

Teachers' Readiness on the Implementation of 21st Century Learning: An Overview in A Primary School in Klang, Selangor

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Abstract

This study aims to determine the degree of teachers' readiness to implement 21st century learning based on their perceptions of implementation constraints or challenges and teachers' suggestions to improve implementation in a primary school in the Klang district of the State of Selangor. To collect the data for this mixed-mode study, a questionnaire in the form of a Google Form and a semi-structured interview were undertaken. The 49 teachers from the chosen school served as samples. Data from the questionnaire was evaluated using MS Excel 2010 to do descriptive analysis and statistical inference, while data from the interview was assessed using coding and themes. The results of this study indicated that teachers' levels of knowledge, aptitude, and attitude were average. The results of this study also pointed to several limitations and difficulties in putting 21st century learning into practice in the classroom. Additionally, it makes several recommendations to improve how successfully 21st century learning is implemented in the classroom.

Keywords: 21st Learning, Perception, Constraint, Challenges, Suggestions

Introduction

The 21st century is characterized by advances in every sphere, including economics, industry, technology, and education. Global development has affected everything (Boholano, 2017). The growth in the 21st century brought forth by the Indonesian government is known as the industrial revolution 4.0. In the age of globalization, people attempt to compete. Language is one of the critical skills they must develop. As a result, the English language holds a significant position as the worldwide tongue (Balla, 2018). The need from the time has led to the development of 21st century capabilities. According to Trilling and Fadel (2009), there are four main frameworks for 21st century skills: life and career skills, learning and innovation skills, information, media, and technology skills, and 21st century themes.

A major part of preparing pupils for higher education is played by primary schools. Since the first educational stage, primary schools mold students' character, knowledge, and skills. According to Artini and Padmadewi (2020), pupils require formal education to develop strong life skills. Teachers in the twenty-first century need to understand and be aware of the 21st century abilities that are difficult for pupils to learn. To assist students in achieving the aim

of 21st century education, instructors must have a working knowledge of 21st century abilities, according to Arch (2010). According to Handayani (2017), English instructors should practice reflection, competency development, ICT proficiency, and alternative assessment promotion.

The capacity to change one's willingness and ability to grow one's skill and attitude to do an activity is what Dalton and Gottlieb (2003) define as ready. During this phase, the teachers must be willing to take better action. A person's confidence is tied to their level of readiness. According to Nasution et al. (2018), preparedness emphasizes preparation. In this instance, the teachers' preparedness may be demonstrated in their readiness to evaluate students' learning progress. To provide an evaluation for their pupils, they must be competent and confident. Additionally, educators must equip themselves with knowledge of 21st century skills.

In terms of lesson design, the teaching and learning process, and the evaluation of primary English instructors, the current research placed a strong emphasis on the integration of 21st-century abilities.

The purpose of this study is to ascertain the level of 21st century learning skills knowledge among primary school teachers in Klang District, Selangor.

Only the level of teacher readiness for implementing 21st century learning, the level of teacher preparation required for implementing 21st century learning, and the extent of level relationships between teachers' willingness and ability to implement it in the classroom are the focus of this study.

Statement of the Problem

Students differ in terms of prior knowledge, interests, motivations, and learning styles, making it challenging to develop 21st century learning abilities in them. The illiterate of the 21st century is not for those who cannot read or write but it is for those who cannot learn, unlearn, and relearn. Education in the 21st century is a transformation done in renewing the existing standard of education, which is an education system that is flexible, creative, challenging, and more complex. (Fauziah, Shamsuddin, and Baharudin, 2020).

A study by Tham and Tan (2020) found that teachers' lack of expertise in teaching techniques and comprehension of the new curriculum vision are to blame for weaknesses in instruction. Instructors must use student-centered learning strategies and creative teaching techniques that emphasize thinking skills and self-learning utilizing ICT (Abdul Halim, 2020).

Rahman (2020), on the other hand, claimed that students' enthusiasm in the learning process is declining because of the teachers' restricted usage of tactics, techniques, methods, and approaches. Students were unable to incorporate 21st century learning abilities into their learning process because teachers are unable to develop them effectively.

