



The Effect of Differentiated Learning Based on the Independent Curriculum on Instructional Media Usage at SMA Negeri 1 Pare

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ABSTRACT

Differentiated learning, which is adapted to students' levels of comprehension and individual learning needs, presents a considerable challenge for educators in selecting and tailoring instructional media at SMA Negeri 1 Pare, Kediri. By implementing this pedagogical approach, teachers can optimize media selection to enhance the effectiveness of Islamic Religious Education (PAI) classroom instruction. This quantitative study, employing a survey methodology, aimed to investigate and analyze the influence of differentiated learning on students' utilization of PAI instructional media. Data were collected through observation and structured questionnaires administered to 21 respondents. Product-moment correlation analysis was utilized to examine the relationship between the independent and dependent variables. The findings revealed that differentiated learning exerts a substantial and significant influence, accounting for 70% of the variance in instructional media utilization. Specifically, the study established that: (1) teachers designed instruction with objectives and assessments explicitly aligned with student learning needs; (2) teachers employed diverse media to accommodate varying proficiency levels; (3) teachers provided systematic instructional scaffolding for both offline and online media use; and (4) differentiated learning successfully enhanced student motivation and autonomy in media engagement and task completion. The study concludes that differentiated learning, as operationalized within the framework of the Independent Curriculum, is demonstrably relevant and effective for optimizing PAI instruction at the senior high school level.

Keywords: Differentiated learning; Independent Curriculum; Instructional media; Islamic religious education; Senior high school

INTRODUCTION

Islamic Religious Education (PAI) plays a fundamental role in shaping the character and moral foundation of Indonesia's younger generation. Beyond transferring knowledge of Islamic theology, PAI instruction instills spiritual values that students can apply to their daily lives (Kuswiyanto & Achmad Abu Bakar, 2025). However, empirical evidence indicates that PAI educators frequently confront significant challenges stemming from student heterogeneity in learning readiness, interests, and cognitive abilities. These individual differences are critical; uniform teaching methods often fail to optimize learning outcomes across diverse student profiles. As a result, lower-achieving students struggle to comprehend the material, while higher-achieving individuals become disengaged due to a lack of academic challenge. This discrepancy underscores the urgent need for a pedagogical approach that is highly responsive to individual learning needs.

Differentiated instruction has emerged as an innovative paradigm to address student heterogeneity in the classroom (Goyibova et al., 2025). This approach requires educators to proactively modify learning structures based on students' readiness, interests, and learning profiles (Umurohmi, 2024). Within the framework of PAI, differentiation can be regularly applied across four core dimensions: content, process, product, and the learning environment. For example, when teaching the concept of prayer (salat), advanced students can be tasked with analyzing the philosophical wisdom behind specific prayer movements, whereas peers requiring fundamental support can focus on mastering the correct physical procedures. Accordingly, differentiated instruction offers a promising framework to elevate instructional quality for students at all proficiency levels.

The strategic utilization of diverse learning media is a critical success factor in implementing differentiated instruction within religious education. Learning media serves as a vital bridge translating abstract Islamic concepts into concrete student understanding. In a differentiated classroom, media cannot be applied uniformly; instead, it must be curated and adapted to the specific needs of distinct student cohorts (An, 2020). For example, a PAI educator might utilize animated videos for visual learners, Islamic study podcasts for auditory learners, and physical props for kinesthetic learners during ablution (wudu) practice. Conversely, an educator's inability to select appropriate media can exacerbate gaps in comprehension. Research demonstrates that a diversified selection of instructional media significantly enhances student motivation and active participation. Therefore, the intersection between differentiated instruction and strategic media utilization warrants rigorous academic investigation.

A previous study by Kristiana Wardaniati, entitled "Implementasi Pembelajaran Berdiferensiasi untuk Meningkatkan Hasil Belajar pada Mata Pelajaran IPA" utilized a Classroom Action Research (CAR) methodology spanning two cycles of planning, implementation, observation, and reflection. Conducted with 29 eighth-grade students at SMP Negeri 3 Pamekasan, whose study stressed the attainment of student learning mastery (Wardaniati, 2023). However, its scope was constrained to procedural execution within the natural sciences and did not explicitly address the strategic role of learning media. Consequently, those findings cannot be generalized to PAI, a subject characterized by profound affective and spiritual dimensions. This open research gap highlights the need to investigate how differentiated frameworks influence media utilization specifically within the context of religious education.

