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THE INFLUENCE OF PROFESSIONAL DEVELOPMENT AND SELF-EFFICACY OF TEACHERS ON UNIVERSAL DESIGN FOR LEARNING PRACTICES IN THE ENHANCED K TO 12 CURRICULUM

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ABSTRACT

This study examined the influence of teachers' professional development and self-efficacy on the implementation of Universal Design for Learning (UDL) practices under the Enhanced K to 12 Curriculum. Using a quantitative descriptive-correlational design, data were gathered from 112 public school teachers in the Division of Panabo City, Davao del Norte, who had participated in the Revised K to 12 Curriculum seminar. Adapted survey instruments measured professional development, teacher self-efficacy, and UDL practices. Data were analyzed using weighted means, Pearson product-moment correlation, and multiple regression. Teachers rated professional development as high across student variability (M = 3.80), peer support (M = 4.25), administrative support (M = 3.75), collaboration (M = 3.67), and training (M = 3.81). Self-efficacy was very high in student engagement (M = 4.33), instructional strategies (M = 4.38), and classroom management (M = 4.36). UDL practices were also very high in engagement (M = 4.23), representation (M = 4.25), and action and expression (M = 4.25). Professional development was significantly related to UDL practices ($r = .643$, $p < .001$), as was self-efficacy ($r = .706$, $p < .001$). Regression results showed that collaboration and peer support were significant predictors among professional development domains, while classroom-management efficacy was the significant self-efficacy predictor. The findings highlight the importance of sustained collaborative professional learning and support for teachers' classroom-management capacity in strengthening inclusive instruction.

KEYWORDS: *Teacher Professional Development, Teacher Self-Efficacy, Universal Design for Learning, Inclusive Education, Enhanced K to 12 Curriculum*

INTRODUCTION

Education systems are expected to provide equitable and meaningful learning opportunities for all students, including learners with disabilities and those who differ in language, culture, ability, achievement, and learning needs. Sustainable Development Goal 4 calls for inclusive and equitable quality education and lifelong learning opportunities for all (United Nations, 2015). In the Philippines, this commitment is reflected in the Enhanced Basic Education Act of 2013 (Republic Act No. 10533) and the Inclusive Education Act (Republic Act No. 11650). However, the presence of policies does not automatically ensure that inclusive principles are consistently practiced in classrooms.

Teachers work with learners who have varied strengths, needs, interests, and levels of readiness. A single way of presenting information, engaging students, or assessing learning may create barriers for some learners. Universal Design for Learning (UDL) offers a framework for anticipating learner variability and designing flexible learning experiences. Its three principles provide multiple means of engagement, representation, and action and expression (CAST, 2024). These principles encourage teachers to offer different ways for students to become interested in learning, access information, and demonstrate what they know.

Despite the value of UDL, implementation depends on teachers' knowledge, confidence, and the support available in their schools. Professional development can strengthen teachers' understanding of inclusive approaches and provide opportunities to practice, reflect, and improve instruction. UDL-focused professional learning is more useful when it is sustained, connected to classroom needs, and supported by collaboration and coaching rather than limited to one-time seminars (Novak & Rodriguez, 2022; Rusconi & Squillaci, 2023). Peer support and collaboration also allow teachers to share strategies, discuss classroom concerns, and develop common responses to learner needs.

Teacher self-efficacy is another factor that may shape UDL implementation. It refers to teachers' beliefs about their capability to organize and carry out the actions needed for effective teaching. Teachers with stronger efficacy beliefs may be more willing to persist when instruction is challenging, adapt teaching strategies, engage learners, and manage classroom behavior. Research has associated teacher self-efficacy with inclusive teaching practices and the adoption of UDL (Woodcock et al., 2022; Sala-Bars et al., 2024).

In the Division of Panabo City, teachers implement the Enhanced K to 12 Curriculum in classrooms where learners have different academic, behavioral, and support needs. The local

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study identified professional development and self-efficacy as important factors to examine alongside teachers' use of UDL practices. Although earlier research has discussed professional development, self-efficacy, and inclusive education, local empirical evidence examining their relationships with UDL implementation remains limited. This study therefore investigated the levels of teachers' professional development, self-efficacy, and UDL practices, and tested the relationships and predictive contributions of their respective domains.