The use of conventional teacher-centered instruction is still widespread among instructors (Ahmad Dahlan, 2019). This indicates that the process of information transfer occurs passively, which has the effect of stifling students' participation in educational activities. Furthermore, most students were unable to master the 4K skills as well as the other skills found in the standard documents. The results of a study by Najhan and Manjeet (2019) demonstrated that instructional techniques and strategies are crucial in encouraging students' interest in a topic and capable of altering their prior impressions of subjects that were regarded as challenging.

To ensure a harmonious combination of teacher, student, and material centralization and be able to support students in maintaining focus throughout teaching and learning sessions, best

pedagogy and teaching practices should apply a variety of methods, strategies, techniques, approaches, and resources that are well blended (Kamarudin Akhmal, 2019). The results of Abdul Ahmad's (2020) study also demonstrated that educators must possess a thorough understanding of pedagogy, subject matter, and student learning requirements. The purpose of this study is to ascertain the degree of 21st century learning skills knowledge among primary school teachers in Klang District, Selangor.

Teachers must reach international standards for students' knowledge to be poured into the mould envisioned by the Malaysia Education Blueprint 2013–2025, also known as the Pelan Pembangunan Pendidikan Malaysia, or PPPM (Mary Yap, 2015). How teachers implement effective and high-quality teaching and learning that is pertinent to current developments is the primary problem of 21st-century education, according to Shift Bulletin (2015a). To meet this challenge, instructors must keep up to date on both their knowledge (curriculum content) and competencies (teaching and learning pedagogy).

The empowerment of IPG is intended to increase teaching standards and graduate quality, ensuring that the caliber of trained instructors provided to schools meets the requirements that can satisfy the learning demands of the twenty-first century. Fauziah Nazar et al. (2020) contended that 21st century educators must be strong mentally, creatively agile, idealistically steadfast, and self-reliant. Marisha Tan (2021), who emphasized holistic pedagogical skills and investigated the use of multi-modal learning models that harness technology to uncover high-level thinking abilities and strengthen students' learning because their success determines the success or failure of human capital through PPPM, supports this viewpoint as well.

Research Questions

This study will answer the following questions:

RQ 1: What is the level of 21st century learning readiness of primary school teachers in the district of Klang in terms of knowledge, skills, and attitude in the school?

RQ2: What are the constraints and challenges faced by teachers in implementing 21st century learning in school?

Significance of the Study

The Ministry of Education Malaysia (KPM), State Education Department (JPN), and District Education Office (PPD), particularly PPD Klang, are anticipated to gain from the findings of this study in their efforts to improve and enhance the training requirements teachers implement 21st-century learning by offering guidance and supplying teachers with knowledge and science on the implementation of successful 21st-century learning in their respective schools. Additionally, it is anticipated that the findings of this study will shed light on how prepared teachers are to implement 21st century learning in the classroom. Additionally, the study's findings can serve as a guide for researchers in the future.

Scope of the Study

Only primary school teachers in the Klang District were included in this study. The study sample will be chosen at random from 10 Klang District elementary schools. Only the level of teacher readiness for implementing 21st century learning, the level of teacher preparation required for implementing 21st century learning, and the extent of level relationships between teachers' willingness and ability to implement it in the classroom are the focus of this study.

Literature Review**21st century learning**

Technology is not just a tool for instructors or lecturers to understand to be more effective in maintaining records, drafting lesson plans, and other personal or professional responsibilities, according to Mansoor (2020), but its application is also crucial. more of a problem-solver and analytical thinker (Tajuddin, 2019). What must be tested are the ways in which students can and must engage with learning through information technology, and how this technology impacts the classroom broadly (Ahmad Abdullah, 2021).

Margaret Darrel (2020) claims that this shift in perspective is about technology that goes beyond considering new tools and software to address transformative education that can put changing student needs at the core of education can and must include relevance and 'up to date' to learning environment. Technology literacy demands innovative instruction, professional educators who are inspired, and changes to their fundamental responsibilities and connections with students for it to be a valuable learning tool for them (Salihin, 2020). In fact, instructors need to be creative and risk-takers whose lessons differ from the ones students have previously received and from how they have learnt. To help kids get ready for the workforce, teachers must undertake difficult but important changes (Rahimah, 2019).

