Navigating the Shift: Grade 7 Mathematics Teachers' Experiences and Perceptions from K to 12 to the MATATAG Curriculum

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ABSTRACT

The Department of Education introduced the MATATAG Curriculum to address issues in K to 12 (Kilag et al., 2024). This qualitative study explored how the Grade 7 math teachers at Nueva Vizcaya General Comprehensive High School managed the shift to MATATAG, focusing on curriculum changes, teacher readiness, challenges, and perceptions. Findings show both curricula stress problem-solving and real-world application, but MATATAG is more focused and constructivist. Teachers received training and materials, but struggled with limited time, complex content, absenteeism, and new methods. They appreciate MATATAG's streamlined content, focus on the basics, relevant lessons, digital tools, and improved assessments, but noted resource gaps, limited student support, and interdisciplinary challenges. The study underscores the need for ongoing training, resources, and administrative backing for successful reform.

Keywords: curriculum reform, instructional challenges, mathematical proficiency, pedagogical shifts, teacher preparedness

INTRODUCTION

The Department of Education (DepEd) introduced the MATATAG Curriculum to better address societal needs and prepare learners (Mutya & Masuhay, 2022; DepEd, 2024). This study explored Grade 7 math teachers' experiences transitioning from K to 12 to MATATAG, examining their preparation, challenges, and perceptions to inform policymakers of possible limitations.

K to 12, established in 2013, extended education to 13 years with learner-centered features but teachers are faced with resource and training gaps (Combalicer, 2016; Barcelo, 2019). Criticisms included curriculum congestion and poor international assessment results (Office of the Vice President, 2023; Chi, 2023; Bernardo, 2020). As an alternative, the MATATAG curriculum, launched in 2023, aims to decongest content, focus on basic skills, and align with 21st-century competencies (Senate of the Philippines, 2023; DepEd, 2023) and was piloted in select schools (Hernando-Malipot, 2023).

To successfully implement this shift, there is a need for well-prepared teachers who would also need ongoing support (Barrot, 2019; Palestina et al., 2020; Nguyen et al., 2022). However, many face inadequate preparation, limited resources, and heavier workloads (Verzosa & Vistro-Yu, 2019; Hughes & Lewis, 2020; Nalbantoğlu & Bümen, 2024). Challenges are worsened by limited stakeholder engagement and reform complexity (Gouëdard et al., 2020; Diano et al., 2023). Moreover, lack of continuous training causes stress and disempowerment, stressing the need for a supportive environment (Kessler–Hopek, 2019). Still, with proper support, teachers see reforms as innovation opportunities.

This study compared the K to 12 and MATATAG Mathematics Curricula and explored the Grade 7 Math teachers' experiences and perceptions of shifting from K to 12 to MATATAG. It was conducted at Nueva Vizcaya General Comprehensive High School (NVGCHS) during the school year 2024-2025. Specifically, it sought to determine the similarities and differences between the two curricula and the preparations of the respondents for the MATATAG Mathematics Curriculum implementation. It also aimed to determine the challenges encountered by the respondents in the implementation of the MATATAG Mathematics Curriculum, and the perceived advantages and disadvantages of the MATATAG Mathematics Curriculum over K to 12.

METHODOLOGY

This qualitative, descriptive-phenomenological study was conducted at Nueva Vizcaya General Comprehensive High School (NVGCHS) with all Grade 7 mathematics teachers as respondents. Data sources included curriculum guides from both curricula and a researcher-made questionnaire. The data gathering process involved obtaining approvals, distributing and retrieving questionnaires, and conducting a focus group discussion. Document analysis using Dalglish et al.'s (2020) READ approach was employed to identify similarities and differences between K to 12 and MATATAG Mathematics Curricula. Thematic analysis, based on Dawadi's (2020) method, was used to describe the teachers' preparation, challenges, and perceptions of advantages and disadvantages of MATATAG compared to K to 12.

