Innovations for High Quality, Aligned Early Childhood Educator Preparation

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IERC

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Preface

by Dr. Stephanie Bernoteit, Senior Associate Director for Academic Affairs,
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According to a survey conducted by the National Association for the Education of Young Children (NAEYC, 2015), there is broad consensus among the American public that access to quality early learning and care is important for young children and their families. The participants in the survey noted that early childhood educators are "professionals who have complex and demanding jobs" and that the knowledge and skills of these professionals are key to quality early childhood programs (p. 2). This NAEYC survey followed a report issued by the Institute of Medicine (IOM) and National Research Council (NRC) (2015) that provided an in-depth review of the multi-faceted knowledge and skills that early childhood professionals need in order to effectively support the social, emotional, physical, and cognitive development occurring in the early years. The IOM-NRC report made a number of research-based recommendations for improving the quality of early childhood educator preparation, including a call for all teachers in the field to have a baccalaureate-level education with specific competencies to support young children's development and learning during the critical period birth through age eight. U.S. public opinion, as evidenced by the NAEYC survey, seems to intuitively support a substantial and growing body of research that shows a positive correlation between early childhood credentialed staff, high-quality early childhood education (ECE) programs, and child outcomes (Bredekamp & Goffin, 2012; IOM & NRC, 2015; Schilder, 2016), particularly when ECE teachers have a baccalaureate degree with an ECE focus (Minervino, 2014).

Illinois is similar to most other states in that requirements for entry into the ECE workforce vary significantly based on the regulations and funding streams of different agencies that have oversight. For example, individuals aspiring to be assistant teachers can work in licensed child care settings merely by having a high school diploma, whereas these same individuals must hold a nationally recognized Child Development Associate (CDA) credential or an associate degree for the same role within Head Start programs. Early childhood teachers working in the state's Preschool-for-All and kindergarten through second grade settings must have a bachelor degree and an Illinois Professional Educator License (PEL) with an early childhood endorsement issued by the Illinois State Board of Education (ISBE). These varied pathways for education and employment, and concomitant issues with compensation, contribute to persistent challenges regarding the consistency of qualifications of individuals in the ECE workforce. A feature of these conditions is the fact that Illinois has a large number of individuals in the ECE workforce who have completed varying amounts of college coursework without attaining the relevant ECE credentials or degrees signifying professional recognition of their efforts.

In response to these challenges, Illinois began to offer educators and child care center personnel a series of leveled credentials administered by the Illinois Network of Child Care Resource and Referral Agencies (INCCRRA) through the Illinois Department of Human Services (DHS). These industry-recognized credentials (known as the Gateways Credentials) have been awarded in areas that include the ECE Credential, the Infant/Toddler Credential (ITC), and the Illinois Director Credential (IDC). The purpose of these leveled credentials has been to provide a preparation and professional development (PD) "lattice" that encompasses the wide-ranging needs of practitioners in all ECE settings across the state. The Gateways Credentials include progressive requirements for professional development and coursework leading ultimately to the completion of associate-, baccalaureate-, and graduate-level degrees in the ECE field.

The Gateways Credentials are embedded as an element of staff educational requirements in the state's Quality Rating and Improvement System (QRIS) for licensed early childhood programs. The availability of the credentials through higher education and professional development programs, coupled with the QRIS, has resulted in a more highly educated early childhood workforce in Illinois licensed child care settings—an estimated 74% with associate or baccalaureate degrees as compared to the national average of 53% (J. Scritchlow, personal communication, September 28, 2016; Schilder, 2016, p. 11). However, there is substantial opportunity for continuing to increase the number of ECE professionals who hold a baccalaureate degree in the field.

The State of Illinois has continued to expand its ECE systems-building work by participating in the federal Race to the Top—Early Learning Challenge. In 2012 and 2013, the State of Illinois was awarded a total of $52.4 million in federal funds to strengthen the training and support of early learning personnel, create and implement the ExceleRate Illinois Quality Rating and Improvement System, and align all early care and education programs with high-quality early learning and development standards. As part of these systems-building and systems-integration initiatives, the IBHE led a project to provide grants to partnerships of two- and four-year institutions of higher education with the aim of improving early childhood educator preparation and pathways to promote attainment of credentials and degrees. These grants, called the Early Childhood Educator Preparation Program Innovation (EPPI) grants, were designed with the collaboration and support of multiple agencies including the Illinois Community College Board (ICCB), the ISBE, The Center: Resources for Teaching and Learning, the Governor's Office of Early Childhood Development (GOECD), INCCRRA, and the Illinois Early Learning Council's subcommittee on Higher Education Learning and Professional Development.

