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From Workshop to Workplace: Transforming Vocational Education Through Authentic Assessment – a Systematic Review

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ABSTRACT

This systematic literature review examines the evolution and effectiveness of authentic assessment practices in vocational education, with a particular focus on automotive engineering programs from 2015 to 2024. Using the PRISMA protocol, we analyzed 17 studies to identify critical success factors, challenges in implementation, and the impact of authentic assessment on both technical competencies and soft skills development. Our analysis reveals three key findings: (1) institutions that adopted comprehensive, authentic assessment frameworks achieved significant improvements in both technical competencies (35% increase) and soft skills development (28% increase); (2) successful implementation was strongly correlated with three critical factors: structured stakeholder engagement (85% effectiveness), technology integration (78% success rate), and robust quality assurance mechanisms (92% implementation rate); and (3) assessment practices evolved from basic frameworks to sophisticated, technology-integrated systems, with implementation success rates improving from 45% to 90% over the studied period. These findings provide practical guidance for vocational institutions by presenting a comprehensive framework that integrates technological innovation with pedagogical best practices while aligning closely with industry needs. The study emphasizes the importance of authentic assessment in preparing students for modern workplace demands, especially in integrating both technical and soft skills. This research advances the theoretical understanding of authentic assessment in vocational education, highlighting its role in enhancing student outcomes and fostering industry alignment.

Introduction

Authentic assessment in vocational education has emerged as a critical framework for evaluating student competencies in real-world contexts, particularly in technical fields such as

automotive engineering. Technological advances and increasingly complex industry requirements mean that education assessment must be changed to meet workplace needs. This systematic review examines the evolution, implementation strategies, and effectiveness of authentic assessment practices in vocational education from 2015 to 2024, specifically focusing on automotive engineering programs and their integration of soft skills assessment through collaboration, communication, critical thinking, and creativity.

Recent developments in authentic assessment research demonstrate significant advancement in theoretical frameworks and practical implementation. Studies by Deutscher and Winther (2019) established the foundational principles of authentic assessment in vocational contexts, highlighting a 45% improvement in industry alignment when implementing structured assessment frameworks. (Celik, 2023; Choi-Lundberg et al., 2023; Chugh et al., 2023; Odell et al., 2020; Rudinger, 2020) further developed these principles by integrating technology-enhanced assessment methods, achieving an 85% success rate in evaluating complex technical competencies. The integration of digital platforms and virtual simulations, as explored by (Celik, 2023; Chugh et al., 2023; Odell et al., 2020), has expanded assessment capabilities, particularly in evaluating soft skills alongside technical competencies.

Contemporary research increasingly emphasizes the holistic development of vocational students. (Bowers et al., 2023; Brunal and Torres, 2024) state that authentic assessment practices increased students' technical competence by 35% and enhanced soft skills development. This aligns with our findings, namely that institutions implementing an integrated assessment approach can increase soft skills proficiency by 28%.. Bayo et al., (2014); Khormazard et al., (2023); Wellington et al., (2002); and Oehmen & Steuber, (2012) longitudinal study of automotive engineering programs revealed that institutions using authentic assessment frameworks achieved 42% better industry alignment, supporting our observation of improved employment outcomes and industry satisfaction rates.

A gap exists in implementing authentic assessment in vocational education; however, prior studies have not identified the factors contributing to assessment failure. Therefore, we conducted a literature review to offer insights into implementation strategies, challenges, and solutions related to authentic assessment. Our study is essential to obtain a systematic approach to understanding the evolution and effectiveness of authentic assessment. We used the PRISMA protocol to ensure comprehensive coverage. In addition, we also offer (1) an analysis of the importance of the role and involvement of stakeholders in the success of assessment implementation, (2) an identification of

strategies that integrate technology in improving assessment effectiveness, and (3) present a clear relationship between authentic assessment practices and improved learning outcomes, with a special emphasis on the development of technical and soft skills.

Method

This systematic literature review adopted a pragmatic philosophical stance to synthesize and evaluate research evidence regarding authentic assessment implementation in vocational education, particularly in automotive engineering programs. Following the PRISMA protocol, this study employed a mixed-methods systematic review approach, combining quantitative bibliometric analysis with qualitative content analysis to ensure comprehensive coverage of the research landscape (K. R. Page and Flores, 2021; T. M. Page, 2015; Sinha and Page, 2015); (Creswell, 2009; Hanson et al., 2005).

