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Implementation of Teacher Professional Development (TPD) in Davao Region: A CIPP-Based Quantitative Assessment

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Abstract

Teacher Professional Development (TPD) is a vital mechanism for strengthening teacher competence, improving instructional quality, and supporting learner outcomes. This study assessed the implementation of TPD in Davao Region, Philippines, using the Context, Input, Process, and Product (CIPP) Evaluation Model. Specifically, it examined the level of implementation in terms of objectives, resources, execution, and outcomes, and determined whether significant differences existed across Schools Division Offices. Employing a quantitative descriptive-comparative evaluative design, the study involved 381 public school teachers selected through stratified random sampling across 11 divisions in the region. Data were collected using a researcher-made and validated survey questionnaire with high internal consistency reliability. Mean, standard deviation, and the Kruskal–Wallis H test were used for data analysis. Findings revealed that the overall implementation of TPD was high ($M = 4.19$, $SD = 0.681$), indicating that TPD programs generally supported and addressed most professional needs of DepEd teachers. Among the domains, outcomes obtained the highest rating ($M = 4.21$, $SD = 0.705$), interpreted as very high, suggesting strong perceived contributions to teacher confidence, professional growth, instructional practice, and learner outcomes. Objectives ($M = 4.20$, $SD = 0.689$), execution ($M = 4.17$, $SD = 0.702$), and resources ($M = 4.14$, $SD = 0.713$) were rated high, reflecting clear program direction, systematic implementation, and adequate support mechanisms. Results also showed no significant difference in overall TPD implementation across divisions, $\chi^2(10) = 17.80$, $p = .058$, indicating relatively comparable perceptions across the region. The study concludes that TPD implementation is generally effective and regionally consistent; however, strengthening resources remains necessary to sustain teacher-sensitive professional learning.

Keywords: Teacher professional development; CIPP model; Quantitative assessment; Descriptive-comparative design; Davao Region; DepEd teachers

1. Introduction

Teacher Professional Development (TPD) remains a critical mechanism for strengthening teacher competence, improving instructional quality, and supporting learner outcomes. In education systems facing curriculum reforms, technological shifts, and increasingly diverse learner needs, teachers require continuous opportunities to update their pedagogical knowledge, deepen content expertise, and refine classroom practices. However, the effectiveness of TPD is not determined merely by the availability of training programs, but by the quality of their design, support mechanisms, delivery, and professional outcomes. Thus, assessing TPD implementation is necessary to determine whether professional development programs are relevant, adequately supported, systematically delivered, and meaningfully translated into teacher growth and instructional improvement.

Globally, TPD is recognized as an important strategy for sustaining teacher effectiveness and improving education quality. Effective professional development enables teachers to acquire advanced pedagogical skills, strengthen subject

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matter knowledge, and develop adaptive instructional approaches responsive to changing educational contexts [1]. Nevertheless, evidence shows that TPD implementation varies across systems due to differences in policy priorities, institutional capacity, resource allocation, and teacher participation [2,3]. International reports further indicate that teachers' participation in professional development may be constrained by workload, scheduling conflicts, lack of incentives, and financial costs [4]. These conditions suggest that TPD should be evaluated not only in terms of participation or program availability, but also in terms of implementation quality and responsiveness to teachers' professional realities.

In the Philippine basic education system, professional development is supported by national policies that emphasize continuing professional growth, reskilling, upskilling, and quality assurance. Republic Act No. 10912, or the Continuing Professional Development Act of 2016, recognizes lifelong learning and professional advancement as essential to professional practice [5]. The Department of Education has likewise identified professional development priorities for teachers and school leaders and has provided guidelines for the allocation and utilization of human resource development funds [6,7]. More recently, DepEd Memorandum No. 044, s. 2023 emphasized quality assurance, monitoring, and evaluation in the implementation of professional development programs [8]. While these policies establish formal support structures, empirical assessment remains necessary to determine how teachers perceive the actual implementation of TPD across program direction, resource provision, delivery processes, and professional outcomes.

