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Balancing Freedom and Limitations:
A Case Study of Choice Provision in a Personalized Learning Class

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Abstract

This qualitative case study explored how middle school teachers and students experienced and perceived choice within a newly implemented personalized learning class. It found that teachers and students had different values, expectations, and interests related to student choice, which contributed to struggles for power and control within the personalized learning class. Findings suggest teachers may benefit from foregrounding personalized learning as a partnership in which students and teachers bring their voices into conversation while framing choice as means toward collaboratively developed learning targets as opposed to an end in and of itself.

Keywords: Personalized Learning; Pedagogy; Student Choice; Middle School; Case Study

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Introduction

Countries around the world have moved toward standardization in education through standards-based reforms and high-stakes accountability policies (Hargreaves, Fullan, Lieberman, & Hopkins, 2010). The United States has epitomized this movement with the high-stakes accountability legacy of No Child Left Behind and its continued push for standardization through the Common Core State Standards (Rothman, 2011). Standards-based reforms have led to an overall “narrowing of the curriculum” (Au, 2007) and contributed to teachers’ use of more controlling instructional approaches with their students (Deci & Ryan, 2002; Pelletier, Séguin-Lévesque, & Legault, 2002). Research also suggests that students’ motivation, engagement, and learning suffer when their teachers adopt more controlling instructional styles and are provided limited opportunities for choice and autonomy in the classroom (Reeve, 2009). In these ways, standards-based reforms have been associated with less choice and autonomy for teachers and students and contributed to lower levels of student motivation, engagement, and learning in school.

In response to these trends, scholars, policymakers, and practitioners have sought to develop curricular and instructional practices that offer greater choice in the classroom and are responsive to students’ unique interests, needs, and abilities as learners. Some of the most common approaches used to tailor curriculum and instruction to students’ diverse needs and abilities are differentiation (Tomlinson, 2014), Universal Design for Learning (Meyer, Rose, & Gordon, 2014), and learner-centered instruction (McCombs & Whisler, 1997). In recent years, “personalization” has become the new buzzword for teaching practices that attempt to respond to the unique characteristics of each learner in the classroom (Bingham, Pane, Steiner, & Hamilton 2016). Efforts to provide students more personalized learning experiences have been incentivized

and supported by the U.S. Department of Education (Sykes, Decker, Verbrugge, & Ryan 2014) and Bill & Melinda Gates Foundation (Pane, Steiner, Baird, & Hamilton, 2015) in the United States, the Bendigo Education Plan in Australia (Waldrip et al., 2014), and the Ministry of Education in New Zealand (Bolstad, Gilbert, McDowall, Bull, Boyd, & Hipkins, 2012).

Although personalized learning is defined and operationalized in diverse ways, efforts have been made to distinguish it from related teaching practices such as differentiation and individualization. Some of the most useful distinctions are offered by Clarke (2013) and Bray and McClaskey (2015) who suggest the primary difference between personalized learning and differentiated and individualized instruction is the extent of student choice in and control over their learning. Clarke (2013) contends, “The difference between individualization and personalization lies in control. We can individualize education by imposing it, but students choose to personalize their own learning. Their volition drives their inquiry” (pp. 6-7). For Clarke, personalization occurs only when students are actively involved in choosing the topics they investigate, how they develop new knowledge and skills, and how they demonstrate their learning. Similarly, Bray and McClaskey (2015) assert that “Encouraging learner voice and choice” is the primary aspect of personalized learning that distinguishes it from differentiation and individualization (p. 13). For these authors, student choice in and control over their learning distinguish personalization from differentiation and individualization.

Although many teachers believe providing students choice in the classroom increases their motivation, engagement, and performance (Flowerday & Schraw, 2000), research suggests students are rarely provided opportunities to have choice in their learning (Bozack, Vega, McCaslin, & Good, 2008; Williams, Wallace, & Sung, 2016). Given the infrequency of opportunities for choice in the classroom, many teachers and students in schools adopting

personalized learning have limited experience with student choice. Research suggests students and teachers may initially struggle with choice provision after spending the majority of their time in schools in predominantly teacher-directed learning environments (Morrison, 2008). To date, little empirical research has examined provision of choice in real classroom settings, particularly personalized learning environments (Williams, Wallace, & Sung, 2016). Therefore, the purpose of this study was to explore how middle grades students and teachers experienced and perceived provision of choice within a newly developed personalized learning class.

Literature Review

Personalized Learning

Varying definitions of personalization. There is significant variety in how teachers and schools define and apply personalized learning in practice. Some approaches to personalization rely heavily on technology, using computer programs to tailor curriculum sequencing, pacing, and presentation to students' unique needs, interests, and abilities as learners (Chen, 2008; Lin, Yeh, Hung, & Chang, 2013). Other approaches place primary responsibility on teachers for tailoring curriculum and instruction to students' individual needs and interests as learners (U.S. DOE, 2010). Teachers remain largely in control within these approaches, using their knowledge of students' capabilities and curiosities to determine the pace, style, and content of curriculum for each individual student. These applications of personalized learning share many similarities with the practices of individualized and differentiated instruction (U.S. DOE, 2010).

Other definitions distinguish personalization from individualized and differentiated instruction by suggesting it requires students to have increased voice and choice in the design, execution, and management of their learning. Bray and McClaskey (2015) define a "personalized learning environment" as one in which students "have a voice in what they are learning based on

how they learn best” and “have a choice in how they demonstrate what they know and provide evidence of their learning. In a learner-centered environment, learners own and co-design their learning” (p. 14). Whereas differentiation and individualization place primary responsibility on teachers, Bray and McClaskey assert personalization entails students taking increased ownership of their education by partnering with teachers to design learning experiences that suit their individual interests, skills, and aspirations. Clarke (2013) also contends that personalized learning is “organized so students learn to answer questions they see as important to their lives,” suggesting students have choice and volition in the questions they pursue within personalized learning environments (p. 7).

