

Dynamic differentiation for applied learning

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ABSTRACT

As colleges and universities adapt to increasingly diverse student populations and workforce demands, applied learning has emerged as a central strategy for fostering engagement, critical thinking, and career readiness. Implementing applied learning effectively requires instructional approaches that recognize varied student backgrounds, skills, and preferences. This article examines the use of choice boards, defined as a menu of assignment options, as a means of enhancing applied learning in higher education. Drawing on literature about differentiation, applied learning, and student-centered pedagogy and including a limited case study from an undergraduate teacher education course, the paper explores how choice boards can support student agency, inclusivity, and academic rigor. Findings suggest that integrating choice boards into applied learning provides flexibility without sacrificing standards, enabling students to tailor their learning experiences while still meeting course objectives. Implications for curriculum design and instructional practice highlight the potential of choice boards to improve motivation, accommodate diverse learners, and strengthen the connection between theory and practice in higher education settings.

INTRODUCTION

As higher education continues to evolve in response to diverse student needs and workforce demands, educators are increasingly exploring instructional strategies that promote engagement, autonomy, and meaningful learning. Applied learning—where students actively use knowledge in real-world or simulated contexts—has emerged as a vital approach for fostering deeper understanding, critical thinking, and career readiness. However, implementing applied learning effectively requires acknowledging the varied backgrounds, skills, and learning preferences that students bring to the classroom. Differentiation, the practice of tailoring instruction to meet individual learner needs, offers a valuable framework for addressing this diversity.

One promising yet underexplored strategy for facilitating differentiated applied learning in higher education is the use of choice boards. Choice boards present students with a curated menu of task options aligned with specific learning objectives, allowing them to select how they engage with and demonstrate their understanding of course material. This structure supports student agency while maintaining academic rigor and relevance. By combining the principles of differentiation with the active, experiential nature of applied learning, choice boards may offer a practical solution for enhancing student motivation, accommodating diverse learners, and improving learning outcomes in higher education settings. This article explores the design, implementation, and potential impact of using choice boards to differentiate applied learning experiences in college-level courses.

LITERATURE REVIEW

The following literature review examines the changing student population, benefits of applied learning in higher education, and defines and explains how choice boards can be a beneficial aspect of these systems.

Changing Populations

The student population in higher education is undergoing significant transformation, reflecting broader demographic, economic, and societal shifts (Ortiz & Waterman, 2016). One of the most notable changes is the growing diversity of students in terms of age, race, ethnicity, and socioeconomic background. While traditional college students—those aged 18 to 22 attending full-time—still represent a significant portion, there is a rising number of non-traditional students (Salmi & D’Addio, 2021). These include adult learners, part-time students, working professionals, parents, and military veterans returning to education later in life (Franklin, 2013). This shift has prompted colleges and universities to reevaluate how they support and engage students with varied life experiences and needs.

Economic pressures are also reshaping who attends college and how they do it. Rising tuition costs and student debt have caused many students to opt for community colleges, online programs, or hybrid models that allow them to work

while studying (Franklin, 2013). First-generation college students and those from low-income families often balance multiple responsibilities and face unique challenges that demand more flexible, supportive systems from institutions (Salmi & D’Addio, 2021). In response, many schools are investing in mental health services, financial aid counseling, and career readiness programs tailored to the realities of today’s student body (Scherer & Leshner, 2021).

Technology is playing a major role in broadening access to higher education. Online learning platforms have made it possible for students in remote or underserved areas to earn degrees, while also accommodating learners who need more adaptable schedules (Compton & Davis, 2010). As technology continues to evolve, so too will the ways in which students engage with education, requiring schools to remain agile and innovative (DeVita et. al, 2016).

Overall, the higher education landscape is becoming more dynamic and complex. The evolving student population brings with it a wealth of experiences and perspectives, enriching the academic environment but also challenging institutions to move beyond one-size-fits-all models. Colleges and universities must continue to adapt in order to meet the changing needs of their students, ensuring that higher education remains accessible, relevant, and equitable for future generations. Differentiated instruction is key to that adaptation.

Differentiation in higher education

Differentiation in higher education refers to the intentional design of instruction, assessment, and learning environments to accommodate the diverse needs, backgrounds, and learning preferences of students (Tomlinson, 2014). While often associated with K–12 education, differentiation is increasingly relevant at the college level due to the growing diversity in student populations, including first-generation students, adult learners, students with disabilities, and individuals from varied cultural and linguistic backgrounds (IRIS Center, 2019). Differentiated instruction can involve offering multiple means of engagement, representation, and expression—such as using varied teaching methods, flexible assignments, or adaptive technologies—to ensure all students can access and demonstrate their understanding of the material (Mintz, 2016).

