
NAVIGATING UNCERTAINTY: THE HIDDEN COSTS OF CURRICULUM REFORM FOR NON-FORMAL EDUCATION TUTORS IN INDONESIA

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ABSTRACT

Curriculum reform in Indonesia has ignited intense debate, particularly in informal education. This study investigates the impact of curriculum uncertainty on tutors in an equality program at the Budi Utomo Community Learning Center, Surabaya, addressing a critical gap in the literature. Employing a qualitative case study approach, we conducted in-depth interviews with ten tutors, analyzed them through thematic analysis. The results revealed that frequent policy changes, coinciding with leadership transitions, engender instability among students and tutors. Tutors report significant investments in adapting to new curricula without adequate support and facing increased workload and motivation challenges. Intriguingly, the study also revealed positive outcomes, including enhanced teaching methods and student engagement. These findings underscore the need for targeted policy recommendations to cultivate a stable and supportive education system. By illuminating the unique challenges in non-formal education contexts serving underserved populations, this research provides valuable insights for future curriculum development and implementation strategies, inviting further exploration of this critical yet understudied area.

Keywords: Curriculum, Non-formal education, Community learning center, Equivalency Education Program, Tutors

INTRODUCTION

The implementation of curriculum reform in Indonesia has become the subject of ongoing debate, leading to a shift in leadership and the introduction of more comprehensive and focused guidance programs to address the challenges faced by education in the modern era. Given the need for students capable of facing various aspects of global development, the importance of updating the curriculum to prepare a competent and skilled generation with relevant skills to face a rapidly changing job market has become increasingly significant (Tang et al. 2020). Curriculum reform may require a different approach to deliver content, facilitate students' learning processes, and assess their achievements (Moore et al. 2023) (El-Sabagh 2021) (Alenezi 2020) (Oguguo et al. 2021). This study draws on cognitive load theory (Sweller, 1988) and adaptive expertise theory (Hatano and Inagaki, 1986) to frame its analysis. Cognitive load theory explains how curriculum changes may strain tutors' mental capacity and teaching effectiveness when demands exceed working memory (Sweller et al., 2019). Adaptive expertise theory illuminates how tutors develop flexible teaching approaches in response to changing curricular demands, a crucial skill for navigating frequent reforms (Carbonell et al., 2014).

Curriculum changes significantly impact teachers' practices, requiring substantial time and resources for adaptation (Pak et al., 2020). These changes affect teaching methods, lesson preparation, and student assessment, necessitating continuous professional development (Martinez, 2022). While curriculum reforms can enhance teaching quality (Moore et al., 2023), they also increase workload and expectations for teachers to stay current through training and workshops (Pak et al., 2020). This dual impact of improvement and added pressure underscores the complex nature of curriculum reform on educators. Challenges stemming from curriculum reforms affect both formal and non-formal education sectors. In non-formal settings, tutors face unique difficulties managing community learning groups, exacerbated by frequent policy changes tied to government transitions. These changes create instability in learning processes and confusion among students, as observed at the Budi Utomo Community Learning Center (PKBM) in Surabaya, Indonesia. Non-formal education tutors often struggle with limited access to appropriate resources and curricula (Looney and Santibañez 2021), highlighting the need for targeted support from government and relevant institutions.

A field study at Budi Utomo PKBM in Surabaya revealed significant challenges faced by tutors in equality programs due to frequent curriculum changes. In-depth interviews with ten tutors highlighted how these changes, triggered by national leadership transitions, create confusion and force continuous adaptation of teaching methods and materials. Tutors reported investing personal time and resources in training and developing new materials without compensation or adequate administrative support. This situation not only increases workload but also decreases teaching motivation, ultimately impacting the quality of education and

tutors' well-being. As one tutor remarked, "Every new curriculum demands time and money for training, while we still must meet our students' needs.

Curriculum changes impact all stakeholders, especially students and educators (Al-Hazaima et al., 2021). In Indonesia's non-formal education sector, particularly equality programs, these changes hold significant implications for national educational reform. Non-formal education is crucial for providing educational access to underserved individuals, offering flexibility not found in formal systems (Hayyi et al., 2023). While curriculum reform is essential for equipping students with relevant skills in a rapidly changing world (Andrea et al., 2024), frequent changes due to leadership transitions have created instability in both formal and non-formal education sectors.

Research on curriculum changes' impact on formal education is abundant, but studies examining non-formal education, especially equality programs, are limited. Existing research focuses primarily on formal education contexts, overlooking the unique challenges faced by non-formal education tutors. Yet, non-formal education is vital for providing educational access to underserved groups, including school dropouts and those needing flexible learning options (Pasha et al., 2022).

Field studies at PKBM Budi Utomo highlight that tutors face increased workloads and lack administrative support during curriculum transitions. Current literature inadequately addresses how this instability affects tutor motivation, well-being, and educational quality. This study aims to bridge this research gap by exploring curriculum instability's effects on non-formal education tutors, specifically in equality programs, to inform more effective policy recommendations for a stable and supportive education system.

METHODS

This study utilizes a qualitative approach to explore the impact of curriculum uncertainty on tutors in a non-formal education equality program. A qualitative approach was chosen because it allowed researchers to gain a deep understanding of tutors’subjective experiences. A case study design was employed to focus on a specific location (Alam2021), namely the Budi Utomo Community Learning Center (PKBM) in Surabaya. This study was conducted at the Budi Utomo Community Learning Center in Surabaya, which offers a non-formal education equality program. The location was chosen because it frequently experiences significant changes in the curriculum every time there is a change in national leadership. The study participants comprised ten tutors who taught in the equality program at the PKBM Budi Utomo. The tutors were selected based on inclusion criteria, such as a minimum of two years of experience teaching in a non-formal equality program and involvement in the adaptation of the latest curriculum.

Table 1. Demographic Characteristics of Participants

Characteristic	Number (n=10)	Percentage
Gender		
Male	4	40%
Female	6	60%
Age Range		
25-35	3	30%
36-45	5	50%
46-55	2	20%
Years of Experience		
2-5 years	2	20%
6-10 years	5	50%
>10 years	3	30%
Education Level		
Bachelor's Degree	7	70%
Master's Degree	3	30%

Source: Educator Basic Data System regarding PKBM Budi Utama by the Ministry of Education of the Republic of Indonesia in 2024

Data were collected through in-depth interviews, direct observations, and document analysis to gain a comprehensive understanding of the tutoring experience. In-depth interviews were conducted using a semi-structured interview guide that allowed for flexibility in exploring various topics (Adeoye-Olatunde and Olenik, 2021). During the observation, sessions were conducted to directly witness how tutors managed their classes

and adapted them to the new curriculum. Documents related to the policy curriculum and teaching materials were also analyzed to supplement the data collected from the interviews and observations.