RESULTS AND DISCUSSION

Section 1. Similarities and Differences Between the K to 12 and the MATATAG Curriculum

Table 1

Similarities and Differences Between the K to 12 and the MATATAG Curriculum

K to 12 Mathematics Curriculum	Similarities between the K to 12 and MATATAG Mathematics Curriculum	MATATAG Mathematics Curriculum
Curriculum Goals		
● K to 12, apart from problem-solving and critical-thinking skills, emphasizes holistic development for higher education, employment, and entrepreneurship.	● The two curricula aim to hone Filipino learners who have problem-solving and critical-thinking skills.	● MATATAG also aspires to make learners mathematically proficient and have better retention of foundational skills.
Foundational Principles and Pedagogical Practices		
● K to 12 is based on a variety of learning theories. ● K to 12 only provides general pedagogical direction.	● The two curricula consider constructivism as one of their foundations. ● Both promote and encourage the active participation and active learning of the students.	● MATATAG is anchored more on constructivist theories. ● MATATAG emphasizes more specific strategies for differentiated instruction.
Curriculum Framework		
● K to 12 uses spiral progression. ● K to 12 is structured into five content areas. ● K to 12 focuses on honing the subject-specific (Math) skills in the learners. ● K to 12 aims to hone the following values and attitudes in the learners: accuracy, creativity, objectivity, perseverance, and productivity. ● K to 12 provides a general list of tools to utilize in the implementation. ● K to 12 explicitly defines context as encompassing locale, situation, beliefs, environment, language, culture, prior knowledge, and experiences.	● The two curricula advocate and promote solving real-world problems and applying mathematical knowledge to practical situations. ● Both curricula focus on cultivating the learners' ability to have correctness and have quality in doing mathematical work. ● Both emphasize the importance of using appropriate tools and technologies to enhance mathematics teaching and learning. ● Both curricula recognize that the learner's environment significantly influences their learning of mathematics. ● Both curricula imply that instruction must consider	● MATATAG utilizes a developmental sequence of concepts with streamlined content. ● MATATAG has three domains. Furthermore, it is also organized around 12 interrelated "Big Ideas" that provide a coherent framework across grade levels. ● MATATAG aims to promote and develop transversal skills that learners can use to cope with the challenges brought by the 21st century. MATATAG also wants to cultivate qualities emanating from the five strands of mathematical proficiency. ● MATATAG aims to cultivate the learners' appreciation of the following values: coherence and consistency, precision and clarity, and generality and extendibility. ● MATATAG provides a more detailed and structured integration of resources.

	learners' background to be effective.	● MATATAG, while not explicitly defining context, focuses more on the home environment and educational resources as the influencers to student learning.
Learning Competencies		
● K to 12 has 64 competencies for Mathematics 7. ● Each competency under K to 12 has an assigned code that indicates the subject area, grade level, content domain, quarter, week of implementation, and the competency number for that week.	● Many learning competencies from K to 12 are retained in MATATAG.	● MATATAG has 50 competencies for Mathematics 7. ● The competencies under MATATAG do not have codes.
Learning Materials		
● K to 12 specifically lists the materials needed for each learning competency.	● None	● In MATATAG, it was just stated that the materials are disseminated to the schools.
Assessment		
● None	● Both curricula use DepEd Order No. 8, s. 2015 as their basis for their grading systems.	● None

Both K to 12 and MATATAG develop problem-solving and critical thinking (DepEd, 2024). MATATAG adds focus on proficiency, learner confidence, and foundational skills (Philippine News Agency, 2023), while K to 12 targets holistic development for higher education and employment (SEAMEO INNOTECH, 2012). Both follow constructivist principles (DepEd, 2016; DepEd, 2024), but MATATAG centers on Piaget, Vygotsky, Bruner, and Glasersfeld, with clearer strategies like scaffolding and the CRA model (DepEd, 2024; Kilag et al., 2024). K to 12 teaches the five domains through spiral progression (Resurreccion & Andaza, 2015). Meanwhile, MATATAG has three domains linked by 12 "Big Ideas" (DepEd, 2024). MATATAG reduces overload and emphasizes essential and transversal skills (Kilag et al., 2024; DepEd, 2024), while K to 12 stresses math-specific skills. K to 12 promotes creativity and perseverance while MATATAG values coherence and generalizability (DepEd, 2016; DepEd, 2024). Both use tools and technology, but MATATAG includes assistive devices and clearer guidance (DepEd, 2024). K to 12 defines context through culture; MATATAG focuses on home and environment (DepEd, 2016; DepEd, 2024). Competencies are reduced from 64 to 50 in MATATAG to prioritize foundations (Philippine News Agency, 2023). Most are retained but resequenced—e.g., sets moved from Q1 to Q2. Only K to 12 has specific codes. K to 12 lists needed materials; MATATAG only notes dissemination. Both follow DepEd Order No. 8, s. 2015 for assessments, reaffirmed in DepEd Order No. 10, s. 2024.

