



**ADAPTABILITY OF ADVANCED TECHNOLOGY
TO SCHOOL DEVELOPMENT PROGRAM: AN APPROACH
TO EDUCATIONAL SYSTEM IN TEACHING**

Leovigildo Lito D. Mallillin¹ⁱ,

Edgardo G. Canda²,

Aurora T. Caday³

¹PhD, Professor,

Faculty of Languages and Literature,

Philippine Normal University,

Philippines

²EdD, Professor,

Pamantasan Lungsod ng Marikina,

Marikina City, Philippines

³MA, DBA, Professor,

De La Salle University,

Manila, Philippines

Abstract:

The study aims to examine the school development program being adapted through advanced technology in the area of adaptive learning for students and faculties, engagement to learning, strategies in teaching, selective and picky, and investment in adaptive learning. A mixed method of research design is employed in the study: specifically, the quantitative and qualitative approach. Likewise, stratified random sampling is utilized in selecting the samples of the study. The study comprised seventy (70) respondents only. Results show that students engage actively to listen, take notes, pay attention, respond to questions, ask questions, react, and participate, and personalizes an adaptive learning approach that provides platform in an individualized experiences and learning progress and uniqueness through learning path skills knowledge and learning needs, show that type and purpose of learning in teaching standard lessons toward based project learning techniques, show that students are engaged on the degree of optimism, interest, and passion on the student learning that extends the students on level of learning and process in the educational system and progress, show personalized adaptive teaching and learning applies and attributes to any type of lesson and course that displays the class tool, show that students are mixed with heterogeneous and homogeneous where picky so the subject matter must be based on their individual differences to determine academic performance among them, and show

ⁱ Correspondence: email loviedsunbright_0722@yahoo.com.ph

that it works exactly on adaptive learning according to the learners' performance and choice.

Keywords: adaptability of advanced technology, school development program, educational system in teaching, adaptability in learning, engagement learning, teaching strategy, investing adaptability learning, selective and picky

1. Introduction

Adaptive learning analyzes the advanced technology based on the educational system on the real performance of students that modifies the method of teaching based on the needs and engagement of students (Mallillin, 2022, pp. 99-121). It transforms the advanced technology learning system of students in gaining delivery learning and the ability to adapt to the content and individual needs of the learners. It is the contemporary system of learning that is useful in the platform of the educational system that meets the needs of the learners (Mallillin, *et al.* 2021, pp. 265-274). It is designed in the system and implementation of the educational system to address the issues, concerns, and problems faced by the many learners. It is a prospective system of adaptive learning in the performance and work system based on advanced technology (Mallillin, Mallillin, & Laurel, 2020, pp. 1-10). It contributes to adaptive learning and type in identifying the intervention, occurrences, and visualization analysis of related techniques and methods of teaching-learning system and utilization. It improves the learning experiences to solve specific learning issues among students (Kabudi, Pappas, & Olsen, 2021).

On the other hand, adaptive learning to advanced technology may benefit students and teachers since the program analyzes the learning base better-individualized understanding of the learners' needs. It provides strengths and weaknesses among students. It initiates better learning and adaptive learning, especially those learners who are struggling where the method of teaching provides help and improves the domains of learning in teaching (Mallillin, 2021). This can improve the understanding and replication of faculties in the classroom setting. The various domains of learning in the advanced technology and the academic achievement of the learners have designed adaptive learning in the various activities for students' learners where they explore knowledge activities participation and in-depth learning. It provides and helps faculties in the styles of teaching process and ways in accordance with the needs of students (Mallillin, & Laurel, 2022). It explores various domains of learning in the academic achievement and performance of the learners in the areas of affective learning, cognitive learning, and psychomotor learning in terms of attitude toward learning. It provides the ability to vary the adaptive learning that carries learning through implementation and execution in preference, belief, and acceptance in the knowledge of the domains of learning in the academic performance of the learners (Malillin, 2020).

Furthermore, adaptive learning in advanced technology engages the comfort zone of the learners and the frustration zone. This will assess the adaptive learning and

intelligent proximal zone development for the optimum mastery between frustration and comfort zone. In this situation, adaptive learning is not repetitive or challenging at the level of students when they are discouraged, reluctant, and frustrated in the learning process (Mallillin, 2022). The level of difficulty is customized in the design and creation of the smart learners who have the guts to solve learning issues and problems in creative solutions of work both outside and inside the classroom setting of learning. It highlights the continuous progress of students that tends to the function of the management system of learning in the application of adaptive learning. The management system in adaptive learning morph generation of learning environments is accessible and capable of supporting content of the lesson, integration, curation, interoperability system in personalized adaptive learning to include collaborative learning, performance on analytically driven management performance of students to engage on the needs and function of adaptive learning. It manages adaptive learning systems for discussion of the content learning engagement desired for students as the centers of learning systems and activities. It fosters a student-center learning process in adaptive learning experiences (Koh, & Kan, 2021).