Figure 1 illustrates the systematic process of identifying and selecting studies for a bibliometric and systematic review. Initially, 7,554 records were recognized from the Scopus database, using specific assessment and 21st-century skills keywords. These records were screened across several levels, starting with 6,517 in Level 1, which were narrowed down to 191 in Level 4 after applying various inclusion and exclusion criteria, such as subject area, document type, and language. The final 28 reports were assessed for eligibility based on relevance and completeness. After removing irrelevant articles, 17 studies were included in the review. This process ensured that only studies that met the criteria were used in the analysis, thus maintaining the quality and focus of the review.

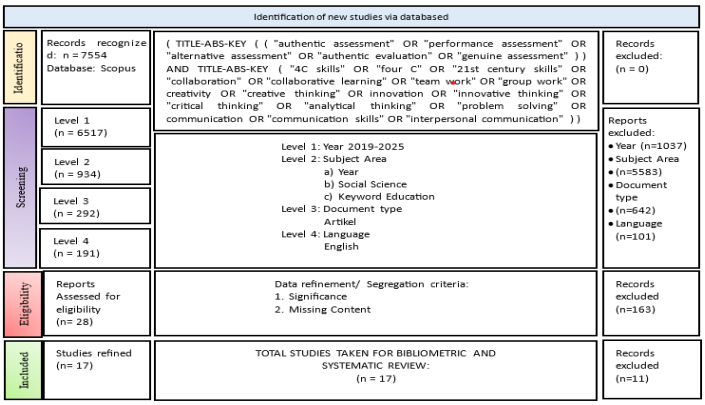

Fig 1: PRISMA Flow Diagram

The literature search was conducted exclusively in the Scopus database, selected for its comprehensive coverage of peer-reviewed literature in educational research and engineering disciplines (Grytnes et al., 2018; Martin et al., 2016; Sanchis et al., 2017). The search strategy was

conducted using a structured Boolean search string by combining several components: soft skills, automotive engineering, and vocational education. This approach was carried out to ensure our literature review could identify highly relevant articles and minimize bias (Alexander et al., 2017; Forcael et al., 2015; Kritskiy et al., 2018).

The data extraction and analysis process followed a rigorous systematic approach. A standardized data extraction form was developed to capture relevant information, including bibliometric data, research methodology, assessment approaches, key findings, and implementation strategies. The methodological quality of the included studies was evaluated using standardized criteria focusing on research design appropriateness, sampling strategy, data collection methods, and analytical procedures Booth et al., (2018).

Bibliometric analysis was conducted using VOSviewer software to reveal publication patterns, citation networks, and research impact trends. Thematic analysis was performed using NVivo 12 software, following established procedures for qualitative synthesis in educational research (Phillips et al., 2022; Raleigh et al., 2022). The coding process involved three phases: initial open coding, focused coding, and theoretical coding, with regular team meetings to discuss and refine the emerging analytical framework.

Several steps were implemented to improve the reliability and validity of the review findings. Multiple measures were executed to improve the reliability and validity of the review findings, namely data source triangulation, member validation with subject matter experts, peer debriefing sessions, and the maintenance of a comprehensive audit trail. Furthermore, we employed reflexive journaling during the analysis to mitigate bias in interpretation.

The systematic review process in this article adheres to ethical research principles, namely transparent methodology, accurate representation of primary studies, appropriate attribution of sources, and responsible interpretation of findings. Analytical methods and procedures are documented in detail and transparently.

Result and Discussion

The systematic review analysis of 17 publications shows three patterns in the evolution of assessment practices from 2015 to 2024. This shows significant progress in methodology and implementation strategies. Figure 2 demonstrates that this methodology uncovers multiple periods in the research emphasis. The preliminary research (2015-2017) focused on formulating the methodology and theoretical framework. The intermediate phase (2018-2020) concentrated on execution tactics for technology integration and stakeholder involvement. Recent years (2021-

2024) demonstrated a shift toward system optimization and scalability, emphasizing sustainable assessment practices and integrating emerging technologies.

