3.1. Teachers as leaderships

Finland has grown in popularity among those seeking an international education during the past ten years (Sahlberg, 2011, pp. 1–3). Thousands of educators and decision-makers have visited Finnish schools and observed classes to understand why this small Nordic country consistently outperforms the rest of the West in international rankings of education. I have had the chance to interact with many of these international guests through my employment in Finland's government. I often ask what they will say to their loved ones and acquaintances about the Finnish educational system. The high social standing and widespread respect for teachers are often cited as reasons why being a teacher is one of the top career choices for young Finns (Sahlberg, 2011, p. 34).

2.3.2. Leadership theory

It can be studied from at least five perspectives: the trait approach, the behavioral approach, contingency (situational) approaches, the role approach, and emerging theories. The first four represent traditional theories that we discuss in this section, and the trait approach involves discovering how to be a leader by examining the characteristics and methods of recognized leaders and subordinates, identifying the five key leadership styles that support TQ (Stogdill, R. M., 1963). These styles and their key traits, in decreasing order of impact on success factors such as;

- Team builder. Tolerant, motivational, inspirational, supportive.
- Captain. Respectful, trusting, reliable, fair.
- Strategist. Trustworthy.
- Creative. Innovative, visionary, courageous, inspirational, confident.
- Impulsive. Obsessed with new ideas, curious, energetic, and participative.

The leadership profile of any individual is a composite of multiple styles; however, the predominance of some styles over others will influence the success of that individual and the role approach suggests that leaders are absolutely to perform the specific roles in order to effectively similar to the traits and behavioral approaches but also takes into account situational factors due to the leaders at upper levels of the organization to between the firm and its outside environment (Murphy, J. 1990) At a lower level, where spans of control extend widely, motivational, coordinative, or disturbance-handling roles may be needed for effective leadership. Henry Mintzberg's various texts and articles provide the basis for this approach, and appropriate managers' roles also depend on situational factors to move away from highly structured roles to assist subordinates, such as motivator, liaison, and spokesperson. The subordinates, in turn, would be expected to perform some of the former managerial roles of making decisions, managing conflicts, and finding opportunities for improvement (an entrepreneurial activity) as part of self-managed teams in the organization.

2.3.3. Leadership in teaching

In the 1980s and 1990s, instructional leadership was thoroughly researched (Hallinger, 2000, 2003). Numerous theories and frameworks can be used to describe instructional leadership. Among models, the Model is a guiding leadership theory. Murphy (1990) Model, Hallinger and Murphy (1985) Model, Weber (1996) Model, and McEwan (2009) Model.

Instructional leadership was characterized by Hallinger and Murphy (1985) as the principal's actions to advance and enhance the teaching and learning process in schools, including staff members, pupils, parents, lesson plans, and management of schools, facilities, and resources (Hallinger, P., & Murphy, J., 1985). The Key Guidance Evaluation Tool (PIMRS), created by Hallinger in 2013, has been used in more than 175 surveys across the globe (Hallinger, P. 2013). The idea of instructional leadership by school administrators is a relatively recent one that came into being in the 1980s. It includes the tasks the principal completes or assigns to others to advance student learning. Prioritization, a focus on curriculum, instruction, and assessment standard alignment are key characteristics. In addition to managing the institution, school administrators also serve as instructional supervisors. The first aspect of the conceptual framework for instructional leadership is the subject of this study. The first pillar of the framework describes how the school leaders use instructional leadership to define the school's goals: by defining a school mission (Rashdi & Khamis, 2017).

Instructional leaders can use the constructivist learning theory's guiding principles to enhance classroom instruction and establish precise academic objectives (Makgato, M., 2012). The following guidelines can help you teach and learn effectively: 1) start with content and experiences that are familiar to the students; 2) avoid making drastic or extreme changes to the students' cognitive models; 3) give the students the skills they need to be independent and be able to use relevant information from a variety of sources to solve problems and challenges; and 4) make connections with the students' existing knowledge structure (Makgato, 2012). Alig-Mielcarek (2003) found that instructional leadership focuses on defining and communicating shared goals (Alig-Mielcarek, J. M. 2003). Administrative leaders are expected to play a key role in improving the standard of instruction in their institutions. The leader is responsible for determining collaboratively with staff what goals they aspire to attain. There should be learning culture at all organizational levels, and the instructional leader should be readily visible.

