

# STUDENT-CENTERED LEARNING OPPORTUNITIES FOR ADOLESCENT ENGLISH LEARNERS IN FLIPPED CLASSROOMS

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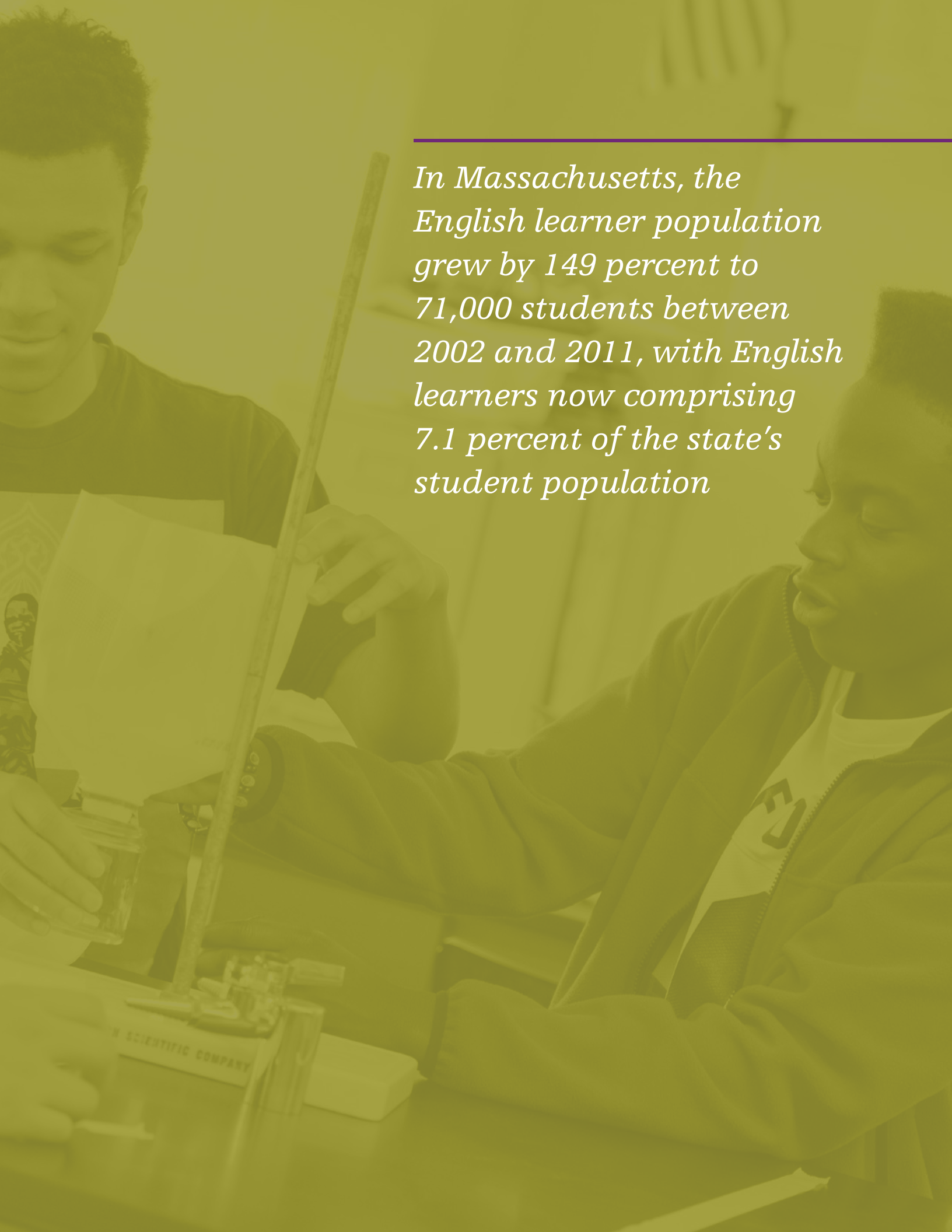
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*In Massachusetts, the English learner population grew by 149 percent to 71,000 students between 2002 and 2011, with English learners now comprising 7.1 percent of the state's student population*

## *Introduction*

Review of Literature .....	p. 5
Theoretical Frame .....	p. 6
The Current Study.....	p. 7

## *Research Design*

Study Overview .....	p. 8
Research Setting.....	p. 8
Research Participants .....	p. 8
Research Methods.....	p. 9
Analysis .....	p. 11

## *Findings*

Situating Flipped Learning in a Secondary School .....	p. 12
A Situated Definition of Flipped Learning.....	p. 16
School Context Factors That Support Flipped Learning .....	p. 20
Flipped Learning with English Learners.....	p. 25
Innovative Practices for English Learners.....	p. 27

## *Discussion*

Dissemination of Findings.....	p. 32
Future Directions .....	p. 32

## *References*

.....	p. 33
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## *Appendices*

A. Delphi Interview Protocol .....	p. 35
B. Classroom Observation Protocol.....	p. 35

## *Tables*

1. Descriptive Statistics School .....	p. 13
2. A Situated Definition of Flipped Learning.....	p. 16
3. School Context Factors Supporting Flipped Learning .....	p. 20
4. Affordances of Flipped Learning with EL students.....	p. 26



# INTRODUCTION

**T**oday, more than five million students in United States schools speak a language other than English at home and are classified as having limited English proficiency (NCELA, 2011). As the fastest-growing segment of the school-age population, English learners have long been overlooked and underserved (Gándara & Contreras, 2008; Ruiz-de-Velasco & Fix, 2001). In Massachusetts, the English learner population grew by 149 percent to 71,000 students between 2002 and 2011, with English learners now comprising 7.1 percent of the state's student population (Massachusetts Department of Elementary and Secondary Education, 2012). At the same time, the implementation of Common Core State Standards (CCSS), a concurrent curriculum and assessment movement, has increased the academic demands placed on schools in Massachusetts and nationally, and may exacerbate the well-documented achievement gap between English learners and English-proficient students (Gándara & Hopkins, 2010; Hood, 2003; Menken, 2008). As schools are called on to educate an increasingly diverse student body to higher levels of academic skill, schools require effective strategies to serve growing English learner populations. Student-centered approaches to instruction show potential to close the achievement gap between English learners and their peers, supporting students' acquisition of both academic language and content (Darling-Hammond, 2010; Rueda & Garcia 2001).

Flipped learning, a type of blended or hybrid learning, is one such student-centered approach deserving of

further exploration. In a “flipped” classroom, traditional roles and functions are switched; students access direct instruction, including teacher lectures, online and on their own time, freeing up valuable class time for students to engage in interactive activities, collaborative work, and guided inquiry projects (Bergmann & Sams, 2012; LaBanca et al, 2013). When class time is thus repurposed to focus on active learning, students are able to ask more questions, engage more deeply with content, use formative assessments to monitor their mastery of learning, and receive consistent personalized support from the teacher (Wolfe, Steinberg & Hoffman, 2013). These forms of engagement should lead to stronger outcomes for students of all English proficiency levels, but while there is a significant and growing body of research on promising practices to meet the needs of English learners in the secondary grades (Echevarría, Vogt & Short, 2014; Walqui & van Lier, 2010), little is known about the effects of flipped learning on the experiences and outcomes (both linguistic and academic) of adolescent English learners. As schools across New England and the U.S. adopt flipped learning and other models of technology integration in classrooms, more research is needed to understand the effectiveness of these approaches for English learners.

This study documents opportunities for diverse adolescent English learners to deeply engage with content and language in flipped learning environments. Through a linked description of teaching practices and student learning experiences in an urban New England high school, the study attempts to understand the potential of flipped instruction in preparing a traditionally underserved population for post-secondary

education. Our research partner Patriot High School<sup>1</sup> (PHS) is one of the New England schools implementing flipped learning. PHS represents a typical secondary school context for adolescent English learners: More than half of students speak a language other than English at home and the majority of students are from minority and low-income homes (Massachusetts Department of Elementary and Secondary Education, 2014). PHS is also an urban school committed to implementing student-centered learning strategies to meet the needs of its diverse students.

## *Review of Literature*

An extensive body of research documents the achievement gap between adolescent English learners and English-proficient students: On average, English learners have lower GPAs, repeat grade levels more frequently, and have lower graduation rates than their language-majority peers (National Center for Educational Statistics, 2010; Perriera, Harris & Lee, 2006; Ruiz-de-Velasco & Fix, 2001; Rumberger & Larson, 1998a, 1998b; Stevens, Butler & Castellon-Wellington, 2000). English learners and former English learners also demonstrate lower performance on high-stakes tests in English (Abedi & Lord, 2001; Mitchell, Destino & Karam, 1997; Stevens, Butler & Castellon-Wellington, 2000). Nationally, students classified as English learners scored 36 points below English-proficient peers on the NAEP reading assessment in fourth grade and 44 points below their peers in eighth grade (U.S. Department of Education, 2013).

The achievement gap widens during adolescence when many English learners attend schools poorly equipped to meet their needs at the same time as the demands of schooling intensify (Suárez-Orozco, Gaytán, Bang, Pakes, O'Connor & Rhodes, 2010). Many English learners, especially Spanish-speakers, find themselves in racially, economically, and linguistically segregated schools where there are few educational resources to meet their needs (Orfield & Lee, 2006). In such school settings, English learners are less likely to find an adult they can go to for academic support (Stanton-Salazar &

<sup>1</sup> Pseudonyms are used for the school and all participants to protect their identities.

Dornbusch, 1995). English learners are more frequently placed in lower ability groups and academic tracks than language-majority students, where pervasive low teacher expectations contribute to disengagement and low academic achievement (Bennici & Strang, 1995; Cummins, 1994; Eccles & Roeser, 2003; Snow & Biancarosa, 2003; Suárez-Orozco, Suárez-Orozco & Todorova, 2008). In many classrooms, English learners encounter unchallenging curricula that does not prepare them for college or the workforce (Mehan, Villanueva, Hubbard & Lintz, 1996; Valenzuela, 1999) and does not engage them in acquiring and using academic English through interactions with their peers and teacher (Carhill-Poza, 2014; Harklau 1994; Valdes, 1998). English learners are also less likely to have access to many of the home resources, including parents who can help students with their homework, technology, and time and space to complete homework, which are assumed for language-majority students (Bang, Suárez-Orozco, Pakes & O'Connor, 2009).