For these authors, student choice and autonomy are central to the practice of personalized learning. They argue students must have volition and an internal perceived locus of causality (deCharms, 1968; Ryan & Deci, 2000) for their learning to feel personal. With the dearth of empirical research on personalized learning, however, little is known about how student choice and autonomy support are enacted in personalized learning environments or how teachers and students experience their provision. Therefore, it is instructive to consider some of the research on the provision of choice in general classroom settings to understand the potential effects of offering student choice in personalized learning environments.

Student Choice

Student choice in the middle grades. The idea of giving students choice in their learning has been a key component of the middle school movement during the past thirty years. Scholars and reform advocates have expressed concern about the mismatch between young adolescents’ desire to exercise control and decision-making and the limited opportunities for student choice and autonomy in the traditional junior high school environment (Eccles et al.,

1993; Jackson & Davis, 2000). In response to this mismatch, middle grades reformers have called for teachers who were “not only open to the possibility of authentic student choice but who understood and valued the power of learning driven by strong personal interests” (Stevenson & Bishop, 2012, p. 35). To meet these calls for authentic student choice, some educators (e.g., Brodhagen, 1995) have used Beane’s (1993) framework for a middle school curriculum that actively involves students in choosing the topics and themes they would explore within a unit of study. The Montessori method, which offers substantial student choice and autonomy in learning, has also been shown to contribute to higher motivation and more positive quality of experience in the middle grades although its use in middle schools remains relatively limited (Rathunde & Csikszentmihalyi, 2005).

Dimensions of student choice. Scholars have identified various ways teachers might give students choices in the classroom. Stefanou, Perencevich, DiCintio, and Turner (2004) have suggested teachers may give students organizational choice (i.e., choice in learning environment through co-creation of classroom rules and due dates), procedural choice (i.e., choice in how learning is presented), and cognitive choice (i.e., freedom for students to argue their own points and choice in how they solve problems). Similarly, Williams, Wallace, and Sung (2016) identified five dimensions of choice provision in their study of six highly effective teachers’ classrooms. These dimensions were choice in strategy (i.e., ways to solve problems), pace (i.e., pace and order of work), format (i.e., how work is presented), topic (i.e., what is studied), and mobility (i.e., working individually or in groups). These typologies suggest choice is a multi-dimensional construct that can be enacted in the classroom in various ways.

Effects of choice provision. Empirical research on the effects of choice provision have been inconsistent and at times contradictory. Some studies have shown provision of choice to be

associated with increases in motivation, engagement, task performance, preference for challenge, and learning (Cordova & Lepper, 1996; Iyengar & Lepper, 1999; Patall, Cooper, & Robinson, 2008; Patall, Cooper, & Wynn, 2010). Other studies have found that choice provision has no effect or, in some cases, a negative effect on motivation and performance outcomes (Assor, Kaplan, & Roth, 2002; Flowerday & Schraw, 2003; Flowerday & Shell, 2015). Collectively, these studies suggest different types of choices and contextual factors may produce varying motivational and performance-related outcomes and challenge the notion that choice will always enhance motivation and performance (Patall, Cooper, & Wynn, 2010; Patall, Sylvester, & Han, 2014).

Benefits and drawbacks of choice contexts. Given the inconsistency of these findings, researchers have examined the varying conditions under which choice provision may or may not be beneficial. Drawing from research on self-determination theory (SDT), some scholars (Evans & Boucher, 2015; Katz & Assor, 2007) have suggested choice is motivating to the extent that it supports students' autonomy (i.e., relevant to their interests and goals), competence (i.e., not too numerous, complex, or simple), and relatedness (i.e., compatible with their family and cultural values). Empirical research has supported these hypotheses. Assor, Kaplan, and Roth's (2002) research suggests the relevance of choices to students' personal goals and interests is more important to positive feelings and behavioral and cognitive engagement than just having the power to choose in the classroom. Patall, Sylvester, and Han (2014) found that having choice increased motivation for participants who had high perceptions of competence in the task at hand but decreased motivation for individuals with lower feelings of competence. Similarly, research has shown that having too many choices can undermine individuals' feelings of competence and in turn reduce their engagement in tasks and activities (Evans & Boucher, 2015; Iyengar &

Lepper, 2000). Collectively, these studies lend support to SDT's proposition that choices are most motivating when they support students' autonomy, competence, and relatedness.

Challenges of student choice. Some scholarship has explored the practical challenges of providing students choice in the classroom. Morrison (2008) and Vatterott (1995) have contended that students may initially resist or struggle with the independence and self-direction associated with choice because they rarely have opportunities to control their own learning in school. Students may also perceive their new autonomy as negative freedom (i.e., freedom from constraints) rather than positive freedom, which has been defined as "freedom to work in concert with others to overcome limits" (Morrison, 2008, p. 55; Greene, 1988). Given their limited experience with choice and freedom in schools, students may use this power to "push for lowered workloads" and similar concessions from teachers (Morrison, 2008, p. 55).

