# Investigating the Impact of Consequential Use on edTPA Performance: A Meta-Analysis Across Content

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#### Abstract

The purpose of this meta-analysis was to investigate the effects of consequential use on edTPA performance across content areas. The present meta-analysis was guided by the Diffusion of Innovation Theory (DOI). The study examined 127 mean difference effect sizes extracted from the 2014 to 2020 edTPA administrative report. The researchers examined the moderator effects of grade level and content specialization on mean difference effect sizes. The overall mean difference effect size was .22 standard deviations based on a random-effects model. Notable heterogeneity was observed based on a statistically significant Q statistic and  $I^2$  of 99.96. The moderator analysis indicated that the content type and grade level were statistically significant moderators of the effects of consequential use of edTPA. Implications and recommendations for research and praxis in teacher education are provided.

Keywords: edTPA, teacher preparation, teacher assessment, meta-analysis, accountability

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Teacher performance evaluation has always been a vital part of the education system, aiming to ensure high-quality education for students. Over the years, various assessment methods have been used to measure teacher candidates' effectiveness and classroom readiness (Ronfeldt, 2021). However, the introduction of the Education Teacher Performance Assessment (edTPA) has recently gained significant attention. The edTPA is a performance-based, subject-specific evaluation for teacher candidates that emphasizes applying skills and knowledge to real-world teaching scenarios. The performance-based nature of edTPA gives it special potential to become a key tool in evaluating the effectiveness of teachers in maximizing their students' learning in their specific context. Its comprehensive approach, which incorporates multiple facets of teaching, such as planning, instruction, and assessment, has made it increasingly popular. As a result, understanding the impact of consequential use on edTPA performance has become an essential area of research interest. Consequential use refers to applying assessment results to make crucial decisions, such as certification or employment. Scholars have called for further research and evaluation of the edTPA based on its increasing consequential use (Behizadeh & Neely, 2018; De Voto et al., 2021; Gitomer, 2021). Consequently, it is essential to evaluate how consequential use affects the outcomes of the edTPA.

The significance of the edTPA in measuring teacher performance stems from its ability to offer a standardized evaluation framework that assesses the readiness of future educators. With its focus on authentic teaching practices and its alignment with state and national standards, the edTPA has gained widespread recognition as a tool for ensuring the proficiency and competence of aspiring teachers. Moreover, the consequential implications of edTPA scores have heightened the significance of this assessment in the context of teacher education. As consequential decisions based on the edTPA results can directly impact the career prospects of teaching candidates, comprehending the implications of this consequential use on the performance of the edTPA becomes crucial to ensure the fairness and accuracy of its application. The impact of the consequential use of edTPA becomes especially relevant when noting the edTPA was mandated in 18 states with approval from 21 states as of 2019 (Gitomer et al., 2019). Given the essential role that the edTPA plays in the evaluation and preparation of future educators, it becomes imperative to delve deeper into understanding how various factors can influence its outcomes. The need to explore the impact of consequential use on edTPA performance is underscored by the understanding that different content fields and grade levels may elicit diverse responses from teaching candidates. Understanding the unique differences across content areas and grade levels necessitates a nuanced analysis that accounts for the variability in the performance outcomes based on the specific content specialization and the assessed grade levels.

This meta-analysis aims to comprehensively examine the impacts of consequential use on edTPA performance, with a specific focus on various content fields. Leveraging the Diffusion of Innovation Theory (DOI) as a conceptual framework, this study analyzes 127 mean difference effect sizes extracted from the extensive 2014 to 2020 edTPA administrative report. In doing so, it seeks to contribute to a nuanced understanding of the influence of consequential use on teachers' performance, thereby shedding light on how this phenomenon operates across different content domains. By exploring the nuanced interplay of field grade level and content specialization as potential moderating factors, the study aims to provide valuable insights into the intricacies of these relationships and their impact on edTPA performance. Ultimately, this

research strives to fill the existing gap in understanding the effects of consequential use in the field of teacher education by answering the following research questions:

- 1. How heterogeneous are mean differences in pre-service edTPA scores for consequential compared to non-consequential states?
- 2. What is the mean difference between edTPA scores for consequential and non-consequential use?
- 3. What are the moderator effects of grade level and content type on consequential edTPA use compared to non-consequential use?