2.3.4. Factors affecting teaching leadership

Academic achievement is typically predicated on two components regarding factors influencing instructional leadership and school administrator effectiveness. The school principal's qualifications and outside factors, including teachers, personnel, the school's atmosphere, educational reform, and educational policy, come first in this list. Ozdemir (2019) carried out research to look at how the principle affected instruction (Ozdemir, N. 2019). Statements like "defining school goals," "understanding instructor expectations," "deciding on institutional goals with students, teachers, and parents," and "setting family expectations about helping children accomplish these goals" are included in this. The attention of Bays (2001), Toprakç et al. (2016), and Msila (2013) It is on the teachers and personnel in each school. An encouraging environment is crucial to instructional leadership (Leithwood & Jantzi, 2005 ; Peariso, 2011 ; Kieleko, 2015 ; Buckley et al., 2004).

Table 1: Leadership Dimensions Derived from 11 Studies of Effects of Leadership on Student Outcomes.

Leadership Dimension	Meaning of Dimension	Effect Size Estimate
1. Establishing Goals and Expectations	Includes the setting, communicating, and monitoring learning goals, standards, and expectations, and the involvement of staff and others in the process, so that there is clarity and consensus about goals.	**Average ES = 0.35** (SE=.08) 49 effect sizes from 7 studies
2. Strategic Resourcing	Involves aligning resource selection and allocation to priority teaching goals. This includes the provision of appropriate expertise through staff recruitment.	**Average ES = 0.34** (SE=.09) 11 effect sizes from 7 studies
3. Planning, Coordinating, and Evaluating Teaching and the Curriculum	Direct involvement in the support and evaluation of teaching through regular classroom visits and providing formative and summative feedback to teachers. Direct curriculum oversight through school-wide coordination across classes and year levels, and alignment to school goals.	**Average ES = 0.42** (SE=.07) 79 effect sizes from 7 studies
4. Promoting and Participating in Teacher Learning and Development.	Leadership that not only promotes but also directly participates with teachers in formal or informal professional learning.	**Average ES = 0.84** (SE=.14) 17 effect sizes from 6 studies

5. Ensuring an Orderly and Supportive Environment	Protecting time for teaching and learning by reducing external pressures and interruptions, and establishing an orderly and supportive environment inside and outside classrooms.	**Average ES = 0.27** (SE=.09) 42 effect sizes from 8 studies

2.4. Conceptual framework

All of the above-listed indicators help us to assess the institutional system of a given country from the viewpoint of, among other things, the enforcement of property rights, public institutions' interference in the economy, efficiency and transparency in the public sector, the quality of the education system, and labor market efficiency.

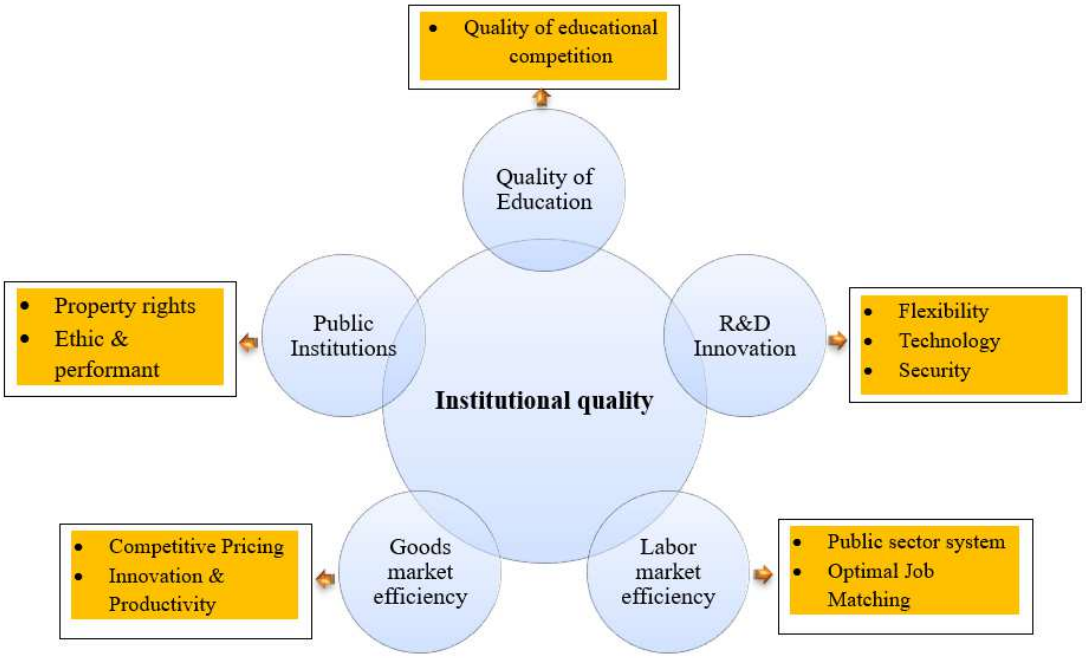

Figure 1: Institution Quality

Source: World Economic Forum; GCI (2016-2017)[1].