Instructors in higher education can implement differentiation through strategies like varied assignment formats, tiered activities that address different levels of readiness, and providing options for collaborative or independent work (Lightweis, 2013), all of which can be used in applied learning. By embracing differentiation, colleges and universities can foster more inclusive and equitable classrooms where all students are challenged appropriately and supported in achieving their academic and career goals (Dosch & Zidon, 2014).

Applied Learning

Applied learning in higher education offers students the opportunity to connect theoretical knowledge with real-world experience, making their

education more practical, engaging, and relevant (Lemke & Wilcoxon, 2024). Rather than learning concepts in isolation, students engage in hands-on activities such as internships, service-learning projects, research, simulations, and lab work that reinforce academic content. This approach helps solidify understanding, improves retention, and cultivates problem-solving skills by placing students in authentic contexts where they must apply what they've learned (Ash & Clayton, 2009).

One of the primary values of applied learning is its impact on career readiness. Employers increasingly seek graduates who can demonstrate experience, adaptability, and the ability to work collaboratively in professional environments. Applied learning experiences allow students to develop these competencies while building portfolios, resumes, and networks that can ease the transition from college to career (Kennedy & Archambault, 2012). Through internships or project-based coursework, students gain insight into workplace expectations and discover how their academic studies align with their future goals (Shepherd & Yeon, 2023).

Applied learning also promotes deeper student engagement and motivation (Ash et. al, 2005). When students see the real-world relevance of their coursework, they are more likely to take ownership of their learning and persist through challenges (Shepherd & Yeon, 2023). This sense of purpose can be especially valuable for students from diverse or non-traditional backgrounds, who may benefit from a more personalized and interactive approach to education.

In addition, applied learning fosters essential soft skills such as communication, leadership, adaptability, and critical thinking (Kokotsaki, Menzies & Wiggins, 2016). These are often best developed through experiential opportunities that require collaboration, reflection, and real-time decision-making (Kolb & Kolb, 2005). By navigating the complexities of applied settings, students not only gain confidence but also learn how to adapt their knowledge to varied audiences and unpredictable situations—vital professional skills (Buchanan et. al., 2019).

Ultimately, the value of applied learning lies in its ability to bridge the gap between theory and practice. It enriches academic instruction, strengthens workforce preparation, and helps students make meaningful connections between their education and their future. As higher education evolves to meet the needs of a changing world, integrating applied learning will be crucial in preparing students to thrive in complex, fast-paced environments.

Choice boards

A choice board is a differentiated instructional tool that presents students with a variety of learning activities organized in a grid or menu format, allowing them to choose how they engage with content (Florian, 2014). Each option on the board is aligned with the same learning objectives but varies in format, depth, or approach, offering students autonomy over how they demonstrate understanding. This strategy is rooted in the principles of student-centered

learning and supports diverse learning preferences, helping to increase motivation, ownership, and engagement (Trust & Maloy, 2020).

In higher education, choice boards can be adapted to suit a range of disciplines and course levels. For example, in a literature course, a choice board might offer options such as writing a critical essay, creating a multimedia presentation, leading a group discussion, or analyzing a theme through visual art. All tasks address the same core objectives, such as critical analysis or comprehension, but allow students to express their understanding in a way that plays to their strengths or interests (Buechel, 2023). This flexibility is especially helpful in classrooms with diverse learners, including adult students, multilingual students, or those with varying academic backgrounds (Trust & Maloy, 2020).

Choice boards also encourage higher-order thinking and creativity. By offering options that vary in complexity and skill application, instructors can design boards that include activities targeting Bloom's Taxonomy levels—from remembering and understanding to analyzing, evaluating, and creating (Arendt, Trego & Allred, 2016). Students might be required to select at least one task from each cognitive domain, ensuring a balanced approach to learning. This method fosters deeper engagement with the material while encouraging learners to think critically about how they learn best (Carless, 2022).

Instructors in higher education can also use choice boards to support collaborative learning (Hanewicz, Platt & Arendt, 2017). Certain tasks might be designed for individual work, while others promote small group collaboration, peer review, or discussion-based exploration. This variety allows students to build communication and teamwork skills while still having control over the structure of their learning (Rideout, 2018). Additionally, instructors can use choice boards for formative or summative assessment, tailoring the level of rigor and feedback to meet course goals (Gijbels et al, 2006).

Ultimately, the use of choice boards in higher education promotes flexibility, inclusivity, and deeper engagement. By shifting some control to students, instructors can cultivate a more active and personalized learning environment. Choice boards respect the diverse needs and strengths of students while ensuring that academic standards are met, making them a powerful tool for modern, student-centered teaching (Arendt, Trego & Allred, 2016).