Section 2. Preparations for the MATATAG Mathematics Curriculum Implementation

The Grade 7 mathematics teachers attended a School-Based Training of Teachers (SBTT) on the MATATAG Curriculum from July 22–26, 2024 (Division Memorandum No. 249, s. 2024). Facilitators cascaded insights from regional training (Division Memorandum No. 214, s. 2024), aligning with Barrot (2019), Palestina et al. (2020), and Abdallah and Wardat (2021) on the value of peer-based, practical training. Hands-on tasks like material development reflected Nguyen et al. (2022) and Wilson and Kelley's (2022) recommendations for deeper teacher readiness. Respondents received new MATATAG-aligned textbooks and lesson exemplars, reducing the need for daily lesson logs. While competencies were mostly retained, their sequencing shifted (e.g., some first-quarter topics moved to the third). Ready-made activity sheets eased planning (Koberstein-Schwarz & Meisert, 2024). In line with Mestry and Govindasamy (2021), school-led collaborative sessions provide the proactive leadership necessary to support effective implementation.

Section 3. Challenges Encountered in the Implementation of the MATATAG Curriculum

3.1 Language Barriers and Students' Abscondences

Teachers Phoebe and Teacher Kalani cited language barriers and frequent absences as key challenges in implementing the MATATAG Curriculum. Teacher Phoebe noted that unclear lesson exemplars make content hard to grasp, leading students to skip classes. This mirrors Moses et al. (2024), and Ngussa and Gundula's (2019) findings on the impact of language on math comprehension. She also observed students' avoidant attitudes toward math, consistent with Schmitz (2023), who linked absenteeism and negative perceptions to poor performance in cumulative subjects like mathematics.

3.2 Limited Time and Difficulty Adapting to New Methods

Teacher Niall and Teacher Catherine noted challenges with reduced instructional time—45 minutes daily compared to K to 12's one hour—making it hard to cover all content (Gutierrez, 2024). They stressed the need for more professional development on time management and teaching strategies. Their struggles with new pedagogical and assessment methods reflect Palestina et al.'s (2020) findings on the need for adequate training.

Section 4. Perceived Advantages of MATATAG Over K to 12

4.1 Emphasis on Foundational Skills and Holistic Learner Development

One key advantage of MATATAG, as noted by the respondents, is its streamlined content and emphasis on foundational skills, which help students build confidence and engage more actively in learning (DepEd, 2024). Teacher Niall highlighted that the focus on essential competencies allows students to master key concepts without becoming overwhelmed. This aligns with the curriculum's goal of fostering mathematical proficiency, critical thinking, and holistic development to prepare learners for responsible citizenship and success in the 21st century (Kilag et al., 2024).

4.2 Competency-Based Assessment for Mastery

The respondents identified competency-based assessments as a beneficial feature of the MATATAG Curriculum, as they align with its focus on mastering essential mathematical skills and concepts (DepEd, 2024, pp. 7–8). This approach enables students to advance based on demonstrated proficiency, which promotes deeper understanding rather than rote memorization. These assessments aim to provide meaningful feedback that can enhance instructional practices and support student learning.

4.3 Use of Technology and Digital Resources

The teachers noted that the emphasis on technology and digital resources has improved student understanding and made learning more enjoyable. This is supported by Etcuban and Leonard's (2025) study, which found that students using GeoGebra-enhanced lessons performed better in geometry assessments than those taught with traditional methods. The MATATAG Mathematics Curriculum Guide also stresses the importance of diverse teaching resources, including electronic materials, to enhance mathematics instruction (DepEd, 2024, p. 8).

