Exploring Personalized Learning and Open Education Pedagogy in Multilingual Learner Teacher Preparation

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Abstract
Preparation to serve multilingual learners is often required for P-12 teacher certification. Teachers come to this preparation with varied experiences and urgent needs to better serve their students. When teacher preparation courses use a one-size-fits-all approach to satisfy certification requirements, teachers may not find learning meaningful to their current context. Further, without common mechanisms for sharing resources produced through teacher preparation, each novice teacher starts assignments from the beginning rather than learning from, and building upon, previous assignments of peers. Reusable teacher preparation assignments through open education pedagogy (OEP) may address the challenges of providing collaborative, relevant, and optimally challenging state-mandated teacher preparation. However, personalized learning may not be aligned with university course evaluations. Thus, faculty members may be concerned about the impact of personalization on student course evaluations. This exploratory study examined personalization and OEP in a required, graduate-level teacher preparation course by analyzing assignment completion data to explore teacher personalized learning paths and comparing standard university course evaluation items from four course runs pre- and post-personalization (N=230). Descriptive analyses illustrate negative changes in teacher evaluation of course organization, feedback timeliness, and time spent outside of class. Teacher satisfaction increased in the areas of diversity, use of technology, access, and online discussions. Results from examining personalized paths and course satisfaction provide recommendations for designing personalized teacher preparation.

Keywords: Individualized learning**,** open educational resources, teacher preparation, English language learners, faculty course evaluations

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Increasingly, teachers serve multilingual learners in public schools across the United States (National Center for Education Statistics, 2023). In response to the growing multilingual student population, departments of education in all states have resources for teaching English learners on their websites and some states, for example, New York and Massachusetts, require preparation in teaching multilingual learners for teacher certification (Andrei & Northrop, 2022). External credentialing structures and state-approved course syllabi can lead to standardized teacher preparation that may lack a means to respond to teacher needs (Lavery et al., 2019). For example, Lavery et al (2019) examined various mechanisms for providing training to teachers to teach English learners, including embedding required or recommended information and strategies into current courses, creating specific courses, and ongoing professional development. Some courses were standardized to ensure that teachers received the required information to develop specific competencies identified by state education departments. In contrast to standardized mechanisms that provide the same information in the same manner to all educators, Gabriel (2010) found that teachers in their first three years benefitted from collaborative professional learning geared toward their individual interests. Similarly, Lavery et al.'s (2019) findings showed that multi-level or differentiated professional development led to teaching practices that in turn showed promising impacts on English learners' learning. Further, efforts to individualize or personalize learning often leverage digital tools. When Kimmons and Hall (2016) studied teacher technology integration, they found that teachers sought technologies with concrete connections to student learning and ease of use. Synthesizing research findings, Kennedy's literature review summarized key components of effective educator professional learning, specifically, teacher motivation, intellectual challenge, and feelings of meaning (2016). Personalized learning paths provide a pedagogical vehicle to enact Kennedy's key components of effective educator development. Previous research provides examples of personalized learning in teacher education, where teachers select meaningful assignments within a faculty-designed structure to learn expected outcomes (Arnesen et al., 2019; Chaipidech et al., 2021; Jones & McLean, 2018).

In addition to responsive professional learning that attends to individual teacher needs, online databases of materials may also increase teacher collaboration. Weiss et al. (2017) identified meaningful collaboration opportunities in teacher preparation as an important need. Rather than the course instructor being the only audience for teacher assignments, studies (e.g., Sun & Van Es, 2015) show that teachers benefit from analyzing each other's work. Teacher preparation courses often require teachers to demonstrate learning through writing lesson plans in isolation with high stakes (e.g., Stanford Center for Assessment, Learning, and Equity, SCALE, 2016) and without building on the previous work of colleagues. However, freely available collaborative technologies (e.g., websites and databases) that facilitate searches and contributions make it possible to provide vehicles for teachers to build upon previous curriculum developments and to contribute new ideas to a teacher community (Jhangiani & DeRosa, 2018).

Taken together, learning designs for teacher preparation need to address the challenges of collaboration and personalization. Yet, given the important role of standard university course evaluations on tenure and promotion, faculty members may be reluctant to experiment with new pedagogical methods such as personalization and OEP (Dziuban, 2023). This study explored how an open education pedagogy (OEP) with personalized assignments in teacher preparation to

serve multilingual learners may impact individual teacher learning paths and course satisfaction as measured by standard university course evaluations.

Literature Review

This literature review defines personalized learning, OEP, and teacher competencies to serve multilingual learners. First, key elements used in personalization, specifically in P-12 teacher education, were defined. Second, a summary of open education resources (OER) principles described the underlying foundation for the process teachers used to search for, remix, and share personalized tasks. Finally, an overview of teacher preparation to serve multilingual learners provided the rationale for topic selection and learning methods of this study's personalized task matrix.

Personalized Learning

Although personalized learning is not new, interest has grown in education in the last decade and there are examples of successful implementation in P-12 schools (Shemshack & Spector, 2020; Patrick et al., 2016). Considering contemporary learning theories, personalized learning may be found in the writings of John Dewey, who described learning as a socially constructed process where individuals are active and reflect on their experiences (Groff, 2008). The concept of personalized learning is rooted in the model of apprenticeship and mentoring (Shemshack & Spector, 2020).

Key Components of Personalized Learning

Key components of personalized learning focus on: (a) learner as an active agent, (b) instructor or technology tool for facilitation and feedback, and (c) environment with multiple or adaptive pathways (Jones & McLean, 2018). More specifically, Van Schoors et. al. (2023) summarized characteristics of personalized learning to include attention to learner characteristics and goals, adaptive learning environment and tasks, driven by the learner, teacher, or technology tool, and visualized feedback through continuous formative assessment. Learner feelings of optimal challenge and relevance are also crucial (Groff, 2008). Chaipidech et al. (2019) summarized important andragogical components of personalization in teacher education, specifically a self-directed, problem-based, context-specific approach. Addressing these elements of personalization, Short and Shemshack (2023) suggested renaming personalized learning to personalized instruction because personalized learning requires faculty members to customize curriculum to address the interests and abilities of each learner in the greatest number of ways.

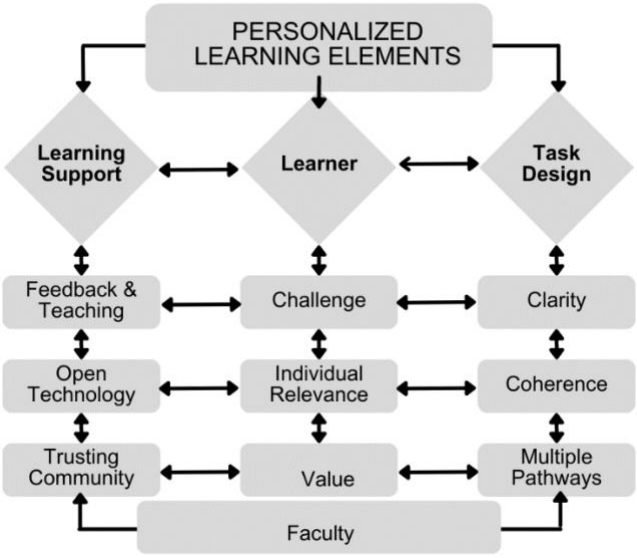
Personalized learning can be challenging to implement. For example, Van Schoors et al. (2023) examined personalized learning from the teacher's perspective and identified issues beyond practical challenges such as time, organization, and curriculum coherence to articulate discrepancies among teacher expectations of student learning and use of technology tools needed to support personalization. Specific pedagogical design features, such as constructing coherent learning pathways that provide support and assessment, while also offering vehicles to pursue different avenues toward learning, challenge teachers when implementing personalized pedagogy (Salinas & De-Benito, 2020). In Shaikh and Khoja (2012), the literature review of personalized learning synthesized the required teacher competencies to implement personalized learning into five areas: learning designer, curator of large bodies of content, communicator, manager, and technologist. Taken together, research studies identified common elements of personalized task

design, such as clarity, coherence, multiple pathways, and continuous assessment that require faculty skill and planning.