Despite these policy supports, studies continue to report concerns related to access, resources, continuity, and equity in teacher development. National evidence suggests that professional development in the Philippines is affected by uneven resource allocation, insufficient funding, and disparities in the distribution of TPD programs across regions [9–11]. UNICEF Philippines also reported gaps in teachers' preparation and training in areas such as information and communication technology and student assessment, underscoring the need for sustained and relevant professional learning opportunities [12]. In Davao Region, these concerns become particularly important because the region covers diverse educational contexts, including urban, rural, and geographically challenged areas. Hence, a regional assessment of TPD implementation can provide evidence on whether teachers experience professional development as aligned with their needs, supported by adequate resources, delivered through systematic processes, and capable of producing meaningful professional and instructional outcomes.

Given these global, national, and regional considerations, this study assessed the implementation of Teacher Professional Development in Davao Region, Philippines. Specifically, it examined the level of implementation in terms of objectives, resources, execution, and outcomes, and determined whether significant differences existed across Schools Division Offices. By generating quantitative evidence, the study provides a basis for understanding how TPD programs are experienced by public school teachers across varied educational contexts. More importantly, the findings may guide policymakers, school leaders, and program implementers in strengthening teacher-centered, resource-responsive, and sustainable professional development systems.

1.1. Purpose of the Study

The purpose of this study was to assess the implementation of Teacher Professional Development (TPD) in Davao Region, Philippines, using a quantitative descriptive-comparative evaluative design anchored on the CIPP Evaluation Model. Specifically, it aimed to determine the level of TPD implementation in terms of objectives, resources, execution, and outcomes as perceived by public school teachers across the 11 Schools Division Offices in the region. It also sought to examine whether significant differences existed in teachers' perceptions of overall TPD implementation across divisions, thereby generating evidence to inform the improvement of professional development planning, resource support, and program implementation.

1.2. Research Questions

- What is the level of TPD implementation in Davao Region in terms of:
 - Objectives;
 - Resources;
 - Execution;
 - Outcomes?
- Is there a significant difference in the perceived level of TPD implementation across the Schools Division Offices in Davao Region?

1.3. Theoretical Lens

The study used the Context, Input, Process, and Product (CIPP) Evaluation Model as its theoretical lens in assessing the implementation of Teacher Professional Development (TPD) in Davao Region. The CIPP Model views program evaluation as a systematic process that examines the alignment between program goals, available support, implementation processes, and resulting outcomes [13]. In this study, context was operationalized as TPD objectives, referring to the clarity, relevance, and alignment of professional development goals; input was represented by resources, including facilitators, learning materials, time, financial support, and institutional assistance; process was represented by execution, referring to the organization, delivery, scheduling, supervision, and monitoring of TPD activities; and product was represented by outcomes, referring to the perceived contribution of TPD to teacher competence, instructional practice, professional confidence, and learner development [14]. Through this theoretical lens, the study provided a structured quantitative basis for understanding how TPD programs are planned, supported, implemented, and realized across the 11 Schools Division Offices in Davao Region.

2. Methods

2.1. Research Design

The study employed a quantitative descriptive-comparative evaluative research design to assess the implementation of Teacher Professional Development (TPD) in Davao Region. The descriptive component was used to determine the perceived level of TPD implementation in terms of objectives, resources, execution, and outcomes, while the comparative component examined whether significant differences existed in teachers' perceptions across the 11 Schools Division Offices. This design was appropriate because descriptive research enables the researcher to describe the characteristics, conditions, or status of a phenomenon as it naturally occurs, while comparative research allows the examination of differences among groups based on measured variables [15,16]. Through this design, the study generated empirical evidence on the extent to which TPD programs are implemented effectively and consistently across varied educational contexts in the region.

