

EFFECTIVE TEACHING STRATEGIES: DISCOURSE FROM EDUCATORS' PERSPECTIVES

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ABSTRACT

In the ever-evolving landscape of education, the professional development of teachers stands as a pivotal factor in the pursuit of improved student outcomes and educational excellence. The role of teachers transcends the mere transmission of knowledge; they are the architects of the learning experience, the guiding lights in the academic journey of students, and the catalysts for educational progress. This study employed qualitative research as the method to explore effective strategies for teacher professional development: insights from educators' perspectives in Pamantawan Integrated School. Phenomenology, as a methodology, seeks to unveil the meaning or essence of an experience, prioritizing understanding over measurements or explanations. Qualitative research methods prove valuable in uncovering the significance of individuals' lived experiences, delving into the underlying reasons, opinions, and motivations. The research participants will be the eight (8) General Education Teachers who are employed Pamantawan Integrated School.Based on the themes that emerged, the implications of the study on identifying effective teaching strategies can be summarized as follows: Implications from the theme "Embracing Student-Centered Approaches: Teaching strategies should prioritize active learning, student engagement, and catering to diverse learning styles. Implications from the theme "Overcoming Obstacles to Effective Teaching: Professional development and training opportunities should be provided to equip educators with the skills and knowledge to address diverse learner needs and integrate technology effectively. Implications from the theme "Overcoming Obstacles to Effective Teaching: Professional development and training opportunities should be provided to equip educators with the skills and knowledge to address diverse learner needs and integrate technology effectively. Future Researchers: Conduct longitudinal studies to evaluate the long-term impact of student-centered teaching strategies on student achievement, engagement, and learning outcomes.

KEYWORDS: effective teaching strategies: discourse from educators' perspectives

INTRODUCTION

In the ever-evolving landscape of education, the professional development of teachers stands as a pivotal factor in the pursuit of improved student outcomes and educational excellence. The role of teachers transcends the mere transmission of knowledge; they are the architects of the learning experience, the guiding lights in the academic journey of students, and the catalysts for educational progress. To fulfill this multifaceted role, teachers must be equipped with the knowledge, skills, and pedagogical insights that allow them to adapt to changing classroom dynamics, emerging educational technologies, and evolving teaching methodologies.

Effective teacher professional development (PD) programs play a critical role in empowering educators with the tools they need to excel in their profession. These programs have the potential to foster teacher growth, enhance instructional practices, and ultimately contribute to increased student achievement. Recognizing the importance of teacher PD, educational institutions, policymakers, and educational leaders have invested significant resources in designing and implementing various professional development initiatives.

The primary objective of this study is to explore effective strategies for teacher professional development through the lens of educators' perspectives. By engaging teachers in reflective conversations about their experiences, challenges and successes with professional development, we aim to unearth valuable insights that can inform the design and implementation of more impactful PD initiatives.

Vongalis-Macrow (2019) highlights the significance of teacher autonomy in professional development and underscores the need for a more nuanced understanding of how autonomy is perceived and practiced by teachers. It suggests that teacher autonomy should be considered a critical factor in designing effective professional development



programs that empower educators to take ownership of their professional growth and contribute positively to the improvement of teaching and learning. The article also calls for further research and exploration in this important area of educational development.

The study of emphasizes the importance of professional development programs for teachers to create effective learning environments and well-managed classrooms for improved student engagement and learning outcomes. It suggests that investing in these areas can significantly enhance student learning. Professional development in educational technology helps teachers integrate digital tools and resources into their teaching practices. This includes using educational software, online resources, and interactive technologies to enhance student engagement and facilitate personalized learning. Teachers learn how to effectively use these tools to support instruction, assess student progress, and provide feedback (Amutha, 2021)

Another study from Hardy (2021) emphasizes the significance of teacher professional development in enhancing educational outcomes. However, it lacks a clear definition of what constitutes such development. The paper also acknowledges a lack of understanding about external influences, such as school resources and policy changes, on its effectiveness. It calls for reform and re-evaluation of current approaches to teacher professional development. A robust definition of teacher professional development is essential for understanding its scope and impact. Professional development can be defined as ongoing, systematic education and training that enables teachers to enhance their teaching skills, knowledge, and effectiveness. This encompasses various activities, including workshops, seminars, courses, mentoring, coaching, and collaborative learning communities. Effective PD should be sustained over time, focused on specific learning goals, and aligned with teachers' professional needs and classroom realities.

