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Teaching Behavior of Teachers in the Digital Age at Songvithaya Affiliated Schools

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Abstract

The purposes of this research were to know 1) level of teaching behavior of teachers in the digital age at Songvithaya affiliated schools. 2) factors affecting the teaching behavior of teachers in the digital age at Songvithaya affiliated schools. 3) compare and contrast the teaching behavior of teachers in the digital age at Songvithaya affiliated schools, and 4) guidelines for correcting teaching behavior of teachers in the digital age at Songvithaya affiliated schools. The sample group used in the research was 169 teachers of Songvithaya-affiliated schools. The research tools were questionnaires and interviews. Statistics used in data analysis include frequency, percentage, mean, standard deviation, t-test, and one-way analysis of variance (One-way ANOVA). The results of the research revealed that: 1) the Teaching behavior of teachers in the digital age at Songvithaya affiliated schools overall and each aspect was at a high level; 2) Most of the factors affecting the teaching behavior of teachers in the digital age at Songvithaya affiliated schools were overall at a moderate level to consider individually. There were two items at a high level; 3) Comparison of teaching behaviors of teachers in the digital age at Songvithaya affiliated schools classified by gender, teaching experience in school, age, and grade level taught, and education level was not significantly different at .05; 4) The teachers have the guidelines for correcting teaching behaviors of teachers in the digital age at Songvithaya affiliated schools. For behaviors before learning and teaching, curriculum analysis, and indicators, the teachers design various assessments, and study standard indicators of learning subject groups, and should study to gain knowledge. The varieties of teaching techniques should be studied. Teachers' behavior during learning and teaching should be taught in the various ways. Teaching methods should be chosen as appropriate to the students following of situation and environment. Teaching and learning arrangements should be selected that are appropriate to the curriculum, indicators, course context, and learning subject groups. Teachers should emphasize the analytical thinking process. There should be analytical thinking and synthesize as appropriate for each age group. Teachers' behaviors after learning and teaching should be evaluated various forms of assessment. Evaluation should be organized in accordance with the goals of suitable for learning activities and students. The teachers focused on students being able to apply their knowledge and should be a focus on allowing learners to apply their learning in the meaningful ways and create knowledge on their own. Positive factors that affect teaching behavior are self-development, eagerness to learn, and learning and teaching. The negative factors are the teachers' welfare and well-being.

Keywords: Teaching Behavior, Teachers, Digital Age, Schools

1. Introduction

Teaching in the digital age integrates both traditional and modern approaches, creating a more holistic and dynamic educational experience. Teachers, therefore, need to continuously develop their teaching behaviors to stay relevant and effective in the digital era (Prasit Ongarttrakul, 2020). Teachers play a crucial role in the curriculum analysis process by fostering positive relationships with students, encouraging active learning where students actively participate in shaping content and learning activities, and designing an engaging learning environment (Chakkraw Kaewnmuang, 2017). Teachers must study the curriculum, plan, prepare content, choose suitable teaching methods, and use diverse assessment techniques aligned with students' contexts and the content (Kelly S. Meier, 2018). Multiple tools are essential in measuring and evaluating learning progress to support student development (Hannah Hawthorne, 2022). A teacher's expertise in any subject area significantly impacts student learning and contributes to students' motivation and engagement (Samar Chourasiy, 2022). Consequently, these factors can influence students' success or failure in their educational journey (Gabina Susuoroka, 2022).

This research examines various factors impacting teaching behavior among teachers at Songvithaya-affiliated schools. It investigates the process of lesson preparation, activities conducted during teaching, and the adjustments teachers make post-teaching to meet school objectives (Pichitra Thongpanich, 2019). These factors may determine the overall success or failure of teaching processes, as they affect students' learning outcomes. Learning is critical to students' lives as it lays a foundation for their future careers and personal growth. Furthermore, understanding these factors provides insights into areas where teachers can improve their teaching behaviors to support student learning. Therefore, this study aims to explore teaching behaviors in the digital age among teachers at Songvithaya-affiliated schools.