4.4 Integration of Contextualized and Real-Life Applications

The MATATAG curriculum's focus on real-life applications and contextualized learning makes lessons more relevant and engaging. Teacher Catherine noted it helps students connect

concepts to daily life, and Teacher Kalani valued localized materials. This supports DepEd's emphasis on meaningful, culturally relevant instruction (DepEd, 2024) and Ocampo's (2024) findings on improved understanding through contextualized approaches.

4.5 Emphasis on Formative Assessments for Continuous Learning

Another advantage of the new curriculum is its emphasis on formative assessment, where teachers provide regular feedback to help students identify strengths and areas for improvement; thus, supporting continuous learning. MATATAG highlights that assessments should document learners' achievements and offer feedback to enhance instruction (DepEd, 2024). This approach is supported by studies such as Maglasang (2022), which found that gamified tools improve math performance.

4.6 Stronger Focus on Authentic Assessments

The teachers reported that authentic assessments such as projects, presentations, and portfolios provide a more comprehensive evaluation of student competencies while encouraging critical thinking and real-world application (Bautista & Valtoribio, 2024). They also noted that these methods are more effective than traditional exams in assessing students' understanding and application of mathematical concepts.

Section 5. Perceived Disadvantages of MATATAG Over K to 12

5.1 Inadequate Facilities and Infrastructure

Teacher Phoebe raised issues on complex assessments, structure, and inclusivity, especially in under-resourced schools. PIDS and Kilag et al. (2024) also noted poor facilities and overcrowding hinder implementation. Teacher Kalani emphasized that flexible learning pathways need more teacher training, with equity challenges due to uneven school readiness.

5.2 Student Learning Challenges Due to Resource and Support Gaps

The respondents identified increased workload, limited teacher preparedness, challenges with inclusive education, and lack of parental involvement as disadvantages of the new curriculum (Garma, 2024). Their experiences varied depending on school support and resource availability, with some finding ready-made materials helpful while others struggled during the transition. Additionally, insufficient training for inclusive education and low parental involvement were noted as significant factors negatively impacting student learning outcomes (Jugan et al., 2023; Cabardo, 2022).

5.3 Demands of Interdisciplinary and Higher-Order Thinking Skills

A respondent noted that students found the new curriculum's focus on interdisciplinary learning and higher-order thinking skills challenging due to the need for proper teacher training and sufficient resources for effective implementation (Milara & Orduña, 2024). Additionally, learners require adequate scaffolding and support to handle the substantial cognitive demands of developing these skills (Wang et al., 2020).

5.4 Challenges in Transitioning to Authentic Assessment

According to one respondent, learners accustomed to traditional exams may struggle with the shift to project-based and formative assessments because these require different study and performance approaches. To address these challenges, support from teachers, technology,

peers, and parents is essential to help students adjust and succeed in these new assessment methods (Zhong & Lyu, 2022).

Conclusion

Both the K to 12 and MATATAG Mathematics Curricula aim to build problem-solving and critical-thinking skills through real-world, learner-centered approaches. However, MATATAG introduces key changes: fewer but more focused competencies, stronger emphasis on mathematical proficiency, transversal skills, and clearer pedagogy. The Grade 7 teachers underwent a week-long SBTT in July 2024, gaining practical training in lesson planning and material development. Updated textbooks and lesson exemplars reduced planning load, while administrative support fostered collaboration. Despite its structured, contextualized, and skill-focused approach, MATATAG faces challenges, including language barriers, student absenteeism due to lesson difficulty, limited instructional time, and adjustment to new methods and assessments. Teachers highlighted MATATAG's advantages (i.e., streamlined content, values integration, tech-based learning, and formative, competency-based assessments), but also pointed out drawbacks like insufficient resources, limited training, increased student pressure, and equity concerns in interdisciplinary and authentic learning. Enhancing materials, teacher support, and time allocation is essential for effective implementation.

Recommendations

Future studies may include more teachers from diverse settings—urban and rural, public and private—to gain a broader and more representative view of the Grade 7 mathematics teachers' experiences during the shift to MATATAG. Researchers could also assess the students' performance and engagement to evaluate curriculum effectiveness. Further investigation into the adequacy of teacher training, resources, and professional development is recommended to identify areas for improvement. Exploring specific teaching strategies and innovations can help highlight best practices, while insights from administrators, curriculum developers, and parents can shed light on institutional and community factors affecting implementation.