Piaget's Theory on 21st Learning

The focus of Piaget's Cognitive Learning Theory is on internal mental processes, such as how newly acquired knowledge is processed through comparison and consolidation with previously stored information. Several individuals have studied Theory Cognitive Learning, including Piaget, Bruner, Ausubel, and Kohler. They contend that learning requires complicated cognitive processes in addition to the simple correlations between inputs and feedback. Learning is a shift in knowledge and perspective that doesn't necessarily manifest in a person's outward behaviour.

Therefore, to use this theory in 21st century learning, teachers need to understand it. Globalization in the twenty-first century has changed the necessity for learning from earlier times. The focus of 21st century learning is on developing students' high-level thinking skills rather than only sticking to the curriculum that is provided by the national education system. According to Simon Cardy (2019), the advancement of educational research has led to the creation of new learning, including new teaching models, and learning strategies that address societal needs. However, the teaching and learning processes of the 21st century continue to use the learning theories researched by earlier individuals as a guide.

Constructivism Theories on 21st Learning

A learning philosophy called constructivism encourages each learner to create their own concepts. Lev Vygotsky, Jean Piaget, and Jerome Bruner, among other psychologists, contributed to the development of this idea. The constructivist learning approach is more flexible since it gives students more room and chances to create and develop their own knowledge. Constructivism is an approach to knowledge acquisition that relies on people actively engaging in problem-solving and critical thinking.

Even pupils have the chance to observe and manage their own thoughts, which leads to a great lot of comprehension and enthusiasm in the subject. The constructivist method emphasizes connecting fact absorption and fact accommodation and encourages the process of new knowledge (Nor Hannah, 2019). Students must participate and engage in meaningful interactions in the technologically based constructivist learning environment. The focus here

is on pupils who make sense of interactions and prior knowledge to understand and generate meaningful knowledge. Therefore, if teachers adopt a constructivist approach, the challenge is to modify instructional design strategies so that students actively participate in project activities and assignments that motivate them to explore, test, construct, collaborate, and reflect on what they are learning.

Constructivism also places a strong emphasis on 21st century learning, in which students play a crucial role as intermediaries and processors of knowledge (John, 2019). Where students have a right to be encouraged to learn, student-centered learning should be prioritized.

According to Grace and Henry (2020), students have the right to learn when they are engaged in active learning and believe that knowledge is being built spontaneously. John, (2019) agrees that pupils should be given engaging, pertinent, and purposeful issues to tackle. It is sufficient to merely organize the problem and let students come up with a solution; the difficulties presented need not necessarily be challenges encountered in the actual world. Yet when using such abbreviations, there is no one correct response or solution to a problem.

The constructivist learning environment is made to encourage students to develop sophisticated thinking abilities that call for inquiry and fair criticism of the issues raised. Students must develop their own concepts to come up with worthwhile answers to problems. This is what Sulaiman (2020) refers to as student-constructed and student-understood knowledge. A useful method to get information and strengthen prior horse defenses is to do a thorough Internet search. According to Grace and Henry (2020), the intention of the early-stage exercises was to provide value to the pupils, as the pen indicates.

Research Methodology

Research Design

This study's design used a mixed mode approach. The researcher employed the qualitative method to discover how instructors felt about using it in their teaching and learning activities in the classroom. The qualitative mode was used to assess how well-versed teachers were in their lesson plans in 21st-century learning. To gather the data needed for the study, a semi-structured interview with participants was undertaken to learn their impressions of the factors identified. Teachers were chosen at random to participate in this survey as responders. They will first be given a tool to assess their preparation for and knowledge of 21st-century learning. The researcher will next interview the instructors to see how they feel about incorporating 21st-century learning into their teaching and learning processes.

Population and Sampling

All the teachers employed by the specific Tamil primary schools (SJKT) in the Klang district of Selangor participated in this study. There are 49 instructors employed by this institution in total. Administrative leaders including the headmaster, senior curriculum assistants, senior assistants for student affairs, and senior co-curricular assistants are within this group.