2. Research Objectives

1. To examine the level of teaching behavior of teachers in the digital age at Songvithaya-affiliated schools.
2. To investigate the factors affecting teaching behavior of teachers in the digital age at Songvithaya-affiliated schools.
3. To compare differences in teaching behaviors of teachers in the digital age at Songvithaya-affiliated schools, categorized by gender, teaching experience, age, grade level taught, and education level.
4. To explore guidelines for improving teaching behavior of teachers in the digital age at Songvithaya-affiliated schools.

3. Research Methodology

This research employed a quantitative approach with the following detailed procedures:

1. **Scope of Content:** The researcher examined theories and concepts from scholars on teaching behaviors, focusing on teacher behaviors before, during, and after teaching sessions.
2. **Population Scope:** The population for this research comprised teachers from three Songvithaya-affiliated schools during the 2023 academic year, totaling 316 teachers who were active up to the end of November 2023.
3. **Sample Group:** The sample included teachers from Songvithaya-affiliated schools teaching during the 2023 academic year. The sample size was determined using Krejcie and Morgan's table, resulting in 169 teachers from the three schools selected through simple random sampling.
4. **Sampling Method:** Stratified Sampling was used, dividing the population into strata based on relevant characteristics aligned with the study objectives. Within each stratum, teachers with similar characteristics were grouped, and random sampling was conducted within each stratum. The sample sizes in each stratum could be equal or unequal, depending on suitability.

4. Research Instruments

The research instruments included a two-part questionnaire:

- **Part 1:** A checklist questionnaire on respondents' demographic information, covering gender, teaching experience in the school, age, grade level taught, and educational level. This section comprised 5 items.
- **Part 2:** A Likert Scale questionnaire on teaching behaviors, focusing on three areas:
 1. **Before Teaching**
 2. **During Teaching**
 3. **After Teaching**

This section consisted of 30 items using a 5-point Likert scale:

- **5** = Very high level of teaching behavior
 - **4** = High level of teaching behavior
 - **3** = Moderate level of teaching behavior
 - **2** = Low level of teaching behavior
 - **1** = Very low level of teaching behavior
- **Part 3:** Guidelines for Improving Teachers' Teaching Behavior

4. Development and Quality Assurance of Research Instruments

To create reliable research instruments, the researcher followed a systematic process:

1. **Review of Relevant Literature:** The researcher examined documents and related research studies, both domestic and international, focusing on teachers' teaching behaviors. This review provided a foundation for designing the questionnaire.
2. **Questionnaire Development:** The questionnaire was designed to cover three areas of teaching behavior: before teaching, during teaching, and after teaching, totaling 30 items.
3. **Expert Review for Validity:** The questionnaire was presented to the research advisor and thesis committee for content adjustments. To establish structural validity and content validity, five experts reviewed the instrument, including:
 - **3 Education Administrators:** Teachers with a Master's degree or higher
 - **1 Thai Language Expert:** Specialist in Thai language teaching
 - **1 Assessment and Evaluation Expert**

Each item's Index of Objective Congruence (IOC) was calculated, with ratings assigned as follows:

- +1: Item is clearly congruent
 - 0: Uncertain congruence
 - -1: Item is not congruent
- Items with an IOC score between 0.8-1.0 met the criteria and were deemed suitable for the sample group.
4. **Reliability Testing:** The revised questionnaire was piloted with 30 teachers from schools outside the sample group to assess its reliability. Cronbach's Alpha Coefficient was calculated to determine internal consistency, ensuring the questionnaire met reliability standards. Based on these findings, the questionnaire was further refined before data collection with the actual sample.

5. Data Analysis Methods and Statistical Techniques

The data analysis for this study was conducted using the SPSS statistical software to ensure thorough and accurate interpretation. The statistical methods employed in this research included:

1. **Demographic Analysis:** Frequencies and percentages were used to analyze the demographic information of respondents, including gender, teaching experience, age, grade level, and educational level.
2. **Analysis of Teaching Behavior Before Instruction:** Mean and Standard Deviation (S.D.) values were calculated for individual items and overall aspects of teachers' behavior prior to instructional activities. Results were interpreted following Best's guidelines (Boonchom Srisakra, 2010: 121).