Many instructors face limited access to quality professional development opportunities. This can be due to geographical isolation, insufficient funding, or lack of time within the school schedule dedicated to PD. As a result, some teachers may not receive the necessary training to enhance their instructional skills and keep up with educational advancements. Often, PD programs are designed with a one-size-fits-all mentality, failing to address the specific needs of individual teachers or groups of teachers. This generic approach can result in PD experiences that are not relevant or beneficial to all participants, leading to a lack of engagement and application in the classroom (Gendale et al. , 2020).

Moreover, Gay (2018) comprehensive's exploration of the concept and implementation of culturally responsive teaching in education. Gay argues that education should be culturally relevant and sensitive to the diverse backgrounds, experiences, and identities of students. The book provides a theoretical foundation, practical strategies, and research-based insights for educators and teacher professional development in the field of culturally responsive teaching.

Implementing inquiry-based teaching in classrooms presents several challenges that educators often struggle to overcome. First, there is a significant lack of support, training, and availability of materials tailored for inquiry-based learning. Many teachers do not receive the necessary professional development to effectively facilitate inquiry-based activities, and resources specifically designed to support this teaching approach are often scarce. This lack of infrastructure makes it difficult for teachers to adopt and sustain inquiry-based methods. addressing these challenges requires systemic changes, including providing comprehensive support and training for teachers, aligning assessment practices with the goals of inquiry-based learning, and ensuring that teachers have access to the necessary materials and resources. By tackling these issues, educators can create an environment where inquiry-based teaching can thrive, leading to more meaningful and engaging learning experiences for students (Gutierez,2019).

While many studies highlight short-term effects of professional development initiatives, there is a dearth of research on the long-term sustainability of these strategies. This study aims to fill this gap by investigating not only the immediate outcomes but also the enduring impact of professional development efforts on teacher practices and, consequently, student achievement. By addressing these research gaps, this study endeavors to contribute meaningful insights that can inform the design and implementation of teacher professional development programs at Pamantawan Integrated School and, potentially, serve as a model for similar educational contexts

Effective PD is directly linked to improved student learning outcomes, as it enhances teachers' instructional skills, subject matter knowledge, and classroom management abilities. However, the impact of broader conditions such as



school resources, educational policies, and leadership priorities is not well understood, leading to gaps in the design and implementation of PD initiatives. A deeper understanding of how these external influences shape PD effectiveness is essential for developing more comprehensive and supportive PD programs. Tailored PD programs are needed to address the diverse needs of teachers based on their unique contexts, experiences, and subject areas. Continuous support, including follow-up sessions, coaching, mentoring, and professional learning communities, is crucial for helping teachers integrate new practices into their teaching and fostering a culture of continuous improvement.

Research Questions

The study is interested in the viewpoints and experiences of educators themselves. It emphasizes gathering data and insights directly from teachers to understand their thoughts, preferences, and recommendations regarding professional development strategies. It sought to answer the following questions:

- 1. What are the experiences of the educators towards identifying the effective teaching strategy?
- 2. What barriers and challenges do educators encounter towards identifying the effective teaching strategy?
- 3. What are the insights gained by the educators towards identifying the effective teaching strategy?

METHODOLOGY

Research Design

This study employed qualitative research as the method to explore effective strategies for teacher professional development: insights from educators' perspectives in Pamantawan Integrated School. This investigation employed a qualitative phenomenological approach, utilizing in-depth interviews as the primary research design. Phenomenology, as a methodology, seeks to unveil the meaning or essence of an experience, prioritizing understanding over measurements or explanations. Qualitative research methods prove valuable in uncovering the significance of individuals' lived experiences, delving into the underlying reasons, opinions, and motivations.

This approach is instrumental in gaining insights into complex issues, aiding in hypothesis development for potential quantitative research. According to Patton (1987), in-depth interviewing, often referred to as qualitative interviewing, involves the collection of qualitative data to achieve a holistic understanding of the interviewee's perspective or situation. It serves not only to elicit information but also to explore intriguing areas for future investigation.