Synthesizing previous studies, Figure 1 illustrates elements of personalization used to guide this study's design and implementation of personalized tasks in teacher preparation for multilingual learners. These personalized learning elements were also used to organize the items of the university's course evaluation. This model or personalized learning elements is limited to the 26-Likert scale university course evaluation items. For example, agency is a key personalization element, yet there were no evaluation items that specifically aligned to student agency. While not inclusive of every aspect of personalization, this model provides an example of connections between personalized learning and existing course evaluation items. In addition, the alignment exercise may shed light on missing evaluation areas such as perceptions of learner agency.

Figure 1

Personalized Learning Elements Relevant to this Study



Preparing P-12 Teachers through Personalized Learning

The International Association for K–12 Online Learning (iNACOL, Friend, 2017) published a report with rich descriptions of successful personalized learning implementation in P-12 schools. The iNACOL report also highlighted elements of personalization including student agency and collaboration for both teachers and students. Modeling personalized learning in teacher preparation can support teachers in implementing personalization with P-12 students. For example, Arnesen et al. (2019) found that teachers who experienced personalization in preparation for teaching through blended learning felt more prepared to personalize learning for P-12 students. Indeed, proponents of personalized learning identify benefits such as greater autonomy leading to increased intrinsic motivation and deeper understanding (Shemshack & Spector, 2020; Salinas & De-Benito, 2020). However, critics have raised concerns that greater learner autonomy also facilitates more surface-level learning and avoidance of tasks that might challenge skills and beliefs (Van Schoors, et. al., 2023). Building on this previous research, this study explored teacher use of pathways constructed in a matrix (see Figure 3) designed to

provide clarity of purpose and to scaffold teacher learning tasks from knowledge acquisition to clinical application.

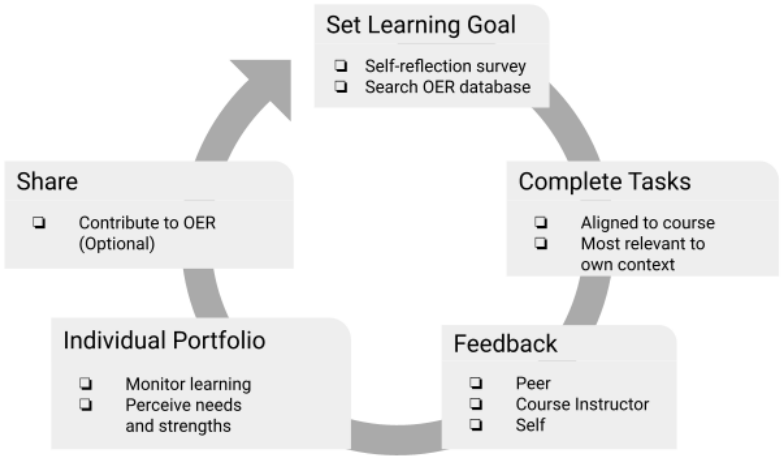
Open Educational Resources (OER)

OER share educational materials freely through the internet by providing copyright for others to use, revise, and build upon the resources (Johnston, 2005). To describe this system, beyond resources being free and accessible, Wiley (2016) introduced the 5R framework (reuse, revise, remix, redistribute, and retain) to guide OER permissions. This study examined the freely available OER database of teacher preparation assignments, sample student work analyses, and curriculum materials to build knowledge in teacher education and propel personalized individual learning pursuits (see https://bondie.commons.gc.cuny.edu/multilingual/). The OER database of curriculum materials were intended for teachers and teacher educators, both to use and to contribute to, to continually grow resources and knowledge of the materials teachers are using to support English learners. Guided by OER principles, teachers were encouraged to contribute new materials to the database, build on previous teachers' submissions, and provide feedback to peer submissions (Geith & Vignare, 2019). For example, teachers could expand previously submitted language objectives by adding a lesson plan to the objectives or adapting curriculum materials from the database to their own setting. This approach to openly share assignments aimed at preparing teachers to serve multilingual learners has an open architecture that grew by learner generation and was intended to facilitate collaboration and personalization.

Open Pedagogy (OEP)

Beyond OER materials, the pedagogy of preparing teachers to serve English learners and the subsequent teaching of English learners was also continuously and openly shared and further generated by participants. Jhangiani et al. (2018) defines the effort to share pedagogy as OEP. Hegarty (2015) identifies eight attributes of open education practices or pedagogy (OEP): participatory technologies, trusting, innovation, sharing, networks, learner-generated and co-constructed, reflective practice, and peer-review. Figure 2 displays the personalized learning process used in this study that reflects Hegarty's attributes (also see self-reflection tools, Appendices B- F). This process was designed to support self-regulated learning by promoting a continuous cycle of goal setting, monitoring, control of actions, and reflecting on learning (Zimmerman, 2008). To support sharing, an online discussion board was established for peer and instructor feedback. In addition to the OER, completed tasks were collected into individual digital portfolios that prompted teachers to reflect on their learning and examine trends in task selection. This approach to personalized teacher learning used both OER and OEP.

Figure 2
Personalized Task Process



Teacher Preparation for Multilingual Learners

This study explored personalized learning within a required course aimed at preparing teachers to serve multilingual learners across all grades and subject areas. Similar to Karlsson's (2015) research that examined teacher learning and implementation of strategies for serving English learners, this study was guided by the WIDA standards that provide a framework for curriculum, teaching, and assessment for multilingual learners in grades K-12, specifically developing student language skills and content knowledge simultaneously (see https://wida.wisc.edu/teach/standards/eld). The topics that teachers selected in the personalized assignment were based on WIDA standards. Teachers chose a learning method that provided a continuum from research to application. Within each task, options focused on different subject areas (e.g., math or social studies) or aspects of the topic (e.g., different types of writing). Figure 3 displays the matrix that organized the personalized task assignments by seven topic rows (language objectives, discussion, vocabulary, reading, writing, language/culture/identity, and design your own) and five learning method columns (read research, analyze student work, apply technology, create materials, and plan a lesson). See Appendices A-G for the assignment, self-assessment and task selection survey, assignment tracker, and rubric.

Each week, teachers used the reflection tool to identify relevant and/or useful tasks. Teachers could search previously completed tasks by grade level and subject at https://bondie.commons.gc.cuny.edu/multilingual/ to gain ideas for new submissions or remix submitted tasks. The professor provided the sequence of two topics for the weekly course meetings (see Figure 4, top row) and recommended tasks from the matrix that could be completed prior to (e.g., readings) and following classes (e.g., creating materials). Teachers were encouraged to complete one reading task before other assignments in each row. The minimum completion expectation was one hundred points for any assignment combination. A limit of no more than two 15-point assignments was given, but not rigidly enforced. The purpose was to guide teachers toward completing lower value assignments designed to build skills needed to

complete the 15-point tasks. Assignments could be completed more than once (e.g., creating objectives for different lesson plans).