The following sections will first introduce the theoretical framework of Diffusion of Innovation, which describes how innovations diffuse into society, like how edTPA diffuses into teacher evaluations. Then, the literature review will address the consequential use of evaluation tools on teacher performance. Next is an explanation of meta-analytical methodology before detailing the analysis results. This paper will end with a discussion of the implications of the findings before concluding with insights for researchers and teacher educators.

## **Theoretical Framework**

The Diffusion of Innovation (DOI) Theory, as described by Everett Rogers (Rogers et al., 2014), elucidates the process by which an innovation is communicated through specific channels over time among members of a social system. The DOI theory posits that innovation diffusion is influenced by various factors, such as the attributes of the innovation itself, the communication channels through which it is disseminated, the time taken for adoption, and the social system's characteristics. Innovations are classified into five categories based on the rate of adoption: innovators, early adopters, early majority, late majority, and laggards. DOI has been widely employed in understanding the adoption and implementation of various innovations in different fields, including education.

The DOI Theory has been widely applied in educational contexts to understand adopting and integrating new practices and technologies. Within teacher education and assessment, DOI offers valuable insights into how innovative assessment practices, like the edTPA, are embraced and implemented within various educational settings. This theoretical framework aids in comprehending the factors influencing the acceptance and utilization of the edTPA among different stakeholders in the education sector. It highlights the significance of factors such as the assessment tool's perceived advantages, compatibility, complexity, trialability, and observability in shaping its adoption and subsequent impact. Applying the DOI framework in educational contexts provides a nuanced understanding of the dynamics involved in implementing and accepting innovative teacher assessment practices, contributing to the development of effective strategies for enhancing teacher education and evaluation.

The relevance of the Diffusion of Innovation (DOI) Theory in understanding the consequential use of edTPA in teacher preparation lies in its ability to explicate the intricate process of how educational innovations are diffused and adopted within the educational system. As a performance assessment tool, edTPA represents an innovation that has introduced significant changes in the assessment practices for aspiring teachers. Understanding the factors

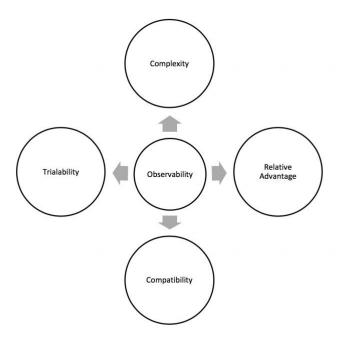
that influence the adoption and implementation of edTPA, such as its perceived advantages, complexity, and compatibility with existing practices, is crucial in comprehending its consequential use in teacher preparation. Furthermore, the DOI framework helps explore the roles played by early adopters, opinion leaders, and the institutional context in disseminating and adopting edTPA, thus providing valuable insights into its incorporation into the teacher preparation curriculum.

In the present study, the Diffusion of Innovation (DOI) Theory was employed as a guiding framework to comprehend the patterns and dynamics of the adoption and use of edTPA in teacher preparation programs. By leveraging the theoretical constructs of DOI, the researchers were able to investigate how the attributes of edTPA as an innovation, the communication channels utilized for its dissemination, and the characteristics of the educational institutions influenced its consequential use. This approach facilitated a comprehensive analysis of the factors that contributed to the variation in edTPA performance across different content fields and grade levels, enabling a nuanced understanding of the moderating effects of these variables. By utilizing DOI as a theoretical lens, the study offered a comprehensive and systematic perspective on the implications of consequential edTPA use, thus providing valuable insights for enhancing teacher education practices and policies.