The study addressed six questions: (1) What is the level of professional development in terms of student variability, peer support, administrative support, collaboration, and training? (2) What is the level of self-efficacy in student engagement, instructional strategies, and classroom management? (3) What is the level of UDL practices in engagement, representation, and action and expression? (4) Is professional development significantly related to UDL practices? (5) Is self-efficacy significantly related to UDL practices? and (6) Which domains of professional development and self-efficacy significantly influence UDL practices?

THEORETICAL AND CONCEPTUAL FRAMEWORK

The study draws on Bandura's Social Cognitive Theory, which explains that beliefs about personal capability influence actions, effort, persistence, and responses to challenges (Bandura, 1997). Applied to teaching, self-efficacy may influence whether teachers attempt flexible instructional approaches, sustain student engagement, and manage diverse classrooms. The study also draws on Vygotsky's Sociocultural Theory, which emphasizes the role of social interaction in learning and development. In professional settings, collaboration and peer support provide opportunities for teachers to exchange knowledge, solve problems, and refine practice.

The conceptual framework treats professional development and teacher self-efficacy as independent variables and UDL practices as the dependent variable. Professional development is examined through student variability, peer support, administrative support, collaboration, and training. Self-efficacy is examined through student engagement, instructional strategies, and classroom management. UDL practices are examined through multiple means of engagement, representation, and action and expression. The study tests both the relationships between the overall variables and the predictive contribution of their domains.

METHODOLOGY

Research Design

The study used a quantitative descriptive-correlational research design. The descriptive component determined teachers' reported levels of professional development, self-efficacy, and UDL practices. The correlational component examined the strength and direction of the relationships between professional development and UDL practices, and between self-efficacy and UDL practices. The design did not manipulate the variables; therefore, the results identify associations and statistical prediction rather than establish cause and effect.

Respondents and Sampling

The respondents were 112 public school teachers from selected schools in the Division of Panabo City, Davao del Norte. Proportionate Stratified Random Sampling was used. Participants were licensed teachers currently teaching under the Enhanced K to 12 Curriculum, had attended the seminar on the Revised K to 12 Curriculum, had at least three years of teaching experience, and voluntarily agreed to participate. Teachers not actively engaged in classroom teaching, those with fewer than three years of experience, those unavailable during data collection, and those who had not attended the seminar were excluded.

Research Instrument

Data were collected using an adapted structured questionnaire with three parts: teacher self-efficacy, professional development, and UDL practices. The self-efficacy items were based on the short form of the Teachers' Sense of Efficacy Scale developed by Tschannen-Moran and Woolfolk Hoy (2001), covering student engagement, instructional strategies, and classroom management. Professional development items were adapted from Kern (2006) and addressed student variability, peer support, administrative support, collaboration, and training. UDL practice items were based on the UDL Framework Scale identified in the thesis as Hongyu et al. (2023), covering engagement, representation, and action and expression.

The instrument underwent expert validation and pilot testing with 40 teachers who were not included in the main sample. Cronbach's alpha coefficients were .94 for teacher self-efficacy, .97 for the professional development scale, and .96 for the UDL scale. These coefficients indicated high internal consistency for the instruments.

Data Gathering and Analysis

Permission was secured from the relevant authorities and school administrators before data collection. Respondents were informed about the purpose of the study, the voluntary nature of participation, their right to withdraw, and the confidentiality of their responses. Completed questionnaires were checked, coded, and prepared for analysis. Statistical analyses were conducted using SPSS version 26. Weighted means and standard deviations described the levels of the study variables. Pearson product-moment correlation tested the relationships between the variables, while multiple regression examined the predictive contribution of the domains. Statistical significance was evaluated at the .05 level.

Ethical Considerations

Participation was voluntary and based on informed consent. Respondents' identities were protected through coded responses, and findings were reported in aggregate form. Data were used for academic purposes and stored securely. The researcher sought the necessary institutional and school permissions and took steps to avoid disrupting teachers' regular responsibilities.

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RESULTS AND DISCUSSION

Levels of Professional Development

Teachers generally reported a high level of professional development. Peer support received the highest mean (M = 4.25), described as very high. This suggests that teachers commonly receive help, advice, and encouragement from colleagues when addressing the needs of learners with diverse abilities. Collaboration (M = 3.67), administrative support (M = 3.75), training (M = 3.81), and attention to student variability (M = 3.80) were rated high.