Figure 3

Personalized Task Matrix

Activity Type		Read Research (5 points)	Analyze Student Work (10 points)	Apply Technology (10 points)	Create Materials (15 points)	Plan a Lesson (15 points)	Offer Peer Feedback (5 points)	Design Your Own (propose points)
Topic	Language Objectives	Objectives-Read	Objectives-Analyze	Objectives-Apply	Objectives-Create	Objectives-Plan	Objectives-Offer	Objectives-Design
	Discussion	Discussion-Read	Discussion-Analyze	Discussion-Apply	Discussion-Create	Discussion-Plan	Discussion-Offer	Discussion-Design
	Vocabulary	Vocabulary-Read	Vocabulary-Analyze	Vocabulary-Apply	Vocabulary-Create	Vocabulary-Plan	Vocabulary-Offer	Vocabulary-Design
	Reading	Reading-Read	Reading-Analyze	Reading-Apply	Reading-Create	Reading-Plan	Reading-Offer	Reading-Design
	Writing	Writing-Read	Writing-Analyze	Writing-Apply	Writing-Create	Writing-Plan	Writing-Offer	Writing-Design
	Culture & Identity	Culture & Identity-Read	Culture & Identity-Analyze	Culture & Identity-Apply	Culture & Identity-Create	Culture & Identity-Plan	Culture & Identity-Offer	Culture & Identity-Design
	Design Your Own (DYO)	Design Your Own (DYO)-Read	Design Your Own (DYO)-Analyze	Design Your Own (DYO)-Apply	Design Your Own (DYO)-Create	Design Your Own (DYO)-Plan	Design Your Own (DYO)-Offer	Design Your Own (DYO)-Design

Challenges Beyond Personalized Task Design

Preparing teachers is more complex than acquiring new skills, and researchers warn that teachers may enter teacher education programs with fixed dispositions and beliefs about languages and language learning that prevent them from providing access and effectively serving multilingual learners (Edwards, 2010). Scholars have concluded that novice teachers need program-wide experiences to learn key instructional practices and develop advocacy skills needed to ensure that culturally and linguistically diverse students, their families, and communities thrive at school (Gitomer & Bell, 2016). However, additional research is needed for faculty members to better understand how to use limited teacher preparation time to ensure that all novice teachers develop capacities to serve culturally, linguistically, and ability-diverse students.

For example, Howlett and Penner-Williams (2020) identified a gap in the literature examining teacher satisfaction regarding professional development to prepare teachers to serve multilingual students. Previous studies have focused on measuring teacher learning outcomes but have not as often explored teacher feelings regarding their learning. Through teacher survey analysis, Howlett and Penner-Williams (2020) found that beyond acquiring knowledge and strategies, teacher feelings about their professional learning mattered, e.g., being concerned about time or feeling an increased awareness of their practices. Although this research did not examine teacher feelings about their teaching practices, this study did explore teacher

satisfaction with course design, instructor pedagogy, and engagement with course materials—important components of teacher learning that are not frequently explored in previous literature.

Course Evaluations

Although the literature debates the usefulness of university course evaluations in evaluating teaching, course evaluations do provide mechanisms for faculty promotion and tenure (Costin et al., 1971). Dziuban et al. (2023) highlighted the complex dynamics of course evaluations, discussing factors that might influence learner evaluations. For this study, factors such as class size or simultaneous enrollment in other courses may have shaped evaluations as much as the addition of personalized learning and OEP. Despite many limitations, course evaluations were systematically administered and required no additional time from faculty members to create or collect. Evaluation items provided one form of data to explore changes in student satisfaction of the course and instructor pre- and post-implementation of personalized learning and the OEP. Table 1 displays 26 Likert-scale evaluation items grouped by personalization element from Figure 1. The alignment illustrated connections between standard course evaluations and implementation of personalized learning.

Table 1

Course Evaluation Items Aligned to Elements of Personalization

# Items	Course Evaluation Items	Personalization Element
Learner (7 items)		
3	Intellectual challenge Stimulated thinking in new ways Assignments promoted learning and growth	Challenge & Purpose
2	Workload amount Benefit to you	Value
2	Readings were valuable Application to real problems/context	Relevance
Task Design (8 items)		
3	Clear and well-organized syllabus Course objectives were clearly stated Evaluation criteria/process was clear	Clarity
3	Course activities aligned with the syllabus Clearly aligned course content Assignments reinforced course goals	Coherence
2	Diversity issues well addressed Encouraged diverse opinions and perspectives	Multiple Pathways
Learner Support (7 items)		

2	Timely feedback on assignments Useful feedback	Feedback
3	Technology use deepened understanding Technology use enabled discussions Technology facilitated peer learning	Open Technology
2	Environment conducive to learning Discussions enhanced understanding	Trusting Community
Faculty (4 items)		
4	Was accessible Responded respectfully Provided well-structured lectures Led effective discussions	Faculty

Research Questions

The purpose of this study was to explore how personalized learning and OER may impact teacher learning paths and course satisfaction when participating in a state-required course aimed at preparing P-12 teachers to serve multilingual learners in the general education classroom. Two research questions guided this study. The first research question explored the extent to which teachers followed individualized learning paths by exploring the sequence of completed assignments, the total completed assignments for each topic across four cohorts, and the amount of time teachers reported spending on course activities outside of class. The second research question explored four semesters of standard university-issued student course evaluation pre- and post-personalization. The course evaluation data provided descriptive information from the P-12 teacher perspective that may inform faculty designs for future personalized assignments.

Methods

This exploratory research examined the impact of personalization and OER on teacher learning paths by analyzing task completion from one course cohort as a case study and comparing standard university graduate course evaluation items across eight courses, four pre-personalization and four post-personalization taught by the same instructor.

Participants

All teacher participants, pre- and post-personalization, were enrolled in a two-credit graduate course that had seven in-person class meetings at a private university in the Northeast United States. Demographic data from individual teachers were not collected. Table 1 describes the enrollment data pre- and post-personalization. All summer term participants were novice teachers seeking initial secondary general education certification for a specific subject area. Fall and spring course participants included novice secondary education teachers, experienced teachers seeking elementary reading specialist certification, and administrators seeking school-level building administration certification. Prior to personalization, 81 teachers participated in four different courses. There were 149 participants in the four courses post-personalization. There was a 46% increase in enrollment in the course following personalization. Prior to personalization teachers enrolled in the course as a requirement for teacher certification. Post-personalization, more students enrolled in the course as an elective. The motivation to enroll in

the course, whether the course was a choice or a requirement, may have influenced teacher interest in the course, personalized task selections, and course satisfaction. Pre-testing equivalence was not measured beyond the qualifications for master's degree admissions. Table 2 illustrates the number of evaluations and response rates pre and post personalization.

Table 2

Participants Enrolled in Teaching Multilingual Learner Course Pre- and Post-Personalization

Year	Term	Enrollment	# Evaluation Responses	Response rate %
		Pre-Personalization		
2017	Summer	23	15	65
2017	Fall	22	19	78
2018	Spring	7	7	86
2018	Summer	27	21	86
		Post-personalization		
2018	Fall	43	43	100
2019	Spring	36	25	69
2019	Summer	23	19	83
2019	Fall	47	46	98
		Total Enrollment and Course Evaluation Responses Pre and Post Personalization		
2017-2018	Total Pre	81	62	77
2018-2019	Total Post	149	133	86
Difference		68 (+46%)	+71	+9.25

Variables

This study used data that are routinely collected through implementation of the graduate course, including assignment completion (i.e., personalized tasks) and standard university course evaluation items aligned to the research questions.

Assignment Completion

Assignment completion was calculated from the individual teacher portfolios where personalized task assignments were tracked each week. Assignment completion calculated the sequence and frequency of each task completed.

Reported Hours Outside Class

Reported hours spent on personalized task assignments were calculated based on one item in course evaluations that asked teachers to estimate on average how many hours per week were dedicated to this course outside of class from the following seven options: less than 2 hours, 2 to <4 hours, 4 to <7 hours, 7 to <10 hours, 10 to <15 hours, more than 15 hours, or no response.