Applicants for the EPPI grants were required to use the funds to promote articulation and alignment of curriculum between two- and four-year ECE programs. Participating institutions that did not already have entitlement to offer coursework leading to Gateways

Credentials were required to seek entitlement as a grant deliverable. In addition, applicants could focus on one or more key aims (Bernoteit, 2014), including:

- Support early childhood educator preparation programs in designing curriculum to incorporate new state standards for educator licensure, Gateways Credentials, as well as what young learners should know and be able to do;

- Build capacity in key areas of need, including but not limited to, early math learning, bilingual/English language learning, and infant/toddler development, and special education;

- Create opportunities for innovation in program implementation, including but not limited to, quality field experience placements, assessments to demonstrate candidate progress toward or attainment of key competencies, flexible pathways to further degree/credential attainment for the current workforce, and Gateways entitlement;

- Develop models of effective early childhood educator preparation;

- Foster the creation or further development of partnerships between two- and four-year preparation programs, schools, preschools, child care centers, and other early childhood settings for the purposes of improved educator preparation.

The first EPPI grants were made available by application in the fall of 2013 for work to be done in 2014. This first cohort consisted of 12 partnerships, including four that comprised the Chicago-Area Consortium for the Redesign of Early Childhood Education (CACRECE). A second round of grants were awarded in 2015 for eight new partnerships, as well as a group of continuing implementation awards to five partnership grantees from the 2014 cohort. Table 1 lists the four-year grantees, their two-year partner(s) and the year in which they were awarded their grant. Figure 1 displays the location of each grantee to illustrate the geographic distribution of the awards. Each of the EPPI grants was $50,000 or less with a grant period of approximately ten months.

These funds were used to support faculty time to meet with partner institutions to conduct joint program redesign and alignment efforts, travel costs, support for partnership efforts with regional employers, and related materials. Over the course of both award cycles, 70% of the state's institutions of higher education with early childhood educator preparation programs participated in the EPPI grant initiative.

This Illinois Education Research Council (IERC) publication is part of a series of studies to describe the work of these higher education partnerships to advance the state's ECE workforce. The first IERC study (Lichtenberger, Klostermann, & Duffy, 2015) examined the approaches to partnership employed by faculty at the two- and four-year institutions that received EPPI grants. In that report, faculty participants noted the institutional and systemic barriers which have, historically, challenged their efforts to create seamless, stackable pathways for ECE professionals to advance their learning and attainment of credentials and degrees. These faculty partners also described the important catalysts for advancing these ECE attainment initiatives, including being able to leverage the EPPI grant itself, along with rules changes promulgated by state agencies, to support new or revised articulation agreements, program redesign, and a number of related efforts to support student success with transfer, as well as credential and degree completion.

The purpose of the study was to identify innovative and promising initiatives carried out by the recipients of the EPPI grants to further develop models for early childhood educator preparation and to build capacity in key areas of need. The study detailed in this report adds to the knowledge base by examining the promising practices that have emerged from the work of the EPPI grant partners. In concert with findings from the Lichtenberger et al. (2015) study, partners cite the importance of focusing first and foremost on ECE students, many of whom are currently employed in the field. By keeping the ECE students central regardless of the institution of higher education where they may currently be enrolled, faculty were able to creatively design bridge experiences; stackable, credential-based pathways to baccalaureate-degree completion; and other academic supports grounded in student

strengths, as well as the needs of the field. A subsequent publication in this series will include a monograph, V*oices from the Field: Collaborative Innovations in Early Childhood Educator Preparation*, in which the educator preparation partners describe each of their partnerships and resulting EPPI innovations (Bernoteit, Latham, & Darragh, in press).

As the EPPI grantees engaged in their partnership work, IBHE and other state agency staff paid close attention to the issues surfaced by faculty regarding challenges in furthering their program redesign and alignment efforts. The state agencies came together to work on these issues based on feedback from the faculty experts. During the course of the EPPI grants, the following actions were taken by IBHE, ICCB, and the other state agency partners:

- Reconvened the ECE Illinois Articulation Initiative major panel to support broader recognition and transfer possibilities for students completing the redesigned and aligned courses emerging from the partnership work and other efforts to jointly design curriculum among ECE faculty;

- Invited faculty from two- and four-year institutions in December 2014 to analyze data and unpack systems issues making it difficult for institutions of higher education to fully embed the Gateways Credentials as stackable pathways to completion within degree programs;

- Coordinated in 2015 a state-level reconfiguration of aspects of the existing Gateways credentialing requirements to address issues identified by the faculty experts (e.g., increased the requirements from 12 to 16 hours for the ECE Level 2 credential to support greater foundational knowledge and improve access to federal financial aid, changed the requirement of the ECE Level 3 credential from a transferrable math course to a credit-bearing math course allowing the field to address important ECE math pedagogy, and explored modifications to Gateways institutional entitlement and procedures for helping candidates acquire

credentials more seamlessly through their higher education programs);

- Provided technical assistance in 2015-2016 to support faculty at two-year institutions to fully align college certificate programs with the newly configured Gateways requirements for the ECE credential at Levels 2 and 3 and to enhance both the transparency and overall stackability of these credentials and certificates within institutions;

- Supported the work of an EPPI grant partnership to fully transition the Gateways Credentials from language grounded in benchmarks to a more manageable and carefully aligned set of competencies; and

- Provided statewide professional development and resources for faculty from two- and four-year institutions to learn about the Gateways Credentials competencies along with related resources for curriculum mapping and assessment of candidate attainment of the competencies.