Figure 1 provides a model of the theoretical relationship between these five components. We posit that observability or the degree to which the effects of edTPA consequential use on preservice teachers' scores and university implementation practices are visible or understandable to teacher educators is key to adopting practices in teacher education programs. According to Figure 1, we contend that observability influences the four other constructs. Therefore, observability is at the center of the model. The remaining constructs are highly contingent upon the perceptions of the preservice teacher. Thus, they all radiate from observability. It is the sole construct that is not directly influenced by the preservice teacher's perceptions or context but rather by the observational evidence the teacher has witnessed or is afforded. In non-hierarchical order, relative advantage describes the preservice teacher's perception of the superiority of edTPA assessment to their knowledge and experiences with non-performancebased assessments (e.g., outcome expectancy). Compatibility is the perceived consistency between the preservice teacher's socio-cultural values, previous ideas, or needs (e.g., cultural discontinuity). Similarly, complexity describes the perceived difficulty or simplicity of use and comprehension (e.g., self-efficacy). Finally, trialability represents the degree of commitment the preservice teacher feels is necessary to do well on edTPA to be a successful teacher in the future (e.g., apprehension). Hence, we contend that the degree to which the effects of edTPA are easily observed and understood (i.e., observability) can influence teacher outcome expectancy, instructional discontinuity, self-efficacy, and apprehension towards edTPA and other performance-based assessments.

Figure 1

Theoretical Relationship between Preservice Teachers' Beliefs and edTPA Performance



#### Literature Review

The landscape of teacher education has significantly transformed with the introduction of edTPA, a vital evaluation tool that assesses teacher candidates' readiness through a performance-based approach. This literature review explores the diverse impact of edTPA on teacher education, focusing on its implementation across various contexts and its effects on teaching practices. By examining existing research, this review aims to thoroughly understand the consequences, challenges, and opportunities related to edTPA, thereby contributing to the ongoing discussion about the evolution of teacher assessment methodologies.

The edTPA has gained prominence as a consequential evaluation tool in teacher education. The edTPA was introduced as a performance-based assessment and has been widely implemented across various institutions and jurisdictions (Lachuk & Koellner, 2015). Designed to measure a teacher candidate's readiness for the classroom, edTPA evaluates a range of teaching skills, including planning, instruction, and assessment. Its adoption represents a significant shift in assessing the capabilities of aspiring educators, with an emphasis on practical teaching skills rather than mere theoretical knowledge. The consequential nature of edTPA in evaluating teacher performance has prompted significant discussions and investigations into its impact on the teaching profession.

# Previous Research on the Impact of Consequential Use on Teacher Performance

The literature on the consequential use of evaluation tools like edTPA has consistently emphasized the potential influence of high-stakes assessments on teacher performance

(Greenblatt, 2016). Research in this area has underscored the complex interplay between external pressures, such as the need to meet specific standards, and its effects on teacher behavior and instructional practices. Scholars have examined how the consequential nature of edTPA might lead to various responses from teacher candidates, including shifts in teaching strategies, heightened preparation efforts, and increased performance-related stress. Gitomer (2021) argued that the consequential use of edTPA is unwarranted based on a lack of evidence regarding its reliability and validity. Behizadeh and Neely (2018) further asserted that edTPA promotes inequitable practices, undermining the argument for its validity in consequential use.

Furthermore, studies have highlighted the need for a nuanced understanding of the relationship between high-stakes evaluations and the development of effective teaching practices (Hutt, Gottlieb, & Cohen, 2018). Several studies have focused on evaluating the effects of edTPA on the landscape of teacher education (Napolitano et al., 2022). These investigations have delved into various aspects, including the impact of edTPA on curriculum design, teacher preparation programs, and the overall quality of teacher education. Scholars have explored the implications of edTPA implementation on the alignment of teacher education programs with the demands of contemporary classrooms (Carter & Lochte, 2017). Furthermore, research has investigated the potential challenges and opportunities that arise from integrating edTPA into teacher education, including its influence on the structure and content of teacher preparation courses (Chung & Zou, 2023). By examining these effects, researchers have aimed to provide valuable insights into the evolving nature of teacher education and how consequential assessments like edTPA shape it.