2.2. Locale and Sampling Procedure

The study was conducted in the Schools Division Offices of DepEd Davao Region, Philippines, specifically covering Davao City, Davao de Oro, Davao del Norte, Davao del Sur, Davao Occidental, Davao Oriental, Digos City, Island Garden City of Samal, Mati City, Panabo City, and Tagum City. These divisions represent varied educational contexts, including urban, rural, and geographically diverse school settings, making the locale appropriate for assessing the regional implementation of Teacher Professional Development (TPD). The respondents were 381 public school teachers drawn from a total teacher population of 44,402 across the 11 divisions. The sample size was determined using a standard sample size computation at a 95% confidence level and $\pm 5\%$ margin of error, which is appropriate for ensuring adequate statistical representation in survey-based research [15,19]. Stratified random sampling was employed to ensure proportional representation of teachers from each Schools Division Office, a procedure suited for studies involving subgroups within a larger population and for improving the representativeness of comparative analysis [15,18]. This sampling procedure enabled the study to generate reliable descriptive and comparative findings on TPD implementation across divisions in Davao Region [20].

2.3. Research Instruments

The study utilized a researcher-made structured survey questionnaire as the primary research instrument to measure the implementation of Teacher Professional Development (TPD) in Davao Region. The questionnaire was anchored on the CIPP-based domains of the study and contained indicators measuring four areas of implementation: objectives, resources, execution, and outcomes. It used a five-point Likert scale to gather standardized numerical responses from public school teachers, making it suitable for determining mean scores, standard deviations, and comparative results across Schools Division Offices [21,22]. To establish content validity, the instrument underwent expert validation to ensure that the items were relevant, clear, and aligned with TPD implementation and DepEd professional development priorities. The instrument was also pilot-tested among teachers who were not part of the actual respondents, and reliability testing yielded a Cronbach's alpha coefficient of 0.98, indicating very high internal consistency and suggesting that the questionnaire reliably measured teachers' perceptions of TPD implementation [23,24]. This supports the manuscript's method section, which identifies the validated survey questionnaire as the main tool for generating quantitative data on TPD implementation.

2.4. Data Analysis Procedure

The data were analyzed using both descriptive and inferential statistical procedures to address the objectives of the study. Mean and standard deviation were used to determine the level of Teacher Professional Development (TPD) implementation in terms of objectives, resources, execution, outcomes, and overall implementation, as these measures are appropriate for summarizing respondents' ratings and describing the general pattern of responses in quantitative research [15]. Before conducting inferential analysis, the distribution of the data was examined to determine the appropriate statistical test. Since the data did not meet the assumption of normality, the Kruskal–Wallis H test was used to determine whether there were significant differences in teachers' perceptions of overall TPD implementation across the 11 Schools Division Offices, as this nonparametric test is suitable for comparing three or more independent groups when normality assumptions are not satisfied [26,24]. The level of significance was set at 0.05, which served as the basis for determining whether the observed differences across divisions were statistically significant.

2.5. Ethical Consideration

The study observed ethical considerations by securing the necessary permissions from concerned offices and authorities before the conduct of data collection. The teacher-respondents were informed about the purpose of the study, the voluntary nature of their participation, and their right to decide whether to participate without any form of coercion, which is consistent with ethical standards in educational research involving human participants [15]. Confidentiality was also maintained by ensuring that the responses were used only for research purposes and that no personally identifiable information was disclosed in the reporting of findings. The accomplished questionnaires were checked, encoded, and treated with care to preserve the accuracy, privacy, and integrity of the data. These procedures supported the ethical conduct of the study by protecting the rights, dignity, and welfare of the respondents throughout the research process [16].

3. Results

The overall implementation of Teacher Professional Development (TPD) in Davao Region was rated high ($M = 4.19$, $SD = 0.681$), indicating that public school teachers generally perceived TPD programs as supportive of their professional needs. Across the four domains, the findings showed consistently high to very high ratings. Outcomes obtained the highest mean score ($M = 4.21$, $SD = 0.705$), interpreted as very high, suggesting strong perceived contributions of TPD to teacher confidence, professional growth, instructional practice, and learner outcomes. Objectives also obtained a high rating ($M = 4.20$, $SD = 0.689$), indicating that TPD goals were perceived as clear, relevant, and aligned with teachers' professional development needs. Execution was rated high ($M = 4.17$, $SD = 0.702$), reflecting generally systematic delivery and implementation of TPD activities, while Resources received the lowest mean among the domains but remained high ($M = 4.14$, $SD = 0.713$), suggesting that support mechanisms were present but comparatively less strongly perceived than the other areas.

