**Library Progress International** *Print version ISSN 0970 1052*
*Vol.44 No. 3, Jul-Dec 2024: P. 19364-19373.* *Online version ISSN 2320 317X*

*Original Article* *Available online at www.bpasjournals.com*

# The Moderation Effect Of Teachers' Work Experience In Implementing Professional Learning Community (Plc)

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**How to cite this article:** Thiru Kali Thevi Jayaraman,Premalatha Sathianarayanan, Nor Hasnida Bt Che Md Ghazali,Hj Hishamuddin B Ahmad,Jaya Kumar Supramaniam (2024) The Moderation Effect Of Teachers' Work Experience In Implementing Professional Learning Community (Plc). *Library Progress International,* 44(3), 19352-19363..

**ABSTRACT**

*The educational platform is rapidly moving towards implementing a Professional Learning Community (PLC) to add value and foster collaboration among teachers, aiming to enhance student achievement in an academic and positive manner. This study delves into the examination and evaluation of potential influences, specifically exploring whether demographic characteristics such as work experience act as moderators in the relationship between Context, and Process evaluation toward Product evaluation in implementing PLC among teachers. The study employs a quantitative method, and as groundwork for the analytical framework, Structural Equation Modeling (SEM) with AMOS 24.0 was adopted to test the significance of the concerned variables. The research involved 480 teachers from secondary schools in the state of Selangor, selected through a stratified random sampling technique. Participants actively completed a comprehensive questionnaire assessing their perspectives on work experience toward implementing PLC. The findings reveals that significant interaction effect of work experience serves as a moderator in the relationship between Context and Process evaluation concerning Product evaluation. Moreover, the study highlights the pivotal role of teachers' work experience in moderating effects within the product evaluation aspect of PLC implementation.*

**Keywords**: *Context Evaluation, Moderator, Process Evaluation, Product Evaluation and Professional Learning Community.*

## INTRODUCTION

umerous educational policies and reforms worldwide are being implemented to equip students for the challenges of the 21st century, specifically addressing the evolving requirements of Education 4.0 [19],[15],[34]. Therefore, the current paradigm shift towards Professional Learning Communities (PLC) in teacher professional growth is perceived as a potential catalyst to enhance teacher quality, whereby it is an important determinant of student outcomes[35],[34],[18]. One of the approaches to achieve the objectives of the 4th shift of the Blueprint, which is to 'Transform Teaching into the

Profession of Choice,' is through Professional Learning Communities (PLC). It serves as one of the pathways to enhance overall teacher professionalism and effectively transform the school system [24]. Essentially, the adoption of PLC is seen as a significant and powerful staff development approach. It holds the potential to reshape teaching and learning practices, offering diverse learning experiences tailored to the needs of students for their future [36]. Recent studies have demonstrated that PLC serve as powerful tools for supporting teacher growth and teaching practice [2]. The concept of PLC seeks to tackle the challenge of improving students' academic performance gap by promoting constructive teacher professional development to inspire transformative shifts in teaching methodologies [5],[6].

Besides that, the role of teachers' experience greatly affects teachers' professional development[20]. Their experience will empower them to instinctively utilize various scenarios to enhance interpersonal skills and relationships. Meanwhile, another study [21] found that new teachers with limited experience tend to be more concerned about their abilities and lack confidence in improving their professional development. Furthermore, proficient educators not only influence the achievement of academic success in students but also teaching experience, which plays a crucial role in shaping the set educational goals [7].

The extended years of teaching seems to have positive effects on certain aspects of well-being, while simultaneously having negative consequences for others. As an example, [3] identified positive outcomes linked to increased experience by associating it with teacher effectiveness. However, previous inquiries have uncovered variations in the impacts of teaching years on overall well-being. Some studies report positive correlations, while others show negative correlations or even no correlations [9],[21],[16]. Hence, it is essential to elucidate the impacts of the variable of teachers' work experience when implementing PLC. Given that fact, the efficacy of outcomes in educator professional development may fluctuate depending on individual work experience. Consequently, despite their significant experience, they encounter challenges in seamlessly integrating the PLC into their teaching and learning approaches. In light of the mentioned challenges, it is imperative to undertake an additional investigation specifically aimed at exploring the factors that influence the acceptance of PLC. This inquiry should encompass an analysis of how work experience influences the successful implementation of PLC. Certainly, investigating the moderating effect of teachers' work experience, which influences the execution of PLC, is essential. Therefore, the aim of present study is to view the moderating effect of teaching experience in implementing PLC among teachers.