Pre-Post University Course Evaluation Items

The university asked all enrolled teachers to complete an online survey course evaluation with 26 Likert-scale items evaluating the course and instructor by measuring agreement to statements listed in Table 2 from strongly disagree, disagree, neutral, agree, and strongly agree and included five open-ended questions asking students for comments on the most and least valuable aspects of the course, effectiveness of the instructor, advice to future students, and needed preparation. For this study, only Likert- scale responses from four pre-personalization and four post-personalization course implementations were analyzed. The final column in Table 2 organized the course evaluation items to elements of personalization.

Procedure

Prior to the start of the course, assignments were transformed from standard required assignments with common due dates (e.g., readings and lesson plans) into a matrix of personalized tasks (see Figure 3). The instructor created assignment guidelines and assessment tools, an OER website, and an online discussion board (see Appendix A through E). IRB approval was not required for data generated through normal course activities and anonymous course evaluations. Task completion was tallied from individual portfolios after course completion. Post-course evaluation data was requested from the university system. Exploratory analysis and visual displays were created to explore individual personalized paths and shifts in teacher responses pre- and post-personalized learning (Tufte, 2017).

Results

The first research question explored the personalized learning paths in four ways: sequence of tasks completed by one cohort, timing of task completion, average completion of each task across four cohorts, and dedicated time outside of class. Figure 4 illustrates the personalized learning paths from the first cohort of 43 participants from Fall 2018. This cohort was selected because 100% of participants completed the course evaluations and 74% of participants reported being required for program completion.

Figure 4 illustrates the personalized paths pursued by individual teachers by charting tasks completed by topic and task type compared to the two topics taught by the course instructor during each of the seven weeks (i.e., see top row). On average, each teacher contributed 13 tasks, submitting 575 tasks into the OER database. The shades of gray indicate the order of topics each participant selected. For example, we see that 38 participants completed a reading task following the first class. The capital letters and different shades of gray indicate that participants chose to learn through different methods and topics. When scanning each column, we see greater variation in task completion by both topic (i.e., gray shading) and type of task (i.e., capital letter) as the seven-week semester progressed. Individual learning trajectories or the sequence of topics completed increased in variance over time from the instructor's topic sequence. Similarly, task types increased in variation from week one, where four different task types were selected, to week six, where all seven task types were completed. White-colored cells show when a teacher had zero task completion. Because task types ranged in points from five points for *Reading Research* to 15 points for *Planning Lessons*, participants could complete fewer tasks if 15-point tasks were selected. The final column of total points earned shows that all but two teachers

earned more than the required 100 points, with the highest score of 131 points. For this display, teachers were grouped by subject area taught and no patterns by subject area were visible.

Figure 4

Comparison of Course Instructor Topics and Individual Teacher Personalized Task Completion

KEY

Color	Topic	Letter	Task Type
	Objectives	R	Read Article
	Discussion	A	Analyze Student Work
	Vocabulary	T	Apply Technology
	Reading	C	Create Materials
	Writing	P	Plan a Lesson
	Culture & Identity	F	Give Peer Feedback
	Design Your Own	DYO	Design Your Own

Week	1		2		3		4		5		6		7		
Instructor															
Students															
1	A	R	P	A	A	R	P	T	A						
2	A	R	R	T	T	R	C	R	P	T	C	A			
3	P	R	F	R	R	C	A	A	C	R	F	T	DYO		
4	P	T	C	P	T	A	A	T	A						
5	R	A	P	R	R	A	T	A	C	DYO	A				
6	R	A	R	A	P	R	A	A	R	R	T	C	A		
7	R	A	R	R	T	DYO	R	A	P	DYO					
8	R	A	R	T	P	R	T	A	P	A	DYO				
9	R	A	R	A	R	R	R	R	T	T	P	P	A		
10	R	C	P	R	C	P	C	T	A	DYO	A				
11	R	F	R	A	A	P	R	R	DYO	A	T				
12	R	P	R	P	R	R	T	A	C	A	A	A			
13	R	P	R	T	T	T	P	A	DYO						
14	R	P	DYO	R	R	P	DYO	DYO	DYO	R	P	R	R	A	A
15	R	T	A	R	P	P	DYO	R	R	A	DYO				
16	R	T	R	A	R	A	R	P	A	P	R	A			
17	R	R	A	T	T	T	C	R	P	R	R	A	A		
18	R	R	A	R	R	P	T	A	DYO	R	A	A			
19	R	R	P	R	A	A	P	A	C	DYO	A				
20	R	R	P	R	A	A	R	P	F	F	DYO				
21	R	R	R	T	R	T	A	R	R	P	P	A			
22	R	R	R	R	T	A	C	A	R	R	A	P			
23	R	R	A	R	R	P	A	P	A	P	A				
24	R	R	A	R	A	P	P	A	R	A	T	DYO			
25	R	R	A	R	C	R	P	A	R	P	A	A			

26	R	T	R	A	DYO	DYO	A	R	A	P	P				
27	T	R	R	C	T	T	R	A	C	A	C	R	P		
28	T	R	R	R	R	P	P	T	A						
29	R	R	A	DYO	T	A	A	P	P						
30	R	A	P	P	R	R	C	T	DYO	A	F				
31	P	R	R	R	R	R	A	C	C	T	C	A			
32	R	P	R	A	P	A	C	C	A	A					
33	R	R	R	A	A	C	P	P	C	P	T				
34	T	R	R	DYO	DYO	A	P	C	R	A	P				
35	A	R	P	R	R	C	T	P	C	C	R				
36	P	R	P	T	T	P	P	R	A						
37	R	R	A	R	C	T	R	A	P	A	P	T			
38	A	R	T	R	A	T	C	A	C						
39	R	A	T	T	T	A									
40	A	R	R	R	A	DYO	A	R	R	R	C	T			
41	R	P	R	R	P	DYO	R	P	R	R	P	P	R	A	
42	R	A	C	P	A	P	P	A	P						
43	DYO	R	R	R	R	R	R	A	A	R	P	T	A		
44	DYO	A	P	A	P	A	T	R	P	T	DYO				

Figure 5

Number of Assignments Completed Each Week by Individual Teachers

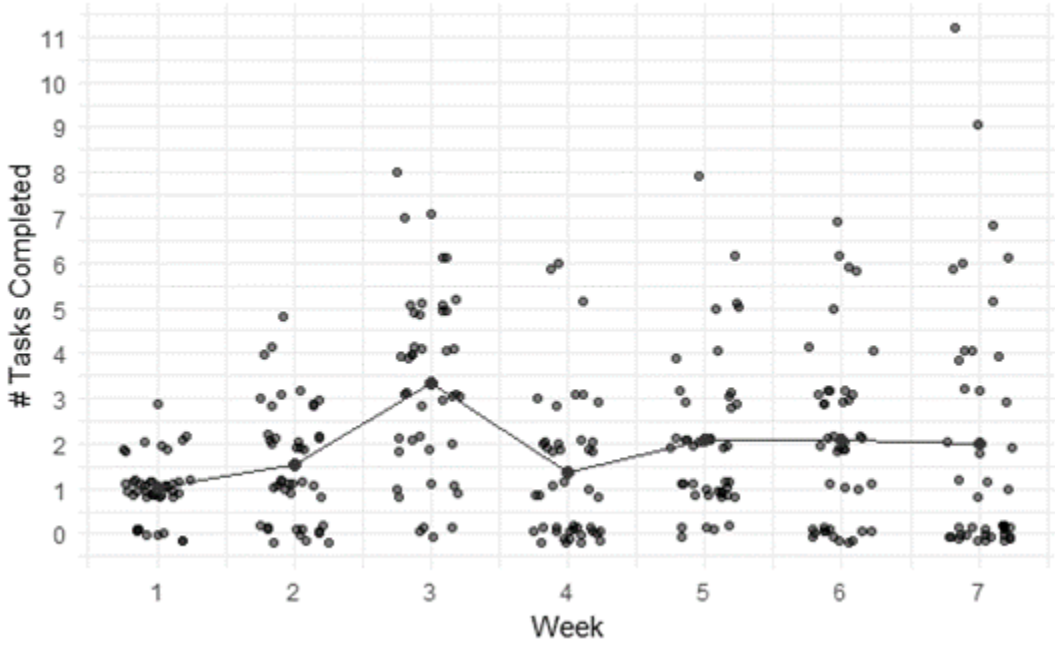


Figure 5 displays the number of personalized tasks completed each week by individual teachers. During week three many teachers completed between two and eight personalized tasks. A few teachers waited until the end of the course to turn in between six and 11 tasks. This view of the data reveals patterns among teachers who completed assignments at a steady pace that increased to a high point middle and then decreased, and those who waited until the end of the course to complete assignments.