Flipped learning has the potential to address many of the challenges adolescent English learners face in school. While there is no single model of flipped learning, a common characteristic is the redirection of attention from the teacher and onto the learners through strategic use of technology (Bergmann & Sams 2012). Flipped instruction is often used in conjunction with competency-based assessment models, in which students progress not on the basis of time spent, but rather on their mastery of the curriculum and the acquisition of learning milestones, an aspect of student-centered learning that research associates with greater academic engagement (Priest, Rudenstine, Weisstein, 2012; EdWeek 2012). Flipped classrooms emerge, then, as ideal laboratories for examining student-centered learning practices for English learners.

Flipped classrooms may increase opportunities for English-learners at all levels to learn academic language and content through participation in interactive classroom learning practices (Walqui & van Lier, 2010). Research has shown that the use of technology, including videos and iPad applications, supported better comprehension and language learning outcomes (Assaf, Ash, & Saunders, 2011; Smythe & Neufeld, 2010; Tan,

Ng, & Saw, 2010). Increased access to differentiated, multimodal academic content which students can view, pause and replay as needed may support greater comprehension than traditional lectures, as well as provide a richer experience with language (Echevarría, Vogt & Short, 2014; Peregoy & Boyle, 2013). Allowing students to complete homework in class, where the teacher is able to provide consistent individual support, could also ameliorate some of the difficulties English learners typically face when trying to complete homework on their own at home.

2000; Lantolf & Thorne, 2006; Luria, 1961; Vygotsky, 1978). For English learners to self-regulate, or internalize knowledge, both individualized instruction and social collaboration are beneficial. Through collective dialogue and scaffolding, children are able to move from the level of skill or knowledge as determined by independent problem solving to a higher level of development as determined through problem solving in collaboration with an adult or more capable peers, the Zone of Proximal Development (Vygotsky, 1978). Through such collective scaffolding, students work

together to co-construct new expertise that then belongs to the group and can then be internalized by the individual. Research in social-cultural theory points to several important features of second language development: the role of peers and peer scaffolding (Ohta, 2000, 2001; Donato, 1994; Swain & Lapkin, 1998); interaction with an expert-learner (Aljaafreh & Lantolf, 1994; Nassaji & Swain, 2000); the emergence of private speech through social interaction (Frawley & Lantolf, 1975); and the use of a first language to



### **Student-Centered Learning: A Brief Definition**

Student-centered learning approaches put students' needs, interests, and learning goals at the center of the educational process. By switching the emphasis from teacher to learner, student-centered learning enables students to actively engage with content tailored to their abilities and creates space for negotiation of meanings, knowledge and cultural forms. This type of learning affords a degree of choice about what is learned, when it is learned, and how it is learned. Through diverse and differentiated learning activities, students can progress at their own pace, figure out their academic and career interests, and take charge of their learning.

### ***Theoretical Frame***

This research project draws upon two theoretical frameworks of learning and development: Vygotsky's sociocultural theory (Vygotsky, 1978), which informs our conception of student-centered learning, and the multimodal literacies theory first introduced by Kress and Jewitt (Kress, 2003), which provides a sophisticated framework for understanding literacy development in the 21st century.

Sociocultural theory provides a useful framework for understanding student-centered learning among diverse students. In this framework, learning is understood to be socially constructed, with cognition and communication mediated by social interaction (Lantolf,

enable second-language learners to explore form-meaning relationships and mediate cognitive activity (Lantolf & Thorne, 2006; Lantolf & Poehner, 2008; Negueruela & Lantolf, 2006; Sternberg & Grigorenko, 2002). For English learners then, interaction is not an addition to learning, but is a necessary condition for the creation of the relationships and activities that generate learning.

Our research also draws on the theories of multiliteracy (New London Group, 1996) and multimodality (Kress, 2003), which ascribe value to the multiple modes of communication that are active in the classroom (e.g., written, visual, audio, gestural, and spatial) (Mills, 2010; New London Group, 1996). In the context of an

increasingly globalized society, where cultural and linguistic diversity are the norm, multimodal pedagogies acknowledge the plurality of language and of text forms, including digital forms, that are used for communication and accessing information (Kress, 2003; Cope & Kalantzis, 2000; Barton, Hamilton & Ivanic, 2000; Cope & Kalantzis, 2000). A multimodal approach to instruction incorporates an array of modal resources, from traditional notions of literacy as written language to spoken language, images, sound, video, three-dimensional models, and movement (Kress, 2003; Vaish & Towndrow, 2010). In that sense, literacy is involved in both representational modes (what a culture makes available as means of making meaning—speech writing, image, gesture, music) and media of dissemination (what the culture makes available as means for distributing these meanings as messages books, computer screens, magazines, videos, films, radios, and chats, and written language becomes simply one of several modes through which learning occurs) (Jewit, 2008; Vasudevan, DeJaynes & Schmier, 2010).

Multimodal pedagogy is a central feature of a flipped classroom. The traditional roles of teacher and student are reconstructed as classrooms expand to allow students to engage with a range of communication tools. A serious look at the multiplicity of modes that are always and simultaneously in use in a classroom suggests that meaning resides in all of them and that each contributes to the overall meaning of the ensemble (Kress, 2003). In this sense, traditional classrooms that focus exclusively on one type of text create artificial boundaries to keep the real world out. The potential of multimodal discourse for generating greater motivation to engage in learning is substantial. Recent research about the multimodal practices explores the ways in which youth intuitively acquire new literacies in their recreational spaces, drawing attention to the ways in which language and communicative practices are shared, sustained, and modified within groups (Street, 2003) and to the innovative and productive potential of informal literacies in electronic environments beyond school (Lankshear & Knobel, 2003; Street, 2003). There are, however, several assumptions about 21st century adolescent literacies

that require examination. For instance, research shows that not all adolescents are necessarily “digital natives” (Prensky 2001; Mills, 2010), which raises questions about the degree to which literacies practiced in contexts outside school should impact school curricula (Vasudevan 2006). Finally, although much current research focuses on the ways in which youth intuitively acquire multimodal practices in their recreational spaces, such learning needs to be balanced with multimodal practice in school settings. Young adolescents cannot explore and understand multimodal literacy practices entirely on their own. They need teachers to scaffold and model new technical proficiencies that would be unattainable without intervention and expert guidance.

### *The Current Study*

The current study addresses a gap in the literature by investigating the academic experiences of adolescent English learners and their teachers in flipped classrooms. We explore flipped instructional practices at the classroom level as a tool for theory-building in collaboration with teachers and also consider how the school context influences learning. These research strategies allowed us to interpret student learning in the context of situated teaching praxis and contribute to a stronger understanding of how flipped learning mediates the learning experiences of adolescent English learners. Implications for researchers, educators, and policymakers, were explored as well.

#### **The study was guided by three primary research questions:**

1. How is flipped learning defined within the school community?
2. How can flipped learning promote positive educational outcomes and experiences for English learners students?
3. What specific practices and school context factors contribute to these outcomes and experiences?



# RESEARCH DESIGN

## *Study Overview*

The current study, conducted in partnership with Patriot High School, develops a research-based definition of flipped learning for adolescent English learners. Using participatory and qualitative methods, the study documents how flipped learning mediated opportunities for diverse adolescent English learners to deeply engage in content and language learning, exploring the potential of flipped learning to prepare an historically underserved population for post-secondary education.

## *Research Setting*

Patriot High School<sup>2</sup> was chosen as the site of this research because it is representative of a typical secondary school context for adolescent English learners and because it is the site of an innovative educational initiative designed to improve their educational experiences. PHS is an urban, demographically diverse school in the Greater Boston area. More than half (53 percent) of the 1,700 students speak a language other than English at home and a significant majority (75 percent) live in poverty (Massachusetts Department of Elementary and Secondary Education, 2014). Students in this school face many of the hurdles common to immigrant students as they seek to learn academic language and content in schools across the country. Mirroring national trends, English learners at PHS perform far below English-proficient students in English language arts, math, and science.

We entered into partnership with PHS during the first

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Pseudonyms are used for the school and all participants to protect their identities.

year of full implementation of a new instructional model to explore how flipped learning supports the academic achievement and college readiness of its diverse students. PHS first implemented flipped learning with the freshman academy in 2012-13 and expanded implementation to the remaining grades in 2013-14. The local model of flipped learning continued to evolve in the 2014-2015 school year and received grant funding to sustain efforts over the next few years. All PHS students have individual, loaned iPads to facilitate their access to flipped learning resources. At the beginning of the study, teachers had received professional development and peer support in adopting flipped learning practices. Our partnership with the school included collaboration on research and professional development over the 2013-14 school year and the first semester of the 2014-15 school year.

## *Research Participants*

**Teachers:** A sample of 19 secondary school teachers were interviewed in 2014. This included seven teachers who were members of the school-wide flipped leadership team and responsible for teaching mainstream students and mainstreamed former limited English proficient (FLEP) students, eight teachers of intermediate level English learners in sheltered classrooms and FLEP students across content areas, and four teachers who work with beginning English learner students in English as a Second Language (ESL) and sheltered classrooms. Researchers described the project to teachers and invited them to join in an after-school discussion, where consent forms were distributed. Teachers received a \$25 iTunes gift card as a token of appreciation for their participation.



**Students:** A sample of 12 English learners was recruited in Spring 2014 to participate in interviews. To ensure that all students would be familiar with the flipped learning model, participation was restricted to those students attending PHS in September of 2014. With the help of school staff, students were recruited from ESL and sheltered content classrooms. A bilingual and bicultural researcher described the project to the students and distributed bilingual parental permission forms and bilingual student consent forms explaining the study in Spanish, Arabic, French, and Portuguese. Students received a \$25 iTunes gift card as a token of appreciation for their participation.

**Parents:** A sample of five parents of English learners at PHS was recruited in Spring 2014 with the help of school staff. Parents spoke Portuguese, Spanish, and Arabic. A bilingual and bicultural researcher described the project to the parents and distributed bilingual consent forms. Parents received a \$25 iTunes gift card as a token of appreciation for their participation.

### *Research Methods*

Research was carried out from January to December 2014, when the school community had between one-half and one-and-a-half years' experience implementing flipped instruction. This timing afforded researchers the opportunity to explore emerging insights and concerns, while the school community was actively implementing relatively new methods. We used collaborative and responsive research methods to give voice to the school community and foreground teachers as experts. Our initial research objectives were to develop a shared definition of flipped learning as a situated, student-centered practice and to identify relevant school context factors that mediate student experiences and outcomes. We addressed the first research question from the perspective of praxis—teaching practice as theory—drawing on qualitative data to understand how diverse stakeholders (teachers, students, staff, and families) define flipped learning as local and situated practice. At the same time, we used

ethnographic observation to build a portrait of the school environment and identify important school-level factors that influenced the implementation and use of flipped learning methods. Findings from this stage of research were used to select classrooms for observations. Qualitative classroom observations and ensuing discussions with members of the school community helped us identify the features of flipped learning that stakeholders viewed as effective in supporting the academic engagement, academic achievement, and language development of English learners, as well as the areas of concern.