The review of existing literature on edTPA highlights a dynamic landscape in which consequential assessments are crucial in shaping teacher education practices. While considerable research has delved into the impact of edTPA on teacher performance and education programs, there remain gaps that warrant further exploration. Future studies should address the nuanced intersections of edTPA with cultural, contextual, and institutional factors, providing a more comprehensive understanding of its implications. Additionally, investigations into the long-term effects of edTPA on educators' professional development and retention would contribute significantly to refining assessment practices and ensuring the continued improvement of teacher preparation programs. In the present study, we set the foundation for these future studies by quantifying the effects of the consequential use of edTPA on pre-service teacher examine performance.

# Methodology

Data for the present study were extracted from the edTPA administrative reports for 2014-2020. edTPA provides sample sizes, means, and standard deviations for consequential use by field in a tabular format that compares the average scale scores from all states with a consequential policy to states without a consequential policy. In the present study, scores from states with a consequential policy served as the experimental group, while states without a consequential policy served as the comparison or control group. These data were disaggregated into grade level and content area moderators examined in the *ANOVA* analog performed in the meta-analysis. These moderators were not chosen simply for convenience but more strategically to explore the impact of the common differences in teacher preparation across certification grade

levels and content areas on the effects of a consequential use of edTPA. The edTPA's use of content-specific assessment addresses weaknesses of previous teaching evaluation systems and determines in part how teacher candidates prepare for edTPA (Okraski & Kissau, 2018; Youngs & Whittaker, 2014). Current research suggests that grade level significantly affects the frequency and use of specific teaching strategies (Denton et al., 2015; Mihaly & Mccaffrey, 2015).

Data analysis procedures were conducted in two phases: model preparation and model fitting. The model preparation phase will follow the procedures outlined in Borenstein et al. (2021) and be performed in R studio using the Metafor application (Veichtbauer & Veichtbauer, 2015). A traditional meta-analysis would require five general steps to define the overall meta-analytic process. However, we conducted the study in three steps due to the direct extraction of all effect sizes from the edTPA administrative report rather than a series of individual studies. First, before model fitting, we modeled independent quantities (i.e., effect size, the within-study variance of the effect, standard error of the effect, and confidence interval for the study effect). In phase 1, these quantities were calculated for each study based on Hedge's g as the effect size estimate. Hedge's g was selected to address the upward bias of g. Hedges g mean difference effect sizes were computed for each study based on the extracted means, standard deviations, and sample sizes. The Hedges g was chosen to account for potential bias in small sample sizes. Effect sizes were calculated using the formula:

$$g = rac{M_1 - M_2}{\sqrt{rac{(SD_1^2 + SD_2^2)}{2}}}$$

 $M_1$  and  $M_2$  are the mean for the consequential and non-consequential use of the edTPA, respectively, and  $SD_1$  and  $SD_2$  are the corresponding standard deviations.

Hedge's g corrects for the bias of d' with correction factor J, where

$$J = 1 - \frac{3}{4df - 1}$$
 and  $g = J \times d'$ .

Second, we assessed heterogeneity in effect sizes using the Q and  $I^2$  statistics. The Q statistic is a test for evidence of heterogeneity in true effect sizes, calculated as

$$Q = \sum_{i=1}^{k} W_i (Y_i - M)^2$$
,

A significant Q value rejects the null hypothesis of a common effect size and provides evidence for heterogeneity in the true effect sizes. The  $I^2$  statistic estimates the proportion of variance in observed effect sizes due to true effects instead of sampling error.  $I^2$  reflects the degree of inconsistency in effects across studies such that more inconsistency suggests less overlap in study confidence intervals (i.e., a large  $I^2$  and a greater proportion of variance in observed effect sizes due to true effects) and less inconsistency suggests more overlap in study confidence intervals (i.e., a small  $I^2$  and a lesser proportion of variance in observed effect sizes due to true effects).  $I^2$  is calculated as