A careful reading of this study offers insights into the commitment of Illinois faculty to innovate in ever-changing institutional, state, and national contexts while remaining firmly centered on supporting student success toward high professional standards. While not the focus of this report, faculty comments throughout this study surface the importance of state agency work to provide coordinated support for systems-building efforts and to address procedural or other state-level administrative elements that may unnecessarily complicate the kinds of institutional program redesign, alignment, and partnership efforts described here. The resulting recommendations for both policy and practice are instructive for the field of early childhood education and representative of practices to support post-secondary student success in general.

Table 1. *2014-2016 Early Childhood Educator Preparation Program Innovation Grant Recipients*

Four-Year Partner	Two-Year Partner(s)	Grant Years
Bradley University	Illinois Central College	2015–2016
Chicago State University*	Morton College* South Suburban College*	2014–2015
DePaul University*	City Colleges of Chicago - District Office* Prairie State College*	2014–2015
Eastern Illinois University	Parkland College Danville Area Community College	2014–2015
Governors State University	Prairie State College South Suburban College	2014–2015
Illinois State University	Heartland Community College Illinois Valley Community College Illinois Central College	2014–2015 2015–2016
Lewis University	Joliet Junior College Kankakee Community College Waubonsee Community College	2015–2016
Loyola University Chicago	City Colleges of Chicago - Harold Washington College	2014–2015 2015–2016
Millikin University	Lincoln Land Community College Richland Community College	2015–2016
National Louis University	Triton Community College	2014–2015
Northern Illinois University	College of DuPage Kishwaukee College Illinois Valley Community College Waubonsee Community College	2014–2015
Rockford University	Highland Community College Rock Valley College	2015–2016
Roosevelt University*	City Colleges of Chicago - Harold Washington College* William Rainey Harper Community College*	2014–2015 2015–2016
St. Ambrose University	Black Hawk College	2014–2015
St. Xavier University*	Moraine Valley Community College* City Colleges of Chicago - Daley College*	2014–2015 2015–2016
Southern Illinois University (Carbondale)	Shawnee Community College Southeastern Illinois College John A. Logan College Rend Lake College	2015–2016
Southern Illinois University Edwardsville	Lewis and Clark Community College Kaskaskia College Southwestern Illinois College	2015–2016

University of Illinois at Chicago	City Colleges of Chicago
	   - Harold Washington College
	   - Truman College
		2014–2015
		2015–2016

University of Illinois at Urbana-Champaign	Parkland College	2015–2016
Western Illinois University	Illinois Valley Community College Illinois Central College Carl Sandburg College Black Hawk College John Wood Community College Sauk Valley Community College Spoon River College	2014–2015

* Members of the Chicago-area Consortium for Redesigning Early Childhood Education (CACRECE)

Figure 1. Location of the 2014-2016 Early Childhood Educator Preparation Program Innovationaton grant recipients.
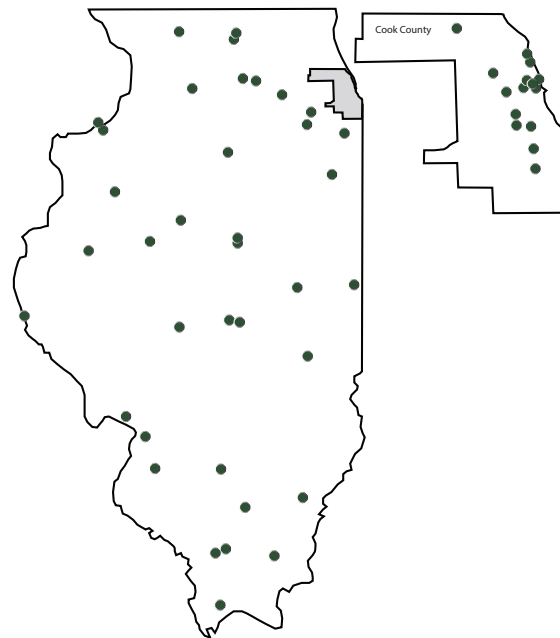
Introduction

Much attention during the past decade has been given to the need to develop a well-trained early childhood education workforce. In order to address this need, the Illinois Board of Higher Education (IBHE) awarded Early Childhood Educator Preparation Program Innovation (EPPI) grants to institutions of higher learning. The IBHE funded partnerships, comprised of two- and four-year institutions, to further develop models for early childhood educator preparation and build capacity in key areas of need. Recipients used grant funds to develop a wide range of seamless pathways for degree and credential attainment through innovative articulation and alignment of curriculum initiatives, strategies for advising and supporting transfer students, and aligning assessments to demonstrate candidate progress toward or attainment of key competencies. Promising practices to improve quality field experience placements, early math learning, bilingual/English language learning, and infant/toddler development were also implemented.

This report presents results from a qualitative implementation study of the initiatives undertaken by the EPPI grant recipients. We begin by describing the background of the project and the methods of our investigation. We then describe the primary catalysts that motivated and provided context for the work of the grantees. Next, we describe the major innovations being implemented with the grant and the core components and specific challenges associated with each innovation and lessons learned from grantees' experiences. Then we discuss the primary barriers to implementation and grantees' strategies for overcoming these obstacles. The report concludes with a discussion of major themes emerging from this research and implications for both policy and practice.