3. **Analysis of Teaching Behavior During Instruction:** Mean and Standard Deviation (S.D.) values were calculated for each item and aspect of teachers' behavior during instructional activities, with interpretation based on Best's guidelines (Boonchom Srisakra, 2010: 121).
4. **Analysis of Teaching Behavior After Instruction:** Mean and Standard Deviation (S.D.) values were calculated for each item and overall aspects of teachers' behavior following instructional activities. The interpretation followed Best's guidelines (Boonchom Srisakra, 2010: 121).
5. **Analysis of Factors Affecting Teaching Behavior:** Mean and Standard Deviation (S.D.) values were calculated for each item and overall factors influencing teachers' teaching behaviors. Results were interpreted using the following scale based on Best's guidelines (Boonchom Srisakra, 2010: 121):
 - **4.51 – 5.00:** Factor has a very high impact on teaching behavior
 - **3.51 – 4.50:** Factor has a high impact on teaching behavior
 - **2.51 – 3.50:** Factor has a moderate impact on teaching behavior
 - **1.51 – 2.50:** Factor has a low impact on teaching behavior
 - **1.00 – 1.50:** Factor has a very low impact on teaching behavior

6. Summary and Discussion of Research Results

1. General Information

Analysis of the demographic data shows:

- **Gender:** The majority of respondents were female (136 people, 80.47%), while males represented 19.53% (33 people).
- **Teaching Experience:** Most respondents had 1-10 years of experience (53.85%, 91 people), followed by those with 11-20 years (24.85%, 42 people), over 31 years (12.43%, 21 people), and 21-30 years (8.87%, 15 people).
- **Age:** The largest group was aged 31-40 (36.09%, 61 people), followed by 21-30 (26.63%, 45 people), 41-50 (20.71%, 35 people), and 51+ years (16.57%, 28 people).
- **Teaching Level:** Most taught kindergarten (26.04%, 44 people), followed by grades 4-6 (25.44%, 43 people), grades 1-3 (24.85%, 42 people), grades 7-9 (15.39%, 26 people), and grades 10-12 (8.28%, 14 people).
- **Education Level:** Most respondents held a bachelor's degree (93.49%, 158 people), followed by a master's degree (5.33%, 9 people), and higher than a master's degree (1.18%, 2 people).

2. Digital-Age Teaching Behavior

The teaching behavior of teachers at Songwit schools was overall at a high level in the digital age. Among the three stages:

- The highest was teaching behavior **during instruction** (mean = 4.46, S.D. = 0.47).
- The next highest was behavior **after instruction** (mean = 4.36, S.D. = 0.54).
- **Before instruction** had the lowest mean (mean = 4.34, S.D. = 0.46).

3. Factors Influencing Digital-Age Teaching Behavior

Overall, factors influencing teaching behavior in the digital age were moderate. The top three influencing factors were:

- **High teaching workload** (mean = 3.80, S.D. = 1.09).
- **Need for increased financial support from the school** (mean = 3.54, S.D. = 1.18).
- **High non-teaching workload** (mean = 3.10, S.D. = 1.30).
- The factor with the lowest mean was the need for teachers to develop effective communication skills with new-age students (mean = 2.67, S.D. = 1.19).

4. Comparison of Digital-Age Teaching Behavior

- **Gender:** No statistically significant difference (Sig. = .38) between male and female teachers' teaching behaviors.
- **Experience:** No statistically significant difference (Sig. = .06) in teaching behavior among different experience levels.

- **Age:** No statistically significant difference (Sig. = .32) in teaching behavior across age groups.
- **Teaching Level:** No statistically significant difference (Sig. = .25) in teaching behavior across teaching levels.
- **Education Level:** No statistically significant difference (Sig. = .09) across education levels.

5. Recommendations for Improving Digital-Age Teaching Behavior

- **Before Instruction:** Teachers should analyze curricula, set learning objectives, and familiarize themselves with standards and indicators. They should also study diverse teaching techniques to increase their instructional efficacy.
- **During Instruction:** Teachers should adapt instructional methods to suit the learners, environment, and context of each subject area, focusing on analytical and critical thinking skills as appropriate for each age group.
- **After Instruction:** Teachers should apply diverse assessment methods aligned with the learning objectives and students' needs. Teachers should also encourage students to apply knowledge meaningfully and foster independent knowledge-building.