For teachers, giving students choice in the classroom presents the challenge of finding an appropriate balance between freedom and limitations (Vatterott, 1995). They must allow students to exercise control over their learning while also guiding them toward particular learning objectives. Giving students this control can be difficult for teachers who fear that student voice and choice may lead to classroom chaos and undermine student learning (Morrison, 2008). Additionally, many teachers believe it is their role to instill "core" or canonical knowledge in students and "might argue that students, who don't know what they don't know, cannot possibly exercise choice and freedom in curricular content to create real learning" (Morrison, 2008, p. 56). In this way, student choice can undermine some individuals' conceptions of what it means to be a teacher.

Limitations of student choice research. Despite the body of scholarship on choice provision, few studies have investigated the enactment of student choice in naturally occurring

classroom settings (Patall, Cooper, & Wynn, 2010). The literature's heavy reliance on laboratory research limits its utility for scholars and practitioners because it pays relatively little attention to the practical realities and dynamics involved in providing students choice in real classroom settings. Williams, Wallace, and Sung (2016) have argued:

The decontextualization of choice in laboratory settings and narrow conceptual definitions of providing choice that ignore the dynamic and interactional nature of authentic learning settings (e.g., classrooms) may be limiting our understanding of choice as a promising site of practice for promoting positive youth development and academic achievement (p. 531).

As these authors suggest, choice is not simply a static input into the learning environment; it involves dynamic interactions between students and teachers and entails shifting the balance of power between educators and learners in more conventional classroom settings. Few studies, however, have examined the interactional dynamics associated with choice provision in real classroom settings, particularly personalized learning environments where there is potential for significant shifts in power between students and teachers.

Given this gap in the literature, the purpose of this study was to explore how middle school students and teachers experienced provision of choice within a newly developed personalized learning class. This study adopts the classroom-level specific portion of Wang and Eccles' (2013) definition of provision of choice as, "opportunities for [student] participation in decision making related to academic tasks and ... student input into class discussion" (p. 14). The specific research question guiding the study was: How do middle school students and teachers experience provision of choice within a newly developed personalized learning class?

Methods

Context

This investigation of choice provision within a personalized learning environment was part of a case study (Merriam, 1998) of a middle school team's experiences during its first year enacting a team-wide personalized learning class. The "case" was Team Explorer, one of two multi-age middle grades teams at Riverview Middle School (RMS), a small, urban school in the northeastern United States. When this study was conducted, there were 160 students enrolled at RMS in grades six through eight, and 80 of these students were part of Team Explorer.

Approximately 70% of students at RMS were eligible for free or reduced-price lunch; 50% identified as white, 20% identified as Asian, 20% identified as black, 7% identified as multi-racial; 2% identified as American Indian or Alaskan Native, and 1% identified as Hispanic; 30% received some form of special education support services; and 30% were English Language Learners (ELL).

Team Explorer was selected because it was in its first year enacting a personalized learning class (called E-Time) that afforded students autonomy and choice in their learning when data collection for this project began. E-Time took place in the team's teacher advisory groups each afternoon for approximately 55 minutes. During this time, students designed and carried out projects for which they had considerable choice in topic, how they conducted their inquiry, and how they demonstrated their learning. All students on Team Explorer were required to participate in E-Time, and they began their independent projects in January of 2015.

E-Time was part of a broader initiative within Riverview's district to move toward more student-centered and personalized approaches to teaching and learning. After consistently underperforming on state standardized tests and recognizing that its traditional model of schooling was not meeting the needs of its student population, the district decided to take a more

personalized approach to its work with students. E-Time was one of these initiatives, and it was intended to offer students an opportunity to engage in more independent and interest-driven learning.

To support their implementation of E-Time, three teachers on Team Explorer applied and were accepted into the Riverview Teacher Collaborative (RTC), which was an “in-house” model of professional development to connect teachers from the middle and high school with educators who had designed and implemented a personalized learning class at Riverview High School during the previous year. Through the RTC, teachers on Team Explorer were afforded half-day pullout meetings twice a month to refine their approach to E-Time. They were joined at these meetings by a teacher from the high school’s personalized learning class who provided assistance and support to Team Explorer teachers in planning and implementing E-Time. The RTC also held monthly meetings with teachers from a nearby district who were exploring personalized and student-centered practices within their own classrooms. These meetings were facilitated by a representative from a local non-profit organization who specialized in personalized and proficiency-based learning and met with Team Explorer occasionally during the school year to offer guidance in the implementation of E-Time.

By January 2015, Team Explorer had created all the structures and processes necessary for students to undertake their personalized projects. Students began their E-Time projects by writing a learning plan that outlined the questions they wanted to answer through their inquiry, the potential products that might result from their learning, possible resources for their projects (both in school and in the community), and their learning goals. Teachers offered students individualized support and guidance during this planning process. Once students completed their learning plans, they were provided the freedom to direct their own learning and decide how they

wanted to carry out their projects. Teachers spent a good portion of E-Time checking in with individual students, monitoring their progress, and providing suggestions for how they could advance their projects.

Students pursued a wide variety of projects during E-Time. One student decided to use a free web-based platform during E-Time to learn Spanish because RMS did not offer classes in the language. Another student who was interested in learning abroad conducted research to better understand the benefits and drawbacks of different travel programs for students. Other students spent E-Time creating tutorials on how to develop skills in their favorite sports, particularly basketball and soccer. Some individuals chose to explore science-related topics during E-Time such as how depression impacts people's lives and how sleep (and lack thereof) affects the body. Finally, a few students decided to spend E-Time doing biographical research on some of their favorite athletes such as LeBron James, Lisa Leslie, and Cristiano Ronaldo. All students were required to create a product that demonstrated the learning from their projects and present these artifacts during the school's Exhibition of Learning Week.