The data were analyzed using thematic analysis techniques to identify patterns and themes that emerged from tutors' experiences of curriculum changes. This process involves initial coding, grouping these codes into broader themes, and interpreting these themes within the context of the study (Ali et al., 2021). NVivo software was used to organize and manage the data during the analysis. Methodological triangulation was employed by combining interviews, observations, and document analysis to ensure the validity and reliability of the data. To verify the accuracy and credibility of the researchers' interpretations, member checking was conducted by providing participants with summaries of the findings. An audit trial was also provided to facilitate the verification of the data collection and analysis processes (Nielsen et al., 2020).

RESULTS

The findings reveal various data on the challenges and impacts of curriculum change in schools, particularly in the context of leadership change. The study found that the adoption of a new curriculum often requires significant time and resource investments, as well as uncertainty among tutors. Additionally, the results show that the main challenge in curriculum change is aligning changes with the needs of students and the national curriculum requirements. Despite these challenges, some positive outcomes can be identified, such as improvements in teaching methods and increased student motivation.

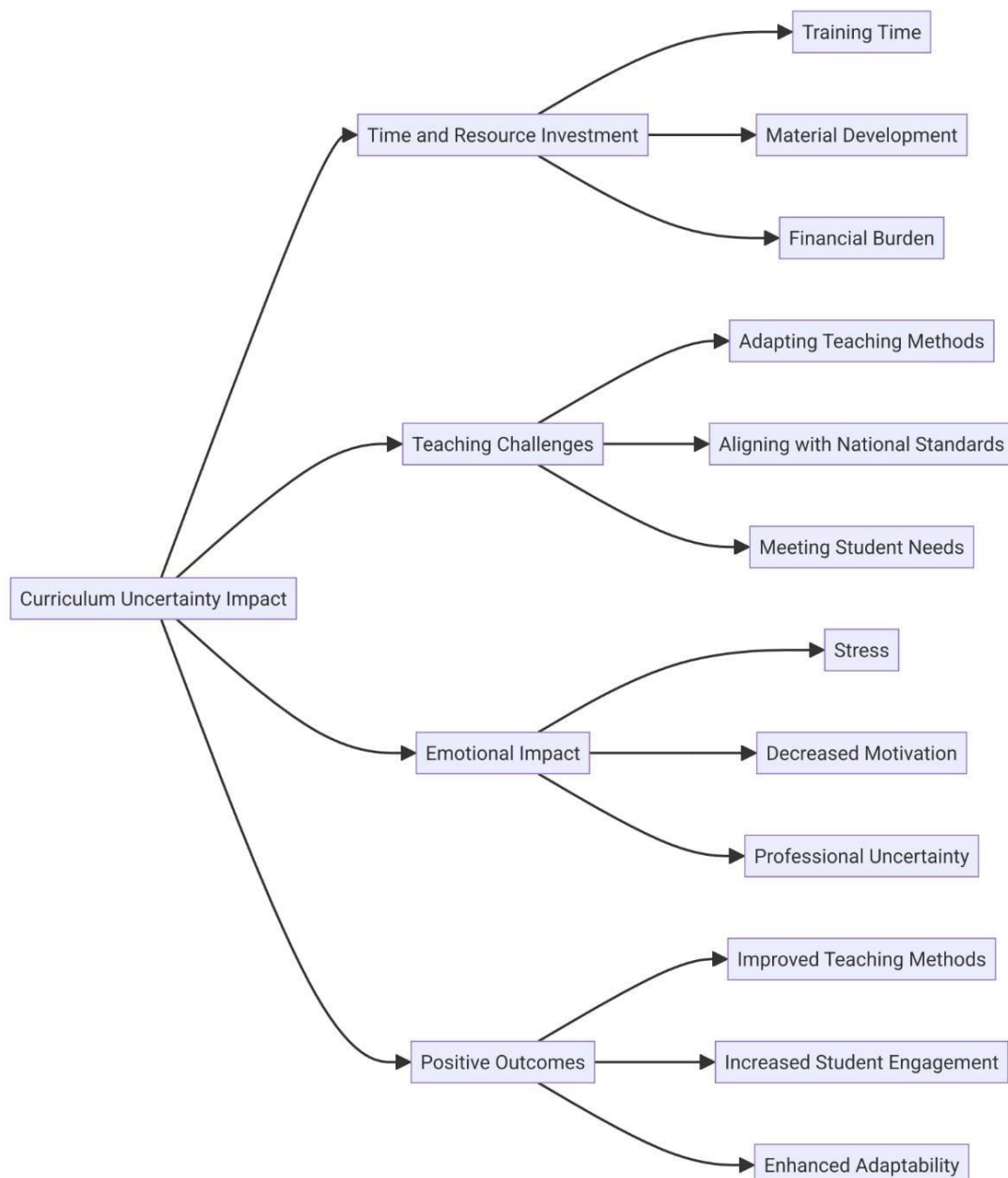


Figure 1. Theme diagram of analysis results

1. Investment of Time and Resources

Adopting new curricula significantly impacts tutors' time and resources. Through in-depth interviews, tutors reported substantial challenges:

"We had to spend countless hours understanding the new curriculum and creating lesson plans that align with it. It felt like we were starting from scratch every time a new curriculum was introduced." (Mrs. Yanti, NVivo Code: Training_Adaptation)

"The training sessions are time-consuming, often taking up weekends and after-school hours. This time could have been better spent preparing for classes and supporting our students." (Mr. Agus, NVivo Code: Training_Time)

Resource limitations exacerbate these challenges:

"Additional resources are rarely provided. We often have to use our own money to buy materials or find creative ways to do so. This adds to our workload and stress." (Mrs. Sari, NVivo Code: Resource_Limitation)

The financial burden is significant:

"The financial and time investment is significant. For instance, we sometimes have to attend workshops in other cities, which means we have to pay for travel and accommodation ourselves." (Mr. Budi, NVivo Code: Financial_Burden)

Continuous professional development adds to the strain:

"We need to constantly update our knowledge and skills to keep up with the curriculum changes. This means spending a lot of time on professional development activities, which can be overwhelming." (Mrs. Lestari, NVivo Code: Professional_Development).

The testimonials underscore the extensive demands placed on tutors, exacerbated by insufficient institutional backing. Analysis of the data reveals that introducing a new curriculum imposes significant time and resource burdens on tutors. Thematic examination of interviews identifies key issues: the substantial time needed for training and adaptation to new curricula, inadequate support resources, and the financial strain on tutors. They express frustration and stress due to personal investments required to meet new curricular demands. Continuous professional development emerges as crucial, though tutors perceive institutional support as lacking in time, financial aid, and resources needed for effective transition. Training sessions often exceed regular working hours, impacting personal lives and job satisfaction. Furthermore, financial pressures from workshops and materials exacerbate stress. Updating teaching materials and methods to align with new curricula adds to their workload. Despite challenges, tutors demonstrate commitment to student success, emphasizing the necessity of institutional support to alleviate burdens. In conclusion, addressing these challenges through improved institutional support, adequate resources, and recognition of tutors' additional efforts is vital for successful curriculum implementation and educational enhancement.