This research adopted qualitative methodologies for data collection, employing an In-depth Interview (IDI) to obtain genuine insights, ensure knowledge accuracy and efficiency, enhance information reliability, and obtain an accurate understanding of the research problem. The choice of the in-depth interview design was made to capture the nuanced perspectives of elementary teachers regarding inclusive education. The IDI design is considered apt for exploring the complex and multifaceted views of the participants, providing a thorough and authentic examination of their experiences and opinions. This qualitative approach allows for a deep exploration of the perceptions and attitudes of elementary teachers, shedding light on their perspectives towards effective teaching strategies.

Research Participants

The research participants will be the eight (8) General Education Teachers who are employed Pamantawan Integrated School. The role of the participants in the study, "Exploring Effective Strategies for Teacher Professional Development: Insights from Educators' Perspectives in Pamantawan Integrated School," will be crucial in providing firsthand insights into the experiences, perceptions, and challenges related to teacher professional development at Pamantawan Integrated School.

Research Participants will serve as informants by sharing their direct experiences with various professional development strategies. Their narratives will offer a detailed understanding of how these strategies impact their teaching practices and overall professional growth.

Purposive sampling, a deliberate and non-probability technique, will be applied in the study "Exploring Effective Strategies for Teacher Professional Development: Insights from Educators' Perspectives in Pamantawan Integrated School." This method involves the intentional selection of participants based on specific criteria or characteristics that align with the research objectives. In this context, purposive sampling ensures that participants are chosen due to their direct experience or knowledge relevant to the research questions.



Research Instruments

The researcher employed a researcher-made interview questionnaire as a guide for questioning participants during the data gathering process. This interview questionnaire not only served as a structured tool for data collection but also functioned as the primary instrument to determine the effective teaching strategies: discourse from educators' perspectives.

In qualitative interviews, open-ended questions were utilized. These questions, devoid of predetermined answer options, encouraged participants to articulate their responses freely. Open-ended questions are inherently more demanding than closed-ended alternatives, as they necessitate participants to express their thoughts using their own words, phrases, or sentences. This approach was intentional, aiming to elicit comprehensive and nuanced insights from participants, allowing for a deeper exploration of their perceptions on the trustworthiness of electronic commerce.

Data Analysis

The data gathered from the in-depth interview done with the participants will be analyzed one by one. Since the data will be gathered with the use of smartphone recorder, it was thoroughly listened and was written in field notes and was then encoded for the filing of the Chapter 3. Answers from the respondents were encoded verbatimly and was given connection to the study.

The following tool was used in interpreting the responses and information in this study. In-depth Interview (IDI): This was used by the researcher to learn the views and insights of the Effective Strategies for Teacher Professional Development: Insights from Educators' Perspectives in Pamantawan Integrated School.

Thematic Content Analysis. This was used in interpreting the responses made by the key participants in determining the views and insights of the Effective Strategies for Teacher Professional Development: Insights from Educators' Perspectives in Pamantawan Integrated School.

RESULTS AND DISCUSSION

This chapter discusses the implications of the data analysis from the interviews and gives recommendations for future research.

The findings of this study show teachers' viewpoints and experiences with effective teaching strategy. Several major themes emerged from qualitative interviews and surveys, offering insight on the challenges, accomplishments, and places for development in effective teaching strategies.

Implications

Based on the themes that emerged, the implications of the study on identifying effective teaching strategies can be summarized as follows:

Implications from the theme "Embracing Student-Centered Approaches: Teaching strategies should prioritize active learning, student engagement, and catering to diverse learning styles. Educators should aim to create dynamic and collaborative learning environments that encourage student participation and peer-to-peer learning.

Incorporating hands-on activities, group discussions, multimedia resources, and interactive tools can enhance student understanding and retention. Fostering an inclusive and supportive classroom culture where students feel comfortable expressing themselves is crucial for effective learning.

Implications from the theme "Overcoming Obstacles to Effective Teaching: Professional development and training opportunities should be provided to equip educators with the skills and knowledge to address diverse learner needs and integrate technology effectively. Educational institutions should allocate adequate resources and support systems to assist educators in implementing innovative teaching strategies. Curriculum design and assessment methods should strike a balance between meeting educational standards and allowing flexibility for educators to tailor instruction to their students' needs. Addressing issues such as large class sizes, limited resources, and rigid curricula is essential to facilitate the adoption of effective teaching practices.