Sample

All eight teachers on Team Explorer elected to participate, sharing their perspectives on and experiences with E-Time. Table 1 outlines the teacher demographics. The teachers worked with 80 students from a variety of ethnic, cultural, and socioeconomic backgrounds, all of whom were invited to participate in focus groups for the research. Of the 80 students, 16 volunteered to participate. At least one student from each teacher advisory participated in the research. Table 2 provides a demographic breakdown of the participating students.

Table 1

Demographics of Teacher Sample

Teacher (pseudonym)	Years of Experience	Gender	Race/Ethnicity	Subject(s) Taught
Cal	5	Man	White	Humanities
Amanda	10	Woman	White	Science
Monica	9	Woman	White	Math
Christina	< 1	Woman	White	Humanities
Allison	16	Woman	White	Humanities
Gwen	11	Woman	White	ESL
Ted	1	Man	White	Special Education
Denise	33	Woman	White	Math/Science

Table 2

Demographics of Student Sample

Student (pseudonym)	Grade	Gender	Race/Ethnicity	Advisory
George	7	Boy	White	Amanda
Sammy	7	Girl	Asian	Amanda
Vivian	8	Girl	White	Amanda
Zane	8	Girl	Asian	Amanda
Myah	6	Girl	Asian	Amanda
Joseph	7	Boy	Multi-Racial	Cal
Kareem	6	Boy	African American	Cal
Elizabeth	8	Girl	White	Cal
James	8	Boy	Not Identified	Monica
Aze	7	Girl	Asian	Monica
Faith	8	Girl	Asian	Monica
Zoe	8	Girl	White	Monica
Callie	6	Girl	White	Allison
Leroy	6	Boy	White	Allison
Donald	7	Boy	White	Allison
Rachel	7	Girl	White	Denise

Data Collection

Data were collected between April and June of 2015. The primary data sources were interviews and focus groups with Team Explorer students and teachers about their experiences in E-Time. Eleven observations of E-Time classes were also conducted to contextualize and triangulate the data gathered through interviews and focus groups.

Interviews. Semi-structured individual interviews were conducted with each of the eight teachers on Team Explorer. These interviews were conducted during the last two months of the school year as students were completing their E-Time projects and preparing for Exhibition of Learning Week. During interviews, participants were asked to describe their experiences in E-Time with a particular focus on their perceptions of the successes and challenges associated with this class and areas for growth. The broad interview questions allowed teachers to share their unique experiences with E-Time, and they were asked probing questions to follow up on ideas that emerged during the conversation. Interviews lasted 26-70 minutes and were audio recorded and transcribed. The variation in interview length was due to differences in teacher availability. Two teachers were only available for 30-minute timeframes during the school day while others were able to participate in interviews after school. One of the interviews conducted after school lasted 70 minutes because the teacher elaborated on her responses in great detail. The other five interviews were in the 35-40 minute range. Regardless of the interview length, all teachers completed the interview protocol, which provided data on their experiences with E-Time and their perceptions of the class's successes and challenges. The variation in interview length was accounted for during the data analysis process through the identification of patterns and themes that were most representative of all teachers' experiences with E-Time as described in the semi-structured individual interviews.

Focus groups. A focus groups was also conducted with six teachers (the team's student teacher and one humanities teachers were unable to attend) to follow up on key themes that emerged from individual interviews and to give teachers an opportunity to collectively discuss their experiences in E-Time. This focus group was conducted in mid-June of 2015 when teachers were reflecting on the successes and challenges of E-Time and the changes they might make for

the following year. Teachers were asked about what they perceived as E-Time's biggest success, what they learned from their first year of enactment, and how they intended to progress with E-Time. The questions for this focus group were developed based on preliminary analyses of teacher interview data, observation field notes, and informal conversations with teachers. The focus group lasted 23 minutes and was audio recorded and transcribed verbatim.

Five focus groups were also conducted with Team Explorer students. These focus groups were also conducted during the last two months of the school year when students were completing their E-Time projects and preparing for Exhibition of Learning Week. Each student who was involved in the research only participated in one focus group. A total of 16 students from Team Explorer participated in five separate focus groups for this study. Four focus groups had three student participants each while the fifth had four student participants. Table 3 provides a breakdown of teacher advisory (TA) representation within the focus groups. The goal of these focus groups was to gain insight into students' experiences with E-Time. During focus group conversations, students were asked to describe what happened during a typical day in E-Time, what they enjoyed and disliked about the class, how it was similar to and different from their other classes in school, and their thoughts on whether or not other schools should have a class like E-Time. Student focus groups lasted 22-34 minutes and were audio recorded and transcribed.

Table 3

Advisory Representation in Each Student Focus Group

Focus Group #	# of Students	TA Teacher(s)
1	3	Allison
2	3	Cal

3	3	Amanda
4	3	Monica
5	4	Denise, Amanda, and Monica

Observations. To triangulate the findings from interviews and focus groups, 11 participant observations of E-Time classes were conducted (Patton, 2015). Each of the five team teacher advisories was observed twice, and the E-Time ELL pullout was observed once. During these observations, field notes were taken with a particular focus on how teachers were working with students to achieve their project objectives. After some observations, teachers shared their perspectives on what happened during a particular class and their general thoughts on E-Time. Teachers' comments during these discussions were recorded in field notes along with initial impressions of their comments. These observations were primarily intended to provide context for the study and to help triangulate data collected through interviews and focus groups.