Professional Development Domain	Mean	Descriptive level
Student variability	3.80	High
Peer support	4.25	Very High
Administrative support	3.75	High
Collaboration	3.67	High
Training	3.81	High

The strong rating for peer support indicates that collegial assistance is a meaningful part of teachers' professional experience. Teachers may benefit from sharing instructional materials, asking colleagues for advice, and discussing strategies for learners who need additional support. This is consistent with the view that professional learning communities and collaborative structures can strengthen instructional competence and inclusive practice (Novak & Rodriguez, 2022; Rusconi & Squillaci, 2023).

Administrative support was high but lower than peer support. The thesis results identify monetary support (M = 3.45), time for professional learning (M = 3.71), and instructional materials (M = 3.70) as comparatively weaker areas. This suggests that encouragement from school leaders may not always be matched by sufficient time, funding, or resources. Professional development requires not only teacher commitment but also organizational conditions that allow teachers to apply what they learn.

Collaboration had a mean of 3.67, indicating that teachers generally experienced opportunities to work with colleagues, although this domain had the lowest mean among the five. Collaborative lesson planning, co-teaching, peer observation, and shared reflection may help translate UDL principles into classroom practice. Training (M = 3.81) was also high, but the findings support the need for continuing and targeted learning rather than relying only on isolated seminars. In particular, training should address the practical demands of responding to student variability.

Levels of Teacher Self-Efficacy

Teachers reported very high self-efficacy across the three domains. Instructional strategies obtained the highest mean (M = 4.38), followed by classroom management (M = 4.36) and student engagement (M = 4.33). These results indicate that respondents generally felt confident in selecting teaching approaches, maintaining classroom order, and encouraging students to participate.

Self-Efficacy Domain	Mean	Descriptive level
Student engagement	4.33	Very High
Instructional strategies	4.38	Very High
Classroom management	4.36	Very High

The high rating for instructional strategies suggests that teachers believe they can provide explanations, use alternative examples, and adjust instruction when learners have trouble. Strong classroom-management efficacy indicates confidence in establishing routines, responding to disruptive behavior, and maintaining a productive learning environment. Such confidence is relevant to UDL because flexible instruction requires teachers to manage different forms of participation and provide appropriate support without excluding learners. The results are consistent with research linking teacher self-efficacy with inclusive practices and UDL implementation (Woodcock et al., 2022; Sala-Bars et al., 2024).

Levels of Universal Design for Learning Practices

Teachers reported very high implementation of all three UDL principles. Multiple means of engagement obtained a mean of 4.23, while multiple means of representation and multiple means of action and expression each obtained a mean of 4.25.

UDL practice domain	Mean	Descriptive level
Multiple means of engagement	4.23	Very High
Multiple means of representation	4.25	Very High
Multiple means of action and expression	4.25	Very High

The results suggest that teachers commonly use strategies intended to sustain learner interest and participation, present information in different ways, and provide varied opportunities for students to demonstrate learning. The engagement results reflect attention to motivation, supportive classroom environments, and learner participation. The representation results indicate the use of varied instructional formats to help students access and understand content. The action-and-expression results suggest that teachers provide choices and supportive tools that allow learners to show what they know in different ways.

Although all three areas were rated very high, the findings should be interpreted as teachers' self-reported practices. They do not independently verify classroom implementation through observation or student outcomes. Continued monitoring, classroom-based coaching, and access to appropriate learning materials may help sustain the reported practices.

Relationship Between Professional Development and UDL Practices

Pearson correlation showed a significant positive relationship between teachers' professional development and UDL practices ($r = .643$, $p < .001$). The null hypothesis of no significant relationship was rejected. Each professional development domain was positively related to UDL practices:

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student variability (r = .306), peer support (r = .561), administrative support (r = .531), collaboration (r = .417), and training (r = .653), with reported p-values below .05.

Professional Development Domain	r with UDL	p-value
Student variability	.306	.001
Peer support	.561	< .001
Administrative support	.531	< .001
Collaboration	.417	< .001
Training	.653	< .001
Overall professional development	.643	< .001

The findings indicate that teachers who report stronger professional development also tend to report greater use of UDL practices. Training and peer support showed relatively strong pairwise associations with UDL. The relationship may reflect the value of opportunities to develop knowledge, exchange strategies, and receive guidance when adapting instruction. However, correlation does not demonstrate that professional development alone causes stronger UDL implementation.

Relationship Between Self-Efficacy and UDL Practices

Teacher self-efficacy was also significantly and positively related to UDL practices ($r = .706$, $p < .001$). The null hypothesis was rejected. The three self-efficacy domains were positively correlated with UDL practices: student engagement efficacy (r = .634), instructional-strategy efficacy (r = .646), and classroom-management efficacy (r = .604), all with p-values below .001.