Table 3 illustrates the percentage of teachers who completed each task, ordered by greatest to least frequency, by course topic, and by cohort. On average, over four cohorts, the most frequently submitted tasks used the *Reading Research* task type and the topics of language objectives, discussion, vocabulary. The least-submitted learning method was *Using Technology* in the topic areas of reading, writing, and culture.

Table 3

Percent of Teachers Who Completed Each Personalized Task by Topic, Task Type, and Cohort Year

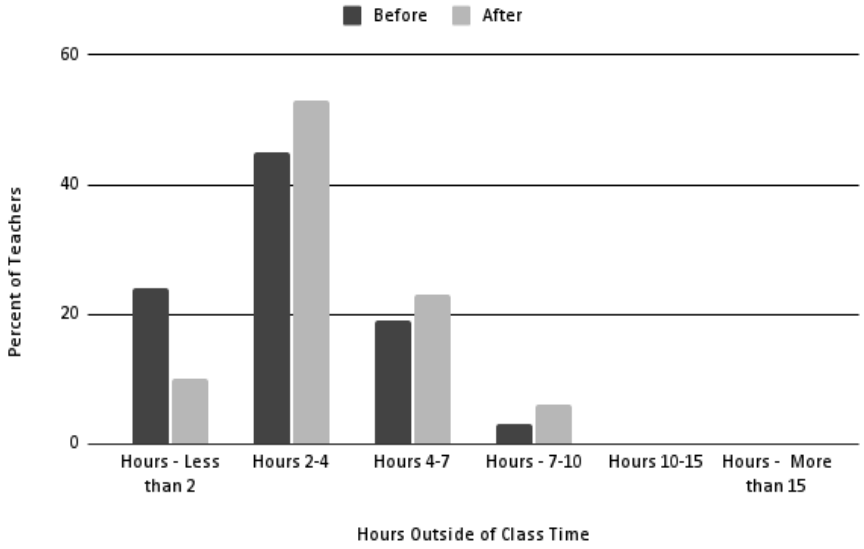
	Fall 2018 (43	Spring 2019 (36)	Summer 2019 (23)	Fall 2019 (47)
Language Objectives				
Read Research	0.93	0.92	0.78	0.79
Plan Lesson	0.84	0.72	0.70	0.77
Analyze Student Work	0.23	0.31	0.26	0.32
Apply Technology	0.21	0.22	0.43	0.36
Create Materials	0.02	0.14	0.26	0.04
Discussion				
Analyze Student Work	1.00	0.83	1.00	0.74
Read Research	1.00	1.08	0.87	1.02
Plan Lesson	0.70	0.25	0.39	0.15
Create Material	0.56	0.17	0.87	0.13
Apply Technology	0.23	0.28	0.04	0.15
Vocabulary				
Read Research	0.53	0.75	0.57	0.66
Plan Lesson	0.44	0.22	0.17	0.40
Analyze Student Work	0.30	0.31	0.30	0.62
Apply Technology	0.05	0.44	0.22	0.47
Create Material	0.00	0.06	0.09	0.19
Reading				

Read Research	0.35	0.75	0.30	0.38
Plan Lesson	0.30	0.28	0.22	0.21
Analyze Student Work	0.05	0.17	0.13	0.15
Create Material	0.02	0.17	0.04	0.11
Apply Technology	0.07	0.08	0.00	0.04
Writing				
Read Research	0.26	0.42	0.22	0.28
Plan Lesson	0.21	0.19	0.13	0.09
Analyze Student Work	0.07	0.08	0.09	0.28
Create Material	0.02	0.11	0.30	0.04
Apply Technology	0.00	0.14	0.04	0.09
Culture & Identity				
Analyze Student Work	0.84	0.33	0.04	0.40
Read Research	0.72	0.64	0.39	0.34
Plan Lesson	0.21	0.08	0.04	0.06
Create Material	0.07	0.08	0.17	0.23
Apply Technology	0.00	0.06	0.00	0.02
Design Your Own				
Design Your Own	0.00	0.28	0.87	0.60

Note: Topics are displayed in color aligned with Figure 4.

Figure 6 displays the estimated amount of time participants reported spending on course activities outside of the synchronous classes comparing pre- and post-personalization. The expected amount of time by the university is six hours per week. Fewer participants reported spending fewer than two hours; more spent between two and ten hours.