2.5. Conceptual and Theoretical Framework

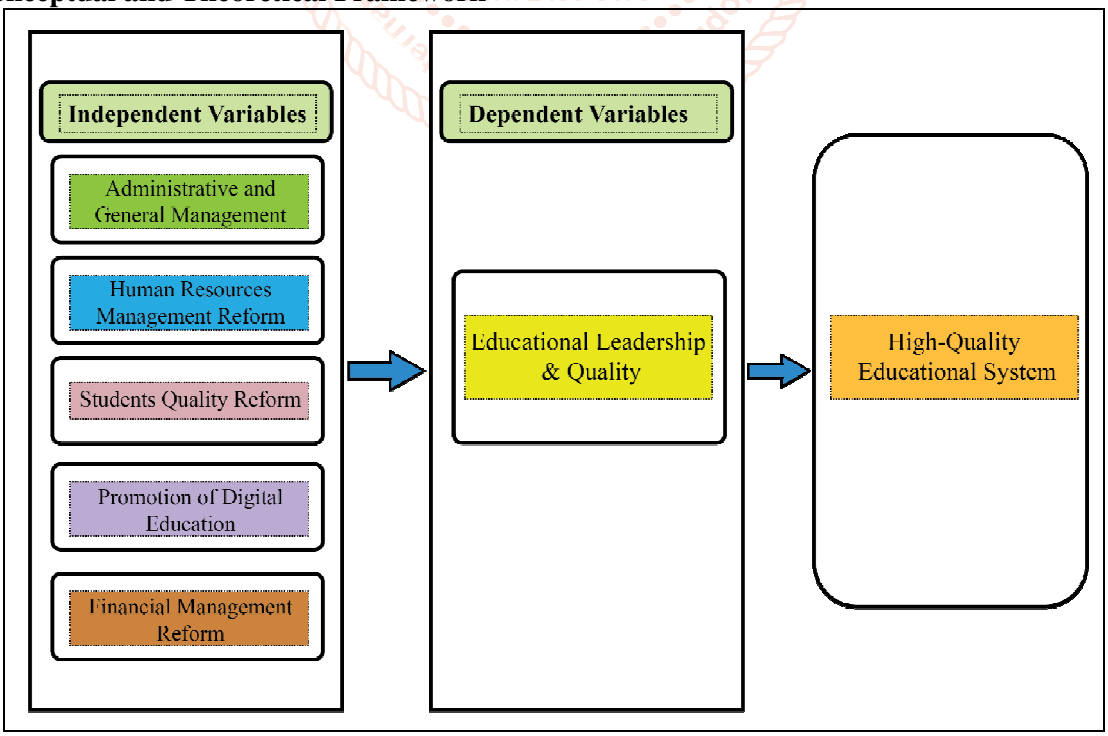

Figure 2: Research Framework

[1] World Economic Forum. (2016–2017). The Global Competitiveness Report 2016–2017. Geneva: World Economic Forum.

2.6. Conclusion Remarks

The analyses have led us to the following conclusions: (1). Most researchers agree that institutional quality is one of the main determinants of FDI inflow. (2). Central and Eastern Europe is one of the most attractive investment areas. Considering the amount of inflowing capital, the EU Member States, particularly the Visegrad Group countries, are leaders in the region. (3). Measuring institutional quality remains problematic to many researchers, as no coherent measure exists. This is why we tried to develop our measure, which was built from 23 partial variables from the GCI. In the group of countries covered by the study, Estonia is the undisputed leader regarding the quality of institutions. (4). simultaneously, it turned out that the examined countries can be divided into groups representing similar institutional quality. (5). Using dynamic panel data models, we examined the impact of institutional quality upon FDI inflow. It turned out that membership in a particular group of countries similar to one another in institutional quality strongly impacts their investment attractiveness. Although this study provides important theoretical contributions and practical implications for policymakers in the examined countries, we realize that it has limitations.

Table 2: Summary list of literature database

Types of Materials	No. of Items
Journal articles	65
Policy document/ Report /Strategic paper	75
Books	100
Research paper	85
Speech/slides/YouTube	8
Total	**333**

3. METHODOLOGY

3.1. Research design

This study adopted a mixed-methods research design, specifically an explanatory sequential design (Toyon, 2021). This approach commenced with a quantitative phase to identify general trends and relationships between variables (transformational leadership and employee performance/reforms), followed by a qualitative phase to explore and explain the quantitative findings in greater depth and context. This design allowed a broader understanding of the phenomenon by integrating numerical data with rich, contextual narratives. The stratified random sample aims to reduce the potential for human bias in selecting cases to be included. As a result, the stratified random sample provides a sample highly representative of the studied population, assuming there is limited missing data. Since the units selected for inclusion in the sample are chosen using probabilistic methods, stratified random sampling allows us to make generalizations (i.e., statistical inferences) from the sample to the population. This is a significant advantage because such generalizations are more likely to be considered to have external validity (Sharma, 2017). The researcher uses a Taro Yamane formula to calculate the sample size of ten high schools.