Background

A recent report issued by the Institute of Medicine and the National Research Council (IOM & NRC, 2015) concluded:

> The education that is available and expected for educators of children from birth through age 8 varies widely for different professionals based on role, ages of children served, and practice setting even though these candidates will have similar responsibilities for young children. Each of the different "worlds" that result from this variability has different values and priorities, different communities, different pathways for entering higher education, and different research bases. As a result, programs lack a consistent orientation and are extremely variable and fragmented across and within institutions. This lack of consistency has important implications for how educators are trained to work with children. (p. 386)

The report recommended developing improved pathways to increase the minimum educational level to a bachelor degree for all lead educators working with young children. One recommended strategy to meet this charge included increasing access to higher education programs. Acknowledging the critical role community colleges play in preparing early childhood educators, the report also addressed the relationships between two- and four-

year institutions, noting, "However, they are often limited by a top-down system in which articulation effort is controlled by the 4-year university. Strengthened collaboration between the two types of institutions is one way to establish educator preparation as a process that includes the community college system" (IOM & NRC, 2015, p. 385). The IOM and NRC call for greater collaboration between two- and four-year institutions is consistent with other efforts that emphasize transfer policies to advance workforce readiness and increase overall education attainment rates (Sponsler, Pingel, & Anderson, 2015).

Recognizing the importance of these relationships, IBHE provided EPPI Grants to 20 partnerships, comprised of two- and four-year institutions, to further develop models for early childhood educator preparation and to build capacity in key areas of need. Recipients used grant funds to develop a wide range of seamless pathways for degree and credential attainment through innovative articulation initiatives, systems for aligning assessments to demonstrate candidate progress toward or attainment of key competencies, and strategies for advising and supporting transfer students. Promising practices to improve quality field experience placements, early math learning, bilingual/English language learning, and infant/toddler development were also implemented.

IBHE contracted with the Illinois Education Research Council (IERC) to examine the initiatives carried out by the EPPI grant recipients. Using a case-study approach, the research team identified innovative practices put in place by the grantees. Results of this study will inform Illinois education stakeholders, particularly those in early childhood education, regarding promising practices to increase the quality of the early childhood workforce. Higher education institutions will also learn inventive strategies to improve the early childhood workforce pipeline through smoother transitions from the two-year to the four-year institutions, as well as opportunities for strengthening the capacity of early childhood educators to meet the needs of their students.

Methods

This qualitative implementation study provides a systematic review of the innovations and strategies EPPI grant recipients utilized in addressing common barriers and practice-oriented issues experienced in early childhood educator preparation. Prior to semi-structured interviews, common themes across each partnership's work were identified through a review of the objectives set forth in their respective proposals and other artifacts posted on the Illinois Early Childhood Higher Education Resources Online (HERO) website (http://www.ilfacultyresources.org), a project of the Early Childhood Center of Professional Development hosted by The Center: Resources for Teaching and Learning. Supplemental information was also gleaned from their presentations at the EPPI conference held in Bloomington, Illinois, in December 2015. Additional themes were identified during the analysis phases of the study to present the findings in categories that are intended to be useful to those who want to replicate this work.

Participants

Study participants consisted of representatives from five of the EPPI partnerships who received funding in the first and second year; five partnerships who received funding in the initial year, but not the second; and seven partnerships who did not receive funding in the initial year, but did receive funding in the second. For partnerships who received funding in the first year (regardless of their funding status in year two), their activities were viewed as a continuation of their work during the initial grant year and focused on finalizing or pursuing new, but related goals. Partnerships who did not receive funding in year one were largely starting from scratch in their activities. This variation translated into a wide spectrum of implementation progress, which was further widened by varying start dates. Additionally, some of the institutions had been working on the initiatives prior to, and even outside of the EPPI grants. However, activities included in this study were all advanced in some manner through participation in the EPPI project.

The principal investigator (PI) for each partnership was contacted via information provided by IBHE and asked to be interviewed by a member of the research team. Additional interviewees were identified from information contained in the grant files and by modified snowball sampling. That is, at the conclusion of each PI interview, he or she was asked to provide contact information for at least one additional grant partner who was instrumental in the project or would provide a unique perspective of the work. In total, the research team requested interviews from 46 individuals across 17 of the 20 partnerships that agreed to participate in this study.[1] Thirty-three of the 46 individuals (72%) agreed to participate in the interviews.[2] Of those interviewed, 16 were identified as the PI for the partnership, 16 were partners who worked at a two-year institution, and one individual worked for a community agency. Interviewees included field placement supervisors, administrators, program coordinators, and early childhood or child development faculty at four-year institutions and/or at community colleges. In many instances, interviewees served numerous roles within their institutions due to the small size of the programs. Of the 17 participating EPPI grantees, seven were from public four-year institutions and ten were from private four-year institutions.[3]

Project Summaries

Prior to the interviews, participants were sent a project summary. This document contained information about the partnership's work that was gleaned from analysis of the grant proposals, quarterly reports, and artifacts posted to the HERO website, along with information presented at the 2015 EPPI Bloomington conference. Participants were asked to review the document and make any clarifications, additions, or subtractions that they felt necessary. Participants were also asked to identify the focus area(s) with which their grant-related work most closely aligned. The three broad focus areas were: student pathways (including articulation, advising/

[1] Two of the identified individuals were associated with two separate EPPI partnerships, both representing community colleges.