Table 1 Level of TPD Implementation in the Region XI

TPD Domains	Mean	SD	Level	Interpretation
Objectives	4.20	0.689	High	The objectives of the TPD are well aligned with the requirements of DepEd teachers and provide sufficient direction for their professional growth
Resources	4.14	0.713	High	The resources of the TPD programs are adequate and relevant to the requirements of DepEd teachers
Executions	4.17	0.702	High	The implementations of the TPD programs are executed and relevant to the requirements of DepEd teachers
Outcomes	4.21	0.705	Very High	The outcomes of the TPD program significantly enhance the teachers' confidence, professional growth, and student learning outcomes.
Average	4.19	0.681	High	This shows that the implementation of TPD programs provides support and meets most of the DepEd Teachers' needs

Further examination of the domain indicators showed specific strengths and areas for improvement. Under Objectives, the highest-rated indicator was the alignment of TPD with DepEd issuances ($M = 4.29$), while the lowest was related to work-life balance ($M = 4.01$). Under Resources, facilitator expertise received the highest rating ($M = 4.21$), whereas time allocation and sufficiency of learning materials both received lower ratings ($M = 4.09$). For Execution, the positive relationship between facilitators and participants obtained the highest rating ($M = 4.21$), while scheduling that does not disrupt instruction received the lowest rating ($M = 4.08$). In the Outcomes domain, the contribution of TPD to teaching practices and educational outcomes obtained the highest rating ($M = 4.24$, $SD = 0.775$), while its contribution to student learning outcomes received the lowest rating within the domain ($M = 4.17$, $SD = 0.776$), although still interpreted as high.

To determine whether teachers' perceptions of overall TPD implementation differed across the 11 Schools Division Offices in Davao Region, the Kruskal-Wallis H test was conducted. Results showed no statistically significant difference across divisions, $\chi^2(10) = 17.80$, $p = .058$. Since the p-value was greater than the 0.05 level of significance, the null hypothesis was retained. This result indicates that teachers across the 11 divisions had relatively comparable perceptions of the overall implementation of TPD. Therefore, the favorable perception of TPD implementation was not limited to a specific division but was generally shared across the region.

Table 2 Kruskal-Wallis Test of Difference in Overall Implementation of Teacher Professional Development (TPD) Across Divisions

Variable	χ^2	df	p-value	Decision
Overall Implementation of Teacher Professional Development (TPD)	17.80	10	0.058	Not significant

4. Discussion

The high overall rating of TPD implementation suggests that professional development programs in Davao Region are generally perceived as relevant, supportive, and responsive to the needs of public-school teachers. This finding indicates that TPD has established a favorable level of program direction, resource provision, delivery, and perceived professional outcomes. From an evaluative standpoint, the result affirms the need to assess professional development as a complete program system rather than as isolated training events. This is consistent with the view that educational programs should be examined through their context, input, process, and product dimensions to determine their quality, relevance, and usefulness for improvement [13,31]. Thus, while the overall result reflects a strong implementation profile, it also points to the need for continuous monitoring to sustain responsiveness to teachers' actual working conditions.

The very high rating for outcomes suggests that teachers strongly recognize the contribution of TPD to their professional confidence, instructional practice, and growth. This indicates that TPD is not merely experienced as a compliance requirement but as a meaningful opportunity for professional learning. The finding supports existing literature showing that effective professional learning can improve teachers' instructional practices and may contribute to learner outcomes when training is relevant, sustained, and connected to classroom application [32,33]. However, the comparatively lower rating for the contribution of TPD to student learning outcomes suggests that improving teacher competence does not automatically translate into immediate or measurable learner gains. This highlights the need for follow-through mechanisms, classroom-based application, coaching, and monitoring to strengthen the link between teacher learning and student performance.

The high rating for objectives implies that teachers perceive TPD programs as purposeful, relevant, and aligned with institutional directions. The strong rating for alignment with DepEd issuances suggests policy coherence in the planning and design of professional development programs. However, the lower rating related to work-life balance indicates that even well-aligned objectives may become less effective when they do not fully consider teachers' workload and personal-professional demands. This means that program goals should not only respond to institutional priorities but also reflect the actual conditions under which teachers participate in professional development. Therefore, future TPD planning should strengthen the alignment between policy expectations and teacher-sensitive implementation.