Implications from the theme "Overcoming Obstacles to Effective Teaching: Professional development and training opportunities should be provided to equip educators with the skills and knowledge to address diverse learner needs and integrate technology effectively. Fostering a culture of collaboration and knowledge-sharing among educators can facilitate the dissemination of best practices and innovative teaching strategies.

Ongoing professional development opportunities are crucial for educators to stay informed about emerging pedagogical approaches and refine their teaching practices. Workshops, conferences, and access to educational research provide avenues for continuous learning and professional growth. These platforms enable educators to explore new methodologies, exchange ideas with peers, and integrate evidence-based strategies into their teaching repertoire. By engaging in ongoing PD, educators can enhance their instructional effectiveness, adapt to evolving educational trends, and ultimately improve student learning outcomes.

Future Directions

On the three main themes that emerged from the study, the following recommendations can be made to various stakeholders:

Department of Education (DepEd): Allocate adequate resources and funding to support professional development programs focused on student-centered teaching strategies, addressing diverse learner needs, and integrating technology effectively into the classroom. Review and update curricula regularly to ensure flexibility and alignment with current educational practices, while still meeting relevant standards and assessments. Provide guidelines and support for schools to foster collaborative learning communities among educators, promoting the sharing of best practices and peer-to-peer learning opportunities. Encourage the adoption of a growth mindset among educators by recognizing and rewarding efforts towards continuous improvement and professional growth.

School Heads: Facilitate regular opportunities for educators to engage in reflective practices, such as peer observations, lesson study sessions, and mentoring programs, to identify areas for improvement and refine their teaching strategies. Promote a culture of collaboration and knowledge-sharing within the school by organizing professional learning communities, subject area meetings, and platforms for educators to share effective teaching practices. Allocate resources for professional development activities, such as workshops, conferences, and access to educational research materials, to keep educators informed about emerging pedagogical approaches and student-centered strategies. Encourage and support educators in experimenting with innovative teaching methods and adapt to the evolving needs and dynamics of their classrooms.

Students: Actively participate in the learning process by providing constructive feedback to educators on teaching strategies that resonate with different learning styles and preferences. Embrace collaborative learning opportunities, such as group projects and peer-to-peer learning activities, to enhance understanding and develop critical thinking skills. Be open to engaging with diverse learning resources and technologies, as educators strive to incorporate student-centered approaches and cater to varied learning needs. Foster a growth mindset by approaching learning with a positive attitude and willingness to learn from mistakes and challenges.

Future Researchers: Conduct longitudinal studies to evaluate the long-term impact of student-centered teaching strategies on student achievement, engagement, and learning outcomes. Explore the effectiveness of specific professional development programs or interventions in equipping educators with the necessary skills and knowledge to implement innovative teaching practices. Investigate the role of school leadership and organizational culture in facilitating or hindering the adoption of effective teaching strategies. Examine the impact of various support systems, such as mentoring programs, technology integration support, and resource allocation, on educators' ability to overcome obstacles and implement effective teaching strategies.

By addressing these recommendations, stakeholders can create an environment that supports and encourages the implementation of effective, student-centered teaching strategies, while also fostering a culture of continuous improvement and professional growth among educators.