Figure 6
Work Hours Outside of Class Time

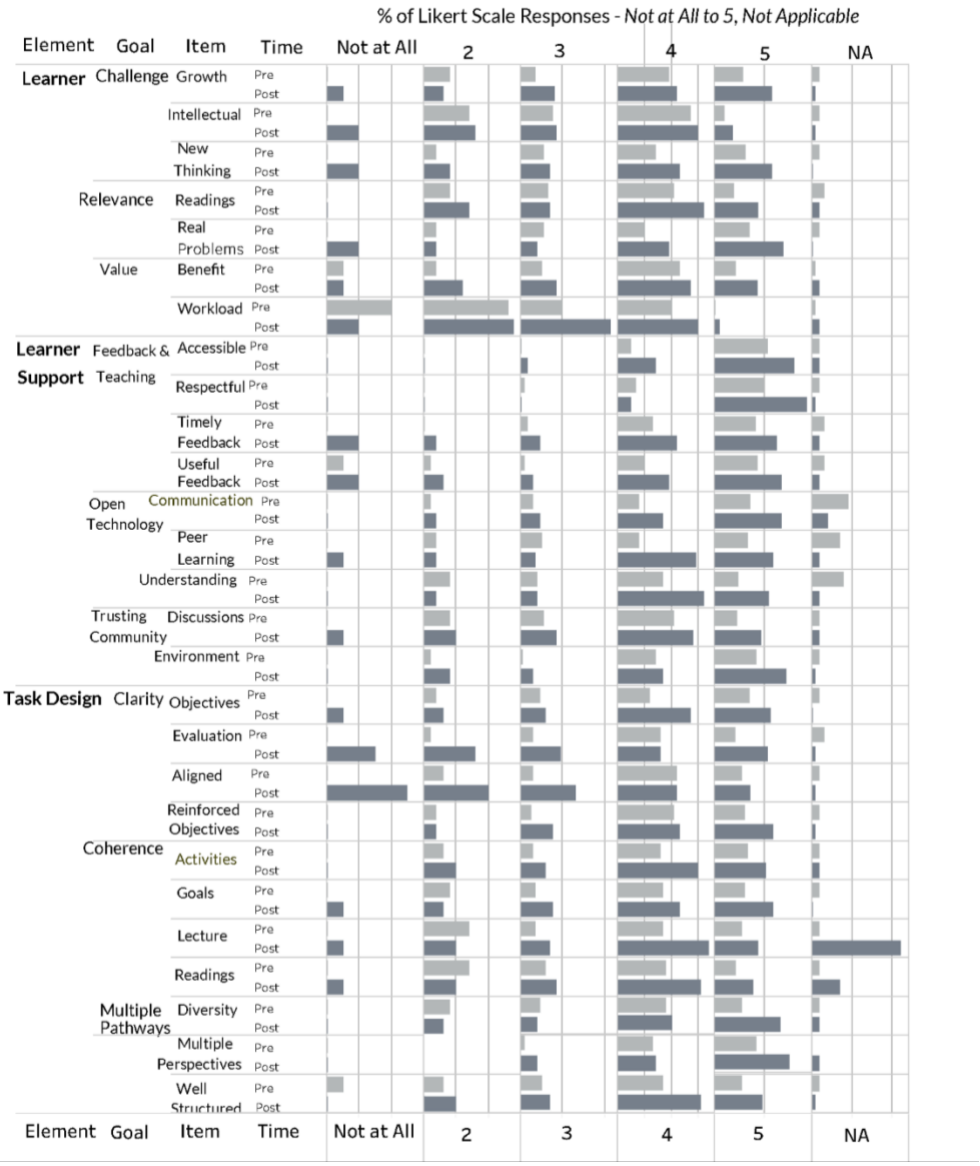


Research Question 2

Research question two examined eight courses, four pre- and four post-personalization through data visualizations and descriptive statistics (Tufte, 2017). Figure 7 displays the percentage of teachers who responded with each Likert-scale rating from not at all to five, or not applicable for each evaluation item, organized by personalized learning element. Percentages were used instead of frequencies of the ratings because of the difference in the number of teachers who completed the evaluations (i.e., pre-62 and post-133, see Table 1). This figure provides a visualization of teacher satisfaction in the four pre- and post-personalization courses.

Figure 7

Percent of Likert Scale Ratings by Personalization Element Pre-Post Personalization



Note: The item regarding Workload used different response options (see Figure 5). For this display the final two options, 10-15 hours and more than 15 hours were combined because there were zero responses for each category. Workload is included here to visualize perceptions of workload in relation to benefit or value.

Table 4 presents the mean rating of each Likert-scale item organized by personalization element. Items related to technology positively changed *deepening understanding* (+.28) and *enabling discussion* (+.61). Teachers reported greater perceptions of workload (+.27) and smaller changes in course benefit (.06). Relevance included items related to the value of course readings (+.29) and applications to real world problems and contexts (+.19). Challenge included items related to *intellectual challenge* (+.15), *stimulating thinking in new ways* (+.04), and assignments *promoting learning and growth* (+.28). Clarity included negative change in *syllabus organization* (-.23), *course objectives were clearly stated* (+.1) and positive change in *clear evaluation criteria and processes* (+.94). Coherence had a negative change in lectures (-.21) with many teachers

selecting *not applicable* and a few *not at all*. Very little change was observed in other coherence items, e.g., *course activities aligned with syllabus* (+.3), *clearly aligned course content* (+.08), or *assignments reinforced goals of course* (+.03). Feedback had negative changes in *timely feedback on assignments* (-0.24) and *useful feedback* (-0.01). Multiple pathways were aligned with items reflecting on issues of diversity, e.g., *diversity issues well addressed* (+0.35) and *encouraged diverse opinions/perspectives* (-0.14). Trusting community was aligned with items reflecting the class culture, e.g., *environment conducive to learning* (+0.17), and *discussions enhanced understanding* (+0.13). Changes were observed in items rating the course instructor, including *responded respectfully* (+1.00) and *led effective discussions* (+1.31) while other items related to the instructor had less change, e.g., *was accessible* (+0.8) and *provided well-structured lessons* had a small negative change (-.07). This exploratory study used descriptive analyses versus inferential statistics due to the exploratory study purpose, sample size differences, and varied motivations for pre-post course enrollment.

Table 4

Course Evaluation Items Pre-Post Personalization Mean Comparison by Personalization Elements

Likert Scale Evaluation Items (Agreement, 1-5, Not Applicable)	Pre-Mean	Post-Mean	Change	Personalization
Promoted learning & growth	4.03	4.31	0.28	Challenge
Stimulated thinking in new ways	4.29	4.32	0.04	
Intellectual challenge	3.68	3.82	0.15	
Readings were valuable	3.84	4.13	0.29	Relevance
Application to real problems / contexts	4.36	4.54	0.19	
Benefit to you	4.09	4.14	0.06	Value
Workload Amount	2.98	3.25	0.27	
Accessible	3.18	4.00	0.82	Teaching & Feedback
Responded respectfully	3.20	4.20	1.00	
Timely feedback on assignments	4.67	4.44	-0.24	
Useful feedback	4.46	4.45	-0.01	
Communication	3.80	4.48	.68	Open Technology
Peer learning	3.82	4.38	.56	
Deepened understanding	4.15	4.43	0.28	
Enabled discussions	3.73	4.33	0.61	Trusting Community
Environment conducive to learning	4.56	4.39	0.17	

Course objectives were clearly stated	4.84	4.94	0.10	
Clear evaluation criteria/process	3.15	4.09	0.94	Clarity
Clearly aligned course content	4.27	4.35	0.08	
Assignments reinforced	4.37	4.40	0.03	
Activities aligned to goals	4.64	4.94	0.30	
Goals	4.18	4.37	0.19	Coherence
Lectures	4.13	3.92	-0.21	
Organized syllabus	3.50	3.27	-0.23	
Diversity issues well addressed	4.19	4.53	0.35	
Encouraged diverse opinions/perspectives	4.40	4.54	0.14	Multiple Pathways
Provided well-structured lessons	4.09	3.98	0.07	

Discussion

This study explored how teachers engaged with personalized professional tasks and evaluated the course pre- and post-personalization. The display of the completed tasks (see Figure 4) revealed patterns that may be related to individual teachers and time (see Figure 5). This analysis illustrated how individual learning paths differed. During the first week, many teachers engaged in the course instructor's topic. However, within that topic, teachers selected different learning methods. This might suggest that teachers had different immediate needs or interests that personalization enabled them to pursue. At the same time, teachers unfamiliar with the course content could begin by following the course instructor's lead. As the course continued, the variety of topics and task types that teachers completed increased. These results may illustrate that increased knowledge on a topic facilitated learners' agency, divergent interests, or risk taking. These results might also suggest that some tasks were more accessible or useful depending on previous knowledge and current teaching needs. In addition, familiarity with matrix options may have led to a wider range of selections and ease in selection. Taken together, these results suggest that previous knowledge and awareness of the options may facilitate teacher agency in pursuing individual learning interests. Figure 4 also illustrates how teachers leveraged time flexibility to finish course requirements on an individual schedule versus set due dates. This design element may have worked well with the competing demands of teachers' lives. However, teachers who finished early or skipped completing tasks during some weeks may have missed the opportunity to apply learning from class sessions. For example, the final instructor led topics of reading and writing and had the fewest number of completed tasks across all four cohorts. These results provide insights for future personalized task design and the organization of course content.

Examining patterns through the average assignment completion over four cohorts provides additional information on teacher engagement with the learning tasks. All four cohorts completed the tasks in very similar patterns, with topics taught earlier in the course receiving the most completed assignments. However, task completion was not completely consistent. For example, the task type *Reading Research* on the topic *Culture and Identity* declined after the first two cohorts. In addition, the *Create Material* task in the Discussion topic changed with each cohort, moving from 56% to 17% then increasing to 87% completion during Summer 2019, and finally returning to 13% completion. *Reading Research* in the Reading topic had one spike of 75% in Summer 2019 but was in the 30% range for all other cohorts. These shifts in teacher task selection may be related to course instructor varying class activities or current events that nurtured teacher interest. Another observation was that the first cohort did not complete the *Design Your Own* task (DYO) option. However, individuals completed the DYO tasks in all subsequent cohorts. This trend may suggest that the availability of the OER database of previous assignments facilitated greater freedom in task selection and creation.