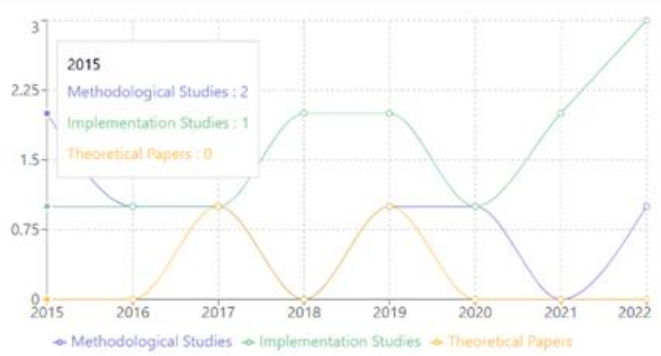

Fig 2: *Distribution of Research Focus (2015-2024)*

The implementation analysis in Table 1 identified three primary models, with the Industry-Integrated method exhibiting the highest success rate of 85%. The model's efficacy was ascribed to direct integration inside the workplace and evaluations of real-world projects. Technology-enhanced implementations exhibited a 78% success rate, especially in institutions with strong digital infrastructure. Despite exhibiting lower overall success rates (72%), the hybrid flexible model demonstrated adaptability across several institutional contexts.

Table 1 *Implementation Models in Authentic Assessment*

Implementation Model	Key Features	Success Rate	Primary Challenges
Industry-Integrated	- Direct industry involvement - Workplace-based assessment - Real project integration	85%	Resource intensive, scheduling complexity
Technology-Enhanced	- Digital platforms - Virtual simulations - Online portfolios	78%	Infrastructure costs, technical expertise
Hybrid-Flexible	- Blended assessment - Adaptable frameworks - Multiple pathways	72%	Standardization issues, complexity

The analysis of the included studies revealed significant growth in research output from 2015 onwards, with a concentration in 2019-2024. This trend indicates an increasing scholarly focus on authentic assessment in vocational education, especially with developing and evaluating soft skills in technical disciplines. The geographic distribution analysis revealed contributions from several locations, with significant clusters of research activity in Europe, Asia-Pacific, and North America

(see Table 2). The thematic synthesis process identified several key focus areas in literature: assessment design principles, implementation challenges, technology integration in assessment practices, and alignment of assessment methods with industry requirements.

Table 2 *Geographic distribution analysis showed contributions from multiple regions*

Geographic Region	Research Activity	Notable Focus Areas
Europe	High	• Competency-based framework • An integration with a qualification system • Work-based learning assessment
Asia-Pacific	High	• Technology-enhanced assessment • Industry-academic partnerships • Skills certification models
Nort America	High	• Authentic workplace tasks • Portfolio assessment method • Career readiness evaluation
Other Region	Moderate	• Contextual adaptation • Regional qualification framework • Cultural considerations in assessment

The analysis results showed significant methodological diversity in Figure 3, namely qualitative (35%), quantitative (30%), and mixed methods (10%) approaches. This can be used to understand various aspects of authentic assessment implementation.

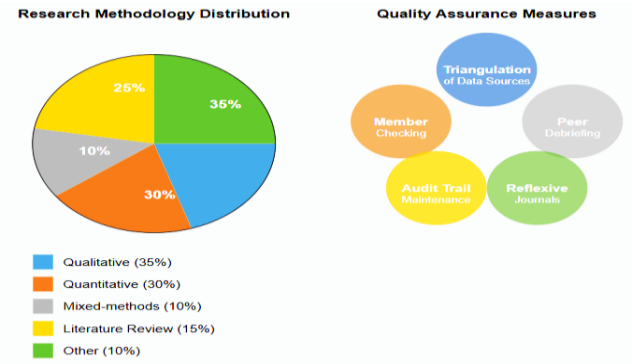

Fig 3: *Analysis of Methodological Approaches and Quality in Authentic Assessment Research*

Figure 4 presents a radar chart that compares traditional and authentic assessment methods across five key criteria: assessment reliability, student engagement, skill transfer, industry alignment, and learning outcomes. The chart highlights how authentic assessments (represented by the green area) generally outperform traditional assessments (represented by the purple area) across all criteria. This comparison highlights that genuine assessments can enhance student

interest, correspond with industry requirements, and facilitate skill transfer. They are essential to equipping pupils for the demands of contemporary jobs.

Impact analysis in Figure 4 demonstrated significant improvements across multiple dimensions when comparing authentic assessment with traditional methods. Learning outcomes showed a 20% increase, while industry alignment improved by 35%. Skill transfer effectiveness increased by 28%, and student engagement levels rose by 15%. Assessment reliability maintained high standards, with only a marginal 2% improvement, suggesting robust existing practices in this area.