REFERENCES

Abdallah, R., & Wardat, Y. (2021). Teachers' perceptions on the effectiveness of professional development programs in improving the curriculum implementation at Jordanian schools. *Elementary Education Online, 20*(5), 4438-4449. https://doi.org/10.17051/ilkonline.2021.05.488

Barcelo, C. (2019). Problems in the implementation of K-12 curriculum by Grade 11 students in Aurora Province, Philippines. *International Review of Research*, *8*(1), 23-39. https://www.philair.ph/index.php/irj/article/view/747

Barrot, J. S. (2019). English curriculum reform in the Philippines: Issues and challenges from a 21st century learning perspective. *Journal of Language, Identity & Education, 18*(3), 145-160. https://doi.org/10.1080/15348458.2018.1528547

Bautista, R. M., & Valtoribio, D. C. (2024). Flexible teaching-learning modality in mathematics education of a state university in West Philippines. *Mathematics Teaching Research Journal, 16*(3), 5–21. https://files.commons.gc.cuny.edu/wp-content/blogs.dir/34462/files/2024/07/Bautista-issue-53_v16_n3-p5.pdf

Bernardo, J. (2020, December 9). PH ranks last among 58 countries in Grade 4 math, science: Study. *ABS-CBN News*. https://news.abs-cbn.com/news/12/09/20/ph-ranks-last-among-58-countries-in-grade-4-math-science-study

Cabardo, J. R. (2022). Parental involvement and learners' academic performance. *International Journal of Multidisciplinary Research and Analysis*, 7(7), 160–170. https://ijmra.in/v7i7/16.php

Chi, C. (2023, December 6). Philippines still lags behind world in math, reading and science — PISA 2022. *The Philippine Star*. https://www.philstar.com/headlines/2023/12/06/2316732/philippines-still-lags-behind-world-math-reading-and-science-pisa-2022

Combalicer, L. (2016). Best practices and problems in the initial implementation of the K+12 curriculum among teachers in Infanta, Quezon: Implications to an effective implementation of senior high school. *Journal of Education and Social Sciences*, *5*(1), 123-134. https://www.jesoc.com/wp-content/uploads/2016/08/Edu-4.pdf

Dawadi, S. (2020). Thematic analysis approach: A step by step guide for ELT research practitioners. *Journal of Education and Training Studies*, *8*(12), 45-54. https://files.eric.ed.gov/fulltext/ED612353.pdf

Department of Education. (2012). DepEd Order No. 31, s. 2012: Policy guidelines on the implementation of Grades 1 to 10 of the K to 12 Basic Education Curriculum (BEC) effective school year 2012-2013. *Department of Education, Republic of the Philippines*. https://www.deped.gov.ph/wp-content/uploads/2012/06/DO_s2012_31.pdf

Department of Education. (2016). K to 12 mathematics curriculum. *Department of Education, Republic of the Philippines*. https://www.criced.tsukuba.ac.jp/math/apec/apec2016/20160216%20Elizabeth%20PRESENTATION%20RE%20SEAMEO-RECSAM-UNIVERSITY%20TSUKUBA%20JOINT%20SEMINAR.pdf

Department of Education. (2023). MATATAG mathematics curriculum. *Department of Education, Republic of the Philippines*. https://www.deped.gov.ph/wp-content/uploads/MATATAG-Mathematics-CG-Grades1-4-and-7.pdf

Department of Education. (2023). General shaping paper. *Department of Education, Republic of the Philippines*. https://www.deped.gov.ph/wp-content/uploads/GENERAL-SHAPING-PAPER-2023.pdf

Department of Education. (2023). Memorandum No. 54, s. 2023: Pilot implementation of the MATATAG curriculum. *Department of Education, Republic of the Philippines*. https://www.deped.gov.ph/wp-content/uploads/DM_s2023_054.pdf