3.2. Setting and participants

This study's target population consisted of educational employees (Teachers, deputy school directors, and school directors) working in Cambodia's public and private educational institutions.

Group	Count
School Directors	7
Deputy Directors	7
A group of students in each school	28
Teachers/Students/Parents	158
Total	**200**

➢ Percentage Proportion by Group

- School Director% = $\frac{7}{200} \times 100 = 3.5\%$
- Deputy Directors% = $\frac{7}{200} \times 100 = 3.5\%$
- A group of students% = $\frac{28}{200} \times 100 = 15\%$
- Teachers, Students, Parents % = $\frac{158}{200} \times 100 = 78\%$

Table 3: Proportional Allocation Based on Sample Size (N = 200)

Group	Count	% of Total (N=200)
School Directors	7	3.5%
Deputy Directors	7	3.5%
A group of students in each school	28	15%
Teachers/Students/Parents	186	78%
Total	**200**	**100%**

3.3. Data collection

To gather comprehensive data, a combination of instruments was utilized:

- Quantitative Phase: A structured survey questionnaire was developed to collect quantitative data (Cheung, 2021). This questionnaire included: (i) Demographic Information: Questions on age, gender, educational level, position, and income. (ii) Transformational Leadership Scale: This section likely utilized a Likert-type scale with 5 points to measure respondents' perceptions of transformational leadership behaviors exhibited by their leaders, adapted from the Multifactor Leadership Questionnaire – MLQ (Batista-Foguet et al., 2021). (iii) Employee Performance and Reforms Scale: This section also likely used a Likert-type scale to assess employee performance (and engagement with or perception of educational reforms (Joshi et al., 2015).
- The questionnaire was designed to be clear and relevant to the Cambodian educational context. A pilot study interviewed 158 working and relevant participants in the academic sector (In, 2017).
- Qualitative Phase: A semi-structured interview guide was used to facilitate the group discussions with 14 leaders and 28 students (Adeoye-Olatunde & Olenik, 2021). The guide focused on open-ended questions related to: (i) General leadership approaches within educational institutions. (ii) Challenges and opportunities in general management. (iii) Perceptions of school principals and students regarding educational institutions and reforms. (iv) This approach allowed for flexibility and in-depth exploration of participants' experiences and perspectives. (v) Right to withdraw, and how their data would be used, ensuring confidentiality.

3.4. Data Analysis

- Quantitative Data Analysis: Quantitative data collected from the surveys were analyzed using descriptive statistics with the aid of statistical software (SPSS)
- Descriptive Statistics: Frequencies, percentages, means, and standard deviations were used to describe the demographic characteristics of the sample and the distribution of responses for leadership behaviors and performance indicators (Holcomb, 2016).
- Qualitative Data Analysis: The transcribed data from the focus group discussions were analyzed using thematic analysis (Clarke & Braun, 2017). This involved: (i) Familiarization: Repeated reading of the transcripts to deeply understand the content. (ii) Coding: Identifying initial codes and significant phrases related to leadership, management, and reforms. (iii) Theme Development: Grouping codes into broader themes and sub-themes that captured recurring patterns and key insights from the discussions. (iv) Reviewing and Defining Themes: We refined and named the themes, ensuring they accurately reflected the data and addressed the research objectives. This process helped explain and provide context for the quantitative findings.

4. FINDINGS

4.1. Findings

The results of a study on Teacher Professional Development (TPD) in high schools in Phnom Penh, Cambodia, are presented in this chapter. The project intends to investigate the use of professional development, the efficacy of tactics to enhance teacher performance, and the influence on student outcomes and teaching quality. Analysis is done on data from students, teachers, school directors, and deputy directors. The chapter's structure addresses three research topics: the influence of professional development on teaching effectiveness and student outcomes; effective strategies for optimizing professional development; and current professional development practices. While the qualitative data offers a more profound understanding of teachers' experiences, difficulties, and perceptions regarding professional development, the quantitative data sheds light on PD programs' frequency, efficacy, and participation rates. The results will direct future PD program enhancements, improving the Cambodian educational system's student outcomes and teaching quality.

4.2. Sample description

Demographic information about respondents was gathered and assessed using the scale tools. The factors include age, gender, educational level, position, and income. The findings are as follows:

4.3. Demographic data of respondents

The data reveals a group where males constitute a significant majority (72%) compared to females (28%), indicating a potential gender imbalance within this population. Most individuals are primarily identified as either Teachers, students, and parents (93%), suggesting these roles are prevalent within this group, with the same fraction holding the positions of School Directors and Deputy School Directors (3.5%). Most individuals are employed by public institutions (71%), with a smaller percentage working in private institutions (29%). Regarding academic qualifications, most hold a Bachelor's Degree (71%), while the remaining portion has attained a Master's Degree (29%). The age distribution shows that the largest segment is between 21 and 30 years old (22.5%), followed by those aged 31-40 years old (17%), 41-50 years old (18.5%), 51-60 years old (14.5%), and more than 60 years old (16.5%).