## RESEARCH METHOD

### Participants

A cross-sectional survey utilizing a quantitative methodology was conducted for this research. The study focused on 480 teachers from nine regions within Selangor, Malaysia. Participants were selected through stratified random sampling. Notably, half of the teachers (240) had less than eight years of teaching experience, while the remaining half (240) had eight years and above of experience.

### Instrument

The instrument's development unfolded through various phases. Firstly, the scholars conducted an extensive review of literature encompassing diverse theoretical frameworks. Simultaneously, they consulted previous resources and models documented within the ministry's records to aid in the design process. To ensure the validity of the content, eight experts with proficiency in assessment, content knowledge, language, institutional understanding, and departmental expertise were engaged. The input from these specialists, including feedback and recommendations, informed necessary corrections and enhancements. After finalizing the draft, it underwent a refinement process supervised by the academic advisor. A study based on empirical evidence was carried out to evaluate the instrument's validity and reliability.

### Data Collection

Due to the global COVID-19 pandemic, data collection was limited to online methods. The researcher utilized a google form housing the questionnaire, accompanied by an official authorization letter issued by the Ministry of Education and an individual consent letter provided to each chosen schools' principal. These materials were then sent for further analysis.

## Results and Discussion

A total of 480 valid google forms were collected from respondents. The profile of the respondents indicated that 50% (240) had teaching experience for less then eight years, while the remaining 50% (240) were experienced teachers with eight years or above of teaching experience. Evaluating the goodness-of-fit indices of the structural model is crucial to verify its congruence with provided data [22]. Data in the Table 1 confirms the strong alignment between the model and the fitness indexes. The model demonstrates a satisfactory fit, indicating its suitability for additional analysis. This is supported by the $\chi^2$/df index of 2.195, which is comfortably below the recommended threshold of 0.5 by [22],[37],[13] for a parsimonious fit. The Root Mean Square Error of Approximation (RMSEA) of 0.050 falls within the acceptable range, typically defined as between 0.030 and 0.080. Moreover, both the Comparative Fit Index (CFI) at 0.980 and the Tucker-Lewis Index (TLI) at 0.973 surpass the recommended threshold of 0.9, indicating a robust fit of the model. These indices, as presented in the Table 1, indicate a strong alignment between the data and the model. A structural model that meets all prerequisites was formulated to estimate the interconnections among the constructs through the application Structural Equation Modeling (SEM). This approach allowed for the assessment of the hypothesis specified in the study.

Table 1
The Structural Model's Fitness Index.

| Name of Category | Name of Index | Index Value | Comments |
|---|---|---|---|
| Absolute fit | RMSEA | 2.195 | The required level is achieved |
| Incremental fit | CFI | 0.980 | The required level is achieved |
| | TLI | 0.973 | The required level is achieved |
| Parsimonious fit | Chi-square/df | 0.050 | The required level is achieved |

The aim of this study is to assess how the moderating factor 'teaching experience' influences the relationship between the independent and dependent variables within the model. The influence test reveals that only two paths exhibit a significant direct influence, as indicated in the Table 2. Consequently, this study specifically investigates the moderating effect of the 'teaching experience' construct in two paths: (i) between context evaluation and product evaluation, and (ii) between process evaluation and product evaluation, as illustrated in the Table 2. It is worth noting, in accordance with [29],[23],[30] that the examination of the moderating effect hypothesis for a construct is only carried out if the pathway indicates a substantial direct impact

Table 2
The significance and coefficient of the regression path

| | Estimate (Beta, ($\beta$)) | S.E. | C.R. | P-value | Result |
|---|---|---|---|---|---|
| Product <-- Context | 0.165 | 0.057 | 2.877 | 0.004 | Significant at 0.01 |
| Product <-- Process | 0.491 | 0.050 | 9.766 | *** | Significant at 0.01 |

P value < 0.05; PR = Product; K= Context; P = Process

Furthermore, this study employs the Multigroup Confirmatory Factor Analysis (CFA) procedure to assess the hypothesis of a moderator effect, as depicted in the model in the Figure 1.