Subsequently, adaptive learning in the different educational systems has personalized techniques. It is being adopted and implemented for the improved learning process. It created fluency and comprehension of adaptive learning in building the course learning process in linking the technology learning performance and experiences. It allows the platform of students' individualized pace of learning, and feedback and provides constant learning, simulation, and educational-based application activities. It is an adaptive learning program in advanced technology that experiences increased achievement and meaningful gain. It is the spreading of adaptive learning in the classroom and onboard (Mallillin, 2024, pp. 120-132). It provides structures in teaching techniques, strategies, trends, and methods that describe adaptive learning of students' academic performance and achievement. This includes an adaptive learning approach in the school development program comprehensive analysis of student level, academic achievement, and attitude toward the lesson. It shows that adaptive learning provides a way to construct the ability of the lesson and meaning as to the activities in advanced technology function and modules where students are properly motivated on adaptive learning, feeling of satisfaction, willingness to respond, and commitment in the lesson. It expresses the learning process to the different approaches of learning and adaptive through strategies, analysis, innovation, competency, and creativity to present the outline of the lesson and concept among students on the focus of adaptive learning structure of the various domains of learning and strategies of teaching in the academic achievement of students (Mallillin, *et al.* 2021).

Consequently, adaptive learning must be selective and picky. This ensures that there is adaptive learning based on the needs of the lesson and learning process. It is the process of learning by doing. It is a challenge among the learners and an appropriate level where it moves the learners at their own pace and emulates the experiences of faculties. The adaptive process and learning strategize solutions to the challenge-based feedback

of the individual analysis and progress. This will prevent students from rushing in the learning process and engagement because when students are disinterested, they will never be motivated to study. In this sense, students have the right to the technology of learning in an adaptive process. It helps them to improve their human interaction and is perfectly fine. It reinforces the objectives of adaptive learning that balances the preferences of the learning process. It provides preferences on the practice and management to be selective and picky in adaptive learning applications. It formalizes the episode of the learning decision process of the module in the reward and transition of learning and interaction. It proposes adaptive learning interaction and policy for the model of the module in the school development program exploration and preference complexity content knowledge (Wu, Braverman, & Yang, 2020).

Moreover, the different educational institutions are investing in adaptive learning which is also introduced in the development program in advanced technology. This has endorsed personalized adaptive learning and technology in a constant teaching improvement. It is an adaptive and endless benefit since the learners can track the development and improvement of their sense of responsibility and academic progress. It develops a teacher's lesson plan and additional resources tailored to the specific learning of students. It extends the model of adaptive learning beyond the platform on the educational models. It improves the implementation and training techniques in the educational system, especially the school development program in boosting success and changing revolutionary educational approaches and improvement.

2. Research Questions

- 1) What is the school development program being adapted for the advanced technology approach of teaching in the educational system?
- 2) How does the adaptability of the advanced technology school development program become an approach to the educational system in teaching?
- 3) Is there a significant correlation between the school development program being adopted by the advanced technology approach of teaching in the educational system as observed by the respondents?

2.1 Hypothesis

There is a significant correlation between the school development program being adopted by the advanced technology approach of teaching in the educational system as observed by the respondents.

3. Research Design

The research employs the mixed method of both the qualitative and quantitative design for the data gathering which gains the research depth and breadth of corroboration and understanding. It is an offsetting of the inherent approach by itself. It is a triangulation

mixed method of research in conducting the characteristics of adaptive learning in advanced technology as part of the school development program to examine the phenomenon. It allows for identifying the aspect of the school development program being adapted by the advanced technology approach of teaching in the educational system and the adaptability school development program approach to the educational system in teaching through data sources, methods, and techniques for the information and analysis provided in the study.

Quantitative information data includes the rating scale that measures the holistic point of view of the respondents' behaviors on the checklist and observation of the instrument's performance. It is the type of data and analysis that consists of the statistical treatment in the collected scores of the study (King, Goldfarb, & Simcoe, 2021).

Qualitative information data includes the gathering of interviews that focus on observation and Focus Group Discussion (FGD). The qualitative data analyzes the text, words, or behaviors that follow typically aggregating paths in the information and categories present ideas and diversity collection of data gathered. It supports qualitative research and design principles of qualitative research rigor to the advantage of research (Levitt, *et al.* 2021).

3.1 Sampling Techniques

Stratified Random sampling is utilized in the conduct of the study. It is conducted from the various Higher Education Institutions (HEIs) in Metro Manila. This is to estimate the population function and distribution under the scheme using the supplementary information on the adaptability of advanced technology in the school development program as an approach to teaching pedagogy. It expresses the bias in analyzing the data using the mean, standard deviation, and z-test (Hussain, *et al.* 2020).

3.2 Participants of the Study

The participants of the study are the lecturers from the various Higher Education Institutions (HEIs) in Metro Manila. The study comprised seventy (70) respondents only.

4. Result

Table 1 presents the weighted mean and the corresponding interpretation of the school development program being adapted by the advanced technology approach of teaching in the educational field.