The primary methods of personal contact are phone (45%) and Telegram (42.5%), with email being less common (12.5%). Professionally, half of the group possesses expertise in TEFL/TESOL (50%), while other areas such as Educational Administration (25%), Human Resources (5%), Management (5%), Finance & Business (5%), Public Administration (5%), and Law (5%) have considerably smaller representations. The participants are affiliated with various schools, with Sovannaphumi High School (19.5%), Cheasim Charnosuroth High School (18%), and Prek Phnov High School (15.5%) having the highest representation, followed by Russey Keo High School (14.5%), BELTEI International School (15%), The Westline School (8%), and Preak Leab High School (9.5%). In terms of professional experience, the majority of participants have less than 5 years of experience (70.5%), with a smaller portion having 6-10 years (27.5%), and very few having 11-20 years (1.5%) or more than 21 years (0.5%).

The survey indicates that the predominant style of leadership influencing PD is indirect leadership, preferred by 29.1% of participants, followed closely by direct leadership (25.3%), appointed leadership (24.7%), and those selecting "All of the above" (20.9%), (See Fig. 1). When evaluating the qualifications and attributes necessary for becoming a teacher, respondents emphasized the importance of a combination of degree and experience (27.2%) and degree and achievement (25.3%). Additionally, degree and morality/attitude, alongside "All of the above," also received considerable importance (20.3% and 27.2%, respectively).

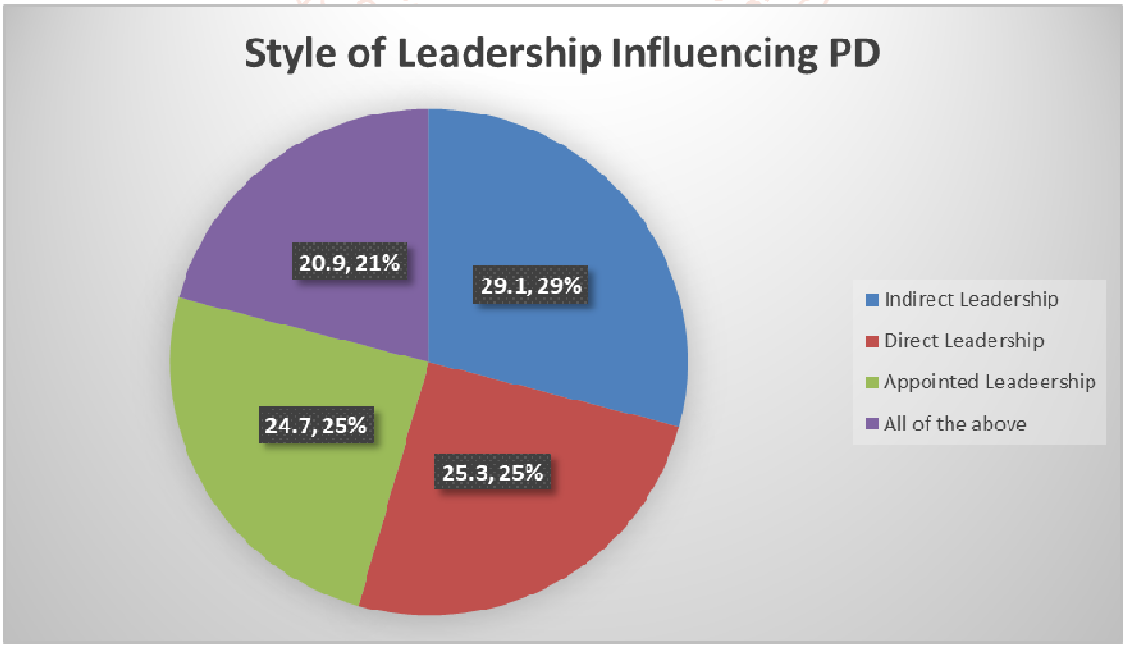

Figure 3: Style of Leadership Influencing PD

The level of support received from school leadership for PD programs was assessed to understand the extent to which leadership actively backs these initiatives. The results revealed notable variation in perceived support. Specifically, 40 respondents (25.3%) reported receiving very low support, while 44 (27.8%) indicated low support. In contrast, 37 respondents (23.4%) reported high support, and another 37 (23.4%) indicated high leadership support.