The high rating for execution shows that teachers generally view the delivery and implementation of TPD activities as systematic and supportive. The positive relationship between facilitators and participants as the highest-rated indicator underscores the importance of professional interaction, collaboration, and supportive learning environments. This aligns with the view that learning is shaped by social interaction, modeling, and guided participation, particularly when

teachers engage with competent facilitators and peers [34]. Nevertheless, the lower rating for scheduling that does not disrupt instruction suggests that implementation processes still need to be more responsive to teachers' classroom responsibilities. Hence, TPD execution may be strengthened by improving scheduling systems, reducing instructional disruption, and ensuring that professional learning is integrated more smoothly into teachers' work routines.

The resources domain, although still rated high, emerged as the lowest among the four domains, indicating that resource-related concerns remain an area for improvement. Teachers recognized facilitator expertise as a strength, suggesting confidence in the competence of trainers and resource persons. However, the lower ratings for time allocation and sufficiency of learning materials indicate that the enabling conditions for effective participation and application may not always be adequate. Literature emphasizes that teacher professional development requires sufficient time, instructional materials, institutional support, and manageable working conditions to become meaningful and sustainable [35,36]. Thus, strengthening TPD resources should be prioritized, particularly in relation to time, materials, financial support, technological access, and school-level assistance.

The absence of significant difference across divisions indicates that teachers' perceptions of TPD implementation were relatively consistent throughout Davao Region. This may suggest that regional policies, program structures, and implementation practices have created a generally comparable TPD experience among teachers across the 11 Schools Division Offices. The use of the Kruskal–Wallis H test was appropriate because the comparison involved more than two independent groups and was conducted under conditions where parametric assumptions were not met [23,24]. However, the non-significant result should not be interpreted to mean that all implementation conditions are equally strong. Instead, it may indicate that concerns related to resources, scheduling, learning materials, and work-life balance are shared across divisions and may require region-wide improvement strategies rather than isolated division-level interventions.

5. Conclusions

This study concludes that Teacher Professional Development (TPD) in Davao Region is implemented at a high level, indicating that public school teachers generally perceive TPD programs as relevant, supportive, and responsive to their professional needs. Using the CIPP Evaluation Model, the findings show that the four domains of implementation—objectives, resources, execution, and outcomes—were all rated favorably. Outcomes emerged as the strongest domain, suggesting that teachers recognize the contribution of TPD to their confidence, instructional practice, professional growth, and learner outcomes. Meanwhile, resources obtained the lowest rating, although still interpreted as high, indicating that support mechanisms are present but may still be strengthened in terms of time allocation, learning materials, technological support, financial assistance, and other enabling conditions.

The study further concludes that there is no significant difference in teachers' perceptions of overall TPD implementation across the 11 Schools Division Offices in Davao Region. This suggests that TPD implementation is perceived with relative consistency across divisions, reflecting a generally coherent regional implementation pattern. However, the absence of significant difference does not imply the absence of implementation concerns; rather, it suggests that resource-related and scheduling-related challenges may be shared across divisions. Thus, sustaining the high level of TPD implementation requires a more resource-responsive and teacher-sensitive professional development system that supports meaningful participation, protects teachers' working conditions, and strengthens the application of professional learning in classroom practice.

5.1. Implications

5.1.1. Implications to Theory

The findings strengthen the usefulness of the Context, Input, Process, and Product (CIPP) Evaluation Model as a theoretical lens for assessing Teacher Professional Development (TPD) implementation in a regional basic education context. The high ratings across objectives, resources, execution, and outcomes indicate that TPD may be better understood as a complete program system rather than as a set of isolated training activities. The study shows that when program objectives are clear, resources are reasonably available, implementation processes are systematic, and outcomes are evident, teachers are more likely to perceive professional development as relevant and supportive. However, the comparatively lower rating for resources also suggests that the CIPP lens should not only identify program strengths but also reveal implementation gaps that may affect program sustainability. Thus, the study contributes to theory by demonstrating that CIPP can be applied as a practical evaluative framework for examining both the coherence and limitations of TPD implementation in varied school division contexts.