Department of Education. (2024, February 16). DepEd to roll out teachers' training for the implementation of MATATAG curriculum. *Manila Bulletin*. https://mb.com.ph/2024/2/16/dep-ed-to-roll-out-teachers-training-for-the-implementation-of-matatag-curriculum

Department of Education. (2024). Policy guidelines on the implementation of the MATATAG curriculum (DepEd Order No. 10, s. 2024). *Department of Education, Republic of the Philippines*. https://www.deped.gov.ph/wp-content/uploads/DO_s2024_010.pdf

Department of Education. (n.d.). History. *Department of Education, Republic of the Philippines*. Retrieved from https://www.deped.gov.ph/about-deped/history/

Department of Education – Schools Division Office of Nueva Vizcaya. (2024). *Division Memorandum No. 249, s. 2024: Corrigendum to Division Memoranda No. 214 and 215, s. 2024 re School-Based Training of Teachers (SBTT) on the MATATAG Curriculum*. https://sdonuevavizcaya.com/dm-no-249-s-2024-corrigendum-to-division-memoranda-no-214-and-215-s-2024-re-school-based-training-of-teachers-sbtt-on-the-matatag-curriculum/

Department of Education – Schools Division Office of Nueva Vizcaya. (2024). *Division Memorandum No. 306, s. 2024: Submission of Completion Reports re School-Based Training of Teachers (SBTT) re MATATAG Curriculum*. https://sdonuevavizcaya.com/wp-content/uploads/2024/08/DM-No.-306-s.-2024-SUBMISSION-OF-COMPLETION-REPORTS-RE-SCHOOL-BASED-TRAINING-OF-TEACHERS-SBTT-RE-MATATAG-CURRICULUM.pdf

Department of Education – Schools Division Office of Nueva Vizcaya. (2024). *Division Memorandum No. 214, s. 2024: Activities re School-Based Training of Teachers (SBTT) on the MATATAG Curriculum*. https://sdonuevavizcaya.com/wp-content/uploads/2024/05/DM-No.-214-s.-2024-ACTIVITIES-RE-SCHOOL-BASED-TRAINING-OF-TEACHERS.pdf

Diano Jr, F., Kilag, O. K., Malbas, M., Catacutan, A., Tiongzon, B., & Abendan, C. F. (2023). Towards global competence: Innovations in the Philippine curriculum for addressing international challenges. *Excellencia: International Multi-disciplinary Journal of Education*, *1*(4), 295-307. https://www.researchgate.net/profile/Felix-Jr-Diano/publication/376646106_Towards_Global_Competence_Innovations_in_the_Philippine_Curriculum_for_Addressing_International_Challenges/links/662fe51e7091b94e93e6f86c/Towards-Global-Competence-Innovations-in-the-Philippine-Curriculum-for-Addressing-International-Challenges.pdf

Etcuban, J. O., & Leonard. (2025). GeoGebra: Its effects on education students' attitudes, motivation, and performance in college algebra. *Formatif: Jurnal Ilmiah Pendidikan MIPA, 15*(1), 13–24. https://doi.org/10.30998/formatif.v15i1.23138

Garma, J. C. (2024). Beyond the four walls: Teacher's experiences in championing the MATATAG curriculum. *International Journal of Advanced Multidisciplinary Research and Studies, 4*(4), 952–966. https://doi.org/10.5281/zenodo.13667710

Gouëdard, P., Pont, B., Hyttinen, S., & Huang, P. (2020). Curriculum reform: A literature review to support effective implementation. *OECD Education Working Papers, No. 239*. OECD Publishing. https://doi.org/10.1787/efe8a48c-en

Gutierrez, D. (2024). *Assessing teacher preparedness and training for the implementation of the MATATAG curriculum at Calubcob I National High School.* https://www.researchgate.net/publication/384070516_Assessing_Teacher_Preparedness_and_Training_for_the_Implementation_of_the_MATATAG_Curriculum_at_Calubcob_I_National_High_School

Hernando-Malipot, M. (2023). Pilot run of MATATAG K to 10 curriculum begins in 35 schools. *Manila Bulletin*. Retrieved from https://mb.com.ph/2023/9/25/pilot-run-of-matatag-k-to-10-curriculum-begins-in-35-schools