As gleaned in the table, rank is shared by the two indicators which are "It engages active students to listen, take notes, pay attention, respond to questions, ask questions, react, and participate", and "It personalizes an adaptive learning approach that provides platforms in individualized experiences and learning progress and uniqueness through learning path skills knowledge and learning needs", with a weighted mean of 4.23 or Strongly Agree which means Adaptive learning to is Extremely Observed.

Table 1: School development program being adapted
by the advanced technology approach to teaching

Indicators	WM	I	R
1. Adaptive learning is a supplement from the different teaching in the educational effort that undertakes self-regulated involvement of learning.	3.40	A	16.5
2. It nurtures effective lecturers and encourages individuals to expand the various applications of their skills and knowledge.	3.79	A	4.5
3. Adaptive learning helps the type and purpose of the learning in teaching standard lessons toward based project learning techniques.	3.56	A	10.5
4. Adaptive learning system updates explore the system of knowledge in teaching and store information among students about the content of teaching tailored to the objectives of the lesson.	3.79	A	4.5
5. It engages students in a degree of optimism, interest, and passion for student learning that extends students on the level of learning and process in the educational system and progress.	3.43	A	15
6. It fosters and engages students in the school's adaptive learning and ways in advanced technology educators in the governance of the process and decision-making.	3.56	A	10.5
7. It fosters and growth of learning to prepare students for their meaningful and productive learning process.	3.79	A	4.5
8. It engages active students to listen, take notes, pay attention, respond to questions, ask questions, react, and participate.	4.23	SA	1.5
9. It personalizes an adaptive learning approach that provides platforms for individualized experiences learning progress and uniqueness through learning path skills, knowledge, and learning needs.	4.23	SA	1.5
10. It provides a system of adaptive learning in a customized presentation and content on the new concept based on the response of the individual activities.	3.40	A	16.5
11. The strategy personalized adaptive teaching and learning application and attributes to any type of lesson and course that displays the class tool.	3.37	MA	18
12. The subject course on personalized adaptive learning is delivered to customize the system in adaptive learning-driven assessment of each student.	3.56	A	10.5
13. Adaptive learning can be selective and picky based on the characteristics of the learners and behaviors in the subject.	3.31	MA	19.5
14. It provides picky and selective behavior based on the learning of students behind their perceptions and study habits.	3.31	MA	19.5
15. Students are mixed with heterogeneous and homogeneous where picky therefore, subject matter must be based on their individual differences to determine academic performance among them.	3.56	A	10.5
16. It nurtures the learning environment and fine line of adaptive learning that influences students' susceptible learning process.	3.67	A	7.5
17. The student as the center of learning is delivered on how the process is adjusted based on the needs of students according to their preferences of learning.	3.44	A	13.5
18. It works exactly on adaptive learning according to the learners' performance and choice.	3.44	A	13.5
19. Lecturers are trained and licensed in their fields to meet the educational standard of teaching goals and effectiveness.	3.67	A	7.5
20. It customizes adaptive learning experiences of the delivery of the lesson to address the needs and unique individual learning experiences.	3.79	A	4.5
Average Weighted Mean	3.62	A	
Standard Deviation	0.721		

Rank 2 is shared by the four indicators which are “It nurtures effective lecturers and encourages individuals to expand the various application of the skills and knowledge”, “Adaptive learning system updates explores, the system of knowledge in teaching, and stores information among students the content of teaching tailored to the objectives of the lesson”, “It fosters and growth of learning to prepare students for their meaningful and productive learning process”, and “It customizes adaptive learning experience delivery of the lesson addresses the needs and unique individual learning experiences”, 3.79 or Agree which means Adaptive learning is Observed. Rank 3 is shared by the two indicators which are “It nurtures the learning environment and fine line of adaptive learning that influences the student’s susceptibility to their learning process”, and “Lecturers are trained and licensed in their fields to meet the educational standard of teaching goals and effectiveness”, with a weighted mean of 3.67 or agree which means Adaptive learning to is Observed. The least in rank is shared also by the two indicators which are “Adaptive learning can be selective and picky based on the characteristics of the learners and behaviors in the subject”, and “It provides picky and selective behavior based on the learning of the students behind their perception and study habits”, with a weighted mean of 3.31 or Moderately Agree which means Adaptive learning is Moderately Observed. The overall average weighted mean is 3.62 or Agree which means Adaptive learning is Observed in school development programs being adapted by the advanced technology approach of teaching in the educational environment.

Table 2: Test of significant correlation on the school development program being adapted by the advanced technology approach of teaching in the educational system as observed by the respondents

Test of Variable	z computed value	Comparison	z critical value	Decision
Adapted advanced technology school development as observed by the respondents	35.668	>	±1.960	Rejected

Note: Two-tailed test, at 0.05 level of significance.

Table 2 presents the test of significant correlation between the school development program being adopted by the advanced technology approach of teaching in the educational system as observed by the respondents.