[2] The remaining 13 subjects were contacted multiple times but did not respond to invitations to participate in this study.

[3] All of the institutions are located in Illinois, except one of the four-year institutions is located in Iowa and partnering with an Illinois community college.

supporting transfer students, and aligning assessments), specific content areas (early math, English Language Learners, and infants and toddlers), and field placements.

Interviews

Interview protocols were developed to identify the components of grant-related work, how the focus area was determined, lessons learned through implementation, data collected, and future plans for the grant-related activities. All participants were also asked questions related to English Language Learners, as educators with this background are in high demand throughout the state. Feedback on early drafts of the interview protocol was obtained internally at IERC and from representatives from IBHE, the Illinois Network of Child Care Resource and Referral Agencies (INCCRRA, and the Governor's Office of Early Childhood Development (OECD). The full interview protocol can be found in Appendix A of this report. This general interview protocol was supplemented with questions specific to the focus area(s) identified by the participants. Supplemental interview questions for each of these focus areas are available in Appendix B of this report.

Interviewees were contacted via email and used an online scheduling service to schedule interviews with research staff. All interviews were conducted over a four-month period, near the end of the second year of funding. Therefore, grantees were at very different stages—first round grantees' projects had ended about a year prior to the interviews; the awards for most of the second round grantees were ending when the interviews were taking place; and a few grantees that received later awards were just getting started. Scheduled interviews were conducted over the telephone and were digitally recorded to ensure the accuracy of notes. Interviews generally lasted between 50 and 90 minutes, although some interviews ran over two hours and interviews with the PIs tended to take somewhat longer than the interviews with other partners. Instead of using full transcription, the researchers developed detailed summaries following the format of the interview protocol, using written notes from the interview along with the digital audio recording. Each summary was sent via email to the interviewee for member checking. Interviewees were instructed to review the summaries and provided the opportunity to clarify, correct, or exclude any of the summarized information, or add entirely new ideas. Most of the interviewees made minor edits to the summaries—mainly for clarification purposes, but substantive changes were rare. Interviewees were given approximately three weeks, with at least two reminders, to return their summaries. Summaries that were not returned in that timeframe were accepted in their original form and used in the analysis. Validated summaries were cleansed of identifying information (for both individuals and institutions) and uploaded to Dedoose, a web-based application for mixed-methods research (Dedoose Version 6.2.7; 2015). Dedoose provided an encrypted collaborative environment, for managing, coding, and analyzing the responses to interview questions.

Coding and Analysis

An initial analysis scheme was developed through open coding of three interview summaries, each from a different partnership. An intercoder reliability check was done by having three members of the research team individually code the same three interviews and then reach consensus on the code assignments. After reviewing the frequently used codes, the researchers collaboratively developed a final scheme that mirrored the interview protocol, including

specific codes for each focus area, such as, "alignment of assessment" or "early math." The scheme also consisted of codes that were common across all partnerships, regardless of grant activities, such as "regular meetings" or "online instruction." This section of the scheme evolved the most during this process and the analysis of the interview summaries, as new themes emerged and some codes were shown to considerably overlap. The scheme also consisted of question-specific codes, such as "next steps" or "scalability." Quarterly reports, advising guides, and partnership summaries were also analyzed as supplemental materials that filled in any gaps identified in the participants' responses. Appendix C shows the final codebook which contains the coding scheme, definitions, and exemplar quotes. Each summary was coded by a primary and a secondary coder. The primary coder was usually the individual who conducted the interview, whereas the secondary coder was another member of the research team. After coding was completed, we used the data matrix method of Miles and Huberman (1994) to identify overarching themes and patterns of similarities and differences in responses from the participants in the study.

Limitations

Before proceeding to this study's findings, it is important to note the limitations of this work. Perhaps most importantly, all of the data used in this research were self-reported and thus susceptible to positive bias. Because many of these projects were brand new or incomplete at the time of our study, it was not feasible to collect outcome or other data that could confirm (or deny) these perceptions. This study was not designed or intended to serve as an evaluation of the EPPI grant or any associated initiatives. Rather, the goal was to study implementation of the grant, describe the initiatives that emerged, identify common challenges and strategies used to overcome them, and establish recommendations for future early childhood educator preparation partnerships.

Findings

We begin the discussion of our findings with a summary of factors that catalyzed grant activities. We then describe the activities of the partnerships across seven broad areas: pathways initiatives, including articulation, alignment of assessments, and supporting transfer students; content area innovations, including early math, English Language Learner instruction, and infant/toddler programs; and efforts to improve field experiences. The section closes with a description of crosscutting challenges to implementation.

Cross-Cutting Catalysts

There were numerous factors that influenced each partnership's involvement in this initiative and the specific strategies they chose to pursue. Several common themes emerged, including: a new willingness to work together; demands from the field; state and national policy trends; and the desire to help minimize credit loss and related costs to students. These catalysts are discussed in more detail below.