Data Analysis

The analysis process began after each data collection task with written reflexive memos about initial impressions of interviews, focus groups, and observations. These memos served as preliminary attempts to make sense of the data (Patton, 2015). After completing data collection and transcription, each transcript was read, and analytic memos were recorded to further conceptualize the data (Strauss & Corbin, 1998). HyperResearch software (version 3.5.1) was then used to perform Initial Coding (Charmaz, 2014; Saldaña, 2016) on each individual interview and focus group transcript. An inductive analytical approach (Miles & Huberman, 1994) was used by allowing codes to emerge from the data. During the Initial Coding process, sections of the transcripts were read, and the following question was considered: "What is the

major idea brought out in this sentence or paragraph” (Strauss & Corbin, 1998, 120)? A short code was assigned to segments of the text based on the answer to this question. Initial Coding was performed with the understanding that the “proposed codes during this cycle [were] tentative and provisional” (Saldaña, 2016, p. 115).

After completing this process for each interview and focus group transcript, initial codes were grouped into categories based on similarities in their properties and dimensions. For example, the initial codes of HANDS-OFF TEACHING, HANDS-ON TEACHING, TEACHER HELP, TEACHER INTRUSION, TEACHER SAY, AND TEACHER-DIRECTION were grouped together under the category of TEACHER ROLE as they all referred in some way to what students perceived the teacher’s role was or should be in E-Time. This process of grouping codes into categories was performed separately for student and teacher data to maintain the unique qualities of these different groups’ experiences within E-Time. The categories that were developed from the teacher data were then compared to those generated from the student data, and the relationships between the categories were explored. Comparisons of these emergent categories (e.g., TEACHER ROLE, STRUCTURING LEARNING, and STUDENT STRUGGLES) suggested that the challenges students and teachers described revolved around their perceptions of and experiences with choice in the classroom. Further analysis of the data within these categories revealed that the struggles were primarily related to the bounds and profusion of choice in E-Time. The findings described in the following section explore these themes in greater detail.

Findings

Findings from this study clustered around two primary themes that characterized students’ and teachers’ experiences with provision of choice in E-Time. The first theme revolved

around students' and teachers' struggles over the bounds of choice and student control in E-Time. Some students felt they should have unconstrained choice within E-Time and that any teacher involvement in their projects undermined their autonomy and volition. These perceptions clashed with teachers' interest in ensuring academic rigor in E-Time and exposing students to new topics and ideas. The second theme related to students' struggles with the profusion of choices in E-Time and teachers' challenges with structuring these choices. In this section, each of these themes is explicated in further detail.

Student Choice and the Struggle for Control

Students valuing choice. When asked what they enjoyed most about E-Time, a majority of students responded that they liked having choice in their learning. Joseph asserted, "I think it's good to have student choice because some kids don't like the topics the teachers give or some kids don't like just want to choose their own topic and I think it's good to pick your own topic." Elizabeth described how she "really, really like[d] the way you can express your topic." Rather than writing a traditional five-paragraph essay to demonstrate her learning, this student appreciated the opportunity to create a Google presentation or iMovie as evidence of her new knowledge and skills. When asked what he would keep in place in E-Time for the following year, Donald responded having choice in projects because it was better than "being forced into one thing." These and numerous other responses from focus groups suggest students deeply valued having the opportunity to choose what they learned about and how they expressed their learning in E-Time.

Few opportunities for choice. One reason many students appreciated having choice in E-Time was that they perceived it as one of the few opportunities during the school day when they had autonomy and control over their learning. When asked how E-Time was similar to their

other classes in school, most students replied that it was not. They pointed to the different levels of teacher control over classroom activities as the key factor that distinguished these learning environments. For example, Elizabeth explained:

[E-Time is] not really similar because [in our core classes] we have a teacher standing up in front of us...and like the environment. Like some teachers are more strict about different things. Like some of our teachers don't like to let us chill out and sit down for a second and think. They just have us like 'you do this, this, this, this,' and then we get graded on it.

For Elizabeth, the main difference between E-Time and the team's core content classes was the amount of autonomy within the learning environment. In core classes, teachers fully controlled the content and flow of classroom activities whereas students had increased autonomy and choice over their learning in E-Time. Myah also addressed this distinction between the extent of student autonomy and choice in E-Time and her core content classes when she asserted, "Because our core, we have like assignments to do and like things the teacher chooses for us, but E-Time, we have to make the decision, we have to make up the goal." Finally, in response to a classmate who said students could do whatever they wanted in E-Time, Zoe added, "When it comes to other classes, you're forced to do whatever the teacher tells you to do." Collectively, these remarks suggest students perceived a clear dichotomy between their opportunities for autonomy and choice in E-Time compared with their core classes.

E-Time as "all around" student choice. For some students, this perceived dichotomy between E-Time and their core classes contributed to feelings that the personalized learning class should be "their time" and that they should have virtually unlimited choice and control over their learning. Vivian asserted, "The concept of E-Time is it's supposed to be all around student

choice. All around it.” Zane also argued, “I don’t think teachers should help you at all. It’s supposed to be your time to learn about what you wanted to do.” Cal, one of the team’s humanities teachers, recalled students expressing a similar sentiment while voicing their frustrations about the team’s slow transition to student-driven learning in E-Time. According to Cal, “They said, ‘We thought this was going to be about us; we thought this was going to be our time.’ And until it was, which wasn’t until about January, they were biting to be loose, to be cut loose.” Based on these comments, many students believed E-Time should invert the power dynamics of their core classes by providing them full autonomy to choose what they studied and how they spent their time during this class. If their core content classes were about teachers choosing what and how they learned, these students felt they should be afforded the same level of control in E-Time.