Self-Efficacy Domain	r with UDL	p-value
Student Engagement	.634	< .001
Instructional Strategies	.646	< .001
Classroom Management	.604	< .001
Overall Self-Efficacy	.706	< .001

This result suggests that teachers who feel more capable of engaging learners, selecting instructional strategies, and managing classrooms also tend to report greater implementation of UDL. The overall relationship for self-efficacy was stronger than the relationship for professional development in this sample. This is consistent with Social Cognitive Theory, which proposes that efficacy beliefs influence effort, persistence, and action (Bandura, 1997), and with studies connecting self-efficacy with inclusive teaching (Woodcock et al., 2022; Sala-Bars et al., 2024).

Predictors of UDL Practices

The multiple regression model for professional development was statistically significant ($R = .721$, $R^2 = .520$, $F = 21.710$, $p < .001$). The five domains explained 52.0% of the variance in reported UDL practices. In the model, peer support (standardized $\beta = .464$, $p = .004$) and collaboration (standardized $\beta = .666$, $p < .001$) were significant predictors. Student variability ($\beta = .122$, $p = .241$), administrative support ($\beta = .039$, $p = .786$), and training ($\beta = .360$, $p = .319$) were not statistically significant when the other domains were considered simultaneously.

Professional Development Predictor	Standardized β	p-value
Student Variability	.122	.241
Peer Support	.464	.004
Administrative Support	.039	.786
Collaboration	.666	< .001
Training	.360	.319

The regression results identify collaboration and peer support as the professional development domains that made statistically significant unique contributions in the model. Collaboration had the largest standardized coefficient. This emphasizes the potential value of shared planning, joint problem-solving, peer mentoring, and reflective discussion in supporting UDL practices. Although training was positively correlated with UDL, it was not a significant unique predictor after accounting for the other professional development domains. This difference illustrates why correlation and regression answer different questions.

The self-efficacy regression model was also statistically significant ($R = .707$, $R^2 = .500$, $F = 33.991$, $p < .001$), explaining 50.0% of the variance in UDL practices. Classroom-management efficacy was a significant predictor (standardized $\beta = .762$, $p = .025$), while student-engagement efficacy ($\beta = .045$, $p = .804$) and instructional-strategy efficacy ($\beta = .032$, $p = .867$) were not significant unique predictors in the model.

Self-Efficacy Predictor	Standardized β	p-value
Student Engagement	.045	.804
Instructional Strategies	.032	.867
Classroom Management	.762	.025

The results suggest that confidence in managing classroom behavior and maintaining an orderly learning environment may be especially important when teachers apply flexible and inclusive practices. UDL requires teachers to respond to different learner needs while sustaining meaningful participation. Classroom-management efficacy may therefore support teachers' confidence in organizing a learning environment where varied activities, resources, and modes of expression can take place. The result does not mean that engagement and instructional-strategy efficacy are unimportant; rather, they did not make statistically significant unique contributions in this regression model.

CONCLUSION

The study found that teachers in the Division of Panabo City reported high professional development, very high self-efficacy, and very high implementation of UDL practices. Professional development and self-efficacy were both significantly and positively related to UDL practices. The professional development regression model identified peer support and collaboration as significant predictors, while the self-efficacy model identified classroom-management efficacy as a significant predictor. These findings suggest that inclusive instructional practice is supported not only by teachers' individual confidence but also by professional relationships and collaborative school-based learning.

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The findings should be interpreted within the limits of the study. The respondents were purposively selected teachers from one division who had attended a curriculum seminar. The measures were self-reported, and the cross-sectional correlational design cannot establish causation. The results may not be generalized to all teachers or other divisions without further study.

RECOMMENDATIONS

Schools may strengthen structured peer-support systems through mentoring, peer observation, coaching, and opportunities to share inclusive teaching resources. School leaders may provide regular time for professional collaboration, including professional learning communities, lesson study, co-planning, and reflective discussions focused on UDL. Training should be needs-based and connected to classroom application, with follow-up demonstrations or coaching that help teachers address student variability.

School administrators may also support teachers' classroom-management efficacy through practical workshops, mentoring, model classroom demonstrations, and access to resources for positive and inclusive behavior support. Future researchers may use larger and more diverse samples, include classroom observations or learner outcomes, and examine additional school-level factors. Longitudinal or mixed-methods studies may provide further evidence about how professional development and self-efficacy relate to sustained UDL implementation.

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