A New Willingness to Work Together

The EPPI grant's partnership requirements presented the opportunity for collaboration that many faculty had long hoped to have. Seven different partnerships identified a change in the willingness of the four-year institutions to work with the two-year colleges as the primary catalyst for these projects. Interestingly, nine of the 11 participants who made this claim were members of the faculty at two-year institutions. These respondents recalled a long-running desire to work with their four-year partners, and noted that many four-year institutions were now more willing to collaborate than they were in previous years.

Some expressed feelings of cynicism at the onset of the project, citing prior difficulties with articulation efforts. One partner attributed past problems to the lack of partnerships and each institution believing they were "owners of our own courses." Historically, four-year programs preferred to admit two-year transfer students who had completed their general education courses and were enrolling to complete child development coursework. "Now, all the four-year colleges need students and so they are much more willing to be flexible. They are singing a very different tune than they were singing 16 years ago. I don't mean that in anyway critically," noted one of the two-year faculty members. She discussed how the four-year universities' desire for two-year students has made it necessary for the universities to learn "how to support the specific needs of community college students. They are not getting the 31 ACT student," so they have to be more flexible and rethink the programs they offer. She added that, previously, the four-year programs did not have a reason to offer a bachelor degree without licensure, whereas now there are many reasons to do so. Four-year institutions cited several reasons for increased interest in recruiting transfer students, including the growing number of students attending community colleges, the demand in the field for personnel with a bachelor degree and EC credentials, but not necessarily a professional educator license, and meeting the needs of the current workforce.

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Once engaged, faculty from both two- and four-year institutions had favorable comments about their partners' desires to remove barriers and work toward common solutions. The flexibility of the EPPI grant was often cited as a positive impetus for this collaboration. For example, when some participants realized that they did not need to have their formal articulation agreements finalized or revised in order to move forward in developing flexible pathways, many expressed the ease with which they were able to be creative in working with their partners. One four-year faculty member stated that for years it was out of her control to work with the two-year colleges in her area because the college president was not interested in recruiting transfer students. Then, "a new president came in who had the exact opposite priorities and brought in new people. These new voices and imperatives created new possibilities for this project to move forward." In the past, according to one faculty member, "other partnerships did not persevere when they came against the 'brick wall' of two-years' having 100 and 200 level courses and the four-year having 300 and 400 level courses." Through the project, institutions have been able to remove the bricks "piece-by-piece." Another two-year participant said that she had approached the four-year institution ten years ago and was told that her proposed options "weren't a good fit for them." She put this work on the "back burner" until she was approached by the four-year institution to participate in the EPPI project and described this progression as "it went from a dud, to going full force."

Demands from the Field

Several participants noted that that there are growing concerns about the supply of individuals with the necessary education and credentials to fill positions in the ECE workforce. For example, programs are being asked to respond to the demands for multiple on- and off-ramps where early childhood educators can enter and exit various career pathways. As a result of federal and state legislation, one of the interviewees noted that "employers in the area are pushing the students to have credentials." This is in large part due to implementation of ExceleRate Illinois (http://www.excelerateillinois.com/), the state's quality rating and improvement system (QRIS) based on federal standards to improve the availability and quality of early and school-age care and education programs. ExceleRate is a joint initiative of the Governor's Office of Early Childhood Development, the Illinois Department of Human Services, and ISBE. The state's QRIS hiring requirements are reflected in the Gateways Credentials administered by INCCRRA. The Gateways website has a large list of career opportunities and, though some require a Professional Educator License (PEL) from ISBE, an early childhood-related bachelor degree from a non-licensure-granting program can be used to qualify for many of the available positions. For example, one can become a family liaison or work in prevention initiative programs or for a social service agency, such as Child and Family Connections, Child Care Resource and Referral, or the Department of Children and Family Services. Additionally, there are openings for Infant/Toddler/Early Childhood specialists and developmental therapists, as well as child care center directors, which do not require a PEL.

Many participants also indicated that employers desired more racial diversity from their graduates, as well as more bilingual educators. Several four-year faculty members reported that the community colleges tended to attract more racially and ethnically diverse students than their institutions generally do. One of them explained that figuring out how to bring candidates into the program "from diverse backgrounds, who have varying amounts of experience in the

field, is something that I have always wanted to address." Thus, the partnerships served as an avenue to recruit these students in order to meet these demands from employers.

Additionally, the desire to improve the comfort level of early childhood educators with math content, coupled with the need to improve Test of Academic Proficiency (TAP) scores for ISBE licensure requirements, led the early childhood community to identify the need for a more robust continuum of aligned early math coursework. A two-year partner indicated that the majority of students in her program are coming in at the lowest developmental level in math and would need four to six math courses to achieve the necessary level for licensure. She was one of several participants who discussed how math is a huge barrier for many of the two-year students who want to move on in higher education. In order to remedy this, another four-year faculty member stated, "The grant helped us see the bigger picture to not only work more closely with our community colleges, but also with high schools."