Part of students’ perception that E-Time should be “all around student choice” and “their time” stemmed from how teachers explained and framed this personalized learning class. By the end of the school year, teachers acknowledged they perhaps overemphasized the choice aspect of E-Time and underemphasized the intended outcomes of their personalized projects. Amanda, the team’s science teacher, explained:

I know we’ve talked a little bit about this year we wished we’d sent the message in the beginning and that it wasn’t – I think we put too much focus on, ‘You get to choose what you want to do,’ rather than sending the message of ‘Yeah, you can have different interests but there’s work with this.’

A few teachers believed that the team’s emphasis on choice while explaining E-Time led some students to perceive the class as a time to “do whatever you want” rather than an opportunity to work toward learning standards and transfer goals through projects that were relevant to their

lives. Many student comments during focus groups suggested they indeed had this impression of E-Time. In this way, choice was both framed and perceived as an end in and of itself rather than a means for working toward mutually agreed upon learning goals.

Balancing choice and “rigor.” Achieving balance between student choice and “academic rigor” was both essential and logistically challenging for teachers. Although they wanted to allow students to choose topics that were relevant to their lives, they also wished to ensure that students developed new knowledge and skills through their projects. Monica, the team’s math teacher, addressed this tension when she said:

I guess I think that they could study anything. I don’t think that there’s a limit in what they can study, as long as there’s rigor in it. And that’s what I’m having a problem doing. I don’t want to limit students’ possibilities. But within their choice, I really want to make sure that there’s some real growth, some real identified skill building.

Amanda raised similar concerns when she discussed trying to avoid a situation in which students were “doing something [they] want[ed] to do but it’s – [they’re] not really learning.” For these teachers, providing students the power to choose their own topics in E-Time presented a significant challenge; they did not want to restrict students’ ability to choose topics that were meaningful to their lives, but they were also concerned about ensuring the academic rigor of students’ projects. With students’ desired topics ranging from the video game *Minecraft* to how to become a better soccer goalie, achieving balance between the ideal of free project choice and academic rigor proved to be a significant challenge in E-Time.

Balancing choice and exposure. Some teachers also worried that providing students choice of topic would undermine their exposure to new issues and ideas. Because many students chose topics that already interested them, teachers were afraid students might not branch out to

explore new areas of inquiry in E-Time. Monica said, “I think sometimes, at 11, if we’re going to go that route that they’re the only ones choosing, we might have some students who only expose themselves to *Minecraft* for the next three years.” Given students’ ages and relatively limited experiences, teachers felt it was their responsibility to expose them to new topics and ideas. Amanda asserted, “This is a time for us to help them – expose them to things they don’t know about because they’re not going to nosedive into something or know about a topic until we can expose them to it.” Echoing these comments, Cal offered, “I think one of the good things about a teacher-directed classroom – and there aren’t many, but one of them is that students are exposed to a lot of topics.” Teachers perceived a significant drawback of project and topic choice was that it limited students’ exposure to new ideas. In addition to ensuring academic rigor in E-Time, teachers wanted to find a balance between allowing students to choose topics that were meaningful to their lives while also encouraging them to explore new ideas and issues.

Struggles over the bounds of choice. The findings explored in this section suggest students and teachers had different values, expectations, and interests related to student choice in E-Time. These disparate perspectives contributed to struggles for power and control within this personalized learning class. Some students became resistant to teachers’ involvement in their E-Time projects because they felt it undermined their power of choice and ability to control their own learning. Vivian expressed this sentiment when she said, “But then kids like me, I don’t want to do [E-Time] because the teacher’s taking away my rights of doing what I wanted to do.” Vivian felt it was her right to control her learning in E-Time and that her teacher effectively retracted that right through her efforts to ensure the rigor of her project. This perceived loss of agency contributed to Vivian’s overall resistance to E-Time. Zane described a similar struggle for autonomy and ownership of his E-Time project when he said, “It’s supposed to be our

project. What do we want to continue to learn about? It's not like they can tell us to do this."

Zane also perceived his E-Time project as his own and felt teacher direction would diminish his autonomy and ownership of learning. Other students believed teachers could be involved in their work as long as it was to help them with the projects they originally chose. As Callie explained, "Instead of making us wander from our original projects, like help us, encourage us for our regular project." Students generally perceived teacher involvement in their projects as negative when it pushed them too far from their original intentions and goals.

Choice and Struggles with Self-Direction

The value of teacher choice. While some students struggled with teachers over the bounds of choice in E-Time, others expressed a desire for less choice in this personalized learning class. Some felt having such extensive choice in E-Time actually inhibited their learning. As one student named Zoe explained:

I'm more of a person to kind of have a lot more structure, like being told what – like maybe choices and what I can do on it...instead of just being told, you pick a topic, you do whatever you want with it. It's like I can't do that. It doesn't work.

For Zoe, the profusion of choice in E-Time felt overwhelming. She preferred when teachers generated topics and learning tasks from which she could pick. Similarly, in describing why it "isn't always a bad thing" when "you're forced to do what the teacher tells you to do," George asserted, "[E-Time's] not structured, so you don't know what to do. In classes, they give you things to do. It's like, oh yeah, I have something to do. I'm not going to waste time." George felt more motivated and capable of completing his work when teachers assigned him tasks than when he had choice in how he carried out his learning.