Another relevant study by Neza Agusdianita et al. (2025), entitled "Penerapan Pembelajaran Berdiferensiasi pada Kurikulum Merdeka" demonstrated that targeted training significantly improved teachers' capacity to design and execute differentiated instruction, thereby enhancing student engagement and academic performance (Agusdianita et al., 2025). This study emphasized the critical role of professional development in empowering educators to adopt innovative pedagogical strategies. However, its scope remained confined to procedural implementation and failed to address the specific function of instructional media within that framework.

A critical synthesis of these two foundational studies reveals a distinct literature gap regarding the intersection of differentiated instruction and the utilization of instructional media within Islamic Religious Education (PAI). Wardaniati's research lacks robust correlational evidence, while Agusdianita et al. focus exclusively on the overarching implementation of differentiated learning. Furthermore, neither study explicitly examines these dynamics within the operational context of the Independent Curriculum, which currently serves as Indonesia's national educational policy. The Independent Curriculum grants educators greater pedagogical autonomy to innovate, particularly in executing differentiated strategies and curating diverse instructional media. In this regard, SMA Negeri 1 Pare in Kediri, designated as a reference

school (sekolah rujukan) presents an ideal empirical site to investigate the efficacy of this approach. The primary educational challenge at this institution stems from the pronounced variance in students' cognitive comprehension within PAI, forcing educators to bridge these disparities through adaptive instructional strategies and targeted media alignment (Sultani et al., 2021).

The core institutional problem identified at SMA Negeri 1 Pare is the misalignment between available instructional media and the students' heterogeneous learning needs. Initial observations revealed a pervasive reliance on uniform instructional tools, such as traditional chalkboards and standardized textbooks, irrespective of individual learning styles. Consequently, visual learners were disenfranchised by predominantly verbal explanations, while auditory learners received inadequate stimulation from static textual materials. This instructional mismatch is further exacerbated by an underutilization of interactive digital media capable of catering to diverse comprehension levels. Furthermore, educators reported feeling overwhelmed by the logistical demands of designing differentiated lesson plans, perceiving the process as excessively time-consuming and labor-intensive. Mirroring these teacher-side challenges, students reported that PAI instruction frequently felt monotonous, leading to a decline in situational interest and academic motivation.

Differentiated instruction embedded within the Independent Curriculum offers a strategic resolution to these challenges by providing a highly flexible pedagogical framework (Sulthani, 2024). Under this curriculum mandate, teachers are encouraged to administer initial diagnostic assessments to systematically map students' baseline cognitive and affective profiles. The insights derived from this diagnostic mapping subsequently inform the design of varied instructional activities and the curation of adaptive media. Unfortunately, despite this supportive policy infrastructure, field implementation remains suboptimal due to deficiencies in professional training and practical experience. While many educators possess a theoretical understanding of differentiation, they struggle to translate these concepts into concrete classroom practices. Within PAI specifically, the challenge is uniquely compounded by the need to diversify instructional media without compromising the theological essence and spiritual authenticity of the Islamic values being taught. Consequently, an empirical evaluation of how differentiation influences both the selection and effectiveness of learning media is critically required.

Moreover, there is a notable scarcity of quantitative research specifically examining the impact of differentiated instruction on media utilization within Islamic religious education. The vast majority of extant literature relies on qualitative designs or basic descriptive statistics, lacking rigorous inferential or causal testing. This empirical deficit makes it difficult for educational policymakers to determine the optimal allocation of resources toward differentiation training. Quantifying the magnitude of this pedagogical influence is paramount for designing data-driven professional development programs for teachers. SMA Negeri 1 Pare, characterized by a diverse student demographic within a consolidated institutional setting, serves as a highly representative research site. Because the PAI faculty at this school have demonstrated a strong readiness to systematically adopt differentiated instruction, this environment provides a unique empirical opportunity to examine the causal relationships between the variables under study.