REFERENCES

- 1. Amutha. (2020). Professional Development of Teachers. Social Science Research Network,
- 2. Ancho, & Arrieta. (2021). Filipino teacher professional development in the new normal. Educ. Self Dev, 16(3), 25-43.
- 3. Andrew (2023) Advancing Sustainable Development Through Teacher Professional Development. Advances in educational technologies and instructional design book series, doi: 10.4018/978-1-6684-4050-6.ch009
- 4. Avalos. (2021). Building on ELA Vocabulary Instruction to Develop Language Resources. https://ila.onlinelibrary.wiley.com/doi/abs/10.1002/trtr.2061
- 5. Avshenyuk., Lyudmyla, Kostina. (2020). Teacher Professional Development as a Scientific Problem in Comparative Pedagogics. Comparative Professional Pedagogy, doi: 10.2478/RPP-2014-0016
- 6. Baimakhanova. (2022). The importance of professional development process of school teachers in the system of continuous education. Korkyt Ata atyndagy Kyzylorda universitetinin habarŝysy, doi: 10.52081/bkaku.2022.v61.i2.072
- Baird, & Clark. (2018). The "look-ahead" professional development model: a professional development model for implementing new curriculum with a focus on instructional strategies. https://www.semanticscholar.org/paper/The-%E2%80%98look-ahead%E2%80%99-professional-development-model%3A-a-Baird-Clark/b072e711d473bd445e2693398f0eaec57ae2c5d7
- 8. Bandura. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), 191-215.
- 9. Bautista, & Ortega. (2019). Teacher Professional Development: International Perspectives and Approaches. Psychology, Society and Education, 7, 240-251. https://doi.org/10.25115/psye.v7i3.1020
- 10. Brikmane. (2019). Teachers' Professional Development Courses to Ensure Quality Education. doi: 10.17770/SIE2013VOL2.585
- 11. Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. Educational Researcher, 33(8), 3-15. https://doi.org/10.3102/0013189X033008003
- Boyce, & Neal. (2006). Conducting In-Depth Interview: A Guide for Designing and Conducting In-Depth Interviews for Evaluation Input. Pathfinder International Tool Series, Monitoring and Evaluation-2. http://www.pathfind.org/site/DocServer/m_e_tool_series_indepth_interviews.pdf?docID=6301
- 13. Chou. (2021). The Influence of Learner Strategies on Oral Presentations: A Comparison between Group and Individual Performance. English for Specific Purposes, 30, 272-285. https://doi.org/10.1016/j.esp.2011.04.003
- 14. Creswell. (2005). Philosophical Assumptions. https://us.sagepub.com/sites/default/files/upm-assets/110627_book_item_110627.pdf
- 15. Daley. (2021). Learning In Teacher Professional Development.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective teacher professional development. Learning Policy Institute. Retrieved from https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report
 Del General Schlierer (2020). Pole Science Retrieved for the Pole Science Science Science (2020).
- 17. Del Campo, & Atiezar. (2020). Redefining the Role of the Teacher: It's a Multifaceted.
- 18. Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. Educational Researcher, 38(3), 181-199. https://doi.org/10.3102/0013189X08331140
- 19. Eroğlu. (2021). Students' opinions on the use of digital storytelling in Turkish course. International Online Journal of Education and Teaching (IOJET), 8(4). 2248-2265.
- 20. Gay. (2018). "Culturally Responsive Teaching: Theory, Research, and Practice. Third Edition. Multicultural Education Series. Teachers College Press January: 35
- 21. Gendole., Joke, Voogt. (2020). Teacher Professional Development Practices.
- 22. Giordano (2018). A Professional Development Model to Promote Internet Integration in P-12 Teaching Practices.
- 23. Giraldo (2019). The Impact of a Professional Development Program on English Language Teachers' Classroom Performance. Profile Issues in Teachers' Professional Development, doi: 10.15446/PROFILE.V16N1.38150
- 24. Girvan. (2016). Extending experiential learning in teacher professional development. https://www.sciencedirect.com/science/article/pii/S0742051X16300713
- 25. Griffin. (2018). Assessment and Teaching of 21st Century Skills: Methods and Approach. https://www.researchgate.net/publication/321611025_Assessment_and_Teaching_of_21st_Century_Skills_Methods_a nd_Approach
- 26. Gutierez. (2019). Collaborative Professional Learning through Lesson Study: Identifying the Challenges of Inquiry-Based Teaching.. Issues in Educational Research
- 27. Guskey, T. R., & Yoon, K. S. (2009). What works in professional development? Phi Delta Kappan, 90(7), 495-500. https://doi.org/10.1177/003172170909000710
- 28. Hardy. (2021). The Politics of Teacher Professional Development: Policy, Research and Practice. Routledge Research in Education.
- 29. Hasanah., Sulha, Sulha. (2022). Teacher Professional Development In Scientific Writing. Journal Of Education, Teaching and Learning, doi: 10.26737/jetl.v7i1.2810