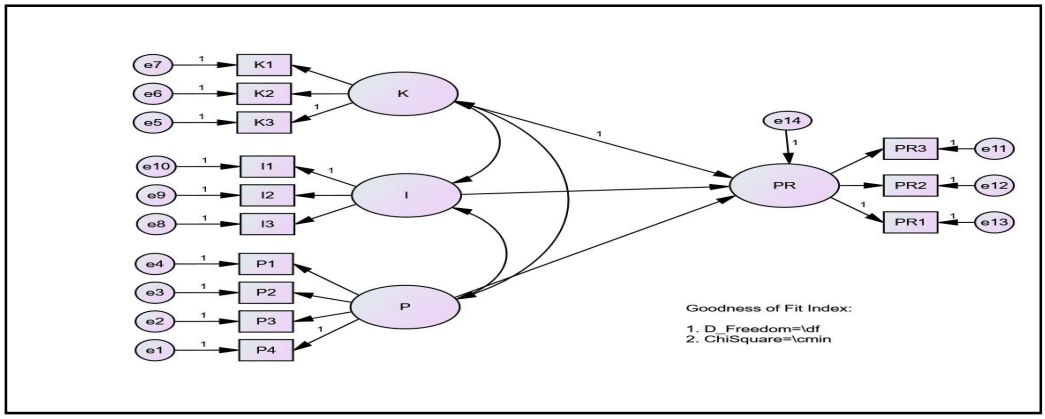
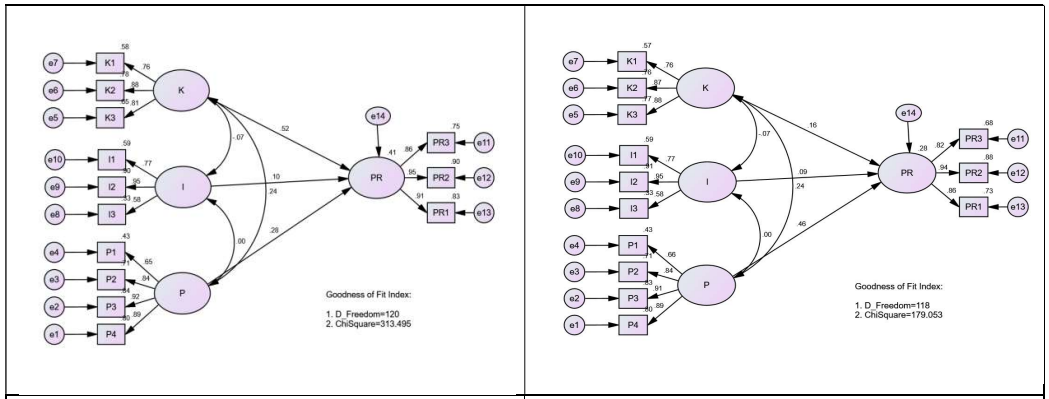



Figure 1 : Examining the Teaching Experience Construct as a Moderator

This study aims to apply the suggested methodology to investigate the moderating effect within the model, as outlined in [33],[4]. The moderator variable under consideration is teachers' work experience. The model indicates that work experience functions as a moderating factor influencing product evaluation from contexts and process evaluations. To validate these effects, a testing process is essential. The ensuing results are detailed in the Figures 2, 3, 4 and 5 and in the Tables 3, 4, 5, 6, 7, 8, 9 and 10 as shown below.

a) The moderator effect between Context Evaluation to Product Evaluation (Ha1)

Hypothesis Statement (Ha1a):
Ha1a: Teaching experience of less than eight years significantly moderates the relationship between Context Evaluation (K) and Product Evaluation (PR)




Constrained Model | Unconstrained Model

Figure 2: Examining constrained and unconstrained model to test hypothesis Ha1a

Table 3
Ha1a: Hypothesis testing of teaching experience data for less than eight years in the relationship between Context Evaluation (K) and Product Evaluation (PR).

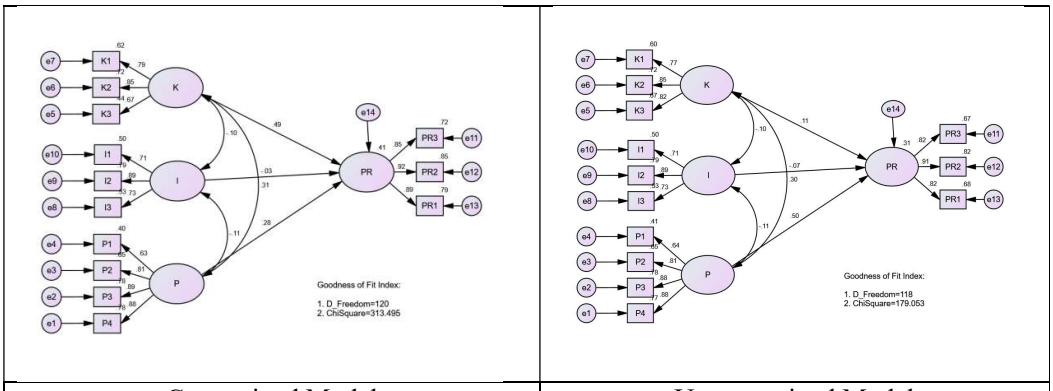
| Model 1 | Constrained Model | Unconstrained Model | Chi-Square Difference | Results on Moderation | Result on Hypothesis |
|---|---|---|---|---|---|
| Chi-Square | 313.495 | 179.053 | 134.442 | Significant | Supported |
| (DF) | 120 | 118 | 2 | | |