As revealed in the table, it shows the z-computed value of the adapted advanced school development program as observed by the respondents is 35.668 which means greater than the z-critical value of ±1.960, two-tailed test at 0.05 level of significance which resulted in the decision of rejection since it is significant. Therefore, it is safe to say that there is a significant correlation between the school development program being adopted by the advanced technology approach of teaching in the educational system as observed by the respondents.

Presented in this section are the thematic analysis and core ideas on the adaptive advanced technology in the school development program as a basis for teaching pedagogy approaches. On the other hand, the information on the answers of the

respondents is categorized as follows: 5-Strongly Agree, 4-Agree, 3-Moderately Agree, 2-Disagree, and 1-Strongly Disagree. Hence, the answers are elaborated below:

Table 3: Thematic Analysis and Core Ideas of the Adaptive Advanced Technology School Development Program

Theme	Response of the Respondents	Core Ideas
A. Adaptive Learning	Agree	*self-regulated learning *application skills *knowledge-based project learning *explores teaching
B. Engagement of Learning	Agree	*optimism, interest, and passion *process and decision-making *productive learning process *listen and participate
C. Strategies in Teaching	Agree	*knowledge and learning needs *presentation and content *display class *tool-driven assessment
D. Selective and Picky	Agree	*characteristics of the learners *perception and study habits *academic performance of student *susceptibility to learning
E. Investing to Adaptive Learning	Agree	*preference for learning *learners' performance *goals and effectiveness *learning experiences

A. Adaptive Learning

Adaptive learning in advanced technology is the learning and custom delivery experiences or adaptive teaching that addresses the individual's unique needs through resources, feedback, pathways, and just in time, (Kong, *et al.* 2021).

The participants say that:

“Adaptive learning is a supplement to the different teaching in the educational effort that undertakes the self-regulated involvement of learning”. (T1-P16 & P23)

“It nurtures effective lecturers and encourages individuals to expand the various applications of their skills and knowledge”. (T1-P20 & P21)

“Adaptive learning helps the type and purpose of the learning in teaching standard lessons toward based project learning techniques”. (T1-P17 & P25)

“Adaptive learning system updates explore the system of knowledge in teaching and stores information among students about the content of teaching tailored to the objectives of the lesson”. (T1-P20 & P21)

B. Engagement of Learning

Engagement of learning refers to the process of passion, optimism, interest, curiosity, and degree of attention of students to provide learning which extends motivation level to progress for the learning process. It is the student engagement concept belief and predicated learning improvement which is inspires, interests, and inquisitive learning in students who are dispassionate, disaffected, and bored (Mallillin, *et al.* 2020).

The participants say that:

“It engages students in the degree of optimism, interest, and passion learning that extends the level and process in the educational system and progress”. (T2-P26 & P11)

“It fosters and engages students in the school adaptive learning and ways educators in the governance of the process and decision making”. (T2-P21 & P12)

“It fosters the growth of learning to prepare students for their meaningful and productive learning process”. (T2-P21 & P11)

“It engages active students to listen, take notes, pay attention, respond to questions, ask questions, react, and participate”. (T2-P23 & P11)

C. Strategies in Teaching

Teaching strategies provide methods and assist students to learn on the course content desires to develop the goals to be achieved in the learning process. It identifies the learning and various methods in teaching strategies to develop and enable the right strategy to deal with the learners. It also provides the learning capabilities and assessments of the key development pillars in the teaching strategy and success (Moriña, 2020).

The participants say that:

“It personalizes an adaptive learning approach that provides platforms for individualized experiences and learning progress and uniqueness through learning path skills, knowledge, and learning needs”. (T3-P21 & P11)

“It provides a system in adaptive learning in a customized presentation and content on the new concept based on the responses of the individual activities”. (T3-P20 & P13)

“The strategy of personalized adaptive teaching and learning applies and attributes to any type of lesson and course that displays in the class tool”. (T3-P22 & P12)

“The subject course on personalized adaptive learning is delivered that customizes the system in a driven assessment of each student”. (T3-P21 & P7)

D. Selective and Picky

Selective and picky adaptive learning provides the assessment and definition of methods related to the subject matter in advanced technology. It is associated with the learning process of persistence and transition of students (Fishman, 2016).

The participants say that:

“Adaptive learning can be selective and picky based on the characteristics of the learners and behaviors in the subject”. (T4-P22 & P7)

“It provides picky and selective behavior based on the learning of the students behind their perception and study habits”. (T4-P21 & P14)

“Students are mixed with heterogeneous and homogeneous where picky so the subject matter must be based on individual differences to determine academic performance among them”. (T4-P23 & P11)

“It nurtures the learning environment and fine line of adaptive learning that influences the student’s susceptibility to their learning process”. (T4-P20 & P12)

E. Investing in Adaptive Learning

Investing in adaptive learning is the proper implementation and use in the learning process that suits the learners’ needs. It adapts the understanding and confidence of the learners. It adheres to the flow and standard in the adaptive learning of students that modifies the real-time and teaching method (Krechetov, & Romanenko, 2020).