CASE STUDY

During the spring semester 2025, I implemented a choice board into the applied learning component of my Introduction to Reading and Language Arts Methods course, which was comprised of 26 students of varying backgrounds and interests including early childhood, elementary, and special education certification areas. This five-hour course has served as the foundational literacy class for education students for the past decade. Beginning in 2017, the course has included an extensive applied learning component that requires students to spend 20-25 hours observing, planning lessons, and working with P-12 students in reading and language arts methods. I had recently noticed that an increasing

proportion of students were working full-time in schools or were otherwise engaged during the time that whole group applied learning experiences would take place, so I created a choice board with options for multiple engagement opportunities (see Figure 1). My key considerations in creating this assignment were: 1. Exposure to specific reading and language arts methods in typical classrooms; 2. Engagement with P-12 students; 3. Opportunities to plan and teach reading and language arts methods and; 4. Opportunities to engage creatively with literacy rich environments to develop an enthusiasm for teaching reading. I then applied these considerations to the four areas of differentiation recommended my Tomlinson (2014): content, process, product, and learning environment.

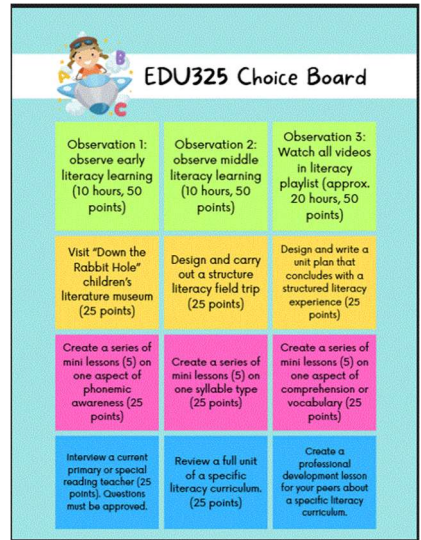


Figure 1. EDU325 Choice Panel

1. Content: the content of this course is aligned with the Missouri State Teacher Education standards for early childhood, elementary, and special education teachers. Because students from three different programs all take this course, I was able to differentiation *some* content based on the program area. Many of the standards are in all three programs, so the content differentiation was limited.
2. Process: students were offered varied activities, resources, and strategies to make sense of the content. For example, students could choose an article, video, or interview to learn about the literacy skill they were observing and planning for as part of the applied learning experience.
3. Product: students could demonstrate their understanding of the material in a variety of ways including lesson plans, presentations, video recordings, and live presentations.
4. Learning environment: students were able to identify their own placement, attend the elementary school alongside the instructor, or have the instructor find them an individual placement with a mentor.

While I did not collect student-level data on this experience, all the of the students did complete their applied learning experiences. Slightly more than half followed the traditional applied learning program that I led, taking groups of students to a local elementary school and working with special reading students at that school. Because of the flexibility in how the assignment points were accrued, some students started their applied learning with the traditional professor-led applied learning and then earned additional points through other projects. Finally, several students who work full-time in schools were able to

complete the applied learning requirements in their work environment.

For each choice, truncated rubrics and assignments were created to guide students in the process while also allowing the inherent flexibility of choice boards to remain. Those documents are included in Appendix A. Students were required to plan and submit “check points” on their applied learning time, and three students required intervention to remain on track to completing the project. End of semester reflections noted that students appreciated the flexibility of the applied learning project, particularly in terms of when and where the hours were completed.

Students were surveyed anonymously at the end of the course. Overall ratings on the choice board assignment were favorable, with students appreciating the flexibility to create options that could be done in their employment setting. Some students noted that having a traditional instructor-led placement as an option was preferable to all student-led placements.

The applied learning component of this course has been included on the syllabus as 20% of the grade since 2019. This has always included a rubric that includes a time log (completion of the activities) and a reflection piece that asks students to connect concepts covered in the course with the applied learning experience. The additional components of the course include projects and exams, all of which use clearly-defined rubrics and grading criteria. It is my belief that the applied learning supports progress toward mastery of the learning objectives defined in these projects, but the applied learning project itself was not designed to be an outcome measure.

Using choice boards for applied learning does create some challenges. First, students need to be held accountable throughout the semester both in terms of rigor and quantity. One student originally wrote that she would observe herself teaching, so I adjusted the rubric for observing to include options such as special education and special reading outside of their normal employment placement. Second, because this is an introductory class, students did not have schema to observe and plan science of reading lessons from the beginning of the experience. To make the early experiences meaningful and productive, I gave students specific tasks to complete during their applied learning, such as interviewing a P-12 student to understand their oral language background. I was then able to scaffold later tasks for more independent learning.

Previous research (see Buchanan et al, 2019) has demonstrated that applied learning in teacher education has promise and opportunities for partnerships with P-12 partnerships. By implementing choice boards, teacher educators can provide the flexibility of multiple models of implementation while still meeting the diverse and divergent needs of diverse student populations.