2. Uncertainty Among Tutors

Tutors face significant uncertainty when adapting to new curricula, stemming from unclear guidance and continuous reorientation of teaching strategies:

"Every time there is a new curriculum, I feel confused and have to work hard to understand the changes. It's like starting all over again." (Mrs. Nur, NVivo Code: Curriculum_Confusion).

This uncertainty affects teaching stability:

"The frequent changes make us feel unstable in our teaching. We are constantly adapting, which affects our confidence and consistency in the classroom." (Mr. Arif, NVivo Code: Instability_Impact)

Adaptation causes stress:

"We always have to adapt to these changes, making us feel unsure if we are meeting the expected standards. It's a continuous cycle of adjustment and stress." (Mrs. Dewi, NVivo Code: Adaptation_Stress)

Lack of support exacerbates the challenges:

"There is minimal support provided during these transitions. We often rely on each other to understand the new requirements, which adds to our stress." (Mr. Fajar, NVivo Code: Support_Lack)

These changes impact teaching effectiveness:

"The frequent changes hinder our teaching effectiveness. We spend more time adjusting to new methods than focusing on our students' needs." (Mrs. Lina, NVivo Code: Teaching_Effectiveness).

The testimonials highlight the considerable uncertainty and stress tutors face as a result of frequent curriculum changes, emphasizing the necessity for clearer guidance and enhanced support systems. The study reveals that recurrent adjustments to the curriculum lead to significant uncertainty among tutors. Thematic analysis of interviews identifies key concerns, including confusion regarding the new curriculum, instability in teaching practices, ongoing adaptation stress, insufficient support, and reduced teaching effectiveness. Tutors express that these frequent changes create confusion and instability, impacting their confidence and consistency in the classroom.

The imperative for continuous adaptation emerges as pivotal. Tutors feel that the constant need to align teaching strategies with new curricular demands induces substantial stress and uncertainty. Many tutors note minimal support during these transitions, often relying on peer collaboration to understand and implement new requirements, thereby exacerbating their stress levels. Moreover, the frequent changes are observed to hinder teaching effectiveness. Tutors invest significant time in adjusting to new methods, diverting attention from addressing students' individual needs. Despite these challenges, tutors remain dedicated to delivering quality education, underscoring the necessity for more robust support systems to assist them in navigating curricular changes effectively.

3. Aligning Changes with Student Needs and National Curriculum Demands

Tutors face significant challenges in harmonizing curriculum changes with both student needs and national requirements. This dual responsibility creates tension and demands innovative approaches.

Balancing local context with national standards is a complex task:

"We must ensure that students understand the local context while also meeting national standards. It's a delicate balance." (Mrs. Ani, NVivo Code: Balancing_Standards)

Tutors struggle to make the curriculum relevant while adhering to national demands:

"The material needs to be relevant to the students' lives, but we often get caught between their needs and the national curriculum demands." (Mr. Joko, NVivo Code: Relevance_National_Standards)

This creates pressure from both local and national expectations:

"There is a lot of pressure to follow the national curriculum strictly, but we can't ignore the local needs of our students. This creates a lot of tension." (Mrs. Rina, NVivo Code: Local_National_Pressure)

To address these challenges, tutors modify their teaching methods and develop integration strategies:

"It's challenging to modify teaching methods to satisfy both local relevancy and national standards, but it's necessary to ensure effective learning." (Mr. Budi, NVivo Code: Method_Modification)

"We try to integrate local examples into the curriculum to make it more relevant for students, while still adhering to national guidelines." (Mrs. Sari, NVivo Code: Integration_Strategy)

These testimonies highlight the complex balancing act tutors perform, adapting teaching methods to meet both local needs and national standards. This process requires significant effort, creativity, and often lacks consistent institutional support. The pressure to ensure teaching relevance while adhering to national standards establishes a demanding educational environment, influencing the overall teaching and learning experience. Addressing these concerns through improved institutional support, clear guidelines, and recognition of tutors' efforts is crucial for ensuring productive teaching and learning in non-formal education settings.

4. Improvement in Teaching Methods

The new curriculum has led to significant advancements in teaching techniques, enhancing student involvement and academic achievement. Tutors reported several positive changes:

Interactive and student-centered methods have made classes more engaging:

"The new curriculum encourages us to use more interactive and student-centered teaching methods. This has made my classes more dynamic and engaging." (Mrs. Lestari, NVivo Code: Interactive_Teaching)

Project-based learning has been incorporated to promote collaborative and real-world learning:

"I've started incorporating more project-based learning activities, which allows students to work collaboratively and apply what they have learned in real-world scenarios." (Mr. Budi, NVivo Code: Project_Based_Learning)

Student engagement has increased due to more relevant lesson content:

"Students are more engaged and participate actively in class discussions and activities. They seem more motivated to learn because the lessons are more relevant to their lives." (Mrs. Rina, NVivo Code: Student_Engagement)

Technology integration has enhanced the learning experience:

"The curriculum encourages the use of technology, so I've started using educational software and online resources to supplement my lessons. This has made the learning experience more interactive for students." (Mr. Joko, NVivo Code: Technology_Integration)

Student outcomes have improved, with better retention of information:

"Yes, students are performing better in assessments and showing a deeper understanding of the material. The new methods seem to help them retain information more effectively." (Mrs. Ani, NVivo Code: Improved_Outcomes)

The testimonies underscore the significant enhancement in student motivation due to the relevance and interactive nature of the new curriculum, resulting in increased engagement, curiosity, and improved academic performance. The evaluation reveals a substantial increase in student motivation following the implementation of the new curriculum. Thematic analysis of interview data identifies several key themes: heightened enthusiasm, increased engagement, motivation driven by relevance, interest in interactive learning, and enhanced academic performance.

Interactive Teaching: Tutors like Mrs. Lestari emphasized the shift towards more interactive and student-centered teaching methods. This approach has made classes more dynamic and engaging, fostering a more conducive learning environment (NVivo Code: Interactive_Teaching).

Project-based Learning: Mr. Budi highlighted the incorporation of project-based learning activities that allow students to work collaboratively and apply their knowledge in practical, real-world contexts. This method has been particularly effective in enhancing students' critical thinking and problem-solving skills (NVivo Code: Project_Based_Learning).

Student Engagement: Tutors such as Mrs. Rina noted a significant increase in student engagement and participation. The relevance of the lessons to students' lives has motivated them to take a more active role in their learning process (NVivo Code: Student_Engagement).