Table 4

Result of hypothesis testing of teaching experience data for less than eight years in the relationship between Context Evaluation (K) and Product Evaluation (PR)

| Product <--- Context | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|
| | .203 | .082 | 2.471 | .013 |

Hypothesis Statement:(Ha1b)
Ha1b: Teaching experience eight years and above significantly moderates the relationship between Context Evaluation (K) and Product Evaluation (PR).




Constrained Model | Unconstrained Model

Figure 3: Examining constrained and unconstrained model to test hypothesis Ha1b

Table 5
Ha1b:Hypothesis testing of teaching experience data for eight years and above in the relationship between Context Evaluation (K) and Product Evaluation (PR)

| Model 1 | Constrained Model | Unconstrained Model | Chi-Square Difference | Results on Moderation | Result on Hypothesis |
|---|---|---|---|---|---|
| Chi-Square | 313.495 | 179.053 | 134.442 | Significant | Supported |
| (DF) | 120 | 118 | 2 | | |

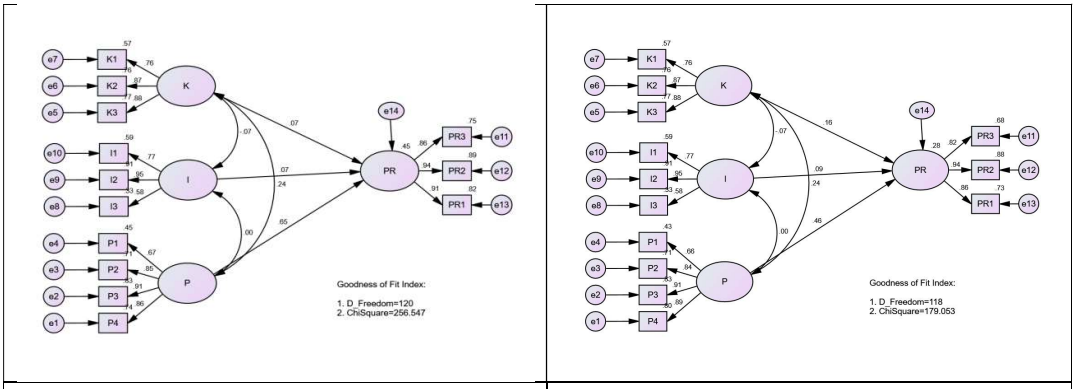
Table 6
Result of hypothesis testing of teaching experience data for eight years and above in the relationship between Context Evaluation (K) and Product Evaluation (PR)

| Product <--- Context | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|
| | .122 | .079 | 1.545 | .122 |

In summary, the hypothesis test indicates that teaching experience, whether more than eight years or less than eight years, significantly moderates the relationship between Context Evaluation and Product Evaluation in the implementation of PLC. As a result, hypothesis Ha1 is accepted.

b) The moderator effect between Process Evaluation to Product Evaluation (Ha2)

Hypothesis Statement:
Ha2a: Teaching experience of less than eight years significantly moderates the relationship between Process Evaluation (P) and Product Evaluation (PR)




| Constrained Model | Unconstrained Model |
|---|---|

Figure 4: Examining constrained and unconstrained model to test hypothesis Ha2a

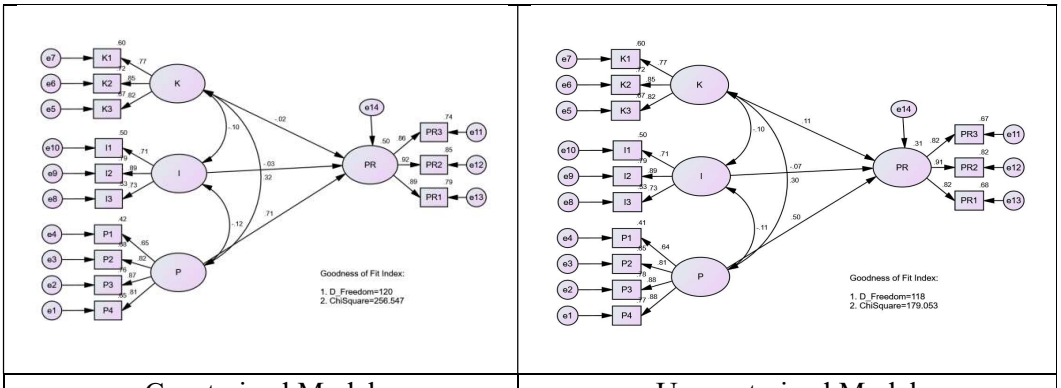
Table 7
Ha2a: Hypothesis testing of teaching experience data for less then eight years in the relationship between Process Evaluation (P) and Product Evaluation (PR)