Influential Factors

Positive factors included self-development and a commitment to effective teaching (Jureeporn Munwi, 2022). Negative factors included inadequate teacher welfare and benefits, which impacted teaching behavior negatively.

7. Recommendations

From the study on teaching behaviors of teachers in the digital age at schools under the Tongskuk Witthaya Network, the researcher offers the following recommendations as guidelines for teachers' teaching behaviors in the digital age, aiming to develop organizations that will enhance the effectiveness of those entities and serve as a guide for future research:

1. Overall Teaching Behaviors in the Digital Age

- The study found that overall teaching behaviors of teachers were at a high level. However, when considering individual aspects, the average for pre-teaching behaviors was lower than for other areas, and the post-teaching behaviors had a lower average than the during-teaching behaviors. Therefore, it is suggested that:
 - Teachers should be given time to study and learn modern equipment and technology before implementing them in practice.
 - Schools should promote the production of modern teaching media and offer rewards to teachers who create innovative teaching materials.
 - Continuous training on the use of technology and equipment should be provided for teachers.
 - Schools should allocate more technological facilities to teachers, reduce their workload, and encourage them to utilize technology for convenience.
 - Support should be given for teachers to work in areas they are skilled in and passionate about.

2. Factors Influencing Teachers' Teaching Behaviors

- The overall findings indicated a moderate level of factors influencing teaching behaviors, with 12 items ranking at a moderate level. The top three influencing factors were:
 - Teachers have a high workload related to teaching.
 - Teachers need more financial support from schools.
 - Teachers have additional work responsibilities beyond teaching.
 - The lowest average was regarding the need for teachers to develop effective communication skills with modern students. The researcher suggests:

- Reducing unnecessary workloads that do not align with teaching responsibilities, allowing teachers time to create engaging and modern teaching media.
 - Schools should provide budget support for technology, ensure comprehensive internet access, and supply modern teaching equipment to alleviate teachers' expenses.
3. **Approaches to Improve Teachers' Teaching Behaviors in the Digital Age**
- **Pre-Teaching Behaviors:** Teachers should analyze curricula and design clear and systematic assessment and evaluation plans. They should also study the standards and indicators of learning areas before teaching.
 - **During Teaching Behaviors:** Teachers should employ diverse teaching methods suitable for their students, context, and environment. They should also select teaching management strategies that align with the curriculum and learning indicators while emphasizing critical thinking processes suitable for different age groups.
 - **Post-Teaching Behaviors:** Teachers should use various assessment methods aligned with learning goals, suitable for learning activities and individual students. They should focus on enabling students to apply their knowledge meaningfully and develop their own knowledge.
4. **Positive and Negative Factors Affecting Teaching Behaviors**
- Positive factors influencing teachers' behaviors include self-development and a desire to learn. Teachers should serve as role models for students, continuously improving themselves in attitude, personality, dedication, and commitment to develop their knowledge to benefit their students fully.
 - Negative factors affecting teaching behaviors include teacher welfare and job security. It is essential to reduce workloads to prevent teachers from compromising their health and effectiveness, which can lead to inefficiency and ineffectiveness in schools. Promoting comprehensive and suitable welfare benefits is crucial.

8. Recommendations for Future Research

The researcher has proposed the following suggestions for future research to deepen knowledge and enhance the usefulness of studies in this area:

1. **Explore Teaching Behaviors in Other Areas:** Future research should investigate the teaching behaviors of teachers in the digital age across different aspects to synthesize clearer and more diverse variables.
2. **Developing Teaching Behaviors:** It is important to study ways to develop teachers' teaching behaviors to align with the challenges present in the digital age.
3. **Research in Different Regions:** Future studies should examine the teaching behaviors of teachers in different educational jurisdictions or areas.
4. **In-Depth Study of Influencing Factors:** Conduct in-depth research on each factor that influences teachers' teaching behaviors to promote students' learning skills in the digital age.

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