State and National Policy Trends

Participants reported that the Gateways credentialing requirements (http://www.ilgateways.com/en/), new ISBE and ICCB ECE standards, and the push for higher completion rates served as catalysts for innovation. Implementation of new state and national standards for teacher preparation programs and the increased demand for Gateways Credentials by licensing agencies motivated institutions to work together to offer the desired pathways. More than half of the partners interviewed agreed that the Gateways Credentials were a good starting point for figuring how the partners could align, and that having the universities also being entitled institutions "was the bridge we were able to build upon." Participants said that Gateways provides the scaffolding that needed to be in place for lifelong learning for early childhood educators, and that getting four-year programs to accept Gateways credential-earning courses for credit provided another rationale for moving the EPPI projects forward. This recognition also motivated programs to begin offering non-licensure bachelor degree programs for students who were interested in working with young children, but did not intend to work in a school system in a position that required a Professional Educator License (PEL).

The national move to Common Core State Standards, with more rigorous literacy and early childhood literature components and math standards emphasizing the development of mathematical understanding, have increased the rigor of teacher preparation. This rigor has "trickled down" to the two-year programs. These factors, coupled with the increase in the number of ECE courses available, provided further fuel to improve partnerships. Additionally, increased awareness among the private universities about the Illinois Articulation Initiative (IAI) made it much easier for four-year institutions to evaluate and accept credits from two-year programs.

Similarly, another important catalyst for some of the EPPI partnerships has been the national push spurred by the Lumina Foundation (2013) and the Education Commission of the States (Smith, 2011; 2013), as well as by efforts in Illinois (McCambly, Bragg, Durham, & Cullen, 2016) to improve completion and transfer rates. This external emphasis, as well as an internal prioritization, increased the focus on "the completion agenda" and the need to develop career pathways with several explicit completion points along the way, "just not in an AAS or BA." Traditionally, the Associate of Applied Science (AAS) is considered a terminal degree for those who do not intend to pursue a bachelor degree. Participants noted that many of these new

> The Gateways credentialing requirements, new ISBE and ICCB ECE standards, and the push for higher completion rates served as catalysts for innovation.

pathways will likely lead to certificates of proficiency associated with the Gateways Credentials. Several two-year faculty mentioned that their mission is to increase the transfer rate of their graduates. One explained, "We talk with students about how important it is to finish something, one of the credentials or certificates, to work in the field." Another participant discussed how the institution is "dedicated towards students completing degrees and we don't want them to complete degrees that don't have value."

Desire to Minimize Credit Loss and Related Costs for Students

For many participants, these innovations were also related to a personal commitment to help students be successful in postsecondary education and to address issues of social and economic justice. For these respondents, the EPPI project offered the opportunity to help students prevent having to re-take courses and to address the related costs, lost time, and negative experiences of transfer students. As one four-year faculty member said:

> When I first started, the faculty did advising....I would get students coming in to transfer into our program who had 90 or 100 hours and I would sit down and look at the transcript with them. We would accept maybe 12 or 15 hours, you know, because they jumped around, the courses were old. It was morally wrong and really created this huge barrier to getting professional credentials in the way that they needed to get them. So, we're working on that. It's getting better, it's getting better.

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Others told similar stories about community college students who might have as many as 50+ hours in ECE coursework, but could only transfer up to 18 hours. These students often ended up retaking courses and hoping to pass the licensure exams, which could take them three or more years to finish, even if they did not want an ISBE license. For example, one participant spoke about the tendency of some four-year institutions to only accept general education credits, forcing students to retake ECE courses, sometimes using the same textbook. Another said that her goal was to "come up with a creative way to figure out a work-around where each institution is happy with the end result," and was pleased that the EPPI project would give her the opportunity to work on that goal with faculty at her partner institution. Another partner discussed how many of her students do not think they can be successful when they initially enroll, but are able to do well by the third or fourth semester at the community college only to get to the four-year program where they are told that they will have to start all over again, which "deflates their ego" and leads many to say, "Forget it, I am not going to do that."

Participants also expressed concerns about minimizing the cost of obtaining a bachelor degree. As one two-year partner said, "Well, in my opinion, becoming a licensed teacher has become so incredibly expensive, that if those students can take any courses at a community college, it would be very financially advantageous for them. We can save them a lot of money, honestly." Another participant reasoned:

> This is important work because it allows us to be able to provide students options and assist them in furthering their education. The main barrier that is being overcome is that we are actually identifying specific courses and pathways to articulate so that students may further their education without repeating coursework or having coursework that does not transfer; thereby, reducing further financial barriers.

Pathway Innovations

This section describes the innovations in two- to four-year transfer pathways undertaken by EPPI grantees. We organize these efforts into three categories: articulation arrangements, alignment of assessments, and advising and supporting students. First, we discuss the reasons grantees chose to address this issue, then we provide details on the distinct pathways models and common features of these innovations. Finally, we discuss lessons learned, including challenges with implementation, and early evidence of impact on policy and practice.