49 teachers were selected as examples to determine the degree of 21st century learning preparedness of primary school teachers in the district of Klang in terms of knowledge, abilities, and attitude in the classroom.

Research Instruments

To gather data for this study, two instruments were employed. A semi structured interview question served as the first piece of equipment. This interview tool can gather the more precise, thorough, and in-depth data needed for this investigation. Additionally, the

researcher might build strong bonds with the respondents. More accurate and trustworthy information may be obtained in a healthy connection. This interview tool is also appropriate for use as a review of data. Only 4 primary questions will be utilized in the interview, in accordance with the study's purpose.

Data Collection Procedures

The researchers verbally consented to the study sample prior to asking them to complete the questionnaire. The researcher also addressed how respondents replied to the items in the questionnaire and the interview questions, in addition to providing a brief overview of the study's objectives.

First, two to three days before the interview, the respondents received the interview questions. It helps the responders to provide information more accurately and without leaving anything out. Due to the Covid-19 epidemic issue in Malaysia and other countries across the world, the interview session was done online via Google Meet.

The Google Form-based questionnaire was then emailed over Telegram and WhatsApp, and the researcher offered the responders two weeks to submit their answers. The researcher then used spreadsheet data that was automatically created by the Google Form tool to collect replies from the respondents.

Data Analysis

Demographics Profile of Respondent

The study's discussion of the respondent demographic was based on four factors. Gender, race, age, and level of education were the four listed demographic characteristics of the respondents who participated in the study. It was discovered that 165 teachers participated in the survey, of whom 49 were male teachers (29.7%) and 116 were female teachers (70.3%). It was discovered that a total of 49 teachers responded to the survey that was used for the study. 4 male teachers (8.2%) and 45 female instructors (91.2%) made up the rest of the group. The largest age group among respondents—42 in all were between the ages of 35 and 44, accounting for 85.7% of the total respondents. Five respondents (10.2%) fell within the 45 to 54 age range. Only 2 (4.1%) of the respondents were 55 years of age or older. 35 (71.4%) respondents had between 11 and 15 years of teaching experience, respectively. 71.4% of responders had more than 10 years of experience, according to this statistic. There were 2 (4.1%) and 1 (2%) responder with experience ranging from 1 to 5 and 6 to 10 years, respectively. According to the data, just one respondent (2.0%) and one (2.0%) respondent, respectively, held teaching degrees. The highest percentage of responders, 43 (87.8%), hold a bachelor's degree. Four (8.2%) of the respondents had a master's degree, but none had a doctorate in philosophy, the highest degree available.

Analysis Based on Research Question 1 (Questionnaire)

- **Knowledge and Awareness of Teachers on 21st Century Learning**

The questionnaire's component B measures the preparation of primary school teachers in terms of their understanding and awareness of 21st-century learning. The results of this study enable researchers to assess the readiness of teachers in a primary school in the District of Klang, Selangor, to apply 21st century learning in their classroom. The 8 items that the researcher created served as the basis for the analysis. The information in Table 4.3 displays the mean and standard deviation that were determined for each question on the questionnaire about the knowledge and awareness of teachers.

Table 4.3 shows that the average level of preparation in terms of knowledge and awareness of 21st century learning is 3.42, with a standard deviation of 0.553. The greatest mean value in this area is found in one of its items, "I know the importance of generating innovation in teaching towards 21st century learning" (mean=4.08 and SD=0.502). This indicates that through their observation and self-evaluation, the instructors in the school that was questioned indicated average levels of preparation in terms of knowledge and understanding of 21st century learning.

Table 4.3

Analysis of the Level of readiness in term of knowledge and awareness on 21st century learning

Items	Mean	Standard Deviation	Interpretation
I know the importance of 21st century skills in effecting learning.	3.26	0.552	Average
I am knowledgeable for exposing students to 21st century skills learning resources.	3.08	0.563	Average
I am knowledgeable to apply 21st century skills in teaching.	3.68	0.559	High
I am knowledgeable to plan learning by incorporating elements of 21st century skills in my teaching.	3.44	0.525	Average
I am knowledgeable in using a variety of teaching and learning strategies and techniques appropriate to the current situation.	3.58	0.498	High
I know the importance of generating innovation in teaching towards 21st century learning.	4.08	0.502	High
I know the importance of managing classrooms so that 21st century learning can happen effectively.	3.48	0.545	Average
I learned 21st century skills through the courses and briefings I attended.	3.66	0.543	High
Overall	3.42	0.553	Average