**Delphi interviews:** To develop and refine a local definition of flipped learning, we employed a series of semi-structured interviews with sequential groups of stakeholders to simulate a controlled debate, following the Delphi technique (Helmer & Rescher, 1959; Linstone & Turoff, 1975). In each round of interviews, ideas raised in prior rounds were systematically presented for discussion, building from the diversity of perspectives toward consensus about a set of core practices and concerns. The Delphi interview technique was chosen because it explicitly positions participants as experts and is designed to refine understandings of messy and complex ideas and phenomena. Our ongoing analysis of interview transcripts identified a range of opinions and ideas about flipped learning, which then informed the next round of interview questions. We used controlled feedback to anonymously inform participants of other participant's perspectives and provided opportunities for interview participants to clarify or change their views, thereby finding convergence and adding specificity to a shared definition of flipped learning, in addition to identifying innovative practices as well as concerns.

Interviews ranged from 46 to 72 minutes (M=58 mins.) and included between four and 12 participants. To ensure that immigrant parents and students were able to express themselves fully, bilingual and bicultural researchers interviewed parents in the language they were most comfortable in. Although interviews with parents and students were conducted in both English and the participants' native language, quotes are presented in English only. Six rounds of interviews were



conducted, followed by a final round with the initial group of interviewees. In the first round of interviews, teacher participants (the on-site Flipped Leadership Team) were asked to provide their expert opinion and judgment on issues we identified. In subsequent rounds with other groups of stakeholders (teachers of English learner students in various mainstream, and sheltered, and ESL classrooms, English learner students, and parents of English learner students), ideas and quotes were presented to participants, who were asked to reflect on previous groups' statements. In the final round, findings were brought back to the initial group. Appendix A provides a sample protocol with identifying information removed.

**Ethnographic observation:** Ethnography allowed us to identify school context factors that affected students' experiences with flipped learning, including school structures (e.g. block scheduling, small learning communities, school safety), elements of school culture (e.g. beliefs about students, teaching and learning), and conditions in the home and community (e.g. SES, community involvement, access to technologies). The researchers constructed a school portrait through focused ethnographic observations, collection of artifacts, and informal interviews with teachers, staff, and students (Spradley, 1980). Researchers spent 112 hours observing classrooms,

hallways, the learning commons, the cafeteria, assemblies, and other school spaces.

**Qualitative classroom observation:** Qualitative classroom observations provided additional insight into students' and teachers' experiences with flipped learning. The classroom observation protocol was developed after extensive ethnographic observation in the school and analysis of interview data. To ensure informational representativeness, a stratified purposeful sampling procedure was used to select four focal

classrooms for observation (Miles & Huberman, 1994; Sandelowski, 2000). Classrooms selected were representative of a variety of English proficiency levels, as well as themes that emerged from interviews. Observations were conducted by two researchers, when possible, and video-recorded for deeper analysis. Each classroom was observed over a minimum of three hours. During observations, researchers worked to identify and document a variety of factors, including uses of technology, classroom management, pedagogical goals, assessment, student engagement, interactions with peers and teachers, and academic and social supports. Appendix B provides the classroom observation protocol developed for this study.

*To ensure that immigrant parents and students were able to express themselves fully, bilingual and bicultural researchers interviewed parents in the language they were most comfortable in.*

## Analysis

**Data sources:** *Data include ethnographic fieldnotes, transcripts of interviews with stakeholders, and notes, artifacts, and video-recordings from classroom observations. Data were analyzed using qualitative and participatory research strategies.*

**Qualitative data analysis:** *Interview data were analyzed thematically using an analytic inductive approach (LeCompte & Preissle, 1993). Interview transcripts were thematically coded by two researchers for reliability. Validity was ensured through the use of multiple sources of evidence and through member-checking emerging findings. The researchers systematized codes in NVivo and use this database to refine thematic codes, pool representative quotes, and produce frequency counts for each code. Where inductively generated thematic categories overlapped, axial coding was applied.*

**Participatory data analysis:** *Participatory research data, including classroom observation data, were analyzed together with members of the school community on the basis of the following factors: a) importance of the research concepts for participating stakeholders, b) inclusion of local knowledge from the community, c) short-term and long-term benefit to the learning community, and d) how the local project connects with larger educational policy and theory (Fals-Borda, 1991; Torres & Reyes, 2011).*





# FINDINGS

## *Situating Flipped Learning in a Secondary School*

The purpose of this current study is primarily descriptive. Researchers drew on school report card data, interviews with teachers, administrators, parents, and students, as well as ethnographic observations to develop a school portrait and describe the contextual factors that influenced the implementation and practice of flipped learning.

**School portrait:** Patriot High School (PHS) is an urban, demographically diverse school in the Greater Boston area. The school is located on a quiet residential street in a neighborhood that is home to many newcomer immigrant families (about 30 percent of the total population) (Sacchetti, 2010). More than half (53 percent) of the 1,709 students who attend PHS speak a language other than English at home, and 11 percent are eligible for language support services (Massachusetts Department of Elementary and Secondary Education, 2014). Mirroring national disparities, English learners in this school perform far below English-proficient students in English language arts, math, and science.

In total, 27 languages are spoken at Patriot High School, including Arabic, Portuguese, French, and several varieties of Spanish. Students' educational backgrounds range from having little or no formal

education upon entering school to an 8th grade education. Sixty-five percent of students are from minority backgrounds and seventy-five percent are from low-income homes (see Table 1). Despite the linguistic and economic challenges that PHS students face, they attend school at a higher rate than the average for Greater Boston and 84 percent aspire to attend college.

Many PHS teachers have deep roots in the community and several were graduates of the school themselves. Almost all (98 percent) of PHS's 121 teachers are licensed in their subject area and there is very little

teacher turnover. The school has recently been the recipient of a prestigious national award for innovation in urban education. Teachers and administrators refer to the school's motto—"Rigor, Relevance, Relationships"—in explaining the school community's commitment to helping its diverse student body excel academically. One teacher explained that

*Throughout the school, students demonstrated respect for each other and a positive repartee with teachers and staff. They were comfortable explaining their ongoing projects to observers. When students changed classes, the hallways filled with noisy conversation in several languages, as well as reminders and greetings from teachers.*

"if you get to know your kids, then you're building relationships with them and you can differentiate your instruction based on how they learn and what you know about them" (Interview, May 6, 2014). The importance of relationships to support student learning is evident in conversations across the school and visible in school policies and structures, including the first-period student advisory. It is also visible in the many conversations we observed among teachers and between students and teachers about students' lives outside of school.

*Table 1. School Characteristics in Percent of Total, 2014*

	PATRIOT HIGH SCHOOL	GREATER BOSTON SCHOOLS	MASSACHUSETTS SCHOOLS
<i>Total enrollment</i>	1,709	54,312	955,844
<i>Low-income homes</i>	74.8	80.6	39.4
<b>RACE</b>			
<i>African American</i>	4.4	33.6	8.7
<i>Asian</i>	5.7	8.5	6.3
<i>Hispanic</i>	51.3	40.9	17.9
<i>White</i>	35.6	13.8	63.7
<i>Other</i>	3.0	3.2	3.5
<i>First language not English</i>	55.6	47.4	18.5
<i>English learner</i>	10.9	29.8	8.5
<i>Attendance rate</i>	95.0	92.1	94.9
<b>GRADUATION RATES</b>			
<i>All students (4 year)</i>	89.0	66.7	86.1
<i>English learners (4 year)</i>	66.1	61.4	63.9
<i>English learners (5 years)</i>	76.5	68.5	70.9
<b>MCAS-PROFICIENT OR HIGHER</b>			
<i>ELA: all students</i>	88.0	76.0	90.0
<i>ELA: English learners</i>	21.0	36.0	36.0
<i>Math: all students</i>	79.0	64.0	79.0
<i>Math: English learners</i>	17.0	39.0	31.0
<i>Science: all students</i>	75.0	47.0	70.0
<i>Science: English learners</i>	0	9.0	13.0
<i>Plans to attend college</i>	84	66	81
<i>Students per computer</i>	2.0	2.9	3.0
<i>Classrooms on internet</i>	100	100	100
<i>Teachers licensed in academic area</i>	98.3	95.7	95.5
<i>Teacher retention</i>	93.4	78.7	94.6
*Data from the Massachusetts Department of Elementary and Secondary Education, 2014.			

# A

**typical day at PHS:** On a typical day, hallways are empty and quiet between bells, and student and teacher voices can be heard from classrooms and other supervised spaces. Culturally diverse events are on display in the entrance area, and student work and posters in several languages for student clubs are posted in the hallways.

A visit to the school on November 19, 2014 revealed two classes comfortably working on computers and at tables in the Learning Commons, a learning center with Wi-Fi, computers, books and comfortable seating that students use for social and academic purposes. Teachers moved between tables, checking in with students who were working in groups or filming short interviews with their iPads in quieter corners and the nearby cafeteria. Two students provided peer support for iPad-related issues at a “genius bar” near the entrance. Along the front wall, a stopwatch was projected onto the screen, counting down to the end of project work time; the screen was surrounded by two dozen student portraits showcasing the school’s student diversity.

Further down the hall, an ESL teacher used a smart board to lead a discussion, with students taking notes on their iPads. In an ELA inclusion classroom, 10<sup>th</sup> graders used their iPads to complete an activity guide as they rotated through learning stations that included videos and printed documents about race in post-Civil War America. In a sheltered math classroom, iPads, each with a unique cover, formed an untidy heap on a cart near the door, while students worked with pencils and paper to solve equations in groups.

Throughout the school, students demonstrated respect for each other and a positive repartee with teachers and staff. They were comfortable explaining their ongoing projects to observers. When students changed classes, the hallways filled with noisy conversation in several languages, as well as reminders and greetings from teachers.

Soon after the 2:20 bell, students began to arrive for the Newcomers Academy, a program aimed at students with interrupted formal education or emergent literacy skills. The PHS Community School was also in session later in the evening, offering ESL, citizenship and high school equivalency preparation classes to more than 200 adults, including many parents of students in the school.