Hughes, S., & Lewis, H. (2020). Tensions in current curriculum reform and the development of teachers' professional autonomy. *The Curriculum Journal, 31*(2), 290-302. https://doi.org/10.1002/curj.25

Jugan, M. B., Delos Reyes, N. R. T., Pepito, J. C., Jr., Capuno, R. G., Pinili, L. C., Cabigon, A. F. P., Sitoy, R. E., & Mamites, I. O. (2023). Attitudes of elementary teachers towards inclusive education of learners with special education needs in a public school. *Power System Technology, 48*(1), 2173–2202. https://doi.org/10.11594/powertech.48.1.01

Kessler-Hopek, T. (2019). Curriculum change: A study on teacher perceptions of curriculum change on content standards [Master's thesis, Columbus State University]. *CSU ePress*. https://csuepress.columbusstate.edu/cgi/viewcontent.cgi?article=1320&context=theses_dissertations

Kilag, O. K., Andrin, G., Abellanosa, C., Villaver Jr, M., Uy, F., & Sasan, J. M. (2024). MATATAG curriculum rollout: Understanding challenges for effective implementation. *International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence (IMJRISE), 1*(5), 172-177. https://doi.org/10.5281/zenodo.11183037

Kilag, O. K., Galve, G., Uy, F., & Sasan, J. M. (2024). The new MATATAG curriculum in the lens of the 21st-century 7Cs. *International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence (IMJRISE), 1*(5), 418-424.

Kilag, O. K., Sasan, J. M., Maguate, G., Abule, A., Cornel, M., & Jayme, R. (2024). A comparative study of K-12 and MATATAG curricula. *International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence (IMJRISE), 1*(6), 682-689. https://doi.org/10.5281/zenodo.11541760

Koberstein-Schwarz, M., & Meisert, A. (2024). Facilitating preservice biology teacher development through material-based lesson planning. *Education Sciences, 14*(1), Article 42. https://doi.org/10.3390/educsci14010042

Maglasang, Y. E. (2022). *Gamifying formative assessment through Quizizz and mathematics performance in modular distance learning* [Master's thesis, West Visayas State University]. https://repository.wvsu.edu.ph/handle/20.500.14353/593

Mestry, R., & Govindasamy, V. (2021). The perceptions of school management teams and teachers of the principal's instructional leadership role in managing curriculum changes. *Interchange, 52*(4), 1–16. https://doi.org/10.1007/S10780-021-09425-5

Milara, R. J., & Orduña, M. L. (2024). Navigating the challenges of interdisciplinary learning: Teacher readiness and resource allocation in the modern curriculum. *Journal of Educational Innovation and Curriculum Studies*, *12*(1), 45–62.

Moses, C., Nghipandulwa, L., & Abed, K. (2024). Exploring curriculum implementation challenges in the teaching of subsidiary mathematics in Oshakati Circuit, Oshana Region: A phenomenological study. *Open Journal of Social Sciences, 12*(2), 604-622. https://doi.org/10.4236/jss.2024.122033

Mutya, R., & Masuhay, A. (2022). *The extent of implementation of blended learning in senior high school science education vis-à-vis students' academic achievement*. Retrieved from https://dergipark.org.tr/en/download/article-file/2390321

Nalbantoğlu, Ü. Y., & Bümen, N. T. (2024). Changes in the curriculum adaptation skills of teachers as a result of professional development support: A Turkish case study. *Teaching and Teacher Education, 137*, 104386. https://doi.org/10.1016/j.tate.2024.104386

Ngussa, B. M., & Gundula, A. J. (2019). The effect of home environmental factors on students' academic achievement: A case of community secondary schools in Monduli District, Tanzania. *World Journal of Educational Research, 6*(3), 354–365. https://doi.org/10.22158/wjer.v6n3p354

Nguyen, Y. T. X., Ha, X. V., & Tran, N. H. (2022). Vietnamese primary school teachers' needs for professional development in response to curriculum reform. *Education Research International, 2022*(1), Article 4585376. https://doi.org/10.1155/2022/4585376

Nueva Vizcaya General Comprehensive High School. (n.d.). *DepEd vision, mission, core values and mandate.* Retrieved from https://bongfra.wixsite.com/nvgchs/vission-mission