Technology Integration: Mr. Joko discussed the integration of technological tools into teaching practices. The use of educational software and online resources has made the learning experience more interactive and accessible for students, catering to different learning styles (NVivo Code: Technology_Integration).

Improved Outcomes: Tutors like Mrs. Ani observed improvements in student outcomes, including better performance in assessments and a deeper understanding of the material. New teaching methods have helped students retain information more effectively and apply their knowledge more confidently (NVivo Code: Improved_Outcomes).

Data analysis indicates that the recently implemented curriculum has advanced teaching techniques significantly, creating more interactive and engaging classrooms. The adoption of student-centered methods such as project-based learning and technology integration has notably boosted student participation and academic performance. Tutors have observed that these innovative approaches have rendered lessons more relevant and captivating, thereby increasing students' motivation to actively engage in class. Moreover, the integration of technology has enriched the learning experience by providing diverse tools and resources that support comprehension.

The observed improvements in student performance underscore the effectiveness of these progressive teaching methods. Enhanced academic outcomes and a deeper grasp of subject matter underscore the importance of employing modern teaching strategies to establish effective and stimulating learning environments.

5. Increase in Student Motivation

The updated curriculum has had a positive impact on student motivation, with tutors reporting increased student involvement and eagerness to learn due to the curriculum's relevance and interactive design.

Students show increased excitement and participation in their education:

"The new curriculum has made students more excited about learning. They are more eager to participate and take an active role in their education." (Mrs. Sari, NVivo Code: Increased_Excitement)

Enhanced engagement and curiosity are observed in classroom activities:

"I've noticed a significant increase in students' willingness to engage in classroom activities. They are more curious and ask more questions." (Mr. Agus, NVivo Code: Enhanced_Engagement)

The curriculum's relevance to students' lives and future careers has boosted motivation:

"Students seem more motivated because the curriculum includes topics that are relevant to their lives and future careers. They see the value in what they are learning." (Mrs. Nur, NVivo Code: Relevance_Motivation)

Interactive and hands-on activities have captured students' interest:

"The interactive and hands-on activities have really captured their interest. They are more involved and look forward to coming to class." (Mr. Joko, NVivo Code: Interactive_Interest)

Increased motivation has led to improved academic performance:

"Yes, students are performing better and are more confident in their abilities. The increased motivation has translated into improved academic outcomes." (Mrs. Ani, NVivo Code: Improved_Performance)

The testimonies underscore the significant enhancement in student motivation due to the relevance and interactive nature of the new curriculum, resulting in increased engagement, curiosity, and improved academic performance. The evaluation reveals a substantial increase in student motivation following the implementation of the new curriculum. Thematic analysis of interview data identifies several key themes: heightened enthusiasm, increased engagement, motivation driven by relevance, interest in interactive learning, and enhanced academic performance.

Increased Excitement: Tutors like Mrs. Sari emphasized that students are more excited about learning. This excitement translated into greater eagerness to participate and take an active role in their education, fostering a more dynamic and lively classroom environment (NVivo Code: Increased_Excitement).

Enhanced Engagement: Mr. Agus highlighted a notable increase in student engagement. The new curriculum has made students more curious and willing to engage in classroom activities, ask more questions, and show keen interest in the material (NVivo Code: Enhanced_Engagement).

Relevance Motivation: Tutors such as Mrs. Nur noted that the relevance of the curriculum to students' lives and future careers has significantly boosted their motivation. Students are more inclined to see the value of what they are learning, which drives their enthusiasm and commitment to their studies (NVivo Code: Relevance_Motivation).

Interactive Interest: Mr. Joko discussed how the interactive and hands-on activities introduced by the new curriculum have captured students' interest. This approach makes learning more engaging and enjoyable, leading to higher levels of student involvement (NVivo Code: Interactive_Interest).

Improved Performance: Tutors like Mrs. Ani observed that the increased motivation has translated into improved academic performance. Students are not only more confident in their abilities, but also perform better in assessments, demonstrating the positive impact of enhanced motivation on learning outcomes (NVivo Code: Improved_Performance).

The results of the data analysis revealed a substantial increase in student motivation following the implementation of the new curriculum.

The curriculum's impact on student engagement and performance improved significantly due to its alignment with students' future careers, interactive learning methods, and hands-on activities. Tutors observed heightened enthusiasm and active participation among students, facilitated by interactive learning techniques that fostered enjoyment and engagement, thereby creating a dynamic classroom environment. Consequently, students' academic performance saw improvement as they grew in confidence and motivation. The positive effects of the new curriculum on student outcomes emphasize the importance of developing curricula that are both relevant and engaging to enhance student motivation. Improved attitudes toward learning underscore the ongoing need for innovative curriculum design and teaching methods to sustain and amplify student engagement. In conclusion, the curriculum's focus on relevance and interactivity has notably enhanced educational quality by

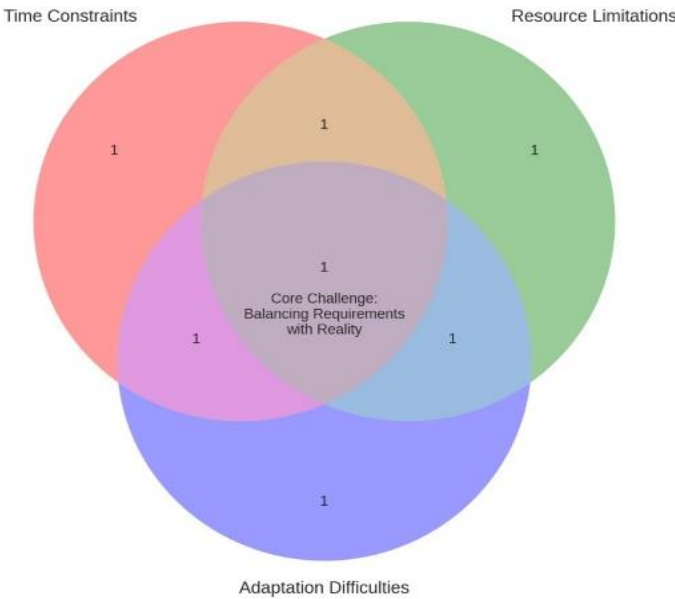
bolstering student motivation. Continuous support for innovative curriculum design and teaching practices is essential to uphold these positive outcomes and further advance student achievements.