**Process of adoption of flipped learning:** Patriot High School introduced flipped learning as a part of a student-centered approach to supporting the academic achievement and college readiness of its diverse students. PHS began implementing flipped learning with the freshman academy in 2012-13 and expanded the effort the school-wide in 2013-14. The effort continues to evolve. At the time of observation, all students had “rented” iPads, the most visible symbol of flipped learning. Perceptions among faculty of how flipped learning was introduced diverged. One of the teacher leaders who had been involved with the freshman pilot of flipped learning reflected on teacher perceptions:

“It started with a group of teachers, myself included, who wanted [flipped learning] and were experimenting with it and took it to the next level. It would be hard to kind of go in, from an administrative point of view, and tell everybody to start flipping their classroom. And I think that a lot of the teachers here felt that last year—at the end of last year and the beginning of this year—and they resisted. They missed this explanation that it was teacher-led and that we figured this out and that we wanted this and it made a lot of sense and that’s why the administration was asking everybody to do it.” (Interview, April 16, 2014)

Despite initially mixed perceptions as to whether the initiative was top-down or bottom-up, flipped learning has since taken root, and teachers related a sense of ownership of the initiative by the end of the 2013-14 school year, using terms such as “teacher-led”, “teacher-directed”, and “collaborative” to describe their current work with flipped learning.



## A Situated Definition of Flipped Learning

When asked how they define flipped learning, school stakeholders members described several core characteristics, but their definitions also revealed immense variability. The official working definition of flipped learning at Patriot High School is: a dynamic student-centered approach to teaching diverse students that may draw on technology to support student learning, participation, and assessment. The following sections describe additional themes that emerged in more detail.

**TABLE 2. A SITUATED DEFINITION OF FLIPPED LEARNING**

<p>◆ <b>Dynamic teaching and learning process</b></p> <p>Teaching and learning are not static. Learning develops in an exciting here-and-now context that allows for unplanned pedagogical moments in addition to structured learning activities. Over time innovative teaching practices are developed and taken up more broadly across the school community as teachers actively engage in their own praxis.</p>
<p>◆ <b>Student-centered learning</b></p> <p>With teacher guidance, students take ownership of their learning and assessment. Students engage in learning through different modalities and have opportunities to monitor their own progress. Interactions among peers and between students and teachers, often mediated by technology, supports learning within and beyond the classroom. Student interests and student choice influence what is learned and how it is learned.</p>
<p>◆ <b>Technology as facilitator of learning</b></p> <p>Although technology, particularly iPads, are symbolic of flipped learning in the school community, the use of technology is optional in supporting student-centered teaching and learning.</p>
<p>◆ <b>Differentiated instruction for diverse students</b></p> <p>Teachers and students are able to support individualized instruction, assessment, and pathways through learning including students with different levels of English proficiency.</p>

**Student centered learning:** The student-centered aspect of the flipped classroom emerged as the core of the teachers’ discourse about flipped learning. PHS educators understand flipped learning to include a set of student-centered practices that allow students to take ownership of their learning and assessment, to engage with content through different modalities, to make choices about their learning based on interests, and to monitor their own progress. Interactions among students and teachers, mediated by technology, supports learning within and beyond the classroom.

Stakeholders articulated as a shift in student/teacher roles that put students in charge of their own learning. Teachers talked about increased “student agency,” “student accountability,” “student responsibility,” and “investment in students’ own learning.” They described using project-based instruction, experiential learning, and flexibility to allow students to move at their own

pace and increase student-to-student and student-teacher interaction. In their interviews, teachers frequently repeated a goal of making most of the class time teacher-facilitated, rather than teacher-led. One teacher explained, “Eighty percent of the time it’s student-centered, and twenty percent of the time is teacher-led, because we know that, as educators, we need that [teacher-led] time to either do the whole-class review, or set up instructions, or make sure that we clear up any questions” (Interview, April 15, 2014). Another teacher explained that the instructor’s role is to come in when “[students] are at a point where they can’t deconstruct for themselves or piece it together themselves or there isn’t a student mechanism to figure it out for each other” (Interview, April 15, 2014).

Teachers reported having conversations with their students about the shifting roles. One teacher said that a student had told her, “You don’t teach us anymore”



(Interview, April 15, 2014). Classroom conversations about taking ownership of one's own learning and creating student accountability were an important part of the process.

*Teachers said they knew that their classrooms were student-centered when they saw students taking charge of their learning. One teacher explained: "If you're seeing those things happen, then you are getting towards the student-centered classroom, which flipped-learning is a means to do" (Interview, April 15, 2014).*

Students were described as more proactive and more invested in their own learning, with flipped learning providing them the "avenues" or "tools" to arrive at the desired learning goals. As one teacher shared, his best classes are when he "just sits back and watch them do what they're going to do. And then oftentimes I want them to argue the points of knowledge that they've brought to the table. Providing them the avenues in which to find those resources or find that information is just as important as lecturing" (Interview, April 15, 2014). Another teacher related that he knows his classroom is flipped when "[students] are the ones asking inferential, deeper questions and evaluating the content, rather than me being up at the front guiding them" (Interview, May 6th 2014). Yet another teacher talked about student-driven inquiry: "You see students delving deeper into a point, when they become individually curious, when they get more inspiration to conduct their own research, when they share their work with everybody, when they post on Schoology from home" (Interview, April 15, 2014).

**Technology as facilitator of learning:** Although technology, particularly iPads, are symbolic of flipped learning in the school community, the use of technology is optional in supporting student-centered teaching and learning. The characteristic that strikes a visitor upon entering Patriot High School is that all students hold iPads. In the hallways, in the Learning Commons, and in the classrooms, students are constantly with their iPads, working independently or in groups. Many students use iPads to play games or connect to social networking sites. One English learner noted that iPads are both an advantage and disadvantage; they can help with work but can also serve as a distraction.

It's important to note that technology does not necessarily lead to more student-centered learning, and researchers saw significant variation in how technology was used in PHS classrooms. Technology was only one of many hundreds of factors that the school community identified as important for moving students and teachers towards more student centered, competency based learning. Many teachers described their initial impressions of flipped learning as having to do with technology, in part because the roll-out included introduction of iPads for all students. One teacher said,

"I thought, at first, that flipped learning was making videos so that kids could do work at home [and] more time in the classroom could be spent actually doing group work. The way it was presented was very technology-heavy" (Interview, May 6, 2014). Soon, however, it became obvious that flipped learning was not solely about technology. As teachers took ownership of flipped learning and deepened the conversation, they began to see technology as one means to facilitate student-centered learning.

The uses of technology varied widely across observed classrooms. Some teachers heavily integrated iPads (monitored or unmonitored) into instruction, while other teachers collected them at the beginning of the class to avoid distraction. In ESL classrooms, iPads were often used as translators. In discussions with the teachers, some admitted that they did not know how to navigate the iPad well enough to check what students were doing. In our observations, we noted that students were not always on task; there were many instances when students used their iPads for activities unrelated to the class. In our discussions with students, they were excited to show us software applications, particularly Schoology, the main learning management platform used in Patriot High School. They were quick to that even though games and social networking sites are blocked, they find ways to circumvent the blocking and access their favorite apps. Students agreed that iPads were more likely to be distracting when the class was not challenging. One student explained, "The iPad is also very distracting if the class becomes too easy" (Interview, May 20, 2014).

The majority of teachers agreed that flipped learning can exist without the technology and that their implementation of iPads is a work in progress. One noted, “We’re using the technology not for technology’s sake” (Interview, April 15, 2014). Another added, “We’re using the iPad as a tool, and you can do all of this stuff without it. It just enhances what you’re able to do” (Interview, April 15, 2014). While technology is not a requirement for flipped learning, it nevertheless proved to be a helpful tool. Technology, as embodied in iPads, facilitates flipped learning in a number of ways. It allows for a more even class flow, providing students “the opportunity to consult their iPads about a question... [rather than] disrupt the class” (Interview, April 15, 2014). Technology also extends class time beyond the traditional school day, such as when teachers want to link classroom conversations to current events:

Some of the kids think of something after the fact. They’re posting it on the discussion board... My kids watching a debate of the State of the Union address, you put up the discussion board, they’re commenting live, right then and there. And that gives them an opportunity to look for that feedback that they would’ve had to wait ‘til the next day and then it’s gone. (Interview, April 15, 2014)

Technology further provides a repository of information and materials, including PowerPoint presentations, videos, notes, and assignments that students and teachers have immediate and sustained access to.

### **Differentiated instruction for diverse students;**

Flipped learning enhances differentiated instruction and assessment by allowing teachers to work with different groups of students and meet their learning needs in more personalized ways. Teachers and students are able to support individualized instruction, assessment, and pathways through learning including students with different levels of English proficiency. Many teachers put class content on Schoology so all students had sustained access to the material and could work at their own pace and in their preferred ways. As one teacher noted, “Some kids want to take the hard copy notes, some kids want to take the notes on the iPad. Other kids just want to sit there and absorb, whether it be from

me, or from their classmates, or the discussion” (Interview, April 15, 2014).

The availability of different modalities (e.g., text, video, audio) affords students multiple entry points to course content. A teacher reflected, “If that modality works for [a student], that’s your learning model, and it might look different on the outside, but, in essence, the objective it’s trying to get at is the same” (Interview, April 15, 2014). Another teacher described bringing in a wide range of resources to support student learning:



“...Oftentimes I want (students) to argue the points of knowledge that they’ve brought to the table. Providing them the avenues in which to find those resources or find that information is just as important as lecturing” (Interview, April 15, 2014).

“With this model and so much differentiation that’s involved, as you get to know the kids a little bit better and their strengths and weaknesses, you can tailor lessons at given times to benefit one group of kids on that given day over another. Everybody’s getting something out of it, but maybe not the same group in time” (Interview, April 15, 2014).

Another teacher added:

Students engage in a lot of self-reflection and need less corrective feedback from the teacher as they realize on their own what needs to be “fixed.” They can self-assess when, for instance, they record themselves with their iPads. This way they can take it home, watch it individually, or watch it during practice, and hear and see for themselves what we all hear and see (Interview, May 6, 2014).

Technology supports learners at different skill levels as well. An administrator described witnessing how technology facilitates differentiation in a foreign language class made up of more advanced native language speakers and students who were completely new to language. She noted, “[Heritage language speakers] could do more challenging work. Another group needed to be assisted more, and I saw different things...happening, engagement with students at different levels in the classroom” (Interview, March 11, 2014).

**A dynamic teaching and learning process:** Teaching and learning are not static. Learning develops in an exciting here-and-now context that allows for unplanned pedagogical moments in addition to structured learning activities. Over time, innovative teaching practices are developed and taken up more broadly across the school community as teachers actively engage in their own praxis. Flipped classrooms are not static and may appear messy and unstructured to an outsider. While not a trend across the board, in the majority of classrooms observed, students moved around, held discussions in small groups, and talked to the person next to them. There was always something happening. Teachers reported that students often intervened and changed the direction of the lesson. One teacher leader noted that, “A lot of times when I let the kids just kind of control the class to learn how they want ... they go in a different angle than what I was thinking” (Interview, April 15, 2014).