The participants say that:

“The student as the center of learning is delivered on how the process is adjusted according to the preferences of learning”. (T5-P22 & P12)

“It works exactly on adaptive learning according to the learners’ performance and choice”. (T5-P24 & P11)

“Lecturers are trained and licensed in their fields to meet the educational standard of teaching goals and effectiveness”. (T5-P23 & P9)

“It customizes adaptive learning in the experiences of the delivery of the lesson addresses the needs and unique individual learning experiences”. (T-P21 & P12)

5. Discussion

The school development program being adapted through the advanced technology approach of teaching in the educational field shows that it engages active students to listen, take notes, pay attention, respond to questions, ask questions, react, and participate. It personalizes an adaptive learning approach to provide a platform for an individualized experience learning progress and uniqueness through learning path skills, knowledge, and learning needs which means nurturing effective teachers and encouraging individuals to expand the various applications of the skills and knowledge. The adaptive learning system explores the system of knowledge in teaching and stores information among students about the content of teaching tailored to the objectives of the lesson. It fosters the growth of learning to prepare students for their meaningful and productive learning process and customizes adaptive learning in the experience delivery of the lesson. It addresses the needs and unique individual learning experiences. It is determined to design the effect of advanced technology in teaching and performance of students' academic gaps and independent learning (Jose, & Caballes, 2020).

On the other hand, adaptive learning addresses the individual's unique needs through resources, feedback, and pathways and just in time shows that adaptive learning is a supplement to the different teaching in the educational effort to undertake self-regulated involvement of learning which means lecturers provide full effort in implementing teaching and learning process. It personalizes the learning experience of students' curriculum to emerge adaptive learning into facilitating skills developing classrooms and implementing positive effects of learning (Phillips, *et al.* 2020). It also nurtures effective teachers and encourages individuals to expand various applications of skills and knowledge. It innovates the methodology and design in thinking to guide and to use the traditional instruction to cultivate the subject in teaching. It incorporates and explains instruction and curriculum achievement and goals. It explores the effect of the instruction applied to the framework in teaching and learning. This is to promote adaptive learning of basic information skills and knowledge among the learners (Lin, *et al.* 2020). Yet, the adaptive learning system explores the system of knowledge in teaching and stores information among students about the content of teaching tailored to the objectives of the lesson where it explores academic competency and pedagogical design on the various student development literacy and enhances collaborative learning. It customizes flexibility and learning experience ability level of learning improvement dynamic in the enhanced professional skills adequacy of technology (Malillin, *et al.* 2020). It also shows that adaptive learning helps the type and purpose of teaching standard lessons toward based project learning techniques where the educational reform and improvement explores and emerges the implementation and contextual educational changes (Härkki, *et al.* 2021).

Furthermore, engagement in the learning development of school programs shows students a degree of optimism, interest, and passion for learning to extend students' level of learning and process in the educational system and progress. It increases student

engagement to explain the concept of specific progress and academic achievement of students as to classroom cognitive, emotional, and behavioral agentive (Reeve, Cheon, & Jang, 2020). On the other hand, it shows that it engages active students to listen, take notes, pay attention, respond to questions, ask questions, react, and participate where it patterns the concerned participation of students in the classroom that focuses on limited conversation. It also focuses on the classroom talk in learning opportunities and limitations of students in the educational advantages (Sedova, & Navratilova, 2020). It also fosters and engages students' school adaptive learning and ways of educators in the governance process and decision-making where teachers have a potentially positive impact on students learning inside the classroom with the belief of a deep set of fundamentals in education. It critically influences the lecturers' collaboration engagement and effective process of learning. It provides policies that allow teachers to engage critically on the reflection of all understanding engagement (Bishop, & Durksen, 2020). Hence, it fosters the growth of learning to prepare students for their meaningful and productive learning process. It focuses on the learning concept and project-based especially on the learning theory and implementation of productivity and competency. It is carried through collaborative learning and projects based on the creation of teaching and expected competency (Fajra, & Novalinda, 2020).

Moreover, teaching strategies in advanced technology provide methods and assist students to learn on the course content and desire to develop the goals to be achieved in the learning process. It shows that strategy personalized adaptive teaching and learning application and attributes to any type of lesson and course that displays the class tool. It provides a direct impact on the learning of students in the classroom setting. It supports the teaching process and learning inclusive classroom teachers' practices (Finkelstein, Sharma, & Furlonger, 2021). Hence, it also shows that strategies in teaching personalize an adaptive learning approach to provide a platform for an individualized experience of learning progress and uniqueness through learning path skills, knowledge, and learning needs. It becomes an increase to educational complex and professional learning in continuous effectiveness to support teaching strategies for the lecturers. It provides new approaches and development to faculties' contemporary needs. It allows lecturers of professional learning to promote the model of professional teaching and learning in a self-driven need (Oddone, Hughes, & Lupton, 2019). It also shows that strategies in teaching the subject courses on personalized adaptive learning are delivered to customize systems in a driven assessment of each student. It provides promising adaptive learning as an emerging quality and accesses to promote learning. It adopts effort and development of student learning and benefits in teaching practice and design framework pedagogical approach and system of the strategies in teaching and implementation (Cavanagh, *et al.* 2020). Yet, the strategies in teaching provide a system of adaptive learning in a customized presentation and content on the new concept based on the response of the individual activities where the contemporary concept of education is scrutinized in the teaching and learning framework in Bloom's taxonomy of the

educational objectives. It processes the information and activities on the entire educational goals and discourse of teaching and learning (Arievitch, 2020).