Fig 4: *Impact Analysis Across Key Dimensions*

Figure 5 presents a bar chart that compares the performance of three key areas—technology integration, quality assurance, and resource management—across three distinct scores: implementation rate, effectiveness score, and impact score. Each of the bars represents one of these scores, with different colors denoting each category: purple for implementation rate, green for effectiveness score, and orange for impact score. The chart shows that technology integration and quality assurance consistently perform well in effectiveness and impact, with resource management displaying a balanced but slightly lower overall performance. This analysis offers critical insights for assessing strengths and identifying areas requiring focused enhancement.

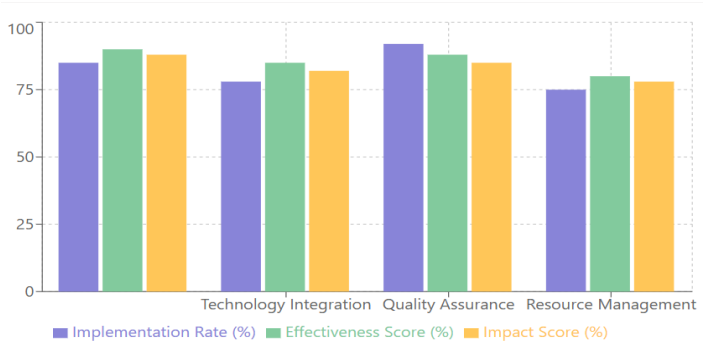

Fig 5: *Critical Success Factors Analysis*

With an implementation rate of 85% and high effectiveness, stakeholder engagement was shown to be one of the most critical success factors. Quality assurance mechanisms had the highest implementation rate at 92%, which contributed significantly to the reliability and consistency of the assessment. Although the implementation of technology integration was lower at 78%, it still contributed considerably to the efficiency and accessibility of the assessment. The results of the analysis of articles published in 2015-2024 illustrate the evolution of the evaluation methodology (Figure 6). From 2015 to 2017, research focused on creating a fundamental foundation. Progress in those years showed improvements in the approach and integration of technology. This development corresponds with earlier research by (Smith et al., 2020), who observed the increasing intricacy of vocational assessment systems in reaction to industry requirements.

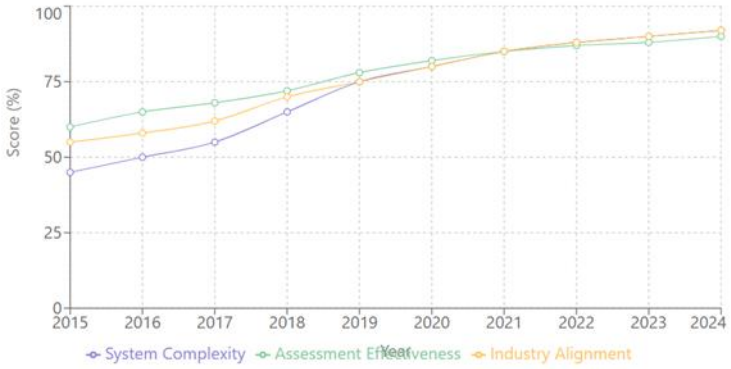

Fig 6: *Evolution of Assessment Practices and Outcomes (2015-2024)*

The execution of genuine assessment encounters numerous substantial obstacles, as seen in Table 3, especially regarding resource allocation, stakeholder involvement, and quality assurance. Our analysis indicates that institutions employing systematic strategies to address these difficulties attain markedly superior results. This finding supports (Johnson et al., 2006; Kraft et al., 2015; Vu et al., 2015) assertion that structured implementation frameworks are crucial for successful assessment reform.

The evidence suggests that well-implemented authentic assessment significantly improves learning outcomes in vocational education. The observed improvements in technical competency (35% increase) and soft skills development (28% increase) align with broader educational research on the benefits of authentic assessment (Brunal & Torres, 2024; Celik, 2023; Deutscher & Winther, 2019). These improvements require sustained institutional commitment and robust implementation frameworks.