- 30. Ian, Hardy. (2012). The Politics of Teacher Professional Development: Policy, Research and Practice. Routledge Research in Education.
- 31. Karīna, Brikmane. (2015). Teachers' Professional Development Courses to Ensure Quality Education. doi: 10.17770/SIE2013VOL2.585
- 32. Kennedy, A. (2020). Models of continuing professional development: A framework for analysis. Journal of In-Service Education, 31(2), 235-250. https://doi.org/10.1080/13674580500200285
- Kennedy, & Shiel. (2019). Raising Literacy Levels With Collaborative On-Site Professional Development in an Urban Disadvantaged School. https://www.researchgate.net/publication/250055855_Raising_Literacy_Levels_With_Collaborative_On-Site_Professional Development in an Urban Disadvantaged_School
- Leung. (2019). Translanguaging and the Transdisciplinary Framework for Language Teaching and Learning in a Multilingual World. The Modern Language Journal, 103, 348-370. https://doi.org/10.1111/modl.12568
- 35. Lunenberg., Jurriën, Dengerink., Fred, A., J., Korthagen. (2019). The Professional Teacher Educator: Roles, Behaviour, and Professional Development of Teacher Educators.
- 36. Madjid. (2020). Professional competence development: a phenomenological study of efl teachers at sma negeri 1. doi: 10.24252/ETERNAL.V61.2020.A13
- 37. McNamara. (1999). General Guidelines for Conducting Interviews. Sage, Minnesota
- 38. Moore. (2019). Professional Development in the Field of Education.. doi: 10.33915/ETD.2879
- 39. Nadrah. (2023). Correlation of the Use a Science Teaching Tool for Elementary School Students. Educational Administration: Theory and Practice. 29, 2 (Apr. 2023). DOI:https://doi.org/10.17762/kuey.v29i2.636.
- 40. Nagpal. (2020). Professional Development An Important Part of Teacher's Behaviour and Beliefs. Journal of emerging technologies and innovative research,
- 41. Orb. (2001). Ethics in qualitative research. https://pubmed.ncbi.nlm.nih.gov/11253591/
- 42. Patton. (1987). How to use qualitative methods in evaluation. Newsbury Park, London, New Dehli: Sage Publications.
- 43. Parkash. (2019). Influences of Teacher Professional Development on Student Outcomes & Efficacy. Educational Quest: An International Journal of Education and Applied Social Sciences, doi: 10.5958/2230-7311.2017.00009.5
- 44. Quinta, Kools., Jurriën, Dengerink., K., Melief., Mieke, Lunenberg. (2019). Professional development activities of teacher educators.
- 45. Sitti (2022). Teacher Professional Development In Scientific Writing. Journal Of Education, Teaching and Learning, doi: 10.26737/jetl.v7i1.2810
- Sobkin., D.V., Adamchuk. (2019). On Teacher Professional Development: Improving Professional Qualifications and Membership in Professional Teacher Communities. Russian Education and Society, doi: 10.1080/10609393.2015.1187012
- 47. Smith. (2020). Professional Development of Teacher Educators. doi: 10.1016/B978-0-08-044894-7.00675-8
- 48. Stremmel. (2019). Repositioning Teacher Education: Teacher Research as Professional Development.
- 49. Richard, & Farell. (2018). Teaching practice: A reflective approach. New York, NY: Cambridge University Press.
- 50. Ved (2017). Influences of Teacher Professional Development on Student Outcomes & Efficacy. Educational Quest: An International Journal of Education and Applied Social Sciences, doi: 10.5958/2230-7311.2017.00009.5
- 51. Vermunt. (2019). Teacher Learning and Professional Development. doi: 10.1007/978-94-6209-536-6_6
- 52. Vongalis, & Macrow. (2012). Developing pedagogies for teaching about climate change. I. Int. J. Learn. 17(9):237-248.
- 53. Vygotsky. (1934). Thought and Language. Cambridge, Mass.: The MIT Press.
- 54. Weihrich, & Koontz. (2005). Management: A Global Perspective. 11th Edition, Tata McGraw Hill Publishing Ltd., New Delhi.
- 55. Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., & Orphanos, S. (2009). Professional learning in the learning profession: A status report on teacher development in the United States and abroad. National Staff Development Council.
- 56. Zhang . (n.d.). Student-centered case-based teaching and online–offline case discussion in postgraduate courses of computer science. Retrieved 2019,