The findings show that a substantial proportion of teachers (46.8%) perceive the support from school leadership as high or very high, reflecting strong backing for PD programs in many cases. However, a slightly larger proportion (53.1%) reported experiencing low or very low support, suggesting that leadership involvement in PD programs may be insufficient in some schools. This disparity highlights the need for more consistent and robust leadership support to enhance the effectiveness and reach of professional development initiatives.

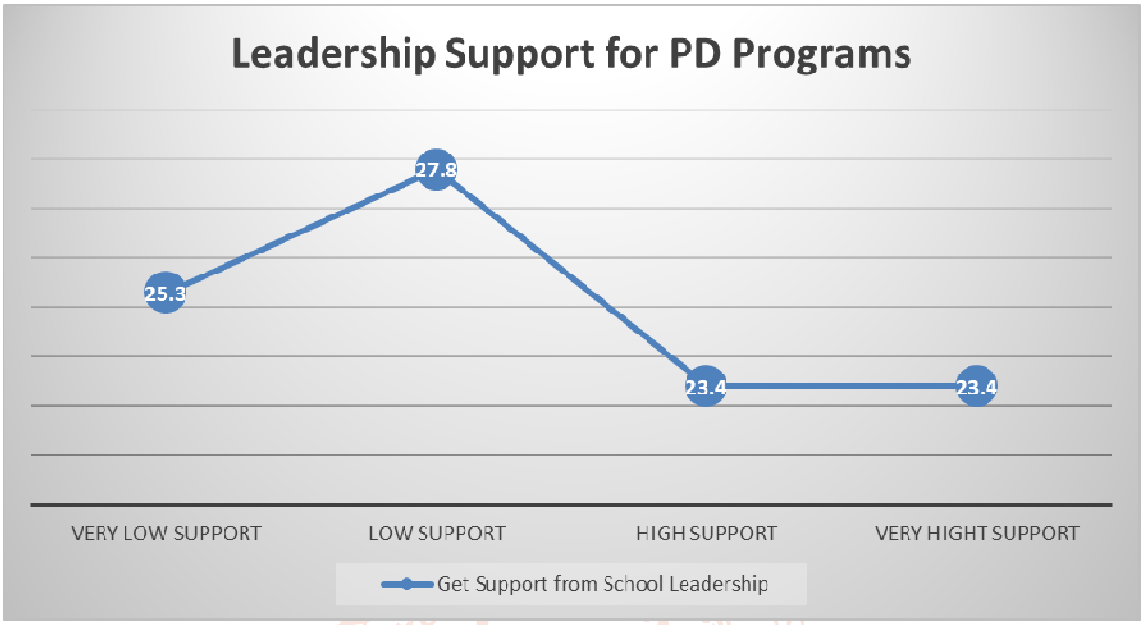

Figure 4: Leadership Support for PD Programs

The extent to which teachers perceived improvements in their teaching practices following participation in professional development (PD) programs was also explored. The responses from 158 valid participants indicated a diverse range of outcomes: 37 teachers (23.4%) reported no improvement in their teaching practices, 39 teachers (24.7%) indicated slight improvement, 47 teachers (29.7%) observed moderate improvement, and 35 teachers (22.2%) reported significant improvement.

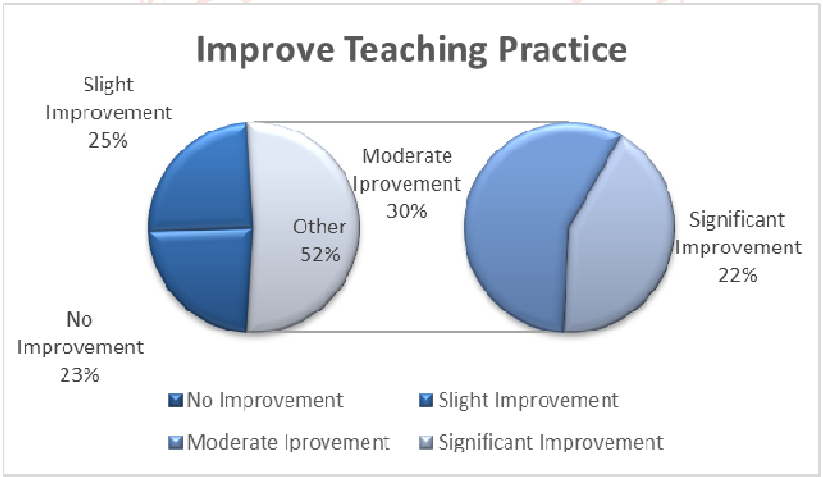

Figure 5: Improve Teaching Practices after PD Programs

These findings demonstrate that most teachers (75.3%) experienced at least some improvement in their teaching practices after attending PD programs. Of this group, 29.7% noted moderate improvement, while 22.2% reported significant improvement. However, it is notable that 23.4% of teachers reported no improvement, suggesting that not all PD offerings are equally effective. This indicates a continued need to refine PD programs and develop more practical, targeted approaches to ensure that professional development meets the diverse needs of all educators.