Expectations to guide and inform choices. As evidenced by Zoe and George's comments, many students wanted more "structure" in E-Time to help guide some of the choices they made for their projects. Although students expressed varying perspectives about what structure would look like in E-Time, many recommendations involved clearer expectations and requirements for their projects. Faith explained, "What structure would look like to me would actually have requirements for what the teacher would want from the students. In my personal opinion, I think the requirements for E-Time were unclear." Donald expressed a similar interest in clearer expectations when he said, "When you're not given any instruction on what to do or what's expected or anything like that, it's kind of hard to gauge what you're supposed to be doing." These students found it challenging to make choices about the processes and potential products of their projects when they did not know the teachers' expectations. They wanted less choice in the outcomes of their projects because they were accustomed to their work being driven by teachers' guidelines, expectations, and requirements.

Freedom to choose as demotivating. For some students, the profusion of choice and perceived lack of structure contributed to feelings of boredom and loss of interest in E-Time. Callie explained, "I'm like, I need more structure, and what I don't like about E-time is that there's no structure. It's boring, there's not much stuff to do." Callie described E-Time as boring throughout her focus group and explained that she and her classmates were bored because they "didn't know what to do" and "couldn't find everything that [they] needed[ed] to do the project." Freedom of choice was de-motivating for Callie because she was uncertain of how to design and drive her own learning. Similarly, George explained that he had "like 20,000 projects" during E-Time because "I tried to start them, then like the day after I was like well, this is boring." Again,

George's comments suggest that choice in topic and process was actually demotivating for him because he was uncertain about the steps he needed to take to carry out his project.

Teachers' struggle with student choice in outcome and structure. Teachers also struggled with the extent of student choice in in E-Time, primarily as it related to project outcomes. When students proposed their projects, they were responsible for identifying the knowledge and skills they would gain through their inquiry. For a number of teachers on the team, allowing students choice in learning targets was a new practice. Allison, one of the team's humanities teachers, discussed that she had done many projects throughout her 16-year career that allowed for student voice and choice "but [that] it's always been within some kind of umbrella theme or I've had an idea of what I wanted them to end up with, what the outcomes would be, and they could get there in different ways." Amanda also explained that "every time I teach up front, I know this is my goal – they're going to learn this. And when you're doing these types of projects, you can't do that." Having control over learning targets allowed these teachers to design structures within which students could exercise choice in activities and, in some cases, topics to work toward particular objectives. When students had choice of learning objectives, however, teachers felt less confident in their ability to structure the learning environment, particularly given the range and diversity of projects and intended outcomes. This dimension of student choice introduced challenges into E-Time beyond those that teachers experienced with student choice of topic and process in their core content classes.

Discussion

The findings from this study largely support existing scholarship on student choice, particularly as it relates to middle grades education. As one of the first examinations of the interactional dynamics of providing choice in real classroom settings, however, the study has

contributed to the literature by illuminating some of the complexities, challenges, and power struggles that may emerge when implementing student choice in personalized learning environments in the middle grades. This section situates the study findings within existing scholarship on student choice and considers their implications for choice provision in personalized learning environments and schools more broadly.

This study offers further evidence to support scholarship in the field of middle grades education that suggests young adolescents desire opportunities for authentic choice and decision-making in their learning (Jackson & Davis, 2000; Stevenson & Bishop, 2012). Study participants overwhelmingly reported that their favorite aspect of E-Time was having choice in their projects because it offered them opportunities to study topics that were meaningful and relevant to their lives. In this way, most study participants wanted to exercise some control over their learning to bring it more into alignment with their personal interests, goals, and curiosities (Assor, Kaplan, & Roth, 2002).

Although students generally valued having opportunities to make meaningful choices about their projects, there were a few factors associated with choice provision in E-Time that undermined their motivation and engagement in this personalized learning class. One factor was that the bounds of choice were not well-defined within E-Time. As Williams, Wallace, and Sung (2016) have noted, teachers can offer choice in a range of dimensions, from how students solve problems and present their learning to what they study and how quickly they progress through activities. Choice can vary within each dimension from a limited number of options to virtually limitless freedom to choose. Because the teachers on Team Explorer had limited experience with choice provision in their core subject area classes, they struggled to find an appropriate balance between freedom and limitations, which is common for teachers who are new to providing

choice (Vatterott, 1995), and they did not explicitly define the bounds of choice for students within each dimension. Therefore, students perceived relatively boundless choice in E-Time.

For one group of students, the perceived boundlessness of choice undermined their feelings of competence and consequently their motivation within E-Time. Consistent with the literature, students on Team Explorer perceived few opportunities for choice in their learning outside their newly developed personalized learning class (Bozack, Vega, McCaslin, & Good, 2008; Williams, Wallace, & Sung, 2016). Therefore, many students struggled with the independence and self-direction that accompanied choice in E-Time, which is common for students who have been granted few opportunities to control their learning in school (Morrison, 2008; Vatterott, 1995). This group of students did not feel fully capable of making choices about the processes and outcomes of their projects, which undermined their feelings of competence and motivation in E-Time. These findings are consistent with Patall, Sylvester, and Han's (2014) research that suggests choice is motivating for individuals with high perceptions of competence in the task at hand but demotivating for those with lower feelings of competence. The findings also align with research that indicates having too many choices can undermine students' feeling of competence and engagement with tasks (Evans & Boucher, 2015; Iyengar & Lepper, 2000).