The “here-and-now” aspect of flipped learning was stressed by both teachers and students. One teacher noted, “At the heart of the idea of flipped learning is re-assessing what happens in the classroom versus what happens outside of the classroom” (Interview, April 15, 2014). Teachers found that students benefited when they did the harder, more complex work in the classroom with the teacher present. Students have the opportunity to voice their confusions and misconceptions in class, and teachers learn more about their students and discover new ways to help them through a dialectical teaching and learning process.

The non-static nature of flipped learning can be also seen in moments when students pursue their own interests. A teacher explained:

“Maybe you don’t know the answer to the question, or they want more information so they can frame a better argument... The iPad gives them the opportunity to, right then and there, to kind of craft their information and engage [with] it and [decide] how and what they’re going to do with it, but then it also encourages them to boil it down and [decide] how then to present it.” (Interview, April 15, 2014)

The dynamic character of flipped learning also contributes to fewer “missed” pedagogical moments. Since students can access class lectures in video format, they can re-play content they have missed at home.

Flipped learning is a dynamic model that transforms the school community over time. As teachers actively engage in their own praxis, innovative teaching practices are developed and spread more broadly across the school community. The shared understanding of flipped learning changes and develops as a result. This dynamic quality is evident in the contrast between the school’s initial definition of flipped learning and the situated definition that developed over time. Early on, a letter from the principal to the school community announced this new way of teaching and learning as follows:

*I have certain kids that will do a lot of independent work on their own because they become more interested in something as they learn something, or I’ll start to see, you know, all of a sudden, one person at one table will do something, and then everybody at that table might do it. But then, somebody else might add something that’s a new twist, and the project’s changed. (Interview, May 6, 2014)*

In a Flipped Learning model, the direct instruction, or “lecture,” portion of the class will be given to the student via videos that are to be viewed at home. Student homework will be to actively view videos created for the particular lesson they are studying. Students may pause the videos or re-watch as many times as necessary. While watching these clips on their iPad or computer, students will be answering guided questions provided by their teacher. Our valuable class time at school will be used to hone skills introduced during these “homework” videos. Students may proceed at their own speed through lessons. Teachers are able to provide more one on one or small group interaction. (Fieldnotes, January 29, 2014)

Initially iPads were presented to the school community as a central tool for learning and many teachers thought that flipped learning was mainly about creating videos that students could watch at home. As the initial

technology-centered discourse gave way to more talk about student-centered work, teachers found that they had already been working toward flipping their classrooms. Reflecting on changing practices and ideas about flipped learning, teachers agreed that the transition into flipped learning takes time and is an ongoing process. Teachers noted the changes in their classrooms even as they thought ahead to where they would like to take their classrooms in the future: “I’m slowly doing stuff that I didn’t do last year, and I know next year I’m going to look back at what I did this year

and be, ‘OK, I’m gonna do this; But I’m not gonna do that.”(Interview, April 15, 2014). As teachers took ownership of flipped learning and defined it as more than using technology, innovative teaching practices took root. Teachers and administrators noted that the transition into flipped learning is neither linear nor even: “Some teachers are slower to implement flipped learning, or, introduce some of the technology in their classes. But that’s normal. It takes some time and not everyone’s jumping into it” (Interview, Administrator, March 11, 2014).

### *School Context Factors That Support Flipped Learning*

The research team sought to understand the factors that influenced the adoption of flipped learning at Patriot High School and identified a range of factors, including broader school structures, approach to professional development, and relationships with families.

<b>TABLE 3. SCHOOL CONTEXT FACTORS SUPPORTING FLIPPED LEARNING</b>		
<p><b>◆ School Structures, Culture, and Investments</b></p> <ul style="list-style-type: none"> <li>Block scheduling</li> <li>School safety</li> <li>Investment in technology</li> <li>Stability of school community</li> <li>Committed school leadership</li> </ul>	<p><b>◆ Professional Development and Teacher Leadership</b></p> <ul style="list-style-type: none"> <li>Sustained, differentiated professional development</li> <li>School-wide resource sharing</li> <li>Peer support</li> <li>Time for collaboration</li> </ul>	<p><b>◆ Parent and Community Resources</b></p> <ul style="list-style-type: none"> <li>Parental support for homework</li> <li>Parental participation in schooling</li> </ul>

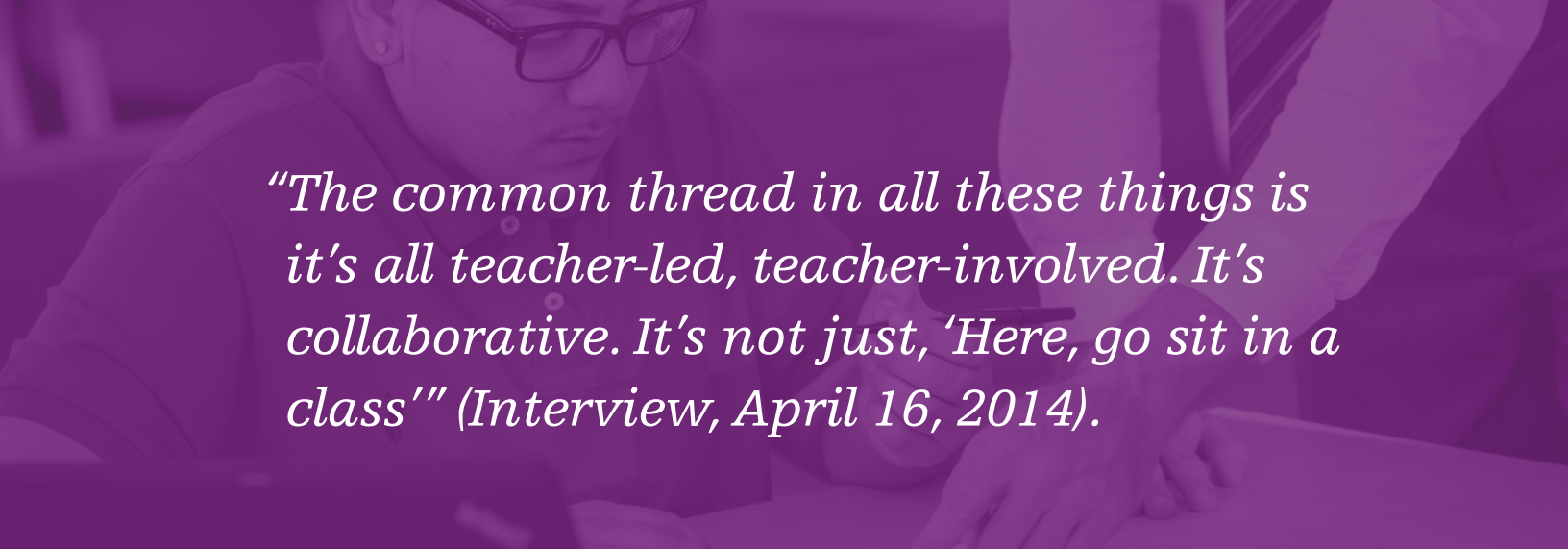
### *School structures, culture, and investments.*

Teachers highlighted a number of resources and structures in the school community that support their innovative work with flipping learning (see Table 2). Emphasizing a situated definition of flipped learning as a dynamic implementation process, some of the resources they discussed resulted from long-term investments that predate the school-wide implementation of flipped learning, while others were developed during the 2013-14 and 2014-15 school years.

Block schedules, in which class periods are lengthened to 80 minutes, minimized time lost in transitioning between classes and created space in classrooms for projects and group work that were difficult to accommodate in traditional 45-minute periods. As one teacher reflected, “When we switched to block

schedules, I feel like the majority of teachers, in order to adapt to a block schedule,... had to naturally make it more student-centered to engage [students] for eighty-plus minutes every day” (Interview, May 6, 2014).

Many school policies, including block scheduling, contributed to a secure school where teachers and students were able to concentrate on teaching and learning. Several teachers referenced school safety as a factor that enabled them to work with students on academic rather than behavioral issues. For example, one teacher compared her experience at PHS to working at another high school: “The level of support that teachers are given, the level of what the expectations of students are behavior-wise is high” (Interview, December 04, 2014). This teacher’s emphasis on high expectations for all students was reiterated by many teachers and was noted in school observations.



*“The common thread in all these things is it’s all teacher-led, teacher-involved. It’s collaborative. It’s not just, ‘Here, go sit in a class’” (Interview, April 16, 2014).*

**A**nother frequently cited contextual support for flipped learning was the school’s investment in technology and a general understanding that instruction via technology is important for reaching 21st century learning goals. Teachers referenced a longstanding commitment to technological resources from district and school administration; they cited examples of these investments, such including the student computer lab, Wi-Fi, computer carts, the Learning Commons, smart boards, and computer programs that they had requested and received for work in their classrooms. Teachers also identified a continued need to improve the technological capabilities of the school, particularly the inconsistent Wi-Fi access. As one teacher commented, “It’s hard to streamline technology for eighteen hundred students and a hundred-plus faculty. Just keeping it consistent is really difficult. Things don’t always work” (Interview, May 6, 2014).

The stability of the school community played an invisible, but vital, role in supporting the development of flipped learning as well. The continuous investment of the staff in professional communities of practice produced deep knowledge-sharing and mentoring relationships that supporting implementation of this new model. The administrations’ long-term commitment to flipped learning allowed teachers to invest time and resources in developing their instructional practices. Teachers felt that flipped learning had been successful in part because of a sense of “trust that we’re going to stick with the direction, that flipped learning isn’t the flavor of the day” (Interview, May 6, 2014). Even with such stability,

however, teachers worried that external forces, including changes in the state’s standards and assessment system, could disrupt their trajectory: I know that there’s got to be some hesitation on everybody’s part because, how does [flipping our classrooms] impact the Common Core and how does the Common Core impact this? And what’s happening with the MCAS and what’s happening with the PARCC assessments? And, you know, our district, as a Title I district, has to be money-driven and money comes from test results. (Interview, May 6, 2014)

The risk of pedagogical innovation was raised at many points in our conversations with teachers and other stakeholders. Some teachers wondered about how their flipped classrooms would be assessed: “[We’re] trusting that evaluators know what flipped learning looks like so if they see it in your classroom, they understand what’s happening” (Interview, May 6, 2014). Other teachers wondered if parents understood that they were still teaching their students, even though they were not lecturing. Parents and students wondered if flipped learning, while engaging students in learning newer, technology-related skills, might not be neglecting other skills. A student commented:

“When I write [on the iPad], it has auto-corrector and other things, but if I write it myself [on paper], I’m going to learn a lot more” (May 20, 2014). Parents in our study similarly questioned the dependence of students on technology. A parent wondered if the iPad was not problematic for student learning: “One asks them to mentally add and they are not able to do it because the tablet does everything for them” (Interview, October 1, 2014).