$$I^2 = \left(\frac{Q - df}{O}\right) \times 100\%.$$

When heterogeneity is high, random-effects models are preferred as they have less bias than fixed-effects models (Hunter & Schmidt, 2018). Therefore, based on the heterogeneity analysis results, we implemented a random effects model to calculate the overall mean difference effect size before applying a meta-analytic ANOVA analog to examine the moderator effects of grade level and content type on consequential edTPA use. As noted by Hedges, Tipton, and Johnson (2010), the use of robust variance estimation in cases of dependency can lead to overcorrection, diminishing the precision of the estimates. In the present meta-analysis, robust error variance estimation was not utilized because the effect sizes were independent, rendering such an approach unnecessary. Dependency among effect sizes arises when multiple effect sizes are derived from the same study or when the data structure inherently violates the independence assumption.

#### Results

Following the procedures above, 127 independent mean difference effect sizes were calculated. Our heterogeneity measures indicated the presence of measurable heterogeneity; see Table 1. After applying the random effects model, the overall mean difference between preservice teacher performance in consequential states versus non-consequential states was statistically significantly different from zero (g =.22). Indicating an overall positive moderate effect size for preservice teacher performance on edTPA when the state utilized a consequential implementation model.

Our moderator analysis examined the impact of grade level and content specialization on the effect of consequential edTPA implementation. A statistically significant  $Q_{\text{between}}$  for grade level ( $Q_B = 77.22, \ p < 0.05$ ) indicated heterogeneity in the random effects model. The  $Q_{\text{between}}$  was not statistically significant for content in the random effects model. However, the  $I^2$  of 99.96% indicates high heterogeneity.

 Table 1

 Overall result of random-effect meta-analysis

|                 |     |       |                |    | Heterogeneity |       |  |
|-----------------|-----|-------|----------------|----|---------------|-------|--|
|                 | k   | ES    | CI             | VR | Q             | $I^2$ |  |
| Overall Results | 127 | 0.22* | [0.177, 0.260] |    | 3.00e+05*     | 99.97 |  |

<sup>\*</sup>indicates a statistically significant result

There was notable heterogeneity based on statistical analysis based on the meta-analytic ANOVA analog interpretation (see Table 2). The smallest grade level mean difference, though statistically significant, was observed in the middle grades (g = 0.013), while the largest mean difference was observed in the secondary (g = 0.359). EC-Elementary was in the middle (g = 0.229). All content mean difference effect sizes were positive and statistically significantly different from zero at the p <0.05 level except for the other category. It is important to note that the other category (g = 0.149) was used to categorize non-grade specific content such as

specializations and certifications (e.g., special education, ESL, Health and Kinesiology). The core content areas had positive, statistically significant effect sizes: literacy (g = 0.139), mathematics (g = 0.235), science (g = 0.211), and social studies (g = 0.207).

 Table 2

 Moderator analysis for random-effect meta-analysis

| Moderator      | k  | $Q_{\mathrm{B}}$ | ES    | 95% CI          |
|----------------|----|------------------|-------|-----------------|
| Grade Level    |    | 77.22*           |       |                 |
| EC-Elementary  | 18 |                  | 0.229 | [0.133, 0.324]* |
| Middle Grades  | 20 |                  | 0.013 | [-0.054, 0.079] |
| Secondary      | 20 |                  | 0.359 | [0.319, 0.400]* |
| Other          | 69 |                  | 0.235 | [0.171, 0.298]* |
| Content Type   |    | 4.08             |       |                 |
| Elective       | 50 |                  | 0.259 | [0.189, 0.329]* |
| Generalist     | 9  |                  | 0.211 | [0.083, 0.338]* |
| Literacy       | 14 |                  | 0.139 | [0.023, 0.254]* |
| Mathematics    | 15 |                  | 0.235 | [0.130, 0.340]* |
| Other          | 19 |                  | 0.149 | [-0.002,0.301]  |
| Science        | 10 |                  | 0.211 | [0.063, 0.359]* |
| Social Studies | 10 |                  | 0.207 | [0.073, 0.341]* |