For another group of students, the ill-defined bounds of choice and limited experience with autonomy in school contributed to their perceptions of choice in E-Time as "negative freedom" rather than "positive freedom" (Morrison, 2008). These students believed they should have limitless choice in virtually every aspect of their learning in E-Time and be free from their teachers' constraints. Because these students felt they had few opportunities for choice and autonomy in other areas of their schooling experiences and believed E-Time was intended to be "all around student choice," they clung mightily to their perceived chance for self-determination

within this personalized learning class. These students felt any teacher efforts to structure their projects undermined their autonomy and internal perceived locus of causality (deCharms, 1968; Ryan & Deci, 2000), and they became less motivated and engaged in E-Time when they felt their freedom was restricted by teachers' involvement in their personalized projects. These perceptions of choice as "negative freedom" also contributed to power struggles between students and their teachers during E-Time.

Implications

Collectively, the findings from this study help illuminate some factors to which teachers should attend when offering students choice in personalized learning environments, particularly in the middle grades. Because student choice is central to personalized learning (Bray & McClaskey, 2015; Clarke, 2013), teachers must consider all the dimensions in which choice can be offered in the classroom and define appropriate bounds and limitations within each. Without establishing these limitations, students may flounder with self-directed learning or resist teacher efforts to become involved in their projects. Adopting an existing structure for choice, such as Beane's (1993) framework for democratic curriculum, could serve as a useful scaffold in the transition from traditional to personalized learning environments. Such a framework would provide teachers a structure to bound student choices while still offering them opportunities to make meaningful decisions about their learning. As teachers and students become accustomed to their new roles and responsibilities within personalized learning environments, structures for choice may need differentiation to accommodate individuals with different levels of perceived competence in making decisions about and controlling their learning.

Findings from this study also suggest it may be important for teachers to foreground the voice and partnership aspect of personalized learning rather than the centrality of student choice

(Bray & McClaskey, 2015). Whereas “choice” implies free will and volition (Deci & Ryan, 1987; Williams, Wallace, & Sung, 2016), “voice” suggests a more collaborative relationship in which students and teachers share responsibility for decision-making within the learning environment (Mitra & Gross, 2009). Team Explorer teachers acknowledged that their potential overemphasis on student choice when presenting E-Time to students may have factored into student expectations that they should be able to act according to their own free will within this class. It also led many students to believe they were “on their own” and were primarily responsible for making key decisions about their learning. By framing personalized learning as a partnership and an opportunity for student voice within the curriculum, teachers may find more success in working with students to identify the appropriate bounds of choice for each individual and ensuring that choice serves as a means for students to meet collaboratively developed learning targets rather than an end in and of itself. This foregrounding of voice and partnership could also help stem some of the power struggles that emerged over student choice in E-Time.

Finally, this study’s findings indicate it would be useful for teachers to incorporate student choice into core subject classes, particularly in schools that are considering a transition to personalized learning. The findings reaffirmed the notion that students value and are motivated by choice when it is aligned with their personal interests and goals and appropriately bounded to support their feelings of competence (Assor, Kaplan, & Roth, 2002; Jackson & Davis, 2000; Patall, Sylvester, & Han, 2014). Incorporating choice into core subject classes in these ways would not only increase the relevance of learning for students; it would also give them and their teachers experience with choice in a context that is a bit more naturally bounded by content and disciplinary expectations and standards. Providing students choice within core subject classes

could therefore help scaffold the transition to personalized learning while supporting students' developmental and psychological needs in more traditional classroom settings.

Limitations

Although this study offers insight into provision of choice within a personalized learning class, it is not without limitations. As with all case studies, the findings from this research are not generalizable beyond the present case. The findings represent one team's experience with choice in a personalized learning environment, which was likely shaped by contextual factors unique to RMS and Team Explorer such as the overall school culture and philosophy of education, teachers' prior experiences with choice in the classroom, and student population. In a different context, students and teachers might experience choice in a personalized learning class in disparate ways from Team Explorer. Given this limitation, future research might aim to investigate other teams' experiences with choice in personalized learning environments.

Another limitation is that convenience sampling was used to select student participants. Although all students on Team Explorer were informed of the research and had an equal opportunity to enroll in the study, the final sample of students consisted of individuals who self-selected to participate. It is possible that students who participated in the study differed from their non-participating peers in terms of their experiences with and perceptions of choice in E-Time. For example, students who participated in the study may have had a more negative view of E-Time overall than their peers who did not enroll in the research.

A final limitation is the timing of data collection, which began after Team Explorer had been engaged with personalized projects for three months. Because data collection began in early April of 2015, the presentation and early enactment of E-Time were not directly observed. Based on teacher interviews and student focus groups, the presentation and early enactment of E-Time

factored into students' perceptions of choice within this class. Although students and teachers both described the emphasis that was placed on student choice when teachers presented E-Time at the beginning of the year, these data could not be triangulated with observations, which limits the conclusions that can be drawn about the presentation of this class.

Conclusion

As an increasing number of countries and schools adopt more personalized approaches to teaching and learning, students and teachers will inevitably wrestle with the challenges and opportunities student choice presents in the classroom. Challenges may be particularly pronounced for students and teachers who have limited experience with choice provision in school. Findings from this study offer possible guidance for teachers adopting personalized learning in their own classrooms to maximize the opportunities associated with student choice. Specifically, teachers might benefit from foregrounding personalized learning as a partnership in which students and teachers bring their voices into conversation while framing choice as means toward collaboratively developed learning targets as opposed to an end in and of itself. Findings also suggest some structure and constraints on choice may be necessary within personalized learning, particularly for students who have limited experience making decisions about the design and enactment of their own learning. Given this study's findings are based on one middle school team's experiences, however, additional research should be conducted on the provision of choice within personalized learning environments to further investigate the complexities, challenges, and opportunities associated with this practice.

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