DISCUSSION

The results of this study revealed various data regarding the challenges and impacts of curriculum changes in schools, particularly in the context of leadership changes. The research found that the adoption of a new curriculum often requires significant time and resource investments, as well as uncertainty among instructors. In this context, this study aimed to investigate the hidden costs of curriculum reform for non-formal education tutors in Indonesia, particularly in terms of time, resources, and stress. Observations show that tutors face significant hidden costs as a result of curriculum reform, including time spent on training and content development, as well as financial burdens for attending unsupported institutional training. Furthermore, the results show that the main challenges in curriculum change involve aligning changes with student needs and national curriculum requirements, creating tension that requires managing diverse expectations.

This topic is important because it sheds light on the unseen challenges faced by non-formal education tutors and the need for support and resources to address them. This study compares the experiences of tutors in Indonesia with those in other countries, providing a broader perspective on the hidden costs of curriculum reform. These findings contradict the assumption that curriculum reform only brings positive results, highlighting the need for a more comprehensive approach to reform. Although there are various challenges, positive results can also be identified, such as improvements in teaching methods and increased student motivation.

Figure 2 Overlapping Challenges in Curriculum Implementation



This study provides data to support the idea that an innovative and student-centered approach can improve student engagement and learning outcomes, but also emphasizes the need for ongoing support for tutors. The implications of these findings are crucial for the design and implementation of curriculum reform in Indonesia and other countries, highlighting the need for careful planning and institutional support to ensure the success of the reform and improve the quality of education.

Investment of Time and Resources

Undertaking the adoption of a new curriculum requires significant investment of time and resources from tutors. The commitment to the time necessary for training and adapting to the new curriculum presents a major challenge. As Mrs. Yanti explains, "We must spend hours upon hours to understand the new curriculum and create suitable lesson plans. It feels like starting from scratch each time a new curriculum is introduced" (NVivo Code: Training_Adaptation). The impact of training sessions on regular teaching schedules is also a matter of serious concern. Pak Agus reveals, "Training sessions often take up time that is frequently spent on weekends and after school. This time would be better used for class preparation and supporting our students" (NVivo Code: Training_Time). In addition, the lack of resources places a burden on tutors. Mrs. Sari states, "Additional resources are rarely provided. We often have to use our own money to buy materials or find creative ways to use what we have. This adds to our workload and stress" (NVivo Code: Resource_Limitation). The financial burden of attending training and workshops is a barrier. Pak Budi explains, "The time and

financial investment is significant. For example, we sometimes have to attend workshops in other cities, which means we have to pay for our own travel and accommodation" (NVivo Code: Financial_Burden).

Furthermore, the need for ongoing professional development cannot be overlooked. Mrs. Lestari states, "We need to continuously update our knowledge and skills to keep up with changes in the curriculum. This means spending a lot of time on professional development activities, which can be very exhausting" (NVivo Code: Professional_Development). The analysis indicates that the adoption of the new curriculum places significant demands on tutors' time and resources, which is further exacerbated by a lack of institutional support, financial assistance, and resources. This situation leads to frustration and stress among tutors. However, despite these challenges, tutors remain committed to their professional roles, emphasizing the importance of better institutional support to ensure the successful implementation of the curriculum and improve the overall quality of education (Janssen and Kirschner, 2020; Castro-Alonso et al., 2021). Cognitive load theory suggests that additional workload, such as extensive training and the development of new materials, can result in increased cognitive load, which negatively affects teaching effectiveness (Janssen and Kirschner, 2020). Mrs. Yanti and Pak Agus described the time required to understand and implement the new curriculum as disrupting class preparation and supporting students, exacerbating their workload (NVivo Codes: Training_Adaptation, Training_Time). Furthermore, the limited resources and financial burden of attending training increases stress among tutors, as revealed by Mrs. Sari and Pak Budi (NVivo Codes: Resource_Limitation, Financial_Burden). The continuous need for professional development, as explained by Mrs. Lestari, further complicates this situation (NVivo Code: Professional_Development). Overall, this analysis demonstrates that adequate institutional support is essential to alleviate the cognitive load and stress experienced by tutors and to ensure successful curriculum implementation and improved overall quality of education.

The Significant Ambiguity Faced by Tutors

Tutors often experience significant ambiguity when adapting to new curricula. This ambiguity is primarily caused by a lack of clear guidance and the need to continuously adapt teaching strategies to new curriculum requirements. Ms. Nur revealed, "Every time there is a new curriculum, I feel confused and have to work hard to understand the changes. It feels like starting from scratch again" (NVivo Code: Curriculum_Confusion). The impact of frequent changes leads to instability in teaching practices, as expressed by Mr. Arif, "Frequent changes make us feel unstable in teaching. We constantly have to adapt, which affects our confidence and consistency in the classroom" (NVivo Code: Instability_Impact). The continuous adaptation process causes stress and uncertainty, as stated by Ms. Dewi, "We always have to adapt to these changes, making us feel uncertain about whether we are meeting the expected standards. This is a continuous adjustment and stress cycle" (NVivo Code: Adaptation_Stress). Lack of support during the transition period also exacerbates the stress experienced by tutors. Mr. Fajar pointed out, "The support provided during this transition is minimal. We often rely on each other to understand the new requirements, which adds to our stress" (NVivo Code: Support_Lack). Teaching effectiveness is also hindered by frequent adjustments, as stated by Ms. Lina, "Frequent changes hinder our teaching effectiveness."

We spend more time adapting to new methods than focusing on the needs of students" (NVivo Code: Teaching_Effectiveness). The data analysis shows that tutors experience significant ambiguity and stress due to frequent curriculum changes. Lack of institutional support and clear guidance exacerbates this situation. To ensure stability and effectiveness in teaching, clear guidance, adequate support, and recognition of tutors' efforts in facing continuous curriculum changes are needed.

The significant uncertainty faced by tutors when they must adapt to new curricula is mainly due to the lack of clear guidelines and need for continuous instructional strategies. According to the occupational stress theory, these situations create ongoing stress and uncertainty that negatively impact self-confidence and teaching effectiveness (Wirth et al., 2020). Mrs. Nur described her confusion in understanding the new curriculum (NVivo Code: Curriculum_Confusion), whereas Mr. Arif associated changes with instability in teaching practice (NVivo Code: Instability_Impact). The uncertainty and stress experienced by Mrs. Dewi owing to continuous adaptation are compounded by the situation (NVivo Code: Adaptation_Stress). The lack of support during the transition, as mentioned by Mr. Fajar, exacerbates the situation by adding stress to tutors (NVivo Code: Support_Lack). The impact of frequent changes is also evident in the effectiveness of teaching, as revealed by Mrs. Lina, where the adaptation of new methods diverts the focus from the needs of students (NVivo Code: Teaching_Effectiveness). This analysis indicates the need for adequate institutional support to reduce the cognitive load and stress experienced by tutors, ensure successful curriculum implementation, and improve overall quality of education (Vanneste et al., 2021). This aligns with the importance of institutional support in reducing stress and improving education quality.