- **Skills Acquired by Teachers on 21st Century Learning**

According to Table 4.4, the learning of teachers in the 21st century is at a high level, with a mean of 4.22 and a standard deviation of 0.594. Most of its items have a very high average score of over 4.50. Item 1 received the highest mean of 4.75 and SD of 0.652 which is "I can use word processing software". This shows that the teachers have very good word processing skills. Two items in this section scored a minimum average, placing them at the average level. The mean values for the items "I can use graphics software" and "I can create a website" are respectively 3.42 and 3.43, indicating that many teachers do not acquire the skills necessary to effectively create websites and graphics programs. Overall, teachers' readiness for 21st century learning skills was shown to be high by their observations and self-assessment.

Table 4.4

Analysis of the Level of readiness in term of Skills on 21st century learning

Items	Mean	Standard Deviation	Interpretation
I can use word processing software	4.75	0.652	Very high
I can use of graphics software	3.42	0.505	Average
I can construct tables and charts using Microsoft Excel	4.58	0.559	Very high
I can create and make electronic presentations using Microsoft Powerpoint	4.55	0.525	Very high
I can build a website	3.43	0.598	Average
I can surf the internet to get information	4.58	0.592	Very High
I can download software using the internet	4.25	0.645	High
Overall	4.22	0.594	High

- **Teachers' attitude on implementing the 21st century learning in their classroom**

Participants answered according to their experience and attitude. Table 4.5 shows the mean and standard deviation obtained for each item of the questionnaire as the attitude of teachers towards the implementation of 21st century learning in their classroom. According to Table 4.4, only the entry "Responsible for the application of 21st century skills in teaching and learning" with a mean of 3.78 and standard is at a high-level deviation 0.602. Most items have an average score between 3.00 and 3.50, which places them in the middle range. The lowest average in this section is "I constantly analyze student achievement and plan follow-up measures (Mean = 2.92 and SD = 0.514) at a low level.

Table 4.5

Analysis of The Level of Readiness In Term of Teachers' Attitude on Implementing The 21st Century Learning

Items	Mean	Standard Deviation	Interpretation
I am responsible for implementing 21st century skills in teaching and learning.	3.78	0.602	High
I am ready to take a course related to pedagogy in the 21st century.	3.49	0.558	Average
I make sure elements of 21st century skills are applied in teaching and learning	3.45	0.509	Average
I am willing to collaborate with other teachers to develop 21st century skills in teaching and learning.	3.14	0.550	Average
I always create a learning environment that involves a digital environment in teaching and learning.	2.98	0.501	Low
I constantly analyze students' achievement and plan follow-up actions.	2.92	0.514	Low
The application of 21st century skills can help me to improve my teaching and learning practice.	3.46	0.538	Average
The practice of 21st century skills in teaching and learning does not burden me in performing the task of teaching.	3.24	0.518	Average
Overall	3.22	0.549	Average

- **Resources and Facilities**

Referring to Table 4.8, statement P1 states that teachers must prepare their own resources for teaching and learning, and P4 believes that this problem is burdensome for most teachers. When talking about securing resources, teachers' ideas, and creativity also play an important role, as P2 realized that securing resources is a challenge for many classes when implementing 21st century learning, as the teacher teaches more than one subject and covers different grade levels. Learning in the 21st century requires not only resources, but also ICT-related tools and equipment. However, P5 notes that the tools and opportunities available to schools are inadequate and ineffective to support the implementation of 21st century learning.

Table 4.8

Participants' Statements on Resources And Facilities In The Implementation of 21st Century Learning

Participants	Statement
P1	"We need to provide a lot of resources."
P2	"Teachers are tired of having to provide resources for many classes."
P3	"Tools and facilities are not enough."
P4	"Provision of attractive and suitable resources." And "Facilities provided not enough to support learning. "
P5	"..Facilities provided to schools are inadequate and less efficient..."