Trust in school leadership was an important context factor, given the uncertainty the educators felt as they took pedagogical risks to implement flipped learning.



One teacher reflected: “I think it’s because the administration—both at the central office level and [the principal]—really know that we’re doing something new and taking some risks and they’re throwing around the word innovation, that we’re going to be at the forefront of this. So I think that they were prepared to be uncomfortable” (Interview, May 6, 2014).

**Professional development and teacher leadership:**

Teachers stressed the importance of sustained and differentiated professional development in implementing and maintaining flipped classrooms. School-wide professional development (PD) and trainings, including a “Foundations of Flipped” course in 2013-14, were viewed as valuable basic support that unified teachers, especially initially. One teacher noted that because of the common introductory course “everybody had a foundational knowledge and understanding of what flipped learning was” (Interview, April 16, 2014). Teachers also referred to school-run PD sessions, webinars, a course run on Schoology (the school’s the main learning management platform), and a partnership with Pearson Learning. Teachers highlighted the need for building on that initial professional development to meet the changing and varied needs of teachers over time. One teacher said

The emphasis is on *continued*. I think we can sing praises to a lot of what we’ve done, but it’s got to take on some differentiation for our staff. It needs to be practical to what they feel they need at that moment. And we need to make a concerted effort to continue this moving forward, because it’s not a one-year [endeavor] (Interview, April 16, 2014).

Teachers described the availability of shared resources as critical. They discussed attending conferences on flipped learning and doing site visits to other schools that used technology in innovative ways in order to share what they had learned with the PHS community. Several teachers mentioned the importance of disseminating ideas and resources by bringing experts in or by sending groups of teachers out to bring resources back. Teachers also described the value of sharing promising practices within PHS. One teacher said:

They had a bunch of resources that they frontloaded, and now you’ll find that somebody, if they have either a

question or an idea, that’ll just pop right up and it’ll come through your email, so you’ll know it’s there and then you can go access it. So, there’s definitely a lot of, ‘I discovered this that’s working really well’, or ‘I’m struggling with this and does anybody have any ideas?’ (Interview, May 6, 2014).

Another teacher discussed how colleagues are in the habit of sharing lessons and ideas, often through online communications:

*We have a group of us who are posting once a week about a flipped-learning topic. It just so happens a lot of people are sharing what they’re doing, which is really cool. A lot of people are just doing a little write-up about a lesson they did, or how they’ve struggled with something, to keep that conversation going, you know. (Interview, April 16, 2014)*

Teachers in this study strongly advocated teacher-led mentorship and professional development. One explained, “The administration can put a definition on [flipped learning] and can say what it is, but it’s totally different. You need the teacher-leaders who are willing to experiment, try, lead, and share” (Interview, April 16, 2014). Other teachers highlighted the importance of communities of practice in their school: “It’s a lot of sharing between colleagues. That’s what it ends up being” (Interview, May 6, 2014). As one teacher summarized, “The common thread in all these things is it’s all teacher-led, teacher-involved. It’s collaborative. It’s not just, ‘Here, go sit in a class’” (Interview, April 16, 2014).

Teachers expressed a sense that there were many avenues to access support. For example, they mentioned the leadership team that had been formed to guide and support teachers in adapting flipped learning, the school’s flipped learning coaches, as well as a Schoology course, and common planning time as some of the more structured ways that they connected to peers and solved common challenges. They also discussed informal networks with friends, the teacher next door, and within their departments. Teachers described the school’s Professional Learning Groups (PLGs) as vital. One teacher said, “We have PLG time, Professional Learning Groups that meet twice a week in the morning that are by subject, so that gives us time to collaborate and maybe create lessons” (Interview, April 16, 2014).

Despite these many resources, teachers still found it difficult to balance the time needed to flip their classrooms. One said, “Teaching for an eighty-minute block in itself requires so much planning, and now teaching an eighty-minute block where you’re differentiating for different groups of students takes ridiculous amounts of time” (Interview, May 6, 2014).

**Parent and community resources:** Parents were included in decision-making around flipped learning through the PHS School Improvement Team and the Parent Teacher Organization. Information on flipped learning was also available on the school website in several languages. Despite the information that was sent home and available online, none of the parents in our study had read anything in their own language about the changes taking place at the school. Two of the parents said that they had received information in English but had not been able to understand it. Immigrant parents in our study did not use the term flipped learning to talk about teaching and learning at PHS; they discussed the iPads, noting that friends were often jealous that their children were in a school with such a forward-looking resource. Parents were overwhelmingly positive about the education their children were receiving at PHS. One parent told us, “My daughter is happy here, the teachers are great and she loves them, she has friends” (Interview, October 1, 2014).

Because of the emphasis on technology, however, parents found their role in supporting their children’s education diminished. All of the parents in our study agreed that the iPad presented a barrier to physically checking their children’s homework. One parent expressed a common frustration: “Sometimes parents want to check their homework, and we cannot see the homework even if it’s right there [on the iPad]” (Interview, October 1, 2014). Parents also found that they were less able to monitor the amount of time their

children spent online and on homework. One parent explained, “He always says he is doing homework.” Parents were not convinced that the time their children spent using the iPad was time spent learning. A parent reflected: “We were taught that one had to concentrate to do homework. The iPad is a distraction for kids. They can text, tweet, use Facebook and Instagram” (Interview, October 1, 2014). What homework parents were able to see did not seem as cognitively demanding as they expected. One parent commented that the short answers her daughter entered into a worksheet did not seem grade appropriate; she said, “I think that if I take my daughter back to my home country, she wouldn’t even be placed in second grade” (Interview, October 1, 2014). Another worried that the iPad technology was neglecting skills necessary for her

daughter’s writing development:

The iPad helps them to translate, it helps them a lot to comprehend, to make a sentence correctly because it translates everything for them, quickly. And those are valuable things they need to learn. We are here to learn English correctly, and I think

[students] are losing out because I ask my daughter sometimes to help me to write a correct sentence and she can’t. (Interview, October 1, 2014)

Our research suggested that parents are an untapped resource for deepening student learning. Teachers characterized their relationships with parents as “respectful” and “appreciative” but “uninvolved,” recognizing that for many immigrant parents in particular, it was difficult to connect at school due to work schedules, language barriers, and lack of awareness about the active role parents can assume in their children’s public school education in the United States. A teacher of English learners described her interactions with parents as limited, saying,

*All of the parents in our study agreed that the iPad presented a barrier to physically checking their children’s homework. One parent expressed a common frustration: “Sometimes parents want to check their homework, and we cannot see the homework even if it’s right there [on the iPad]” (Interview, October 1, 2014).*



*“Unfortunately, because either the timing is bad or they’re shy about coming because they’re English isn’t very good, I don’t really have much feedback from parents” (Interview, May 7, 2014). Students agreed that the onus for understanding students’ day-to-day learning experiences was on parents. One English learner said, “The school often has meetings, so if parents come to the meetings and speak with the teachers, they will know about the reality of what we are learning, but it depends on the parents one has if they are informed or not” (Interview, May 20, 2014)*

The staff identified parent engagement as an area to work on moving forward. As one teacher leader explained:

We did send home a parent letter at the beginning of the year with resources about...flipped learning and what does this look like. We had a few community events that were moderately attended. We did one at parent-teacher conferences. So, we’ve made some attempts, but I think if you’re going to totally transform what “playing school” means, that means talking to the parents and involving the parents on a whole new level. (Interview, April 15, 2014)

Participants agreed that when parents are able to monitor their children’s homework and participate in conversations about their schooling experiences, students and the school benefit.

### *Flipped Learning with English Learner Students*

Observations of different types of classrooms serving English learners revealed a diversity of approaches to flipped learning, similar to the range observed in other classrooms, and teachers of English learners expressed a range of comfort levels with the shift to flipped instruction. In fact, many teachers made the case that they had flipped their classrooms long before the school officially implemented flipped learning. A teacher noted:

This was always a natural way of learning and, as a teacher, I felt like it made a lot more sense for the students to do more discovering on their own than me telling them everything. So, I haven’t really taught [in a

traditional] way for a long time because it just didn’t really work for me. I guess now it has a new name, but it’s just, it’s what I’ve been doing. (Interview, April 15, 2014)

Some ESL teachers explained that they had been doing project-based or communicative-language teaching, approaches that emphasize interaction, and flipped learning fit well in that context.

While some teachers integrated technology heavily into instruction, using iPads, Schoology, and smart boards, others collected iPads at the beginning of the class to limit disruption. One teacher confided, “iPads drive me crazy. They are an incredible distraction” (Fieldnotes, February 26, 2014). Still other teachers of English learners integrated technology into their classrooms, while maintaining a traditional teacher-directed classroom structure, using iPads in place of worksheets or using Rosetta Stone software to create a language lab-type setting in which students worked independently under headphones.

One area where observers found consistency was in the use of technology for translation purposes. Even teachers who preferred to use print materials agreed that iPads were helpful for translation. Our observations routinely showed students using iPads and phones (to avoid switching out of a document on the iPad) to translate a variety of texts with applications such as Google Translate and Photo Translator. Translation tools often helped students to follow along and not get lost due to comprehension breaks. The ability of technology to translate large amounts of text foregrounded the use of students’ native languages in the classroom, with the native language was routinely referenced as a resource for learning.

An administrator commented on the range of implementation in classrooms serving English learners, noting that: “In the ESL classrooms it’s a little different. I may not have seen as much, but the use of technology is prevalent. I do see a lot of iPad usage, and I’m very pleased to see our ESL students not segregated, but included” (Interview, March 11, 2014). Teachers of English learner students agreed that they felt part of an inclusive whole-school conversation about flipped learning and language learning.

Teachers of English learners across classroom types agreed that flipped learning should not look different for this population, compared to English-proficient students. They stressed how differentiation within a flipped classroom supported every student. The most visible affordance of flipped learning for English learners was their immediate and sustained access to a wide range of online resources, which enabled independent access to course content (including being able to re-watch videos or podcasts and posted classroom discussions), multimodal content, and translation support. Teachers put materials on the Schoology platform so that students could access outside of class time and watch or listen as many times as they wanted. Replaying videos and podcasts helps English learners to better prepare for class. As one student notes,

“There are ways where [teachers] give you the lesson before you get to the class by videos we see before you go to class, so you know what you’ll learn, so it’s easy, way easier to teach you because you have the idea” (Interview, May 20, 2014).