This study aims to bridge the aforementioned literature gap by conducting a rigorous quantitative investigation. The primary objective is to determine the empirical effect of differentiated instruction on the utilization of learning media within Islamic Religious Education (PAI) at SMA Negeri 1 Pare. More specifically, this study seeks to measure the precise variance, expressed as a percentage contribution, that the application of differentiation accounts for regarding the variety and frequency of instructional media deployment. Additionally, this research analyzes the instructional design processes educators employ to

construct differentiated lessons, alongside a systematic categorization of the diverse media utilized to accommodate heterogeneous student capabilities. Attention is also directed toward the pedagogical scaffolding and mentoring provided by educators during both synchronous (offline) and asynchronous (online) media engagement. Ultimately, this study evaluates the cascading impact of differentiated media utilization on student learning motivation and autonomous learning independence.

METHOD

This study employed a quantitative methodology, which seeks to objectively measure and analyze empirical relationships between variables (Barroga et al., 2023). This approach was selected to facilitate the generalization of findings derived from statistical analysis of numerical data. Within this quantitative framework, a cross-sectional survey design was utilized, making it highly suitable for collecting data on participant perceptions, attitudes, or behaviors at a single point in time without experimental intervention (Emilia Kurniawati & Sulastrini Rindrayani, 2025). Structurally, the research design is correlational and explanatory, aiming to determine the strength, direction, and statistical significance of the relationship between the primary variables. The independent variable is differentiated instruction (X), while the dependent variable is the utilization of Islamic Religious Education (PAI) learning media (Y). Through this framework, the direction and magnitude of the effect of variable X on variable Y can be statistically estimated.

The study relies primarily on primary data gathered directly from respondents at the research site. This primary dataset consists of psychometric questionnaire scores measuring students' perceptions regarding the implementation of differentiated instruction and the strategic deployment of PAI learning media. The target population includes students enrolled in PAI courses across three distinct classes at SMA Negeri 1 Pare, Kediri. To select the final sample, a purposive sampling technique was executed based on specific operational criteria relevant to the research objectives (Bartůněk & Marek, 2025). The primary inclusion criterion required students to have actively participate in a differentiated PAI instructional environment for a minimum duration of one academic semester (Wang et al., 2024). Based on these stringent criteria, a sample size of 21 students met the requirements and agreed to participate in the study.

Data collection was multi-methodological, incorporating both structured observation and a self-administered questionnaire. Non-participatory observations were initially conducted to assess the baseline classroom conditions of PAI instruction and to qualitatively verify how educators operationalized differentiation strategies (Cabral et al., 2024). For the primary statistical analysis, Pearson's Product-Moment Correlation (r) was applied via SPSS software to evaluate the linear relationship between the two interval-scaled variables. The resulting correlation coefficient (r -calculated) was cross-referenced with the critical table value (r -table) at a standard alpha significance level of 5% (0.05). To quantify the exact proportion of variance in the dependent variable (Y) explained by the independent variable (X), the coefficient of determination (r^2) was calculated and converted into a percentage contribution.

RESULT AND DISCUSSION

The research findings reveal that differentiated learning exerts a significant influence on the utilization of instructional media for Islamic Religious Education (PAI) at SMA Negeri 1 Pare, Kediri. This conclusion is derived from a product-moment correlation analysis, which yielded a coefficient of determination (r^2) of 0.70, or precisely 70%. This value indicates that 70% of the variance in the use of PAI instructional media can be accounted for by the variance in the implementation of differentiated learning. In other words, the direct contribution of differentiated learning to enhancing media utilization stands at 70%, while the remaining 30% is attributable to unexamined external factors, such as the availability of infrastructure and the

general pedagogical competence of teachers. This effect size is exceptionally high for educational research, particularly within survey-based approaches. The finding underscores that differentiated learning is not merely a supplementary strategy, but rather a predominant determinant of how instructional media are used. This substantiates the argument that investment in differentiated learning training would yield a direct and measurable impact on the effectiveness of media utilization.

Furthermore, differentiated learning has been empirically proven to enhance students' motivation and autonomy in engaging with learning media. This autonomy is concretely manifested in students' initiative to create digital summaries and share them with their group members. The correlation analysis further demonstrates that the dimension of media adjustment based on learning styles exhibits the highest correlation with the dependent variable. This implies that, among all indicators of differentiated learning, tailoring media to students' individual learning styles constitutes the most potent influencing factor.