Aligning Changes with Student Needs and National Curriculum Requirements

A significant challenge for educators is aligning curriculum changes with students' needs and national curriculum requirements. The need to balance local contextual understanding with national standards creates tension and demands for educators to manage diverse expectations. Ms. Ani emphasized the importance of ensuring that students understand local contexts while also meeting national standards, stating, "We must ensure that students understand local contexts while also meeting national standards. This is a complex balancing act" (NVivo Code: Balancing_Standards). Mr. Joko highlights the difficulty in creating a curriculum relevant to students' lives, stating, "Material must be relevant to students' lives, but we often find ourselves caught between their needs and national curriculum requirements" (NVivo Code: Relevance_National_Standards). The significant pressure from both local and national expectations creates a tense environment, as expressed by Ms. Rina, "There is a lot of pressure to strictly follow the national curriculum, but we cannot ignore the needs of local students. This creates a lot of tension" (NVivo Code: Local_National_Pressure). The need to modify teaching methods to meet both of these requirements is also acknowledged by Mr. Budi, "It is very challenging to modify teaching methods to be locally relevant and meet national standards, but this needs to be done to ensure effective learning" (NVivo Code: Method_Modification). Ms. Sari explains the strategies used to confront these competing demands, stating, "We try to integrate local examples into the curriculum to make it more relevant to students, while still adhering to national guidelines" (NVivo Code: Integration_Strategy).

The data indicate that aligning curriculum changes with student needs and national requirements presents a significant challenge for educators. They must continuously innovate and adapt to ensure that their teaching methods meet both requirements, often without sufficient institutional support. To address this challenge, better institutional support, clear guidelines, and innovative strategies are needed to balance local needs and national standards, thereby improving teaching effectiveness and student-learning outcomes. The need to reconcile curriculum changes with student needs and national standards creates tensions that require the management of diverse expectations, as per the ecological theory of education (Lin et al., 2021). Mrs. Ani emphasizes the importance of maintaining a balance between understanding the local context and fulfilling national standards (NVivo Code: Balancing_Standards). Pak Joko reveals that the relevance of the curriculum to students' lives often falls between local and national requirements (NVivo Code: Relevance_National_Standards). Pressure from local and national expectations creates a tense environment, as explained by Mrs. Rina, highlighting the pressure to follow the national curriculum without neglecting local student needs (NVivo Code: Local_National_Pressure). Pak Budi sheds light on the challenges of modifying teaching methods to be locally relevant and in alignment with national standards (NVivo Code: Method_Modification), while Mrs. Sari explains strategies for integrating local examples into the national curriculum to address competing demands (NVivo Code: Integration_Strategy). Data indicate that educators are required to continuously innovate and adjust their teaching methods to satisfy the demands of both local and national standards, often without sufficient institutional backing (Reiser, 2023) (Darling-Hammond et al., 2020). To address this challenge, more effective institutional support, clear guidelines, and innovative strategies are required to balance local needs and national standards, thereby enhancing teaching effectiveness and student learning outcomes.

Improvements in Teaching Methods

This study has identified several positive impacts of the new curriculum, particularly in enhancing teaching methods. Teachers reported that the curriculum introduced innovative strategies aimed at increasing student engagement and improving learning outcomes. Ms. Lestari explained, "The new curriculum encourages us to adopt more interactive and student-centered teaching methods, which has made my class more dynamic and engaging" (NVivo Code: Interactive_Teaching). Mr. Budi highlighted the adoption of project-based learning, noting, "I've begun incorporating more project-based activities that promote collaborative learning and practical application of knowledge" (NVivo Code: Project_Based_Learning). Ms. Rina observed improved student engagement, stating, "Students are more active in class discussions and activities, showing greater motivation because the lessons are more relevant to their lives" (NVivo Code: Student_Engagement). The integration of technology into teaching methods was also noted as beneficial by Mr. Joko, who mentioned, "The curriculum encourages the use of educational technology, allowing me to integrate software and online resources that enhance interactivity in lessons" (NVivo Code: Technology_Integration). Ms. Ani highlighted improvements in student performance and understanding, noting, "Students have shown better performance in assessments and a deeper grasp of the material, indicating that the new methods support more effective retention of information" (NVivo Code: Improved_Outcomes).

The analysis underscores significant enhancements in teaching methods brought about by the new curriculum, resulting in more interactive and engaging classroom environments. The adoption of student-centered approaches like project-based learning and technology integration has notably boosted student engagement and

learning outcomes (Jamil & Belkacem, 2024; Hansen et al., 2020; Al-Khasawneh et al., 2023). These findings emphasize the critical role of innovative teaching strategies in creating effective and enjoyable learning environments. Continued professional support and development for instructors are essential to sustain these positive changes and continually enhance educational outcomes.

Increasing Student Motivation

According to instructors, the implementation of the new curriculum has positively impacted student motivation. Students have shown increased engagement and enthusiasm for learning due to the curriculum's relevance and interactive nature. Mrs. Sari notes, "The new curriculum has sparked greater eagerness among students to learn, leading to increased participation and active involvement in their education" (NVivo Code: Increased_Excitement). Pak Agus has observed a notable rise in students' willingness to engage in classroom activities since the introduction of the new curriculum, stating, "I've witnessed a significant increase in students' desire to participate in class activities. They display heightened curiosity and ask more questions" (NVivo Code: Enhanced_Engagement). The enhanced relevance of the curriculum has also been identified as a key factor in boosting student motivation. As articulated by Mrs. Nur, "Students appear more motivated because the curriculum addresses topics that are pertinent to their lives and future careers. They perceive the value in what they are learning" (NVivo Code: Relevance_Motivation). Pak Joko highlights how interactive activities and practices have captured students' interest: "Interactive activities and practices effectively hold their attention. They are more engaged and anticipate coming to class" (NVivo Code: Interactive_Interest). Mrs. Ani has observed improvements in academic performance attributable to increased motivation: "Students are performing better on assessments and have gained confidence in their abilities. The heightened motivation has translated into improved academic outcomes" (NVivo Code: Improved_Performance).

The analysis indicates that the new curriculum has significantly elevated student motivation, rendering learning more stimulating and pertinent. The curriculum's alignment with students' lives and future careers plays a crucial role in enhancing their enthusiasm and dedication to learning. Teachers report heightened student eagerness to learn and increased active participation in class. Interactive and practical activities have heightened the enjoyment of learning, thereby boosting student engagement. These improvements have led to better academic results, underscoring the importance of relevant and interactive curricula in enhancing student motivation. Continuous support for innovative curriculum design and teaching methods is essential for sustaining these positive changes and advancing students' educational outcomes.