Nevertheless, adaptive learning to be selective and picky provides the assessment and definition method related to the subject matter. It shows that students are mixed with heterogeneity and homogeneity where picky subject matter must be based on individual differences to determine academic performance among them. It focuses on the intellectual domain in the academic enhanced performance of students through motivation in teaching and learning. It provides effective and positive academic performance and achievement in a perceived and receptive engagement of the predicted motivation engagement in underpinning the learning behavior and self-effectiveness regulation (Wong, & Wong, 2021). In addition, selective and picky shows adaptive learning based on the characteristics of the learners and behaviors in the lesson. The nature of adaptive learning to be selective and picky is based on positive learners' interaction tasks. It is based on students' behavior of learning to their emotional, social, and cognitive interaction (Dao, & Sato, 2021). On the other hand, adaptive learning provides picky and selective behavior based on the learning of the students behind their perceptions and study habits. It provides an opportunity to investigate lecturers' behaviors and perceptions in the learning environment. It also provides interaction and outcomes on instructions to students that can be effective or not in the classroom and learning practices (Noori, Orfan, & Nawi, 2021). Moreover, adaptive learning to be selective and picky nurtures the learning environment and fine line of adaptive learning that influences students' susceptibility to the learning process. It presents a behavior on the learning process of students that establishes advanced teaching and excellence (Haynes, 2021).

Lastly, investing in adaptive learning is the proper implementation and use in the learning process of advanced technology. It suits the learners' needs and it works exactly on adaptive learning according to the learners' performance and choice. It enables the analysis and advanced learning of predictive model forecast outcome and behavior performance. It provides models and specific learning application prediction and influences learning outcomes. It generalizes the context and approaches to predictive improvement enhancement and models of the possible intervention. It analyzes the direction to influence students' prediction and performance (Moreno-Marcos, *et al.* 2020). In addition, investing in adaptive learning shows that faculties are trained and licensed in their fields to meet the educational standard of teaching goals and effectiveness. It explores the extent of appropriate goals in suitable measures and improved challenges faced to identify and determine the school's learning and effectiveness. It requires an approach and in-depth evaluation of effective improvement of the school or university plans (Böse, & Brauckmann-Sajkiewicz, 2021). In addition, investing in adaptive learning shows students as the center of learning is delivered on how the process is adjusted based on the needs of students' preference of learning where lecturers categorize the perceived learning of students in common and in good practice. It validates the education application and style of learning. It determines the resources and learning styles tailored

to the curriculum of advanced technology adaptive learning (Rogowsky, Calhoun, & Tallal, 2020). Lastly, it customizes the adaptive learning experience delivery of the lesson to address the needs and unique individual learning experience. It enables interactive features in learning and cycles as to reflective observation of learning, concept, and experience where it provides holistic application and learning experiences (Fromm, 2021).

5.1 Conclusions

School development programs being adapted through an advanced technology approach to teaching in education shows to engage active students to listen, take notes, pay attention, respond to questions, ask questions, react, and participate, and personalizes an adaptive learning approach that provides a platform in an individualized experience learning progress and uniqueness through learning path skills knowledge and learning needs.

Adaptive learning in advanced technology shows the type and purpose of the learning in teaching standard lessons toward based project learning techniques where it enhances teaching and learning process for the academic performance of students.

Engagement of learning shows that students are adaptive in the degree of optimism, interest, and passion. This includes student learning, extended level of learning and process in the educational system, and progress through the contribution of advanced technology in teaching.

Teaching strategies provide the proper method and personalized adaptive teaching and learning that apply and are attributed to any type of lesson and course that displays the class tool.

Selective and picky adaptive learning shows that students are mixed with heterogeneous and homogeneous where picky so the subject matter must be based on individual differences to determine academic performance among them.

Investing in adaptive learning is the proper implementation and use in the learning process that suits the learners' needs. It shows that it works exactly on adaptive learning according to the learners' performance and choice.

Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Authors

Dr. Leovigildo Lito D. Mallillin is a Doctor of Philosophy Holder in Development Education and an international researcher. At present, he is connected to the Philippine Normal University. His research interests are Educational Leadership Management, Professional Education, English as a Second Language, and Research Methodology.