Nueva Vizcaya General Comprehensive High School Official Facebook Page. (n.d.). *Nueva Vizcaya General Comprehensive High School*. Retrieved from https://www.facebook.com/nvgchs2017/

Ocampo, A. P. (2024). The MATATAG Curriculum: Assessing its impact on 21st-century science and social studies education in the Philippines. *Excellencia: International Multi-Disciplinary Journal of Education, 2*(10), 921–930. https://doi.org/10.5281/zenodo.7777777

Office of the Vice President. (2023). *VP Sara: DepEd pledges to produce employable K to 12 graduates.* Retrieved from https://www.ovp.gov.ph/post/vp-sara-deped-pledges-produce-employable-k-12-graduates

Palestina, R. L., Pangan, A. D., & Ancho, I. V. (2020). Curriculum implementation facilitating and hindering factors: The Philippines context. *International Journal of Education, 13*(2), 91-104. https://doi.org/10.17509/ije.v13i2.25340

Philippine News Agency. (2023, October 17). *DepEd to pilot new K-10 curriculum in 35 schools*. https://www.pna.gov.ph/articles/1210540

Republic Act No. 9155. (2001). *Basic Education Act of 2001*. Official Gazette of the Republic of the Philippines. https://www.officialgazette.gov.ph/downloads/2001/08aug/20010811-RA-9155-GMA.pdf

Republic Act No. 10533: Enhanced Basic Education Act of 2013. (2013). *Official Gazette of the Republic of the Philippines*. https://www.officialgazette.gov.ph/2013/05/15/republic-act-no-10533/

Resurrecion, G. F. (2015). Spiral progression approach in teaching science in selected private and public schools in Cavite. In *Proceedings of the DLSU Research Congress 2015, 3*. De La Salle University. https://www.dlsu.edu.ph/wp-content/uploads/pdf/conferences/research-congress-proceedings/2015/LLI/017LLI_Resurrecion_GF.pdf

Schmitz, E. A., Jansen, B. R. J., Wiers, R. W., & Salemink, E. (2023). Math-failure associations, attentional biases, and avoidance bias: The relationship with math anxiety and behavior in adolescents. *Cognitive Therapy and Research, 47*(5), 788–801. https://doi.org/10.1007/s10608-023-10390-9

SEAMEO INNOTECH. (2012). *K to 12 toolkit: Reference guide for teacher educators, school administrators and teachers*. SEAMEO INNOTECH. https://www.seameo-innotech.org/wp-content/uploads/2020/05/k-12-toolkit.pdf

Senate of the Philippines. (2023). *Legislative Research Service Quick Notes Second Regular Session, 19th Congress*. Retrieved from https://legacy.senate.gov.ph/publications/LRS/Quick%20Notes/Ctte%20on%20Basic%20Ed-MATATAG%20curriculum%20(2).pdf

TIMSS & PIRLS International Study Center. (n.d.). *About TIMSS & PIRLS International Study Center*. Retrieved from https://timssandpirls.bc.edu/about.html

Verzosa, D. M. B., & Vistro-Yu, C. P. (2019). Prospects and challenges in implementing a new mathematics curriculum in the Philippines. In *School mathematics curricula: Asian perspectives and glimpses of reform* (pp. 207-226). Springer. https://doi.org/10.1007/978-981-13-6312-2_11

Wang, M., Wu, B., Chen, N. S., & Spector, J. M. (2020). Connecting cognitive foundations with instructional design: The role of scaffolding in higher-order thinking skill development. *Educational Technology Research and Development*, *68*(3), 1103–1123. https://doi.org/10.1007/s11423-020-09757-w

Wilson, S. M., & Kelley, S. L. (2022). *Landscape of teacher preparation programs and teacher candidates*. *Evaluating and Improving Teacher Preparation Programs*. National Academy of Education. https://eric.ed.gov/?id=ED618996

Zhong, L., & Lyu, B. (2022). Exploring the impact of performance-based assessment on students' learning engagement and outcomes in the digital era. *Journal of Educational Technology and Development*, *15*(3), 112–129