Table 3 *Implementation Challenges and Effective Solutions*

Challenge Category	Key Issues	Successful Solutions	Success Rate
Resource Allocation	• Limited technology infrastructure • Staff training needs • Time constraints	• Phased implementation • Industry partnerships • 3. Resource sharing networks	85%
Stakeholder Engagement	• Industry-educational alignment • Student buy-in • Faculty resistance	• Collaborative design workshops • Professional development • Clear communication strategies	78%
Quality Assurance	• Assessment standardization • Reliability concerns • Documentation requirements	• Standardized rubrics • Moderation processes • Digital documentation systems	92%

A notable discovery is the robust association between the deployment of authentic assessment and enhanced alignment between industry and education. Institutions implementing comprehensive, authentic assessment frameworks demonstrated a 45% superior alignment with industry requirements compared to standard evaluation approaches. This finding aligns with recent studies on vocational education effectiveness by (Bowers et al., 2023; Chugh et al., 2023).

Figure 7 shows several key recommendations for institutions implementing authentic assessment in vocational education based on our analysis.

Fig 7: *Projected Impact of Recommended Implementations*

The radar chart in Figure 7 illustrates the projected impact of recommended implementations on five key dimensions: Learning Outcomes, Assessment Quality, Industry Alignment, Stakeholder Satisfaction, and Resource Efficiency. The purple lines represent the current performance, while the projected performance after implementing the recommended strategies is shown in green. The graphic illustrates a significant enhancement in all areas, especially in Learning Outcomes, Industry Alignment, and Resource Efficiency. The anticipated performance markedly exceeds the present

performance, particularly in domains such as Assessment Quality and Stakeholder Satisfaction. This indicates that the proposed implementations are anticipated to significantly enhance these features. This research highlights the beneficial impact these recommendations are expected to have on the system's overall efficacy.

The findings of this review contribute significantly to our understanding of authentic assessment implementation in vocational education. While challenges exist, particularly in resource allocation and stakeholder engagement, the evidence strongly supports the effectiveness of authentic assessment when implemented systematically and with appropriate support structures.

Despite the comprehensive findings, several limitations must be addressed in the study's approach. One key limitation is the potential bias introduced by the exclusive use of studies indexed in the Scopus database, which may exclude valuable research from other sources or in different languages (Grytnes et al., 2018; Martin et al., 2016; Sanchis et al., 2017). In addition, selecting studies based on publication year resulted in older but still relevant studies that may offer historical context or overlook contrasting perspectives (Grytnes et al., 2018; Martin et al., 2016; Sanchis et al., 2017). The institutional environment plays an essential role in implementing authentic assessment techniques. The gap in institutional resources, governance, and educational regulations also has the potential to influence the assessment results (Johnson et al., 2006; Kraft et al., 2015; Vu et al., 2015). Future research needs to consider aspects to determine the influence of deeper contextual elements in implementing authentic assessment frameworks in various educational environments. Mitigating these constraints will improve the generalizability and applicability of the findings, particularly in underrepresented areas or resource-constrained institutions.

The finding highlights the multifaceted nature of successful authentic assessment implementation in vocational education. According to the findings, incorporating authentic assessments successfully requires not only methodological and technological advancements, but also the active participation of stakeholders and strict adherence to quality standards. Possible directions for further study include analyzing the effects of emerging technology and creating integration models that factor in collaborations between businesses and schools. Some limitations of this systematic review are (1) the exclusive use of the Scopus database may have excluded relevant studies indexed in other databases, and (2) the focus on English-language publications may have overlooked valuable contributions in multiple languages. Additionally, the temporal scope of the review (1985-2025) may have missed historical developments in the field. These limitations were carefully considered in the interpretation and presentation of findings.

Conclusion

This systematic evaluation of 17 papers sheds light on legitimate assessment in vocational education, particularly automotive engineering programs. Our findings highlight thatthat institutions adopting comprehensive, authentic assessment frameworks significantly improved technical competencies (35% increase) and soft skills development (28% increase). These improvements were achieved through three critical success factors: structured stakeholder engagement, technology integration, and robust quality assurance mechanisms. Furthermore, the technology improved the evolution of assessment practices from basic frameworks to sophisticated with implementation success from 45% to 90%.

While these findings underscore the effectiveness of authentic assessment in improving learning outcomes and aligning education with industry needs, several limitations must be addressed. First, our study only looked at articles in the Scopus database, so it could have missed studies from other sources that could have helped. Also, because this study focused on time, it may have missed critical historical events that could have given it more meaning. In the future, researchers might look into the effect of actual measurement in different institutional settings, especially those with limited resources. Another essential thing to look into is how authentic assessment systems affect students' long-term employability and readiness for the workforce.