Students also used video and audio to create their own learning materials and take control of their learning. A student commented on the value of technology for practicing oral language, explaining, “We practice how to speak when we record in the iPad. We read and we take ideas, so that helps because some word that we don’t know we look in the paper and we record” (Interview, May 20, 2014). Teachers commented on the use of translation tools and a variety of applications, all of which facilitated comprehension and critical thinking. One teacher found that it was particularly helpful to create videos with closed captioning because “they hear a word [and] they might not really understand what that word is, but if they also see it, they can look it up or even just by seeing it, they might understand better what that word is, which is helpful for ELLs more so than for native speakers” (Interview, May 6, 2014). Immediate and sustained access to a plethora of resources and content enabled English learners to pursue their own interests more independently.

## TABLE 4. AFFORDANCES OF FLIPPED LEARNING FOR ENGLISH LEARNERS

### ◆ Immediate and Sustained Access to Content

The availability of online resources enables greater access to course texts (including the option to rewatch videos, podcasts, and posted classroom discussions), multimodal content, and translation support. Access to online resources also supported differentiation of content and allowed students to pursue their own learning interests.

### ◆ Redefined Student-Teacher Relationships

The availability of the teacher during class time and greater access to the teacher outside of class redefines the student-teacher relationship as one built on caring and greater awareness of what is happening in students’ lives inside and outside school.

### ◆ Differentiated Assessment and Self-Assessment

Students are able to reflect on their own learning through self-assessment. Teachers are able to differentiate assessments while maintaining high expectations for all students.

### ◆ Opportunities to Learn and Use Academic English

Increased interaction in and out of classrooms provides English learners with more opportunities to use and learn academic English in meaningful contexts.

In flipped classrooms, English learner students have more access to the teacher during class, often when they are working on projects and worksheets. At the same time, teachers note that they get to know their students better. In many instances, they discovered personal stories about their students’ lives and living situations. The greater availability of the teacher during class time and greater access to the teacher outside of class redefined teacher-student relationships and helped to foster teachers’ awareness of what was happening in students’ lives inside and outside of school. Teachers reported often acting as advocates for students in and beyond the school.

One of the least visible affordances of flipped learning for English learner students was the opportunity for differentiation. Teachers described being able to differentiate assessment as well as content for English learner students at very different levels of English proficiency and with disparate content skills. Teachers also described practices that led students to reflect on and assess their own learning, such as reflective journaling, Do Nows, videos, and self-graded exams

One teacher explained:

I realize that [flipped learning] is working is when I don't have to correct the students. They realize what they need to fix without me having to say a word. I have them do a lot of self-reflection because they do individual performances, group performances, things like that. And I'll have them record themselves with their iPads. This way they can take it home, watch it individually, or watch it during practice, and hear and see for themselves what we all hear and see. (Interview, May 6, 2014)

Finally, the increased quantity and quality of interaction in and out of classrooms provide English learners with more opportunities to use and learn academic English in meaningful contexts. Group work as part of the student-centered flipped learning was particularly beneficial to English learner students. One student explained that:

There are also times when the teacher gives us work, like a medium project...and gives parts to each one of us. So she gives a part in every group, and we have to do this particular part, and the other group does the other part, and we put them together and we discuss what the other group did well and things that are not in line with the project, and this is good because it helps one to understand the other people. (Interview, May 20, 2014)

Not only were the deepening of relationships with teachers and increasing of time for interactions with peers in student-centered learning activities important, but the amount of time students had and the type of

texts that technology brought into classrooms also facilitated deep, academic conversations. An administrator described the time spent in flipped classrooms as “powerful” in the way that, “Teachers have time to teach certain themes or aspects and students have more time to spend on that topic” (Interview, March 11, 2014).

### *Innovative Practices for English Learners*

To illustrate how students and teachers created and used the affordances of flipped learning in their classrooms vignettes of three representative innovative practices are described. Technology, including video lectures that could be viewed at home, were but one of many hundreds of innovative practices that the school community identified as important for moving students and teachers towards more student centered learning. These innovative practices included student-directed research projects, brainstorming activities, multimodal learning stations, homework time during class, field trips, creating videos, directing plays, differentiated assessments, creating study guides, collaborative



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research projects, student-curated galleries, open-ended assignments, blogs, self-reflection and self-assessment, student-generated questions, reciprocal reading groups, recorded videos of teacher lectures or instructions and many more. The three vignettes that follow demonstrate several innovative ways that teachers made effective use of flipped learning to benefit English learners. Each vignette may illustrate several points.

### Vignette 1: Do Now with iPads

Fifteen English learners enter their sheltered US History class, where the teacher greets them and helps them settle into their seats. The smart board at the front of the room shows a Schoology page with the prompt, “Which of Lewis and Clark’s jobs was the most important? Why?” Students log onto their course page and found the Do Now page for the day. Some get to work independently, while others talk with neighbors in English and other languages. Some students use Google translator to look up words they don’t know.

After a few minutes, the teacher refreshes the Schoology page to show posts from half the class on the smart board. He leads a discussion of students’



“Before the iPads, we would have a small informal discussion, or I would have them respond in their history notebooks. The technology helps to streamline the process. I can see all the responses in one place and see which students understand the material and can express their ideas” (Interview, October 26, 2014).

answers, “liking” each as he reads them aloud. Students follow along on their own iPads or the projection. Student responses vary in their linguistic complexity. For example, one student wrote, “I think the most important job for them was to draw a map, because they had no idea where they were going, and at the same time they had other jobs to take care of. And there were only three people and a lot of land to cover.” Another student wrote, “Draw maps so they could make routes.”

Students do not all agree that mapmaking was the most important job in the expedition. Recalling the primary documents they had read the day before, some students argue that the most valuable job of the explorers was to discover new plants and animals, while others think that, “The most important thing is to meet new people maybe they can trade [with] each other.” The teacher calls on students to explain and expand on their answers, asking questions to check for

understanding, and calling on students who had yet to post. Within 10 minutes, the Do Now is complete, every student having answered the prompt. The class moves on to analyze an entry from Clark’s journal. (Fieldnotes, October 23, 2014)

Most teachers at PHS use Do Nows as part of their daily routine to activate student background knowledge, but the activity looks different in every class. Some teachers used worksheets, review problems, reflective journals, or self-reflection on a test or project students had completed the day before. This teacher used a discussion question related to the notes from the day before to review and reconnect with the previous day’s learning. The teacher explained that while technology

was not necessary for students to complete the Do Now, it added functionality to the activity, making it more student-centered. The technology scaffolded comprehension and language production for students with less advanced academic English skills, allowing them to view peers posts, use translation support, and have access to their written response to support sharing orally. The teacher noted:

Before the iPads, we would have a small informal discussion, or I would have them respond in their history notebooks. The technology helps to streamline the process. I can see all the responses in one place and see which students understand the material and can express their ideas (Interview, October 26, 2014).

This online format allowed the teacher to quickly assess comprehension and use of key academic language to inform his instruction. In the class the day before, student responses to a Do Now had prompted him to review key vocabulary and discourse structures found in explorers’ journal entries before moving into the planned activity.

Through the Schoology platform, students have access to the class posts through the end of the course and can access this resource as needed. This particular teacher shared his success using the Schoology “wall” to facilitate student discussion with other teachers, and observers noted several instances of this innovative practice throughout classrooms at PHS.

### **Vignette 2: Video-Recorded Instructions**

Fourteen students are seated in groups of three and four in the learning commons, flipping through project packets. The class has been working on a research project called “A Historical Figure that Americans Need to Know” for a week. The teacher directs students to a YouTube video titled “How to do Our Annotations.” Students easily locate the link to the video on their class Schoology page and follow along as their teacher plays the video, pausing a few times to draw their attention to important features of her explanation.

The video begins with a shot of the same teacher saying, “Hi everyone. This video is going to explain what you need to finish for me by Friday.” Instructions are given for level one learners, then for level two, before the video shifts to show an example of an annotated article, where the teacher demonstrates annotating a printed article in three colors, saying, “I underlined the important information. Then I wrote a one sentence summary to annotate what I read.” The teacher spends a total of five minutes showing and discussing the video. The students then move to computers or search for articles on their iPads, using a list of websites on their project Schoology page, which is projected on the smart board at the front of the room. The teacher circulates among students, giving feedback and answering questions. (Fieldnotes, December 08, 2014)

The video is one way that this teacher increased the amount of instructional time available. She was able to spend more time on content-focused discussions and engage in extended feedback loops with students because she did not have to spend her time repeating the directions for the assignment.

For English learners, the multimodal approach was an important scaffold. Students could watch the video as many times as needed to support language learning and comprehension, and it empowered students to take control of their own learning. Practically, this practice also enabled students who had to miss class or had difficulty paying attention to catch up. The teacher explained that, “I told them the first day we started this, I was like, ‘You have a calendar. You know it’s due. If you’re not in school it’s all on Schoology. There’s no excuse” (Interview, December 3, 2014).

She went on to explain that this innovative practice was part of the way that she communicated high expectations for all students, while differentiating content for less proficient English learner students. She noted: “They’re all working at different levels, different times, and you can see that their actual graphic organizers when they start to write about the graph are a little different but all this prewriting is the same” (Interview, December 3, 2014).

### **Vignette 3: Reciprocal Reading**

Students in this upper level English as a Second Language class spend a full period engaged in reciprocal reading groups in preparation for making a video interviewed biography as part of a three-week research writing unit. Students use their iPads very little during this activity, instead focusing on four sheets that ask them to predict, question, clarify, and summarize leveled books on a historical figure. Students are deeply engaged in making sense of the texts, using iPads to look up words they don’t know, taking turns reading paragraphs out loud, and completing and discussing the reciprocal reading worksheets as they finish each page or chapter, depending on their comfort level with the text.

A group working on a Gandhi biography offered predictions such as, “I predict that the next chapter will be about him going to another place and there he’s going to want to change the laws,” and questions such as, “Why are they fighting now after all they have been through?” The teacher checks in with the groups as they work, asking questions to clarify and push their understanding of the texts. Students spent the majority of the 80-minute period thus engaged with peers, texts, and their teacher. (Field notes, November 19, 2014).

This teacher learned about reciprocal reading from another teacher who recommended this innovative practice in an email. The structure allowed her to hold all students to high standards and encourage students to self-assess their progress towards those skills. She explained:

[The students] are going to be encountering research in the science class. They’re going to have to do it in history class or in a mainstream English class. They

need to have these skills, they need to be exposed to that, but some kids are stronger at writing and reading than others. So, fortunately, they spread out and I could go around to each table and work individually on those skills with the reciprocal reading (Interview, November 19, 2014).