➢ Impact of PD on Student Learning Outcomes

Another critical aspect examined was the perceived impact of professional development (PD) on student learning outcomes. The responses indicated a range of perceptions regarding the effectiveness of PD in enhancing student performance. Of the 158 valid responses, 34 teachers (21.5%) reported that PD had no impact

on student learning outcomes. Conversely, 43 teachers (27.2%) indicated minimal impact, 51 teachers (32.3%) observed a moderate impact, and 30 teachers (19.0%) reported a significant impact on student achievement. The data suggest that most teachers (81.3%) believe PD has a minimal to moderate positive impact on student learning outcomes. In particular, 32.3% of respondents noted a moderate impact, and 19.0% identified a significant impact due to PD participation. Nevertheless, the finding that 21.5% of teachers perceived no impact underscores the need for more effective follow-up activities and tailored PD sessions. Ensuring that PD experiences translate into measurable improvements in student learning remains important for ongoing development.

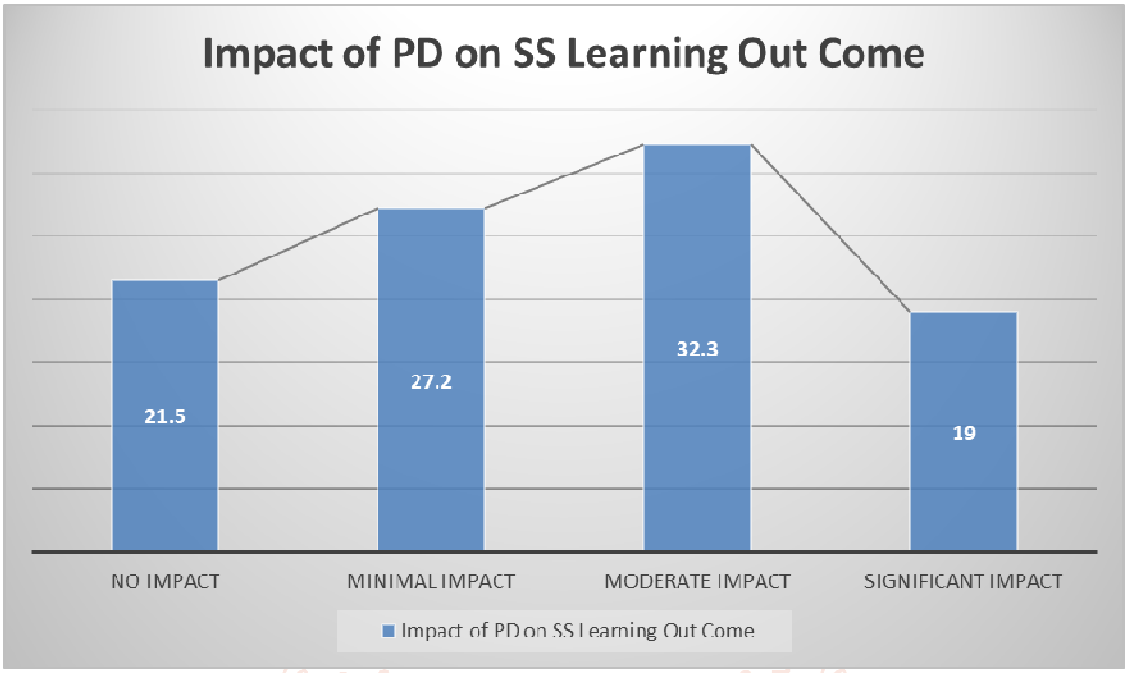

Figure 6: Impact of PD on Students Learning Outcome

5. CONCLUSION

5.1. Conclusion

This chapter addressed all three research questions and highlighted the study's key findings. It was revealed that professional development (PD) activities are widely implemented among educators; however, only 45% of teachers felt that these programs effectively addressed their specific needs, highlighting a significant gap in alignment. The study also identified practical strategies for optimizing PD, emphasizing needs-based, ongoing professional development and leadership involvement. Notably, over 65% of teachers preferred these approaches, emphasizing that leadership support is crucial for successful implementation. Furthermore, while direct student outcomes were not measured, the impact of PD on teacher performance was evident, with enhancements noted in areas such as lesson planning and student engagement. An encouraging 68% of teachers reported improvements in student motivation and participation following their involvement in PD activities.

5.2. Summary of key findings

The study found that 78% of high schools in Phnom Penh engage in some form of PD activity. The most common activities were workshops (52%), followed by mentoring programs (41%), seminars (38%), and peer collaboration (35%). While workshops were the most widespread form of PD, qualitative interviews indicated that mentoring was perceived as the most beneficial for professional growth, with 62% of teachers reporting improvements in their teaching practices due to mentoring.