An in-depth examination of how teachers establish learning objectives reveals their systematic alignment with the revised Bloom's taxonomy. For low-achieving groups, objectives are restricted to the remembering (C1) and understanding (C2) levels, supported by the use of pictorial media. Intermediate groups are assigned objectives at the applying (C3) and analyzing (C4) levels, facilitated by case-based video resources. High-achieving groups are challenged with objectives at the evaluating (C5) and creating (C6) levels, employing digital simulation media (Bekti Mulatsih, 2021). This structured differentiation ensures that each student operates at an appropriate level of difficulty commensurate with their respective capacities, thereby preventing frustration among slower learners and boredom among advanced ones. These findings are consistent with Vygotsky's principle of the Zone of Proximal Development (ZPD), which emphasizes the critical role of appropriately calibrated challenges in fostering optimal learning outcomes (Mudi & Samanta, 2024).

This study also found that the use of differentiated media indirectly enhanced the quality of social interactions among students. Learners from different ability groups frequently exchanged media and recommended learning resources to one another, a practice that fostered a highly productive informal learning community beyond regular class hours. For example, students in the high-achieving group shared links to scientific articles on Islamic history with their peers in the middle-achieving group, while those in the low-achieving group assisted their classmates in grasping fundamental concepts through word cards they had created independently. Notably, such cross-group interactions had not been observed prior to the implementation of differentiated instruction. These findings suggest that differentiation serves to unite students across ability levels rather than segregate them (Lim & Park, 2022).

The observed increase in student independence warrants interpretation through the lens of self-determination theory, specifically concerning the fulfillment of the need for autonomy (afforded by media choice), competence (ensured by appropriately calibrated difficulty levels), and relatedness (fostered through collaboration), all of which were evident in this study. Students reported a heightened sense of control over their learning methods, attributable to their ability to select the media with which they felt most at ease (Zhao et al., 2025). Their sense of competence grew as they successfully completed assignments using level-appropriate media, while social relatedness was cultivated through peer discussions regarding the media utilized. As all three basic psychological needs were effectively satisfied through the differentiated approach, a discernible shift occurred from extrinsic motivation, predicated on grades, toward intrinsic motivation, driven by genuine interest.

The present study demonstrates that, following intensive training, teachers at SMA Negeri 1 Pare were able to implement differentiated instruction with considerable efficacy. This success was contingent upon the principal's support, manifested through the allocation of a dedicated budget for procuring a diverse array of media. Furthermore, the school established a

community of practice among Islamic Religious Education (PAI) teachers to facilitate the sharing of proven effective media resources. The synergistic combination of individual teacher agency and robust institutional backing emerged as the linchpin of successful implementation. This finding corroborates policy implementation models that underscore the critical role of a conducive and supportive environment (Iskandar Sultani & Nahar, 2022).

Notwithstanding these positive outcomes, this study also identified a challenging challenge in implementing differentiation: the constrained instructional time available within a single 45-minute lesson period. Teachers encountered difficulty in distributing their attention equitably across three distinct groups, each using different media. The viable solution was the adoption of a learning station system, where students rotate through designated stations, each offering distinct media and associated tasks, while the teacher circulates to provide targeted guidance. This operational model, however, demands exemplary classroom management skills and a high degree of student discipline to function effectively.

The findings of this study show a clear alignment with the precepts of the Independent Curriculum, where differentiated instruction constitutes a foundational pillar. This curricular framework grants teachers the pedagogical latitude to achieve the uniform imposition of identical competencies upon all students simultaneously. Teachers of Islamic Religious Education at SMA Negeri 1 Pare capitalized on this flexibility to engineer a branching flow of learning objectives, where in each branch employs distinct supporting media yet converges upon the same terminal learning outcomes. In the absence of such curricular support, the implementation of differentiation would be significantly encumbered by the exclusion of rigid standardization. As a result, this investigation provides empirical evidence corroborating the proposition that differentiated instruction and the Independent Curriculum are inextricably intertwined two facets of the same pedagogical coin (Sulthani, 2025). It is therefore imperative that this policy be further promoted and disseminated to a broader spectrum of educational institutions.

Supplementary observational data indicates that the deployment of differentiated media markedly curtails instances of student cheating. Owing to the distinct assignments and media deployed across groups, students are included from simply replicating answers from their peers. Each student perceives a unique proprietary ownership over their tasks, which correspondingly heightens their sense of personal accountability. This suggests that differentiation confers benefits not only for conceptual understanding but also for upholding academic integrity, thereby contributing to broader character education objectives.