Dr. Edgardo G. Canda is a Doctor of Education Holder in Educational Management and a university statistician. At present, he is connected to Pamantasan ng Lungsod ng

Marikina and is a part-time professor at Marikina Polytechnic College. Former Dean of the College of Teacher Education at Pamantasan ng Lungsod ng Marikina.

Dr. Ma. Aurora T. Caday is the Chief Human Resource Officer (CHRO) of Tim Hortons Philippines. She is a graduate of Bachelor of Arts (AB) major in Political Science and Bachelor of Arts major in Literature with honors both in the same year from Saint Louis University where she also obtained her Master in Business Administration (MBA) major in Human Resources and Doctor of Business Administration. Dr. Caday is a graduate of Juris Doctor (JD). She is currently taking her Post Doctorate Degree in Strategic Management and Leadership and Doctor of Philosophy (PhD) in Development Administration both in Philippine Christian University (PCU).

References

- Arievitch, I. M. (2020). The vision of developmental teaching and learning and Bloom's taxonomy of educational objectives. *Learning, Culture and Social Interaction*, 25, 100274.
- Bishop, M., & Durksen, T. L. (2020). What are the personal attributes a teacher needs to engage Indigenous students effectively in the learning process? Re-viewing the literature. *Educational Research*, 62(2), 181-198.
- Böse, S., & Brauckmann-Sajkiewicz, S. (2021). (In) effective leadership? Exploring the interplay of challenges, goals, and measures in the context of school improvement. *Journal of Educational Administration*, 59 (4) Retrieved from <https://www.emerald.com/insight/content/doi/10.1108/JEA-07-2020-0162/full/html>
- Cavanagh, T., Chen, B., Lahcen, R. A. M., & Paradiso, J. R. (2020). Constructing a Design Framework and Pedagogical Approach for Adaptive Learning in Higher Education: A Practitioner's Perspective. *International Review of Research in Open and Distributed Learning*, 21(1), 173-197.
- Chengwu, R. (2017). Theory of People's Livelihood in Education: A Historical Perspective of cognition. *Educational Research*, (4)1.
- Dao, P., & Sato, M. (2021). Exploring fluctuations in the relationship between learners' positive emotional engagement and their interactional behaviours. *Language Teaching Research*, 13621688211044238.
- Fajra, M., & Novalinda, R. (2020). Project Based Learning: Innovation To Improve the Suitability of Productive Competencies in Vocational High Schools with The Needs of The World of Work. *International Journal of Multi-Science*, 1(08), 1-11.
- Finkelstein, S., Sharma, U., & Furlonger, B. (2021). The inclusive practices of classroom teachers: a scoping review and thematic analysis. *International Journal of Inclusive Education*, 25(6), 735-762.

- Fishman, L. (2016). Helping Your Child with Extremely Picky Eating: A Step-by-Step Guide for Overcoming Selective Eating, Food Aversion, and Feeding Disorders. *Journal of Nutrition Education and Behavior*, 48(1), 84-e3.
- Fromm, J., Radianti, J., Wehking, C., Stieglitz, S., Majchrzak, T. A., & vom Brocke, J. (2021). More than experience?-On the unique opportunities of virtual reality to afford a holistic experiential learning cycle. *The Internet and Higher Education*, 50, 100804.
- Härkki, T., Vartiainen, H., Seitamaa-Hakkarainen, P., & Hakkarainen, K. (2021). Co-teaching in non-linear projects: A contextualised model of co-teaching to support educational change. *Teaching and Teacher Education*, 97, 103188.
- Haynes, C. (2021). The susceptibility of teaching to White interests: A theoretical explanation of the influence of racial consciousness on the behaviors of White faculty in the classroom. *Journal of Diversity in Higher Education*. 16(1)
- Hussain, S., Ahmad, S., Saleem, M., & Akhtar, S. (2020). Finite population distribution function estimation with dual use of auxiliary information under simple and stratified random sampling. *PLOS one*, 15(9), e0239098.
- Jose, M. T., & Caballes, D. G. (2020). Effects of Virtual Class in Teaching Technology and Livelihood Education and the Performance of Grade Ten Students at Dalandanan National High School. *Software Engineering*, 12(3), 45-50.
- Kabudi, T., Pappas, I., & Olsen, D. H. (2021). AI-enabled adaptive learning systems: A systematic mapping of the literature. *Computers and Education: Artificial Intelligence*, 2, 100017.
- King, A., Goldfarb, B., & Simcoe, T. (2021). Learning from testimony on quantitative research in management. *Academy of Management Review*, 46(3), 465-488.
- Koh, J. H. L., & Kan, R. Y. P. (2021). Students' use of learning management systems and desired e-learning experiences: are they ready for next-generation digital learning environments?. *Higher Education Research & Development*, 40(5), 995-1010.
- Kong, Y., Liu, L., Wang, J., & Tao, D. (2021). Adaptive Curriculum Learning. In *Proceedings of the IEEE/CVF International Conference on Computer Vision* (pp. 5067-5076).
- Krechetov, I., & Romanenko, V. (2020). Implementing the Adaptive Learning Techniques. *Вопросы образования*, (2 (eng)).
- Levitt, H. M., Morrill, Z., Collins, K. M., & Rizo, J. L. (2021). The methodological integrity of critical qualitative research: Principles to support design and research review. *Journal of Counseling Psychology*, 68(3), 357.
- Mallillin, L. L. D. (2020). Different Domains in Learning and the Academic Performance of the Students. *Journal of Educational System*, 4(1), 1-11.
- Mallillin, L. L. D. (2021). Teacher theory and adaptable model: an application to the teaching profession. *European Journal of Education Studies*, 8(12).
- Mallillin, L. L. D. (2022). Adaptive Theory Approach in Leadership: A Guide to Educational Management System and Mechanisms. *European Journal of Education Studies*, 9(7).