CONCLUSION

In an increasingly diverse and dynamic higher education landscape, instructors must adopt flexible and inclusive strategies to support meaningful learning for all students. Integrating choice boards into applied learning offers a compelling approach to differentiation, allowing students to engage with course

content in ways that align with their strengths, interests, and goals. By providing structured yet adaptable options for demonstrating knowledge, choice boards help bridge the gap between theory and practice while fostering student ownership, creativity, and deeper engagement.

While this article explores choice boards in a course that inherently includes applied learning, these assignment options could also be applied in general education courses. By presenting students with a menu of task options aligned with core learning objectives instructors can accommodate different learning styles, interests, and levels of readiness. For example, a biology choice board might include options to design an infographic explaining a cellular process, conduct a virtual lab simulation, or write a research brief connecting course content to a real-world environmental issue. Similarly, in a history course, students might choose to create a podcast about a pivotal event, compare and contrast primary documents, or lead a seminar discussion. This structure allows students to engage with material in ways that highlight their strengths while still meeting rigorous academic standards. By applying Tomlinson's (2014) criteria for differentiation, it is possible to create a range of options in many content areas.

This exploration of choice boards as a tool for differentiated applied learning highlights their potential to enhance both instructional effectiveness and student outcomes. As institutions continue to prioritize experiential learning and equity, further research and innovation in this area can inform best practices and inspire new approaches to curriculum design. Ultimately, leveraging choice boards in higher education not only supports academic success but also prepares students to navigate complex, real-world challenges with confidence and adaptability.

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APPENDIX A**Field Work Choice Board EDUXXX Spring 2025**

Observations Choose at least one (1)	Additional choices Choose up to one	Stackable Options Choose as many as needed (can do multiple of one)
Early: Ten (10) hours observing early literacy activities such as oral language, print concepts, and phonological awareness (50 pts)	The Rabbit Hole: Visit “The Rabbit Hole” children’s literature museum and create a lesson plan (35 points)	Book Report: Create and write a book report on a children’s chapter book (cannot be picture book.) 5 points for 200 pages or less, 10 points for 201+
Elementary: Ten (10) hours observing primary or older literacy activities such as phonics, comprehension, and vocabulary	MYO Field Trip: Create and implement a structured field trip connected to a children’s book (35 points)	Lesson Plan Create a mini lesson plan for a read aloud or independent reading children’s book. Must be standards-based. (5 points)
Virtual: Twenty hours of videos will be provided covering both early and middle literacy development	Interview 1: Interview a current primary or special reading teacher (35 points). Questions must be approved.	Read Aloud Go to a read aloud in a classroom or library (5 points)
MYO: Create your own observation (50 pts/10 hrs)	Interview 2: Interview a librarian (35 points). Questions must be approved.	
Points:		

EDU325 Choice Board Rubric**General Evaluation Criteria**

- **Exceeds Expectations (Full Points):** Demonstrates deep understanding, creativity, and professional-level application. Work is thorough, polished, and well-supported.
- **Meets Expectations (¾ Points):** Demonstrates understanding and application of concepts. Work is clear, mostly complete, and meets assignment requirements.

- **Approaching Expectations (½ Points):** Demonstrates partial understanding. Work lacks depth, detail, or clarity; some requirements missing.
- **Below Expectations (¼ or 0 Points):** Minimal effort, incomplete, or missing key elements.

Observations (50 points each)

Criteria:

1. **Completion of Required Hours** (10–20 hours documented) – 10 pts
2. **Quality of Notes/Reflection** (depth, accuracy, evidence of learning) – 15 pts
3. **Connections to Literacy Concepts** (theory to practice) – 15 pts
4. **Professionalism & Presentation** – 10 pts

Projects/Experiences (25 points each)

(e.g., museum visit, field trip, unit plan, mini lessons, interviews, curriculum review, developmental plan)

Criteria:

1. **Completion of Task Requirements** (all elements included, correct format) – 5 pts
2. **Application of Literacy Knowledge** (accurate use of concepts/strategies) – 7 pts
3. **Creativity/Originality** (innovative approaches, engaging presentation) – 5 pts
4. **Clarity & Organization** (professional, polished work, grammar/mechanics) – 4 pts
5. **Depth of Reflection/Analysis** (goes beyond surface-level description) – 4 pts

Scoring Example

- Exceeds Expectations: 24–25 pts (project) | 47–50 pts (observation)
- Meets Expectations: 18–23 pts (project) | 37–46 pts (observation)
- Approaching: 13–17 pts (project) | 25–36 pts (observation)
- Below: 0–12 pts (project) | 0–24 pts (observation)