- **Time**

The results in Table 4.9 show that participants face time constraints that prevent them from effectively applying 21st century learning. With reference to the statements P1, P2 and P4, the teacher stated that the activity and learning of the 21st century takes a long time. Without poorly planned learning and constant practice, 21st century learning will not function smoothly and effectively. On the other hand, Learning Time has been replaced by other tasks that do not belong to the teaching and learning process, when teachers must complete external tasks, paperwork or school programs during the teaching and learning time of P3 and P5 respectively.

Participants	Statement
P1	"Group activities require more time."
P2	"Limited time period for teaching and learning sessions."
P3	"Time constraints and going to courses have affected the teaching process and learning. "
P4	"Not enough time to carry out activities."
P5	"...additional tasks... paperworks and school programs that take up teaching sessions and learning. "

- **Knowledge and Skills**

P1 stated that the implementation of 21st century learning reduces the process of evaluating students' understanding of the subject and this statement shows that P1 does not know how to assess student performance in 21st century learning. Statements P2, P3 and P5 indicate that teachers' lack of knowledge, ideas and teaching skills affect the effectiveness of the process of implementing 21st century learning. P3 said about teachers who are in a comfort zone with old teaching methods and refuse to implement new teaching pedagogy. P4, on the other hand, emphasizes that knowledge and skills enable teachers to effectively prepare and carry out teaching in a certain period.

Participants	Statement
P1	"The focus on assessing students' comprehension in a topic is limited. Some of the skills of 21st century learning are difficult to apply in the classroom. "
P2	"Lack of knowledge in understanding 21st century learning. So, lack of ideas on how to apply 21st century learning into skills... subject skills."
P3	"Some teachers are still unclear about 21st century learning and are reluctant to change their pedagogical practices. Teachers themselves have not yet mastered creativity and critical thinking well and are more comfortable with the method of traditional teaching. "
P4	"Teachers need to make good preparations to ensure that activities are possible completed within the targeted time. "
P5	"I think almost 70% of teachers do not know and do not understand the concept of 21st century learning ..."

Discussion

(Discussion of the knowledge, abilities, and attitude of primary school teachers in the Klang area about their preparation for 21st-century learning)

The information gathered through a questionnaire was used to address this research question. In terms of knowledge and awareness, the first component was to examine the degree of primary school teachers' preparation for 21st-century learning in the Klang area. The second part was on assessing instructors' attitude towards incorporating 21st-century learning into their classrooms. In terms of knowledge and awareness, the survey's results, which included 49 respondents, indicated that instructors were generally prepared to apply 21st century learning (mean = 3.42, standard deviation = 0.553).

The results of the questionnaire's second portion, which assessed instructors' attitudes towards adopting 21st-century learning, were likewise average (mean = 3.22; standard deviation = 0.549). The researcher concluded that the degree of 21st century learning preparedness of primary school teachers of Klang was only at an average level in terms of knowledge, abilities, and attitude in the school.

According to Wearmouth, Edwards, and Richmond (2020), deep readiness in the context of a teacher refers to their preparedness to assume duties involving things like their interests, attitudes, knowledge, and abilities. The degree to which teachers' reactions to and implementation of change in their specific classes are affected determines the success of a change (Fredrick, 2013).

(Discussion on 21st century learning's implementation in the classroom, its limitations and difficulties, and ideas for how to make it better)

The study's findings indicated that instructors still require professional development courses to better their grasp of how to integrate 21st-century learning. Instructors also recognized the necessity for these courses. The findings of research by Sukri (2013), revealed that the study sample has a high level of comprehension about the application of 21st century learning. Research by Abdullah (2017), on the other hand, discovered that instructors only had a moderate degree of expertise regarding the application of 21st century learning.

Teachers recommended more professional development courses to help improve their understanding of 21st century learning. Insufficient information limited their activities teaching practices in a narrow field because they have no idea how to implement the learning of the 21st century for all subjects, including assessment. Besides, teachers felt that 21st century learning is suitable for certain subjects, and they do not know how to use these features for assessment student performance in learning.

Namsone, Cakane, France, and Butkevica (2016), study found that teachers understood better after a professional development model as a guide.