The *Apply Technology* topic was rarely completed by teachers. There are several possible explanations: teachers may have estimated that the task completion time was too long because of learning a new application to complete the task, there may have been misalignment between the ways teachers use technology or what technology was available at their schools, the tasks may have not been relevant, or teachers may have felt that all of their tasks used technology since they were accessing tasks through OER and maintaining a digital portfolio. The low engagement with technology raises many questions about how teachers develop teaching with technology skills when assignments are integrated into courses where learning technology is not the primary focus. Teachers also may have felt it was too time consuming to learn the strategies to teach multilingual learners and to engage with new technologies at the same time. However, technology tasks focused on teaching multilingual learners have been successful in teacher preparation, such as Martínez-Álvarez et al.'s (2017) multimodal expressions exploring relationships of identity, culture, and language invited recursive and deep reflections. Given the lack of engagement with technology-focused tasks, faculty could revise tasks based on examples from previous literature.

Teachers reported an increase in the number of hours dedicated to the course outside of class time, with most teachers spending between two and four hours. How teachers spent the additional time raises many questions. For example, more time may have in turn resulted in the development of greater skills to teach multilingual learners. However, the increased time could have been related to selecting assignments. The nine students who continued to submit tasks through the final week of the course may have found an interest that they were pursuing. Given limited time, teachers may have selected tasks that could be finished quickly rather than tasks needed to develop their teaching skills. Future course evaluation could add a question asking teachers to describe the activities that they engaged in during the time outside of class.

Course evaluation items provided a lens to consider the task completion data. Figure 6 reveals that, on average, teacher-reported satisfaction shifted pre- and post-personalization. Interestingly, the response *not at all* was used much more often post-personalization. Specifically, the item measuring the alignment of lectures to course goals shifted to include *not at all.* This result makes sense, given that the topic sequence of classes was often different than

the topics teachers pursued in their tasks (see Figures 4 and 5). Figure 7 illustrates that, overall, teacher-reported ratings were positive, at 3 or higher, prior to personalization and remained positive after personalization. The data visualization draws our attention to where there was more movement in specific items. For example, *diversity, well-structured assignments, and multiple perspectives* all shifted positively post-personalization and reflect important elements of personalization and OER. However, course satisfaction related to the course organization and clarity decreased after personalization, possibly because the personalized assignment was not explained clearly or that this type of assignment was unfamiliar to many teachers enrolled in a course required for certification. This could also suggest that making decisions each week and searching through completed tasks taxed teacher cognitive load (Mayer, 2004).

Significance

This research explored the impact of personalization and OER on novice teacher learning paths and course satisfaction as measured by university course evaluations. These changes transformed a required licensure course aimed at preparing teachers to serve multilingual learners into a personalized learning experience. This study provided evidence that a cursory alignment among evaluation items and personalized learning is possible and standard course assignments can be reorganized into learning paths that offer autonomy, choice, and flexibility in due dates. Further, evidence suggests that teachers, within this specific course and setting, seemed to respond positively to these changes. This study offered methodological, practical, and theoretical significance for the field of teacher education.

By using data generated through course activities and existing measurement tools, this study provided a realistic methodology for future studies. This research showed how existing tools can be used by faculty members to deeply reflect on learner engagement and responses to pedagogy in teacher preparation. The results also illuminated ways to improve the personalized tasks and implementation.

Practically, this study demonstrated that when faculty members are confronted with a dictated curriculum, standard assessments, and limited time (i.e., two credit/seven weeks versus four credit/15 weeks), learning can be personalized and enhanced through OER/OEP. The personalized assignment task matrix and analysis methods are replicable both in teacher preparation courses and P-12 education. The personalized learning model and assignments provide a documented beginning for future studies to build upon. As Lavery et al. (2019) identified, teachers who experience personalized learning in teacher preparation may be more likely to utilize personalized learning in their own teaching. However, the completed tasks in teacher portfolios were not analyzed for the extent to which personalized learning elements were applied, nor were personalized learning elements used in the rubric that guided submissions (see Appendix E). Explicit support for teachers to apply pedagogy being modeled through the course into their own P-12 classroom was not provided and should be incorporated in future iterations of this course design.

Through careful analysis, clear missing components in the personalized task design for this study were revealed, including attention to teacher feelings (Howlett & Penner-Williams, 2020) and explicit development and recognition of teacher beliefs and expectations regarding multilingual students and learning languages (Van Schoors et. al., 2023). Further, Heineke et al.

(2022) examined the importance of teacher capacity to nurture the well-being of multilingual learners. Aspects of beliefs, expectations, and well-being for both teachers and students should be included in future implementations of a personalized matrix for teacher preparation to serve multilingual learners.

In addition, Mayer (2004) suggested measuring cognitive and behavioral activity when testing educational techniques such as discovery learning or constructivism, which are key elements of personalized learning. This study focused on examining behavioral responses but did not investigate the thinking or feelings that propelled or resulted from engaging in the personalized assignment. Future studies may examine cognitive load in decision making and feelings of challenge when engaging with personalized tasks. Specifically, future studies should investigate the extent to which personalized learning can prepare teachers for the intellectual challenges of classroom teaching. The extent to which personalization facilitates avoidance of intellectual challenge should also be examined.

Theoretically, this study identified elements of personalized learning aligned with university course evaluations. Course evaluations convey messages to students regarding what is important about learning experiences in courses and may shape faculty instructional decisions through the influence of course evaluations on opportunities for advancement (Costin et al., 1971). While the alignment of course evaluations to personalized learning and OEP is imperfect, making the effort to do so offers theoretical contributions to the field of teacher education because the alignment makes underlying values visible. However, students' feelings about their agency or learning, role, and experiences throughout the course were not sought. The items related to the student learning experience asked only about time spent outside of class on course activities versus exploring ways the course content was relevant to their lives outside of the course.

Theoretical significance includes the illumination of this study's approach to personalization as a beginning or surface-level approach to greater individual relevance in required teacher preparation courses. The designs of learning tasks and existing evaluation items fall short of Kenney's (2016) identification of motivation, intellectual challenge, and feelings of meaning as key components of teacher development. This study showcases the need for a new theoretical framework to guide the design of teacher learning that moves beyond skill acquisition detached from thinking and feeling. Zusho et al. (2023) offers a framework that focuses on the quality of learning experiences as new standards, e.g., measuring learner feelings of love, joy, rigor, and freedom. These feelings are salient to all personalized learning pursuits and could effectively guide teacher preparation. Future designs for personalized learning may explore ways to nurture love, joy, rigor, and freedom in task design and to measure these qualities from the teacher perspective.

Limitations

This exploratory study has important limitations that should be considered when interpreting the results. Pre-testing equivalence was not measured beyond the qualifications for master's degree admissions. Course evaluations items were not distributed equally among personalization elements or personalized element alignment tested. Changes in the evaluation items could be the result of factors other than personalization, such as the course instructor

teaching improvements over eight iterations of the same course content. Sample sizes varied by 46% pre-post personalization. Findings should not be generalized beyond this study. Although OER was used as a critical component of the personalized task assignment, no evaluation items could be used to measure the extent to which teachers examined completed tasks in the database and built on submissions. Although this exploratory study did not aim to produce generalizable findings, the results do offer insights and raise questions that may inform creating personalized tasks.