In addition to providing students with time to work with their teacher one-on-one, reciprocal reading allows students to interact with peers while analyzing academic texts. These interactions provide English learner students with opportunities to learn and use academic English in a meaningful context.

We embarked on this project with a somewhat limited definition of flipped learning as it emerged from review of existing literature. Some define a flipped classroom as one that uses videos lectures as at-home assignments, with students spending more class time in peer to peer and teacher to student interactions. While that notion of a flipped classroom refers to the practical and logistical considerations that underlie flipped learning, a broader definition of flipped learning encompasses a “pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage in the subject matter” (Talbert, 2014). Our research revealed several themes that enrich our understanding of what flipped learning looks like in practice in a secondary school and how this approach can be leveraged to enrich the learning experience of English learners in particular.

### *Five Themes of Flipped Learning*

**1. Flipped learning is not static.** In our observations of Patriot High School, we saw that flipping a classroom through new forms of technology does not necessarily lead to enhanced learning, and that flipped learning can happen even in the absence of some of these tools. Technology, including video lectures, was only one of many hundreds of factors that the school community identified as important for moving students and teachers towards more student centered, competency-based learning. The situated definition of flipped

learning in this study, then, does not depend on technology as previous definitions have. Crucially, this situated definition reveals the inherent student-centered nature of flipped learning that was largely missed or underemphasized in earlier definitions.

The situated definition of flipped learning at Patriot High School manifested itself as a dynamic, student-centered approach to teaching diverse students that may draw on technology to support student learning, participation, and assessment. This locally situated definition contrasts in several ways with the literature. First, the definition does not speak to broader teaching practices but rather takes shape in the specific institutional context of a single school and the here-and-now of a variety of classrooms. Second, because school life is embedded in a web of sociocultural norms and contextual factors, this situated definition allows for a more nuanced theory of practice, one that acknowledges the specific needs and characteristics of the school community. This definition is still taking shape as the school community transitions to flipped learning; it is not reflective of a finished product, but of an on-going process of teaching praxis.

**2. School context is important.** Patriot High School is an urban, demographically diverse school contending with familiar urban challenges, including a high poverty rate and a significant performance gap between English learners and their English-proficient peers. The school is also the site of an innovative initiative to improve the educational experiences of its diverse student body. In what many have called “subtractive times” for linguistically diverse students in public education (Gándara & Hopkins, 2010), this school community has sought to leverage the potential of flipped learning to prepare a traditionally underserved population for post-secondary education.

As implementation of the Common Core increases the academic demands on students, we need examples of schools that are able to support English learners in meeting these challenges as touchstones for policy and practice. Our findings revealed a number of resources and structures in the school community that supported their effort to flip instruction. Block scheduling, strong school safety, long-term investments in technology, the stability of the school community, and trust in school

leadership all contributed to an environment where teachers and students could focus on innovating learning practices, rather than on managing student behavioral issues. Teachers, who had become learners again themselves, stressed the importance of sustained and differentiated professional development in implementing and maintaining flipped learning. Without this strong foundation, we might expect to see flipped learning reduced to giving students iPads instead of the transformational work that we observed over the past year.

**3. Flipped learning supports student-centered practice.** Regardless of where teachers began in this journey, the Patriot High School flipped learning initiative generated a school-wide conversation about student learning that led to innovations in practice and a deepening of teacher praxis. Our findings suggest that flipped instruction is dynamic: Teaching and learning in flipped classrooms develops in an exciting here-and-now context, as the traditional role of the teacher gives way to more student-led interactions. In a flipped learning environment, teachers witness student progress in real time and not simply as a finished product that is brought to class. Teachers valued how flipped learning allowed them to follow their students' learning process more closely and be present for epiphanies that would otherwise have happened outside of the classroom. Through this process, teachers got to know their students better, got to follow their thinking and doing, and became more aware of where students needed additional support. The result was a more motivating experience for students.

**4. Flipped learning can support English learner students in crucial ways.** English learners seem to be particularly well-positioned to benefit from flipped learning. Observations of ESL, sheltered immersion, and mainstream classes containing English learners revealed a diversity of approaches to flipped learning. We found a number of opportunities for flipped learning for English learner students, including immediate and sustained access to content, redefined student-teacher relationships, differentiated assessments, and opportunities to learn and practice academic English through meaningful interactions with

other students, texts, and teachers. The increased quantity and quality of interaction in and out of classrooms facilitated deep, academically focused conversations through which English learners co-construct knowledge in ways that are consistent with a Vygotskian framework of collective scaffolding. With the introduction of iPads and an online learning management system, students were more able to self-regulate and take ownership of their learning. Technology also afforded students with more opportunities to access content through multiple modalities and to draw on their native language to make meaning of new content. Teachers could potentially build on these strong practices by connecting social uses of technology with specific multimodal literacy practices that are different from those students use recreationally.

**5. Parents and Community, an untapped resource.** Findings pointed to parents and the community as an untapped resource for deepening the learning that can happen through flipped learning in the school community. Parent participants reported that their role in supporting their children's education had diminished, as the iPad presented a barrier to physically checking their children's homework and monitoring the amount of time their children spent online. Immigrant parents face a dual challenge in accessing and monitoring student work because of language and digital technology literacy issues. Despite community outreach around implementing flipped learning, the school still struggled to engage parents in the complexities of this intervention. Looking forward, the school has an opportunity to develop these parental relationships in support of student learning. Research on culturally responsive teaching suggest that, in order to provide immigrant students with challenging, equitable instruction, teachers need to know their students well, building on a deep knowledge of the strengths that students bring from their home and community (Gay, 2000). When teachers invest in knowing their students and families, the caring relationships that develop provide a powerful foundation for learning. In particular, when parents are able to participate in conversations about their children's schooling experiences, both students and schools benefit.



# DISCUSSION

## *Dissemination of Findings*

Through this study, we developed a theoretically and empirically informed definition of flipped learning as a situated, student-centered learning practice, with additional explication of relevant school context factors and of innovative practices that were beneficial to English learners. Building from this research, we are collaborating with the school community to deliver a series of professional development workshops during the 2014-15 school year. These collaborative endeavors are essential to the depth and validity of research findings, serving as an important mechanism for influencing policy from the bottom up and giving back to stakeholders.

## *Future Directions*

The study revealed both the unified focus within the school community and the diversity of approaches engendered by flipped learning as teachers and students continued to adapt and theorize new ways to make teaching and learning more student-centered. The dynamic nature of flipped learning practices at Patriot High School point to the need for further research about how a variety of flipped learning practices at the classroom level affect English learners. Mixed-methods research could shed light on the connections between student learning processes

and outcomes as they are mediated by flipped learning methods. Quantitative research strategies are needed to map relationships between classroom characteristics and student learning experiences and outcomes, while qualitative and participatory research strategies can further examine the advantages of flipped learning for linguistically diverse learners in a variety of classroom settings. In order to speak to policy implications, a large-scale study is needed to establish these patterns across a wider sample of schools engaged in blended

and flipped learning with linguistically diverse students.

Further investigation is also needed about the role of families and communities in flipped learning efforts. From our interaction with parents of English learner students, we were struck by the urgent need to include families and communities in the discussion about flipped learning and what it means for their children. Even schools with strong family and community outreach

may struggle to engage with parents around the complexities of educational interventions like flipped learning. Our research pointed to parents and the community as an untapped resource for deepening the learning that can happen both within and beyond classrooms through flipped learning. Additional participatory and qualitative research are needed to better understand obstacles and facilitators to parent and community participation in flipped learning.

*A broader definition of flipped learning encompasses a “pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage in the subject matter”*



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## Appendix A: Sample Delphi Interview Protocol

Delphi Interviews are a way to develop a shared definition of flipped learning as a local, situated learning practice by talking to sequential groups of experts to simulate a controlled debate following the Delphi technique. In each round of interviews, ideas raised in prior rounds will be presented for discussion, building from the diversity of perspectives toward consensus about a set of core practices and concerns. What you say today is confidential. The interviews will be recorded to accurately capture your responses but all names will be replaced with pseudonyms. You have the right to refuse to answer any question, to leave the interview at any point, or to review any part of the interview recording. The interview should last about an hour. We ask that you state your first name before you speak so that we can accurately transcribe the interview.

### What is flipped learning?

(prompt) How would you define flipped learning?

(prompt) What are the essential characteristics of flipped learning?

The following quote is taken from information given by the school to parents. As you listen to this quote, think about how well it describes flipped learning here at SCHOOL: "In a Flipped Learning model, the direct instruction or "lecture" portion of the class will be given to the student via videos that are to be viewed at home. Student homework will be to actively view videos created for the particular lesson they are studying. Students may pause the videos or rewatch as many times as necessary. While watching these clips on their iPad or computer, students will be answering guided questions provided by their teacher. Our valuable class time at school will be used to hone skills introduced during these "homework" videos. Students may proceed at their own speed through lessons. Teachers are able to provide more one on one or small group interaction." (example text)

(prompt) What might be missing from this description? What could we add?

### How can flipped learning lead to better students learning?

(prompt) What about for ELL students?

The following quote is taken from another group of teachers at this school. As you listen to this quote, think about how well it describes

teaching practices here at SCHOOL: (text withheld)

(prompt) What might be missing from this description? What could we add?

(prompt) Describe some promising teaching practices and strategies for supporting the academic engagement, academic achievement, and language development of ELL students.

### What does that (better student learning and better student outcomes) look like?

(prompt) Can you talk about students' skills, behaviors, thinking, engagement?

The following quote is taken from administrators at this school. As you listen to this quote, think about how well it describes assessment practices here at SCHOOL: (text withheld)

(prompt) Do you agree or disagree?

### Moving forward what do you hope to be seeing in the next year or so?

## Appendix B: Classroom Observation Protocol

Classroom observations will be conducted as unobtrusively as possible so that normal classroom learning is not interrupted and there is no risk from participation beyond that of everyday life.

**Focus of Ethnographer 1:** What teaching practices and strategies are being used to support the academic engagement, academic achievement, and language development of ELL students? These include but are not limited to:

Classroom setting (space arrangements, environment, etc)

Classroom management

Lesson topic/goals

Pedagogical material used

Lesson structure

Assessments

Use of technology

**Focus of Ethnographer 2:** What learning practices and learning strategies do students use? How do classroom discourse and culture support the use of these learning practices and interactions? Elements may include but are not limited to:

Student involvement

Peer interaction

Academic/Social support

Use of technology



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