<sup>\*</sup>indicates a statistically significant result at p < 0.05

### Limitations

While providing valuable insights into the consequences of consequential use on edTPA performance, this meta-analysis is subject to several limitations that necessitate caution in generalizing the findings. The diversity across states in terms of policies and practices introduces a level of heterogeneity that may influence the overall effect size. Educational policies and practices can vary significantly from state to state, and this diversity could contribute to the observed heterogeneity in the outcomes. Additionally, the study's temporal scope, spanning from 2014 to 2020, may not fully capture recent developments or policy changes surrounding consequential use. Education is dynamic, with continuous changes in practices and policies over time. The findings may, therefore, not wholly represent the current landscape of edTPA implementation and its associated consequences.

A notable limitation is the reliance on data extracted solely from edTPA administrative reports. While these reports provide standardized and aggregated information, they might lack the granularity required to examine contextual factors influencing consequential use thoroughly.

The absence of detailed information on state-specific variations, differences in teacher preparation programs, and specific policy nuances limit the depth of the analysis. Another limitation is the study's classification of states based on the presence or absence of consequential use policies. The nature and extent of these policies can vary, impacting the magnitude of consequential effects. A more nuanced examination of these policies' specific elements and stringency could enhance our understanding of their influence on edTPA outcomes.

Teacher demographics, such as race, gender, or experience, were not considered moderators in the analysis, representing a limitation. The consequential effects of edTPA may differ based on individual characteristics, and a more comprehensive analysis incorporating these variables could provide a richer understanding of the nuanced influences at play. The cross-sectional nature of the data is another limitation, as it hinders the exploration of changes in consequential use effects over time. A longitudinal analysis would offer insights into the dynamic nature of edTPA consequences and how these effects evolve as teachers progress through their careers.

Moreover, the meta-analysis may be susceptible to publication bias, as unpublished or negative findings may not be as readily accessible. This potential bias could impact the comprehensiveness of the synthesized evidence and may result in an overestimation of the overall effect size. Lastly, the generalizability of the findings may be limited to the states included in the administrative reports. Caution is necessary when extending the results to regions or countries with different educational contexts, policies, and practices. In addressing these limitations, future research endeavors can contribute to a more nuanced understanding of the consequences of edTPA implementation, facilitating the development of more contextually relevant and effective educational policies and practices.

### Discussion

The present meta-analysis investigated the impact of consequential use on edTPA performance, employing the Diffusion of Innovation (DOI) Theory as a guiding framework. The analysis aimed to shed light on the nuanced dynamics of this relationship across various content fields and grade levels. The significance of this study lies in its contribution to understanding how consequential use influences teacher candidates' performance on edTPA, a crucial assessment tool in teacher education.

The purpose of the meta-analysis was to examine the impact of consequential use on edTPA performance across content fields, utilizing 127 mean difference effect sizes from the 2014 to 2020 edTPA administrative reports. The findings of this meta-analysis underscore the significance of considering the diverse impacts of consequential use in the context of edTPA. The substantial overall mean difference effect size of .22 standard deviations, as derived from a random-effects model, points towards the notable influence of consequential use on edTPA performance. The staggering heterogeneity observed, as evidenced by a statistically significant Q statistic and an I2 value of 99.96, emphasizes the complex nature of this phenomenon and the need for nuanced analysis. The moderation analysis further highlights the critical role played by content type and grade level in shaping the effects of consequential use. By revealing the statistical significance of these moderators, the study offers a deeper understanding of the

nuanced dynamics underlying the influence of consequential use on edTPA performance, thereby paving the way for more targeted and effective interventions in teacher education.