5.1.2. Implications to Practice

The findings imply that TPD implementation in Davao Region is generally effective, but its continued success depends on how well professional development activities are made more teacher-sensitive, resource-responsive, and application-oriented. Since outcomes obtained the highest rating, teachers appear to recognize the value of TPD in improving confidence, professional growth, instructional practice, and learner outcomes; however, the relatively lower rating for the direct contribution of TPD to student learning suggests the need for stronger classroom follow-through, coaching, mentoring, and monitoring after training. The lower ratings for time allocation, sufficiency of learning materials, scheduling, and work-life balance further indicate that schools and program implementers should design TPD activities that minimize disruption to instruction and reduce additional burden on teachers. This supports the view that professional development becomes more meaningful when teachers are given adequate time, materials, support systems, and manageable working conditions for applying new learning. Therefore, TPD practice should move beyond attendance-based participation toward sustained professional learning that is supported before, during, and after implementation.

5.1.3. Implications for Policy

The absence of significant difference in overall TPD implementation across the 11 Schools Division Offices implies that teachers' perceptions are relatively consistent across Davao Region, suggesting that TPD improvement may require region-wide policy and implementation strategies rather than purely division-specific interventions. Since resources received the lowest mean among the domains, policy action should prioritize equitable resource provision, adequate funding support, technological access, learning materials, and protected time for professional development. This aligns with DepEd policy directions on professional development priorities, human resource development fund utilization, and quality assurance of professional development programs. At the same time, national and regional evidence on uneven resource allocation, access gaps, and continuing teacher development needs supports the need for policies that make TPD more inclusive, sustained, and responsive to teachers' contextual realities. Hence, policymakers may use the findings as evidence for strengthening a regional TPD system that balances policy compliance with teacher welfare, instructional continuity, and meaningful application of professional learning.

5.2. Recommendations

Based on the findings, it is recommended that DepEd regional and division offices strengthen the resource component of Teacher Professional Development (TPD), particularly in terms of time allocation, learning materials, technological support, financial assistance, and school-level implementation support. Although resources were rated high, they obtained the lowest mean among the four domains, indicating that teachers still experience limitations in the enabling conditions needed for meaningful participation and classroom application. Program implementers may provide more accessible learning materials, improve technology-assisted delivery, allocate protected time for professional development, and ensure that TPD participation does not add unnecessary workload to teachers. These support mechanisms may help sustain the favorable implementation of TPD while making professional learning more responsive to teachers' actual working conditions.

It is also recommended that TPD programs include stronger follow-through mechanisms to ensure that professional learning is translated into classroom practice and learner improvement. Since outcomes obtained the highest rating, teachers recognize the contribution of TPD to their professional confidence, growth, and instructional practice; however, the comparatively lower rating on its contribution to student learning outcomes suggests the need for closer monitoring of classroom application. Schools and divisions may institutionalize post-training coaching, mentoring, Learning Action Cell sessions, peer observation, reflective practice, and technical assistance to bridge the gap between training participation and instructional improvement. Since no significant difference was found across divisions, improvement efforts may be pursued through region-wide strategies while allowing flexibility for local contextual needs; future researchers may also conduct qualitative or mixed-methods studies to explore how workload, resource availability, and school support affect teachers' participation, application of learning, and perceived impact on learner outcomes.

Compliance with ethical standards

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Disclosure of Conflict of interest

We, Marjun B. Rebosquillo and Nestle Joy R. Arguilla, declare that we have no conflicts of interest or competing interests to disclose regarding the publication of this manuscript or any institution, product, or entity mentioned herein. Furthermore, we have no affiliations with, or financial interests in, any products or organizations that could influence the study outcomes presented or compete with those discussed in the manuscript.

Statement of Ethical Approval

Ethical approval adhered to Belmont Report principles, ensuring informed consent, confidentiality, voluntary participation, minimized risks, participant protection, and trustworthy procedures throughout the study for all respondents.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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