6. RECOMMENDATIONS

6.1. Recommendations for Improving Current PD Practices

Based on the study's conclusions, several recommendations are proposed to enhance professional development (PD) practices in educational settings. First, it is essential to increase the frequency of PD sessions and ensure that the content is relevant to teachers' classroom needs. Schools should prioritize continuous professional development opportunities rather than relying solely on occasional workshops. This approach allows for a more sustained and impactful learning experience for educators. Furthermore, encouraging teacher input in the planning of PD initiatives is crucial. By actively involving teachers in identifying their professional development needs and shaping the PD curriculum, schools can create training programs that are more relevant and effectively address the challenges

teachers face in the classroom. This collaborative approach empowers educators and fosters a sense of ownership over their professional growth.

Lastly, providing equitable access to PD opportunities is vital for all teachers, regardless of the resources available within their schools. This may involve offering online PD options for educators in remote locations or those with heavy teaching loads. Ensuring that high-quality professional development is accessible to all teachers will ultimately contribute to a more informed and capable teaching workforce, benefiting student learning outcomes.

6.2. Recommendations for Strategy Implementation

Several strategies are recommended to optimize professional development (PD) effectiveness for educators. First, it is crucial to prioritize continuous, needs-based, and reflective PD models. Ongoing PD should address teachers' real-time challenges, incorporating strategies such as mentoring, peer collaboration, and reflective practice as integral components of PD initiatives. These approaches enhance teacher skills and promote a culture of continuous improvement. Second, training school leaders to manage effective PD cycles is essential. School leaders play a pivotal role in the planning, implementing, and evaluating PD programs. Their involvement ensures that PD aligns with the specific needs of teachers and the broader educational objectives of the institution. Providing leaders with the necessary training can significantly enhance the impact of PD on teaching practices. Integrating mentoring and coaching into school systems is fundamental to fostering a supportive professional environment. Institutionalizing these practices as part of the PD strategy allows teachers to receive ongoing support and encouragement, which is critical for their professional growth. Schools can create a collaborative atmosphere that benefits all educators by embedding mentoring and coaching within the PD framework.

In summary, prioritizing continuous and reflective PD, effectively training school leaders, and incorporating mentoring and coaching are vital strategies for enhancing the overall efficacy of professional development in educational settings.

6.3. Recommendations for Enhancing Impact on Outcomes

Professional development (PD) enhances teaching effectiveness and student outcomes. To maximize the impact of PD, it is essential to directly link PD content to the real challenges teachers face in their classrooms. This connection can significantly enhance instructional quality and foster greater student engagement (Sá & Serpa, 2020). Additionally, monitoring and evaluating the impact of PD is vital. Establishing systems incorporating student feedback and performance data can help assess whether PD initiatives translate into improved classroom practices and increased student participation. Lastly, creating follow-up support systems after PD sessions reinforces learning. Providing sustained support, such as regular check-ins, mentorship, or opportunities for peer collaboration, facilitates the practical application of newly acquired knowledge and skills, ultimately leading to more effective teaching practices (Baporikar, 2018).

6.4. Limitations of the Study

This study provides insights into teacher professional development (PD) practices in public high schools in Phnom Penh, but it has several limitations. The small sample size and focus on a limited number of schools may not represent the broader educational landscape in Cambodia. Additionally, the brief research period limits the evaluation of PD's long-term effects on teaching effectiveness and student outcomes. The study's focus on public schools excludes rural and private institutions, which may face different PD challenges. These limitations underscore the need for further research to view PD practices across Cambodia comprehensively.

6.5. Suggestions for Further Research

To build on these findings, future research should focus on several key areas. Firstly, examining Teacher Professional Development (PD) in rural areas and private schools is essential. These unique environments often encounter distinct challenges regarding access to resources, funding, and support systems compared to their urban or public counterparts. Investigating how teachers in these settings engage with PD could provide critical insights into the effectiveness and adaptability of various professional development models. Secondly, it is vital to investigate the long-term impacts of PD on student achievement. Conducting longitudinal research would enable a more comprehensive examination of the correlation between ongoing professional development participation and student academic performance. Such studies could track cohorts of students and their teachers to assess the enduring benefits of teacher training, including skill retention, instructional quality, and students' success in standardized assessments and overall class engagement. Lastly, exploring the role of digital PD tools in Cambodian high schools is crucial in the context of rising digital technologies. Research should identify effective online platforms and

strategies that facilitate ongoing teacher development while addressing specific barriers, such as geographic isolation. Understanding how digital PD can be optimized for educators in remote locations will help ensure that all teachers receive the necessary support to enhance their instructional practices.

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