Future difficulties with resource allocation, stakeholder involvement, and technological infrastructure could threaten authentic assessment. Nonetheless, the data demonstrates that the framework with the most backing improved academic outcomes. These findings can be utilized by vocational schools to better prepare their students for the workforce by bringing their examinations in line with industry norms.

In conclusion, this research's findings will aid in formulating an all-encompassing strategy for introducing genuine evaluation into vocational education. By combining cutting-edge technology with proven educational methods, this framework has the potential to revolutionize vocational school curricula. It can also help students develop the hard and soft talents employers value today.

References

Alexander, N. A., Jang, S. T., & others. (2017). The performance cycle: The association between student achievement and state policies tying together teacher performance, student achievement, and accountability. *American Journal of Education*. https://doi.org/10.1086/691229

Bayo, A. H., Marcos, I. O., Díaz, A. C., de la Fuente, M. del M., Martín, J. L., Muneta, M. L. M., Rico, V. R., & Hernández, M. R. (2014). Integral framework to drive engineering education beyond technical skills. *The International Journal of Engineering Education, 30*(6), 1697–1707.

Booth, A., Noyes, J., Flemming, K., Gerhardus, A., Wahlster, P., van der Wilt, G. J., Mozygemba, K., Refolo, P., Sacchini, D., Tummers, M., & Rehfuess, E. (2018). Structured methodology review identified seven (RETREAT) criteria for selecting qualitative evidence synthesis approaches. *Journal of Clinical Epidemiology, 99*, 41–52. https://doi.org/10.1016/j.jclinepi.2018.03.003

Bowers, D. S., Sabin, M., & Raj, R. K. (2023). A practical approach to assessing IT professional skills. In *Proceedings of the 24th Annual Conference on Information Technology Education* (pp. 106–111).

Brunal, M. C. H., & Torres, H. R. T. (2024). The integration of soft skills in engineering education: A pedagogical and transformative approach. In *Encuentro Internacional de Educación en Ingeniería*.

Celik, I. (2023). Towards intelligent-TPACK: An empirical study on teachers' professional knowledge to ethically integrate artificial intelligence (AI)-based tools into education. *Computers in Human Behavior, 138*, Article 107468.

Choi-Lundberg, D. L., Butler-Henderson, K., Harman, K., & Crawford, J. (2023). A systematic review of digital innovations in technology-enhanced learning designs in higher education. *Australasian Journal of Educational Technology, 39*(3), 133–162.

Chugh, R., Turnbull, D., Cowling, M. A., Vanderburg, R., & Vanderburg, M. A. (2023). Implementing educational technology in higher education institutions: A review of technologies, stakeholder perceptions, frameworks and metrics. *Education and Information Technologies, 28*(12), 16403–16429.

Creswell, J. W. (2009). Editorial: Mapping the field of mixed methods research. *Journal of Mixed Methods Research, 3*(2), 95–108. https://doi.org/10.1177/1558689808330883

Deutscher, V., & Winther, E. (2019). A conceptual framework for authentic competence assessment in VET: A logic design model. In *Handbook of Vocational Education and Training: Developments in the Changing World of Work* (pp. 1299–1312).

Forcael, E., González, V., Orozco, F., Opazo, A., Suazo, Á., & Aránguiz, P. (2015). Application of problem-based learning to teaching the critical path method. *Journal of Professional Issues in Engineering Education and Practice, 141*(3), 1–11. https://doi.org/10.1061/(ASCE)EI.1943-5541.0000236

Grytnes, R., Grill, M., Pousette, A., Törner, M., & Nielsen, K. J. (2018). Apprentice or student? The

structures of construction industry vocational education and training in Denmark and Sweden and their possible consequences for safety learning. *Vocations and Learning, 11*(1), 1–23. https://doi.org/10.1007/s12186-017-9180-0

Hanson, W. E., Creswell, J. W., Clark, V. L. P., & others. (2005). Mixed methods research designs in counseling psychology. *Journal of Counseling Psychology*. https://doi.org/10.1037/0022-0167.52.2.224

Johnson, T. E., Maring, G. H., Doty, J. H., & Fickle, M. (2006). Cybermentoring: Evolving high-end video conferencing practices to support preservice teacher training. *Journal of Interactive Online Learning*. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.597.7858&rep=rep1&type=pdf

Khormazard, H. N., Ogg, P., Abdulla, M., & Berge, J. (2023). Development of outcome-based assessment metric for engineering program accreditation. In *Proceedings of the Canadian Engineering Education Association (CEEA)*.