| Model 1 | Constrained Model | Unconstrained Model | Chi-Square Difference | Results on Moderation | Result on Hypothesis |
|---|---|---|---|---|---|
| Chi-Square | 256.547 | 179.053 | 77.494 | Significant | Supported |
| (DF) | 120 | 118 | 2 | | |

Table 8
Result of hypothesis testing of teaching experience data for less than eight years in the relationship between Process Evaluation (P) and Product Evaluation (PR)

| Product <--- Process | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|
| | .515 | .076 | 6.784 | *** |

Hypothesis Statement:
Ha2b: Teaching experience eight years and above significantly moderates the relationship between Process Evaluation (P) and Product Evaluation (PR).




| Constrained Model | Unconstrained Model |
|---|---|

Figure 5: Examining constrained and unconstrained model to test hypothesis Ha2b

Table 9
Ha2b:Hypothesis testing of teaching experience data for eight years and above in the relationship between Process Evaluation (P) and Product Evaluation (PR)

| Model 1 | Constrained Model | Unconstrained Model | Chi-Square Difference | Results on Moderation | Result on Hypothesis |
|---|---|---|---|---|---|
| Chi-Square | 256.547 | 179.053 | 77.494 | Significant | Supported |
| (DF) | 120 | 118 | 2 | | |

Table 10
Result of hypothesis testing for teaching experience data of eight years and above in the relationship between Process Evaluation (P) and Product Evaluation (PR)

| Product <--- Process | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|
| | .453 | .066 | 6.914 | *** |

In summary, the hypothesis test indicates that teaching experience, whether more than eight years or less than eight years, significantly moderates the relationship between Process Evaluation and Product Evaluation in the implementation of PLC. As a result, hypothesis Ha2 is accepted.

## CONCLUSION

Teachers' work experience is the key factor in implementing PLC. The study's findings indicate that work experience acts as a significant moderator, playing a substantial role in influencing the relationship between Context Evaluation and Process Evaluation in the context of Product Evaluation during the implementation of PLC. Furthermore, these findings gain additional support from the research conducted by [32],[27], which suggests that experienced teachers consistently adhere to and endorse educational policies, such as those outlined in the Malaysian Education Development Plan (2013-2025). Taking into account this study aligns with [28],[22] whom asserted that positive influence of teachers' work experience enhances the implementation of more effective teaching practices for achieving objectives.

Moreover, the results offer valuable insights indicating that experienced educators have significant expertise in proficiently executing teaching and learning procedures [11],[25]. Similarly, the study conducted by [8] shed light on this matter. It indicates that teachers with experience have executed teaching tasks with greater systematic and effectiveness, successfully implementing PLC [12]. Reference [3] strengthens this viewpoint by arguing that experience ensures academic achievement in students.

However, incorporating moderators such as teachers' work experience fortifies the connection between Context Evaluation, Process Evaluation, and Product Evaluation during the implementation of PLC. This implies that the substantial work experience of educators plays a significant role in understanding the importance of integrating PLC into the teaching and learning process [1],[10]. Nevertheless, research indicates that the implementation of PLC plays a pivotal role in supporting new teachers lacking prior job experience to thrive and attain their goals outlined in the Malaysian Education Blueprint (2013–2025). In spite of this, future research endeavors could explore on more variations in years of work experience to gain a deeper understanding of how teaching experience can effectively influence in implementing PLC and may provide valuable insights into the generalizability of our findings

## ACKNOWLEDGEMENT

This paper and the research behind it would not have been possible without the exceptional support of Mrs Premalatha Sathianarayanan, Dr Nor Hasnida Bt Che Md Ghazali, Prof Madya Dr Hj Hishamuddin B Ahmad, Mr Jaya Kumar Supramaniam for their contributions to this

work. Their enthusiasm, knowledge and exacting attention to detail have been an inspiration and kept my work on track. Special thanks to Sultan Idris Educational University for their assistance and support. Finaly, the generosity and expertise of one and all have improved this study in innumerable ways and saved me from many errors; those that inevitably remain are entirely my own responsibility.

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