The implementation of the new curriculum has positively impacted student motivation. Aligned with intrinsic motivation theory, the curriculum's relevance and interactive nature stimulate student engagement and enthusiasm for learning (Mitsea et al., 2022; Mekari et al., 2020; Brunyé et al., 2020; Bliss et al., 2021). Ibu Sari observes that the new curriculum has heightened students' eagerness to learn and their active participation in education (NVivo Code: Increased_Excitement). Pak Agus documents a significant increase in students' willingness to participate in classroom activities, indicating heightened curiosity and engagement (NVivo Code: Enhanced_Engagement). Mrs. Nur acknowledges the curriculum's relevance, covering topics crucial to students' lives and future careers, as pivotal in enhancing student motivation (NVivo Code: Relevance_Motivation). Pak Joko adds that interactive and practical activities effectively capture students' interest, increasing their involvement and enthusiasm for attending class (NVivo Code: Interactive_Interest). Mrs. Ani notes that increased motivation has resulted in improved academic performance, with students demonstrating greater confidence in their abilities and achieving better results in assessments (NVivo Code: Improved_Performance).

The data confirms that the new curriculum has significantly increased student motivation, making learning more engaging and relevant. The curriculum's alignment with students' lives and future careers is pivotal in boosting their enthusiasm and commitment to learning. Tutors observe increased student enthusiasm for learning and greater participation in class. Interactive and practical activities have enhanced the learning experience, increasing student engagement and academic performance (Conradty and Bogner, 2020; Xue et al., 2022). These improvements underscore the importance of a relevant and interactive curriculum in enhancing student motivation. Continuous support for innovative curriculum design and teaching methods is crucial for sustaining these positive changes and improving students' educational outcomes.

CONCLUSION

The discourse surrounding curriculum reform in Indonesia has been profound, particularly concerning leadership changes, comprehensive guidance, and mentoring programs. This study illuminates the multifaceted impact of curriculum changes on tutors in non-formal education, specifically within the PKBM Budi Utomo program in Surabaya. Our findings reveal that the adoption of new curricula demands substantial investments in time and resources, while simultaneously fostering uncertainty among tutors. These educators find themselves

allocating additional time for training and material development, grappling with resource constraints, and shouldering the financial burden of training without adequate institutional support. The absence of clear guidance and support during transitional periods exacerbates stress and uncertainty in teaching practices.

A significant challenge lies in aligning curriculum changes with student needs and national curriculum requirements, often creating considerable pressure on tutors. However, amidst these challenges, the new curriculum has catalyzed improvements in teaching methods and increased student motivation through more interactive, student-centered approaches and technology integration. These findings underscore the complex interplay between curriculum reform and its impact on non-formal education tutors, highlighting both the hidden costs and potential benefits of such changes.

Based on these findings, we recommend: (1) Phased implementation of curriculum changes; (2) Targeted professional development for tutors; (3) Establishment of feedback mechanisms; (4) Development of support systems for tutors; (5) Consideration of financial incentives and (6) Promotion of institutional collaboration. These recommendations aim to foster a more stable and supportive education system, particularly benefiting underserved populations in non-formal education contexts. Further research, including longitudinal studies, is needed to explore the long-term impacts of curriculum changes on education quality and tutor well-being, providing insights for future policy improvements.

REFERENCES

- Adeoye-Olatunde, O. A., & Olenik, N. L. (2021). Research and scholarly methods: Semi-structured interviews. *Journal of the American College of Clinical Pharmacy*, 4(10), 1358-1367. <https://doi.org/10.1002/jac5.1441>
- Alam, M. K. (2020). A Systematic Qualitative Case Study: Questions, Data Collection, NVivo Analysis and Saturation. *Qualitative Research in Organizations and Management: An International Journal*, 16, 1-31. <https://doi.org/10.1108/QROM-09-2019-1825>
- Alenezi, A. (2020). The role of e-learning materials in enhancing teaching and learning behaviors. *International Journal of Information and Education Technology*, 10(1), 48-56. <https://doi.org/10.18178/ijiet.2020.10.1.1338>
- Al-Hazaima, H., Low, M., & Sharma, U. (2021). Perceptions of salient stakeholders on the integration of sustainability education into the accounting curriculum: a Jordanian study. *Meditari Accountancy Research*, 29(2), 371-402. <https://doi.org/10.1108/MEDAR-02-2020-0708>
- Ali, M., Mustapha, I., Osman, S., & Hassan, U. (2021). University social responsibility: A review of conceptual evolution and its thematic analysis. *Journal of Cleaner Production*, 286, 124931. <https://doi.org/10.1016/j.jclepro.2020.124931>
- Al-Khasawneh, M. A., Alzahrani, A., & Alarood, A. (2023). Alzheimer's Disease Diagnosis Using MRI Images. In *Data Analysis for Neurodegenerative Disorders* (pp. 195-212). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-2154-6_11
- Andrea, J., Sakinah, F., & Gistituati, N. (2024). MERDEKA BELAJAR DALAM REVOLUSI PENDIDIKAN INDONESIA DI ERA DISRUPSI. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 9(2), 7158-7175. <https://doi.org/10.23969/jp.v9i2.15021>
- Bliss, E. S., Wong, R. H., Howe, P. R., & Mills, D. E. (2021). Benefits of exercise training on cerebrovascular and cognitive function in ageing. *Journal of Cerebral Blood Flow & Metabolism*, 41(3), 447-470. <https://doi.org/10.1177/0271678X20957807>
- Brunyé, T. T., Brou, R., Doty, T. J., Gregory, F. D., Hussey, E. K., Lieberman, H. R., ... & Yu, A. B. (2020). A review of US Army research contributing to cognitive enhancement in military contexts. *Journal of Cognitive Enhancement*, 4, 453-468. <https://doi.org/10.1007/s41465-020-00167-3>
- Buchner, J., Buntins, K., & Kerres, M. (2022). The impact of augmented reality on cognitive load and performance: A systematic review. *Journal of Computer Assisted Learning*, 38(1), 285-303. <https://doi.org/10.1111/jcal.12617>
- Carbonell, K. B., Stalmeijer, R. E., Könings, K. D., Segers, M., & van Merriënboer, J. J. (2014). How experts deal with novel situations: A review of adaptive expertise. *Educational research review*, 12, 14-29. <https://doi.org/10.1016/j.edurev.2014.03.001>
- Castro-Alonso, J.C., de Koning, B.B., Fiorella, L. et al. Five Strategies for Optimizing Instructional Materials: Instructor- and Learner-Managed Cognitive Load. *Educ Psychol Rev* 33, 1379–1407 (2021). <https://doi.org/10.1007/s10648-021-09606-9>