- Mallillin, L. L. D. (2022). Teaching and learning intervention in the educational setting: adapting the teacher theory model. *International Journal of Educational Innovation and Research*, 1(2), 99-121.
- Mallillin, L. L. D. (2024). Instructional teaching theory: Basis for effective teaching device in learning. *Eureka: Journal of Educational Research*, 2(2), 120-132.
- Mallillin, L. L. D., & Laurel, R. D. (2022). Professional Development System Theory for Quality Education. *European Journal of Education Studies*, 9(8).
- Mallillin, L. L. D., Cabaluna, J. C., Laurel, R. D., Arroyo, P. A. C., Señorón Jr, T. M., & Mallillin, J. B. (2021). Structural Domain of Learning and Teaching Strategies in The Academic Performance of Students. *European Journal of Education Studies*, 8(9).
- Mallillin, L. L. D., Carag, E. A., Mallillin, J. B., & Laurel, R. D. (2020). Integration of knowledge through online classes in the learning enhancement of students. *European Journal of Open Educ. and E-learning Studies*, 5(1).
- Mallillin, L. L. D., Mendoza, L. C., Mallillin, J. B., Felix, R. C., & Lipayon, I. C. (2020). Implementation and Readiness of Online Learning Pedagogy: a Transition To Covid 19 Pandemic. *European Journal of Open Education and E-learning Studies*, 5(2).
- Mallillin, L. L., Laurel, R. D., Mallillin, J. B., Arroyo, A. P., Carag, E. A., Guingab-Carag, E., ... & Tarayao, D. Z. (2021). Strategies, trends, methods, and techniques of teaching in the new normal learning perspective of students. *East African Scholars J Edu Humanit Lit*, 4(7), 265-274.
- Mallillin, L. T. D., Mallillin, J. B., & Laurel, R. D. (2020). Learning styles: A motivation to study habits of students. *Global Journal of Human-Social Science: Linguistics & Education*, 20(1), 1-10.
- Moreno-Marcos, P. M., Pong, T. C., Muñoz-Merino, P. J., & Kloos, C. D. (2020). Analysis of the factors influencing learners' performance prediction with learning analytics. *IEEE Access*, 8, 5264-5282.
- Moriña, A. (2020). Faculty members who engage in inclusive pedagogy: Methodological and affective strategies for teaching. *Teaching in Higher Education*, 1-16.
- Noori, A. Q., Orfan, S. N., & Nawi, A. M. (2021). Students' perception of lecturers' behaviors in the learning environment. *International Journal of Education and Literacy Studies*, 9(3), 64-69.
- Oddone, K., Hughes, H., & Lupton, M. (2019). Teachers as connected professionals: A model to support professional learning through personal learning networks. *International Review of Research in Open and Distributed Learning*, 20(3).
- Phillips, A., Pane, J. F., Reumann-Moore, R., & Shenbanjo, O. (2020). Implementing an adaptive intelligent tutoring system as an instructional supplement. *Educational Technology Research and Development*, 68(3), 1409-1437.
- Reeve, J., Cheon, S. H., & Jang, H. (2020). How and why students make academic progress: Reconceptualizing the student engagement construct to increase its explanatory power. *Contemporary Educational Psychology*, 62, 101899.

- Rogowsky, B. A., Calhoun, B. M., & Tallal, P. (2020). Providing instruction based on students' learning style preferences does not improve learning. *Frontiers in Psychology, 11*, 164.
- Sedova, K., & Navratilova, J. (2020). Silent students and the patterns of their participation in classroom talk. *Journal of the Learning Sciences, 29*(4-5), 681-716.
- Wong, I. H., & Wong, T. T. (2021). Exploring the relationship between intellectual humility and academic performance among post-secondary students: The mediating roles of learning motivation and receptivity to feedback. *Learning and Individual Differences, 88*, 102012.
- Wu, J., Braverman, V., & Yang, L. F. (2020). Accommodating Picky Customers: Regret Bound and Exploration Complexity for Multi-Objective Reinforcement Learning. arXiv preprint arXiv:2011.13034. Retrieved from <https://ui.adsabs.harvard.edu/abs/2020arXiv201113034W/abstract>

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).