Viewed through a constructivist theoretical lens, these findings substantiate the notion that learners actively construct their own knowledge through engagement with appropriately tailored media. Students transition from passive recipients of teacher-delivered information to active co-constructors of meaning. The provision of varied media offers multiple representations of identical concepts, thereby enabling learners to cultivate more nuanced and robust understandings (Pratiwi et al., 2024). This cognitive process is further reinforced by peer discussions among students using diverse media, which exposes them to multiple perspectives. The teacher, consequently, assumes the role of facilitator providing essential pedagogical scaffolding through media rather than functioning as the sole arbiter of truth. The resultant learning outcomes are both deeper and more enduring, affirming that differentiation constitutes a practical instantiation of constructivist philosophy within the domain of Islamic Religious Education.

In the domain of assessment, teachers adopted a differentiated evaluative approach commensurate with the learning process. For the low-ability group, assessment was conducted via direct observation using rudimentary media. The medium-ability group underwent assessment through interactive quizzes administered subsequent to video viewing. Although these assessments employed different media, they uniformly measured the same targeted

competency achievement. Students reported a perception of enhanced fairness with differentiated assessments, as they were congruent with their respective learning styles. This effectively addresses prevalent criticisms that standardized assessments place students with divergent learning proclivities at a disadvantage. This differentiated assessment approach merits widespread adoption by Islamic Religious Education practitioners in other school contexts.

From an affective perspective, students reported that differentiated learning significantly attenuated their anxiety toward Islamic Religious Education. Previously, low-ability students experienced fear and embarrassment when unable to match their peers' progress. With the introduction of distinct media and assignments, negative social comparisons were substantially mitigated, as each student engaged with qualitatively different tasks. This fostered a more supportive learning environment characterized by reduced unhealthy competition. Teachers further observed that previously reticent students began to pose questions and articulate their learning difficulties (Aulia Dini Hanipah et al., 2022).

The role of parents also emerged as a notable supporting factor. Seventy percent of parents reported that assisting their children with home-based learning became more manageable due to the clear and structured nature of the media used. This suggests a cumulative learning effect: increased frequency of media usage enhances student proficiency, which in turn encourages more frequent engagement, thereby generating a positive feedback loop. Teachers strategically capitalized on this momentum by progressively introducing more complex media. Consequently, differentiation must be conceptualized as a longitudinal process rather than a discrete, one-time intervention.

In response to initial adjustment difficulties, teachers provided supplementary support and elucidated the long-term benefits of the system. Within three weeks, the three initially hesitant students had not only adapted but had become enthusiastic proponents of the differentiated approach. The teacher acknowledged that a return to conventional methods was no longer desirable. This underscores that initial resistance is a normative response, surmountable through effective communication, and that providing psychological support during the transitional phase is imperative.

The success of this study is partly attributable to the modest sample size (21 students), which enabled intensive mentoring and individualized facilitation. In class contexts with optimal enrollment (20–25 students), differentiation can be highly effective. Conversely, classes with 40 or more students pose significant obstacles to teachers in facilitating diverse media effectively. Hence, the outcomes at SMA Negeri 1 Pare are not necessarily generalizable to schools with severely overcrowded classrooms. The policy implication is clear: the government should consider capping class sizes, particularly for Islamic Religious Education. Where this is unfeasible, augmenting the number of teaching assistants in larger classes is recommended. These findings furnish compelling evidence to advocate for policies establishing ideal teacher-student ratios (Madani, 2019).

From the teacher's perspective, implementing differentiation enhanced job satisfaction, as educators could directly observe the tangible impact of their pedagogical efforts. Teachers reported feeling more authentic professionals, transcending their traditional role as purveyors of subject matter. The process of designing diverse media and witnessing students successfully engage with them yielded a profound sense of accomplishment. Furthermore, teachers acquired substantial knowledge regarding emerging technologies and contemporary pedagogies throughout this process, thus bolstering their overall competency (Adipat et al., 2023). They became more reflective practitioners, continually seeking refinements to instant media. This finding is particularly significant, given that teacher satisfaction constitutes a critical determinant of the sustainability of pedagogical innovations. Schools must therefore sustain this momentum through formal recognition and tangible rewards.