Recommendations

The close examination of personalized learning paths and results of course evaluations offer direction and questions for implementing personalized learning in teacher education. For example, while the ability to make relevant assignment choices worked well for some teachers' learning, others may have preferred a sequence of required assignments. Read and Hurford (2008) described this tension as a continuum from overwhelming to enabling. Future courses may address this tension by providing a path with fewer choices designed by the professor. Future studies should interview teachers to discover the reasoning that underlies perceptions of personalized learning, use of completed assignments, and implementation of personalized pedagogy in their own teaching. Faculty members might consider eliminating or revising assignments that were not selected by any cohort. A matrix with equal numbers of tasks for each topic may not be necessary, but other organization structures for personalized learning tasks should be explored.

This project was a test and proof of a concept demonstrating one way of implementing personalization within the context of an established curriculum and credentialing structure. Additionally, this project explored how personalization in teacher preparation may further teachers' individual expertise while also demonstrating what personalized learning could look like in teachers' own Pre-K-12 classrooms. Future studies should explore how personalization relates to teacher autonomy and commitment to P-12 personalizing learning and how the free materials website may support learning transfer to daily practice. In addition, future studies might measure the extent to which standardized outcomes in teaching practices can be achieved through personalized learning. While this study relied on participants to self-select personalized tasks, future studies may leverage technology tools from automated survey feedback to employing algorithms to assess teacher skills and then recommend tasks to teachers.

Researchers have suggested that teacher preparation for multilingual learners needs to examine beliefs and dispositions about language learning (Edwards, 2010; Van Schoors et. al., 2023). Faculty members may consider adding a reflection component to each assignment that directly prompts reflections on teacher beliefs. In addition, a row may be added to the matrix to nurture the development of teacher identity and awareness of existing beliefs. Future studies should tackle the challenge of measuring or documenting how personalized learning in teacher education may support teachers and course faculty members in confronting and changing the dispositions and beliefs about multilingual learners that may prevent teachers from providing necessary teaching and access to the curriculum for all students in daily teaching.

Declarations

The authors declare no conflicts of interest.

The authors declare no funding for this research.

Permission to collect data from human subjects was not required from the IRB/Ethics Board at the Harvard Graduate School of Education.

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APPENDIX A
Personalized Pathways Procedures

Where are the Learning Choice Materials?

All materials can be found at https://bondie.commons.gc.cuny.edu/multilingual/

All posts must include both the preparation and post thinking routines.

Preparation Thinking Routine

1. Name of the selected assignment and number of points the assignments is worth (attach completed assignment)
2. I made this choice because … (describe your goal or what you are hoping to accomplish by completing this assignment)
3. How long do you think you will spend working on this assignment?
4. On a scale of one to five, with one being not at all confident, 3 being neutral, and 5 being very confident, rate how confident you are that you will be able to accomplish your goal? Describe what makes you say that level of confidence?

Post Assignment Reflection

1. What did you do (give number of assignment and points desired)?
2. What challenges, if any, did you encounter? Describe how you addressed the challenges.
3. Reflect on your learning from this assignment. Complete the sentence: I used to think _____ but now I think _____ so next I will _____

* In the subject line of your post indicate the assignment number and the feedback you desire: Peer, Teacher, Self, Expert

Points will be awarded each week (by the following Sunday).
Check grades in Canvas on the left-hand menu for scores.

APPENDIX B
Task Choice Selection Tool

How do I know what topic to choose?
Take a moment to think about the topics that we will be studying. Create a learning value score by thinking about the amount of expertise that you already have using the *Knowledge Rating Tool* and the ways that help you learn best using the *Methods for Learning Tool*. Use this reflection guide to help set learning goals for yourself and to plan a learning path of assignments that will be most effective and efficient for you.

Knowledge Rating: Reflect on how familiar you are with the topics of our course.
1 = I know a lot about this 2 = I have heard about this 3 = This sounds new to me

Interest Rating: Ask yourself what sounds interesting.
1 = This seems tiresome 2 = I am curious 3 = I am excited to learn more

Useful Rating: Thinking about your immediate situation and future, which topics are useful?
1 = I can't imagine needing this knowledge 2 = I think it could help me 3 = I need to know

Topics - What We will Learn (Rows)	Knowledge 1, 2, or 3	Interest 1, 2, or 3	Useful 1, 2, or 3
1.Objectives Practice creating language objective, breaking down objectives into accessible learning progressions, and incorporating anti-bias objectives into lesson plans.			
2. Discussion - Speaking/Listening Learn how to structure equitable discussions and support all learners in using language for communication and learning.			
3. Vocabulary Learn how to select words to teach and help students learn and use vocabulary.			
4. Reading Learn how to select relevant texts, make text accessible and build language skills, and support student comprehension.			
5. Writing Learn how to support and extend student writing skills.			
6. Language, Culture, and Identity Expand your understanding of language, culture, and identity.			

APPENDIX C

Task Choice Selection Tool (continued)

How do I choose a method of learning the topic that I have chosen?

Think about the ways that help you learn most. Evaluate the methods that would be most helpful for each topic (row) that you would like to learn.

Effective Rating: When I do activities like this:		
1	**2**	**3**
I forget pretty soon	I can remember for a long time	I can use my learning, e.g., to solve problems and relate my learning to other topics

Efficient Rating: Reflect on the ratio of effort to value:		
1	**2**	**3**
Too much work for the benefit	Time spent and effort match	Impact is greater than the amount of time and effort

How to Learn (Columns)	**Effective (1, 2, or 3)**	**Efficient 1, 2, or 3)**
R - Read, Research, and Reflect Use articles, videos, podcasts, infographics, and other sources to explore a research question. Organize your findings and reflect on how this knowledge will impact your instruction.		
A - Analyze Teacher and Student Work Expand your thinking about language demands in curriculum. Increase your sensitivity to the strengths that students bring to learning.		
T - Technology Tools Learn how tools support and extend language learning.		
C - Create Learning Materials Create scaffolds, supports, and extensions to support and extend language development. Revise materials to increase access and rigor for all learners.		
P - Lesson Plans Demonstrate understanding of WIDA standards and SIOP strategies in instructional plans.		
F - Offer Feedback Respond to a module colleague using the ladder of feedback.		

APPENDIX D
Planning and Tracking Sheet for Personalized Pathway

	Expertise I will develop	Assignments I will complete	Expected Points
Week 1			
Week 2			
Week 3			
Week 4			
Week 5			
Week 6			

Limits

Maximum of two 15-point assignments

Must complete one Read and Research before doing other assignments in the row.

APPENDIX E
Choice Assignment Rubric

	Does Not Meet Criteria **(No points, you will be asked to resubmit assignment)**	**Meets Criteria** **(Full points)**
Responds effectively to the assignment	Does not complete the assignment as written, does not meet the full criteria of the assignment.	Completes the assignment as written. Meets all components of the assignment.
Accurately reflects WIDA Standards and the principles of SIOP	Does not demonstrate understanding of core principles enumerated in the course understandings and literature.	Demonstrates understanding of core principles enumerated in the course understandings and literature.
Work demonstrates precision and accuracy appropriate to the demands of a graduate course (including correct citations, grammar, and mechanics)	Work contains significant grammatical inaccuracies, inaccurate citation, or a general lack of precision with respect to completeness or accuracy.	Work meets all discipline specific standards for accuracy.
Work demonstrates thoughtfulness and insights appropriate to the demands of a graduate course	Work does not demonstrate deep thinking or insightful responses to the task.	Work demonstrates thoughtfulness and insights appropriate to the demands of a graduate course.
Work specifically and explicitly responds to an identified language demand in an inclusive setting.	Work product does not include specific attention to language demands.	Work specifically addresses the language demands.

Use these criteria to offer feedback to peers. Points will be earned based on meeting **all** criteria.