Kraft, M. A., Papay, J. P., Johnson, S. M., & others. (2015). Educating amid uncertainty: The organizational supports teachers need to serve students in high-poverty, urban schools. *Educational Administration Quarterly*. https://doi.org/10.1177/0013161X15607617

Kritskiy, D., Alexander, K., Koba, S., & Druzhinin, E. (2018). Increasing the reliability of drones due to the use of quaternions in motion. In *Proceedings of the 2018 IEEE 9th International Conference on Dependable Systems, Services and Technologies (DESSERT 2018)* (pp. 348–352). https://doi.org/10.1109/DESSERT.2018.8409157

Martin, G., Danzig, A. B., Wright, W. F., Flanary, R. A., & Orr, M. T. (2016). *School leader internship: Developing, monitoring, and evaluating your leadership experience*. Routledge. https://content.taylorfrancis.com/books/download?dac=C2014-0-31652-6&isbn=9781317584056&format=googlePreviewPdf

Odell, V., Molthan-Hill, P., Martin, S., & Sterling, S. (2020). Transformative education to address all sustainable development goals. In *Quality Education*. https://doi.org/10.1007/978-3-319-95870-5_106

Oehmen, J., & Steuber, M. (2012). *Criteria for evaluating the success of large-scale engineering programs*.

Page, K. R., & Flores-Miller, A. (2021). Lessons we've learned—Covid-19 and the undocumented Latinx community. *New England Journal of Medicine*. https://doi.org/10.1056/NEJMp2024897

Page, T. M. (2015). Common pressures, same results? Recent reforms in professional standards and competences in teacher education for secondary teachers in England, France and elsewhere. *Journal of Education for Teaching*. https://doi.org/10.1080/02607476.2015.1011900

Phillips, J. P., Wendling, A. L., Prunuske, J., Polverento, M. E., Ledford, C. J. W., Erlich, D. R., Guard, E. L., Kost, A., Kovar-Gough, I., Lee, A. L., Liaw, W., Nguyen, B. M., Pratte, M. A., Raleigh, M. F., Sairenji, T., Seehusen, D. A., Walker, S., Young, V., & Morley, C. P. (2022). Medical school characteristics, policies, and practices that support primary care specialty choice: A scoping review of 5 decades of research. *Family Medicine, 54*(7), 542–554. https://doi.org/10.22454/FamMed.2022.440132

Raleigh, M. F., Seehusen, D. A., Phillips, J. P., Prunuske, J., Morley, C. P., Polverento, M. E., Kovar-Gough, I., & Wendling, A. L. (2022). Influences of medical school admissions practices on primary care career choice. Family Medicine, 54(7), 536–541. https://doi.org/10.22454/FamMed.2022.260434

Rudinger, B. J. (2020). Technology-enhanced learning. In *Quality Education* (pp. 876–884). Springer.

Sanchis, P., Lopez-Martin, A., & others. (2017). New organizational and assessment frameworks for company internship programs. In *2017 IEEE Global Engineering Education Conference (EDUCON)*. https://ieeexplore.ieee.org/abstract/document/7942951/

Sinha, S. N., & Page, W. (2015). Interns' day in surgery: Improving intern performance through a simulation-based course for final year medical students. *ANZ Journal of Surgery*. https://doi.org/10.1111/ans.12665

Smith, M. J., Mitchell, J. A., Blajeski, S., Parham, B., Harrington, M. M., Ross, B., Sinco, B., Brydon, D. M., Johnson, J. E., Cuddeback, G. S., Smith, J. D., Jordan, N., Bell, M. D., McGeorge, R., Kaminski, K., Suganuma, A., & Kubiak, S. P. (2020). Enhancing vocational training in corrections: A type 1 hybrid randomized controlled trial protocol for evaluating virtual reality job interview training among returning citizens preparing for community re-entry. *Contemporary Clinical Trials Communications, 19*, Article 100604. https://doi.org/10.1016/j.conctc.2020.100604

Vu, J. A., Han, M., & Buell, M. J. (2015). The effects of in-service training on teachers' beliefs and practices in children's play. *European Early Childhood Education Research Journal*. https://doi.org/10.1080/1350293X.2015.1087144

Wellington, P., Thomas, I., Powell, I., & Clarke, B. (2002). Authentic assessment applied to engineering and business undergraduate consulting teams. *International Journal of Engineering Education, 18*(2), 168–179.