- Conradty, C., Bogner, F.X. STEAM teaching professional development works: effects on students' creativity and motivation. *Smart Learn. Environ.* 7, 26 (2020). <https://doi.org/10.1186/s40561-020-00132-9>
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2019). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2), 97–140. <https://doi.org/10.1080/10888691.2018.1537791>
- El-Sabagh, H.A. Adaptive e-learning environment based on learning styles and its impact on development students' engagement. *Int J Educ Technol High Educ* 18, 53 (2021). <https://doi.org/10.1186/s41239-021-00289-4>
- Hansen, P., Climie, E. A., & Oxoby, R. J. (2020). The demands of performance generating systems on executive functions: effects and mediating processes. *Frontiers in Psychology*, 11, 1894. <https://doi.org/10.3389/fpsyg.2020.01894>
- Hatano, G., & Inagaki, K. (1986). Two courses of expertise. In H. Stevenson, H. Azuma, & K. Hakuta (Eds.), *Children development and education in Japan* (pp. 262-272). New York: Freeman.
- Hayyi, A., Muslihatun, M., Mukhlisin, L., Awal, R., Hasanuddin, H., & Murcahyanto, H. (2023). Evaluasi Program Penyelenggaraan Pendidikan Kesetaraan Paket C di Lembaga Pendidikan Nonformal. *Kaganga: Jurnal Pendidikan Sejarah dan Riset Sosial Humaniora*, 6(2), 778-791. <https://doi.org/10.31539/kaganga.v6i2.7377>
- Jamil, N., & Belkacem, A. N. (2024). Advancing Real-Time Remote Learning: A Novel Paradigm for Cognitive Enhancement Using EEG and Eye-Tracking Analytics. *IEEE Access*. <https://doi.org/10.1109/ACCESS.2024.3422926>
- Janssen, J., Kirschner, P.A. Applying collaborative cognitive load theory to computer-supported collaborative learning: towards a research agenda. *Education Tech Research Dev* 68, 783–805 (2020). <https://doi.org/10.1007/s11423-019-09729-5>
- Leahy, A. A., Mavilidi, M. F., Smith, J. J., Hillman, C. H., Eather, N., Barker, D., & Lubans, D. R. (2020). Review of high-intensity interval training for cognitive and mental health in youth. *Medicine & Science in Sports & Exercise*, 52(10), 2224-2234. <https://doi.org/10.1249/MSS.0000000000002359>
- Lin, H. C. S., Yu, S. J., Sun, J. C. Y., & Jong, M. S. Y. (2021). Engaging university students in a library guide through wearable spherical video-based virtual reality: Effects on situational interest and cognitive load. *Interactive Learning Environments*, 29(8), 1272-1287. <https://doi.org/10.1080/10494820.2019.1624579>
- Looney, J., & Santibañez, B. (2021). Validation of non-formal and informal learning to support disadvantaged learners: Alternative assessments. *European Journal of Education*, 56(3), 439-453. <https://doi.org/10.1111/ejed.12469>
- Martinez, C. (2022). Developing 21st century teaching skills: A case study of teaching and learning through project-based curriculum. *Cogent Education*, 9(1), 2024936. <https://doi.org/10.1080/2331186X.2021.2024936>
- Mekari, S., Neyedli, H. F., Fraser, S., O'Brien, M. W., Martins, R., Evans, K., ... & Dupuy, O. (2020). High-intensity interval training improves cognitive flexibility in older adults. *Brain sciences*, 10(11), 796. <https://doi.org/10.3390/brainsci10110796>
- Mitsea, E., Drigas, A., & Skianis, C. (2022). ICTs and speed learning in special education: high-consciousness training strategies for high-capacity learners through metacognition Lens. *Technium Soc. Sci. J.*, 27, 230. <https://doi.org/10.47577/tssj.v27i1.5599>
- Moore, N., Coldwell, M., & Perry, E. (2023). Exploring the role of curriculum materials in teacher professional development. In *Non-Linear Perspectives on Teacher Development* (pp. 135-151). Routledge. <https://doi.org/10.1080/19415257.2021.1879230>
- Nielsen, B.B., Welch, C., Chidlow, A. et al. Fifty years of methodological trends in JIBS: Why future IB research needs more triangulation. *J Int Bus Stud* 51, 1478–1499 (2020). <https://doi.org/10.1057/s41267-020-00372-4>
- Oguguo, B. C., Nannim, F. A., Agah, J. J., Ugwuanyi, C. S., Ene, C. U., & Nzeadibe, A. C. (2021). Effect of learning management system on Student's performance in educational measurement and evaluation. *Education and Information Technologies*, 26, 1471-1483. <https://doi.org/10.1007/s10639-020-10318-w>

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- Pak, K., Polikoff, M.S., Desimone, L., & Saldívar García, E. (2020). The Adaptive Challenges of Curriculum Implementation: Insights for Educational Leaders Driving Standards-Based Reform. *AERA Open*, 6. <https://doi.org/10.1177/2332858420932828>
- Pasha, S., Ali, N., Sarwar, M. N., & Abid, M. A. (2022). How Does Community and Ngos Provide Formal And NonFormal Education To Out Of School Children. *Webology*, 19(3).
- Reiser, B. J. (2023, January). Why scaffolding should sometimes make tasks more difficult for learners. In *Computer Support for Collaborative Learning* (pp. 255-264). Routledge.
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive science*, 12(2), 257-285. [https://doi.org/10.1016/0364-0213\(88\)90023-7](https://doi.org/10.1016/0364-0213(88)90023-7)
- Sweller, J., van Merriënboer, J. J., & Paas, F. (2019). Cognitive architecture and instructional design: 20 years later. *Educational Psychology Review*, 31(2), 261-292. <https://doi.org/10.5555/1658616.1658652>
- Tang, S. Y., Wong, A. K., Li, D. D., & Cheng, M. M. (2020). Millennial generation preservice teachers' intrinsic motivation to become a teacher, professional learning and professional competence. *Teaching and Teacher Education*, 96, 103180. <https://doi.org/10.1016/j.tate.2020.103180>
- Vanneste, P., Raes, A., Morton, J., Bombeke, K., Van Acker, B., Larmuseau, C., ... Van den Noortgate, W. (2021). Towards measuring cognitive load through multimodal physiological data. *COGNITION TECHNOLOGY & WORK*, 23(3), 567–585. <https://doi.org/10.1007/s10111-020-00641-0>
- Wirth, J., Stebner, F., Trypke, M. et al. An Interactive Layers Model of Self-Regulated Learning and Cognitive Load. *Educ Psychol Rev* 32, 1127–1149 (2020). <https://doi.org/10.1007/s10648-020-09568-4>
- Xue, X., Liu, B., Hu, J. et al. The potential mechanisms of lactate in mediating exercise-enhanced cognitive function: a dual role as an energy supply substrate and a signaling molecule. *Nutr Metab (Lond)* 19, 52 (2022). <https://doi.org/10.1186/s12986-022-00687-z>
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