In addition, teachers were interested and ready to use ICT tools in teaching, but they complained about the quantity and quality of available spaces in schools. Garba and Byabazaire, (2015) reported similar results in their study of teacher interests. Teachers were also said to be under-resourced and had to take matters into their own hands to produce their own resources for their teaching. Teachers who taught many subjects need to redouble their efforts and this situation causes fatigue and anxiety in teachers. As a result, teachers felt familiar with the traditional pedagogy and teaching practices.

Recommendations

The researcher stated that other factors were also involved in the study, such as the motivation of the teacher, teachers' satisfaction with the implementation of 21st century education or other motivational factors such as economic factors and the workload of the teacher as a factor affecting the ability of the teacher implementation of 21st century education. The researcher also recommends further studies to use samples from a wider and more diverse range demographic area to obtain more accurate survey results to represent the population Malaysia. In terms of research instruments, future researchers can add open response questions to the survey. With open questions, researchers can get more information about the study. The interview method can also be used by researchers as a research tool to obtain observations from respondents in the form of independent and comprehensive statements.

Conclusion

The whole study was about preparedness teachers to implement 21st century education according to teachers' knowledge and skills, study management systems, and administrative support related to the use of study work learning in 21st century education. The results of this study can be used stakeholders and stakeholders to design effective programs and evaluate their effectiveness programs implemented, especially those involving teacher development professional skills, especially 21st century educational skills.

Contribution

According to the study's findings, primary school teachers in the Klang area of Malaysia were only somewhat prepared for 21st-century learning in terms of their knowledge, abilities, and attitudes. They lacked the knowledge, pedagogical expertise, and attitudes necessary to effectively implement 21st century learning techniques. Besides, teachers appeared to have a favorable opinion on the application of 21st century learning. When students engaged actively in learning activities and even when they seemed more confident, teachers could feel the advantages of 21st century learning. They were still practicing at a reasonable level in the classroom, though. Because of the difficulties and barriers, they encountered, teachers seldom ever incorporated 21st century learning into the classroom. It was claimed that their teaching methods were influenced by their knowledge, resources, facilities, and burdens from other activities.

The study's findings demonstrated that instructors' comprehension of how to apply 21st-century learning has not yet reached a high level, and teachers admit that they require professional development classes to increase their comprehension. Due to a lack of understanding, they were only able to teach a small number of subjects and have no clue how to include 21st century learning into evaluation as well. Teachers believed that 21st century learning was only acceptable for subjects, and they lacked the skills to apply these activities to gauge their students' learning progress. Despite their complaints regarding the number and caliber of facilities offered in their schools, teachers were enthusiastic and eager to employ ICT tools in their instruction. Most instructors were still impacted by old paradigms in their instruction, which made them difficult to invest a bit more time in creating their own resources for 21st-century learning. Teachers were at ease using conventional pedagogy and instructional methods consequently.

The contribution of this study can be seen in the teaching and learning strategies used in 21st-century education, which emphasize communication skills in addition to collaborative learning, creative thinking, critical thinking, and applying values. These strategies can result in a Malaysian society that is developed while maintaining high moral standards. It was evident from the study's findings that teachers had intermediate proficiency with the learning management system.

This research can also help teachers to assess the level of self-perception related to their knowledge in implementing 21st century education. Through this research, it can also be a source of ideas for teachers strive to enhance added value and professionalism, such as continuing their studies at a higher level or taking any courses organized by MOE, JPN, PPD or privately to improve education skill. Based on this research, she can help stakeholders such as the Office of Teacher Education, the State Department of Education, the County Office of Education, and school management planning programs to enhance professionalism. of the teacher, if necessary, to achieve the standard objectives. The research results can also show the importance of building teaching leadership skills in managers, especially in promoting the implementation of 21st century education in schools.

This study could also provide insights to the Ministry of Education or organizations directly involved in teacher training, such as the Malaysia Teacher Training Institute, on the added value that teachers need to be able to prepare for changes in education centered on the integration of IT. In addition, the pedagogy is centered for students too. It can help to improve the 21st century education implementation module by focusing more on the area of a teacher's knowledge and skills as a central part of the implementation of 21st century education.

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