The moderation analysis focused on field grade level and content specialization, revealing statistically significant differences. The results indicated that consequential use's impact varied across grade levels and content areas. Notably, the middle grades exhibited the smallest mean difference, while secondary grades showed the largest mean difference. Additionally, all content areas demonstrated positive and statistically significant mean differences.

The implications of this study are multifaceted, with direct relevance to both research and practice in the field of teacher education. By shedding light on the nuanced relationship between consequential use and edTPA performance across various content fields, this research offers valuable insights that can inform the development of more effective teacher preparation programs. Moreover, the findings highlight the critical role played by content specialization and grade level in mediating the effects of consequential use, thereby emphasizing the need for tailored and context-specific approaches to teacher assessment. As such, this study holds the potential to inform the development of more targeted and effective educational policies and interventions aimed at enhancing teacher performance and, by extension, student learning outcomes.

As we reflect on these findings, it becomes clear that the impact of consequential use on edTPA performance extends beyond statistical measures. It speaks to the heart of teacher preparation and the complex interplay between assessment policies, teaching practices, and the future of education. The theoretical model presented in this study, anchored in the Diffusion of Innovation Theory, offers a conceptual framework for understanding the intricate relationship between preservice teachers' beliefs and edTPA performance. Observability, at the center of the model, is pivotal in influencing teachers' perceptions of relative advantage, compatibility, complexity, and trialability. This model contributes to understanding the dynamics of edTPA and provides a foundation for future research exploring the psychological and perceptual aspects of consequential assessments. Therefore, we propose a call to action for researchers and teacher educators.

Firstly, there is a pressing need for continued research that goes beyond the mean effect sizes and explores the nuanced experiences of preservice teachers. Qualitative inquiries can unveil teachers' lived experiences, challenges, and successes in navigating the consequential landscape of edTPA. Understanding the human side of assessment can inform the development of more empathetic and supportive teacher preparation programs. Secondly, teacher educators should engage in a reflective reassessment of how they incorporate edTPA into their programs. The significant differences observed based on content specialization and grade level underscore the importance of tailored support and guidance for teacher candidates. It is incumbent upon teacher educators to design interventions that address the unique challenges posed by consequential assessments in different educational contexts. Lastly, policymakers and education stakeholders should consider these findings in shaping assessment policies. A one-size-fits-all approach may not be conducive to fostering adequate teacher preparation. Policies that recognize

and account for the variability in the impact of consequential use based on content and grade level are crucial for ensuring fairness and promoting the development of highly skilled educators.

## **Conclusion**

In the present meta-analysis on the consequential use of the edTPA and its impact on teacher performance, several key findings emerged, offering valuable insights for researchers and teacher educators. The study, guided by the Diffusion of Innovation Theory, delved into the nuanced dynamics across various content fields and grade levels, shedding light on the intricate relationship between consequential use and edTPA outcomes. The substantial overall mean difference effect size of 0.22 standard deviations signals a notable positive influence of consequential use on preservice teacher performance. This finding underscores the importance of recognizing the consequential nature of assessments in shaping teaching practices. The complex heterogeneity observed, with a staggering I2 value of 99.96%, emphasizes the need for nuanced analysis and a deeper understanding of the contextual factors contributing to the variation in edTPA outcomes.

The moderator analysis provided important insights, revealing statistically significant grade-level and content specialization differences. The smallest mean difference in the middle grades and the largest in secondary grades highlight the variability in how consequential use affects teacher candidates across different educational contexts. The variability in the impact of consequential use across grade levels and content areas underscores the necessity for tailored approaches in teacher assessment and preparation programs, acknowledging the diverse impacts based on content and grade level.

In conclusion, this meta-analysis represents a significant contribution to understanding the complexities associated with the edTPA and its implications for practice. It calls upon researchers, teacher educators, and policymakers to collaborate in shaping the future of teacher preparation. By embracing the multifaceted nature of edTPA and considering the diverse impacts on teacher candidates, we can collectively contribute to cultivating a skilled and resilient teaching workforce, ultimately enhancing the quality of education for generations to come.

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