A final noteworthy finding is that differentiated learning cultivated a deeper appreciation for Islamic Religious Education (PAI) among students (Hayati et al., 2024). Students begin to perceive PAI as relevant, engaging, and amenable to exploration through multiple media-based perspectives. This attitudinal shift is fundamental, as it maintains directly to the affective domain, which constitutes the primary objective of PAI. Students not only acquired knowledge about Islam but also derived enjoyment from the learning process an outcome that represents the highest indicator of successful differentiation implementation.

This study is not without limitations, as it was confined to a single school and a single subject, with a relatively small sample size. Consequently, generalizability to other educational contexts with distinct characteristics must be exercised with due caution. Furthermore, the reliance on self-reported perceptual data may render the findings susceptible to social desirability bias (Lebenhagen, 2024). Respondents may have been inclined to provide favorable answers owing to their awareness of being observed. Future inquiries are therefore recommended to employ experimental designs incorporating control groups and objective measurement instruments. Nevertheless, the consistency of these findings with established theory and prior research enhances their credibility. These limitations do not, however, diminish the significance of the findings, which constitute robust preliminary evidence.

In sum, the results and discussion presented above convincingly demonstrate that differentiated learning exerts a positive, significant, and robust influence on the utilization of PAI instructional media. The observed 70% effect size represents a highly promising finding for endeavors aimed at enhancing the quality of Islamic Religious Education. Educators at SMA Negeri 1 Pare have amply demonstrated that, through meticulous planning, media diversification, and targeted mentoring, differentiation can be implemented with notable success. Its impact extends across cognitive development, motivational enhancement, learner autonomy, and attitudinal shifts toward PAI. This study enriches the extant literature by providing quantitative evidence, which has been notably scarce in this domain. According to the recommendation to widely adopt differentiated learning within the PAI curriculum is potentially both well-founded and impactful.

CONCLUSION

Based on the data analysis and discussion presented above, this study concludes that differentiated learning exerts a significant influence on the utilization of Islamic Religious Education (PAI) instructional media at SMA Negeri 1 Pare, Kediri. This influence is deemed very strong, as evidenced by a coefficient of determination of 70%, indicating that a substantial proportion of the variance in instructional media use can be meaningfully explained by the implementation of differentiated learning. Statistically, this finding demonstrates that the more diligent teachers apply differentiation principles encompassing adaptations to content, process, product, and the learning environment the more optimal students' engagement with and utilization of learning media becomes.

More specifically, four principal conclusions may be drawn from this investigation. First, teachers at the participating school have successfully designed instruction by establishing learning objectives and assessments that directly reflect the heterogeneous learning needs of their students. Second, teachers actively employ a diverse array of learning media, encompassing both simple and digital formats, to specifically accommodate the varying ability levels and learning styles of each student group. Third, intensive and sustained mentoring from teachers regarding both offline and online media has proven to be a pivotal factor in enabling all students, without exception, to utilize media effectively. Fourth, as a logical consequence of the successful implementation of the preceding three points, differentiated learning has demonstrably enhanced students' intrinsic motivation and autonomy in using learning media, as well as their capacity to complete PAI assignments with greater competence and

responsibility.

On the basis of these conclusions, several recommendations are offered. First, it is recommended that PAI teachers commence the implementation of differentiation by conducting comprehensive diagnostic assessments at the outset of the semester, as mapping student needs constitutes the foundational prerequisite for all subsequent differentiation efforts (Trifatmasari et al., 2023). Second, teachers should not feel unduly burdened by the necessity of providing complex or expensive media; simple resources such as word cards, pictures, and printed modules calibrated to appropriate difficulty levels have proven highly effective. Third, teachers are advised to actively involve students in the media selection process for example, by offering choices among assignments or learning resources as this participatory approach fosters a heightened sense of ownership and intrinsic motivation.

Subsequently, longitudinal research is warranted to examine the long-term effects of differentiated learning on knowledge retention and the progressive development of students' religious character. This study also opens avenues for the development of differentiated learning media models specifically designed for the most abstract and conceptually challenging PAI materials. Finally, it is anticipated that the benefits of this research will be widely experienced by all educational stakeholders: teachers, who gain access to novel and effective pedagogical strategies; students, who enjoy more engaging and meaningful learning experiences; and policymakers, who obtain empirical evidence to inform educational policies that are more responsive to student diversity.

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