Articulation Arrangements

Motivation for Articulation

At four-year institutions, teacher candidates traditionally take general education courses during their first two years of study and early childhood courses during their third and fourth years of preparation. Conversely, coursework for students in two-year AAS programs generally only covers early childhood content, and not general education. This situation made it challenging for students with an AAS degree to transfer to a four-year program, to equate 100- and 200-level courses with 300- and 400-level courses, and to account for differences in credit hours awarded for those courses. This was often the "brick wall" that kept prior articulation efforts from being successful. Thus, the need to modify courses across institutional partners at all levels, and to make adjustments horizontally, as well as vertically, was viewed as essential by most of the partnerships.

In writing about college partnerships, Mark Fincher (2002) says that in addition to written articulation agreements, the partners must form a "strategic alliance" that embodies three key components: it minimizes the transfer costs to the student, recognizes each other as partners in recruiting and serving students, and allows students to follow a similar schedule so that they can continue to meet their work and family responsibilities. Fincher also stresses the importance of formal alliance agreements so that the transfer of courses will remain the same when the administrators that oversee transfers change. Research indicates that the greater the credit loss during transfer, the lower the chances of a student completing a bachelor degree (Monaghan & Attewell, 2015). In order to minimize credit loss, faculty from the two- and four-year institutions must agree upon what transfers in the major, but this may be one of the most difficult articulation tasks to tackle (Ignash & Townsend, 2000).

Bornfreund, McCann, Williams, and Guernsey (2014) argue that, ideally, partnerships should develop articulation agreements that allow entire early childhood programs, or at least multiple course-to-course transfers for full university credit. In keeping with these recommendations, rather than focus on updating old agreements or creating new ones, many EPPI projects focused on course alignments and articulation at the program-level to create more seamless pathways between the two- and four-year institutions. Many participants commented on how time consuming it was to get formal articulation agreements written and finalized.

In developing new or improved pathways, a non-licensure degree was not an option for some programs. This approach was most common among the partnerships involving private four-year institutions due to concerns about the return on investment for the higher tuition costs associated with their institutions. These programs focused on creating continuums for high school and two-year students who identified early that they planned to go on to a four-year institution to become a certified teacher and earn a PEL. As a faculty member at one four-year institution put it, "I can't image anyone finishing a four-year degree program and not earning a license out of it. It's just reinforcing this idea of the two-tiered early childhood systems we've got, not just in this state, but across the country."

Other partnerships focused on meeting the expanding demand for early childhood personnel beyond teaching in a public school system. These programs were typically responding to the difficulties faced by students who decided at a later point, often after completion of an AAS degree, that they wanted to go on for a bachelor degree. Such students were frequently told that they would need to start over and obtain another associate degree or begin as a freshman at a four-year institution with almost no credit for their prior courses. Taking better advantage of statewide initiatives aimed at improving transfer options for two-year students was the goal of a number of these partnerships.

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Articulation Models

High schools as part of the continuum. Including area high schools as part of the continuum is one pathway model developed by several partnerships. In one partnership, connections with the area high schools were initiated by the school district, who wanted to offer a Gateways ECE Level 1 credential through their high school academy. High school students can take classes offered in conjunction with a child care center operated by one of the area high schools and earn dual credit for their freshman year. Graduates of the high school program could then choose to enroll in one of the region's two-year colleges to earn Gateways ECE Level 2, 3, and 4 credentials, or attend the local four-year institution to obtain an ECE Level 5 credential and licensure. As an added bonus, students with a Level 1 credential from the high school would not need to wait a year to qualify for a Gateways scholarship. Plans are also underway to establish an ECE 1+3 program for students entering the four-year institution, where they will earn a licensure degree with ECE and ESL endorsements. In this partnership, not only were two-year students encouraged to transfer to the four-year institutions, but students in the four-year program were encouraged to complete their general education courses at one of the two-year campuses. According to one partner, the EPPI grant "helped us see the bigger picture to not only work more closely with our community colleges, but also with high schools."

Four-year continuum. Programs that developed licensure pathways, where two-year students were identified early with the explicit goal of enrolling at a specific four-year institution, often spoke about their innovation as a "four-year continuum." For one partnership, students are duly accepted by both partnering institutions and are provided with an advisor charged with keeping them on this pathway. In these partnerships, all of the courses from the associate degree typically counted towards licensure. Obtaining an ECE license with an ESL endorsement "can be done by transfers in two years if they do everything we tell them to do. That's how it was designed," noted one of the partners.

Another partnership that defined their pathway as a four-year continuum included a summer bridge program that was designed to address requirements that a typical four-year student would complete during their first two years, especially with regard to field experiences. This summer program also lightens the load of the fall semester by incorporating programmatic requirements without charging tuition. The intent is for transfers to be "ready to be a teacher-learner that you kind of have to be in this apprenticeship model that we have here," stated the four-year partner.

Cohort bridge program. Other four-year institutions developed different bridge models. One partnership developed a "cohort bridge" program leading to licensure, where students can obtain a bachelor degree from the four-year partner onsite at one of the two-year colleges. In these programs, courses are taught by the four-year's faculty and available online and at night. The two-year college that is hosting the bridge program also has an early childhood laboratory school on campus which students will be able to access. This bridge program is designed to increase access for these students, including parents who stay at home with their children. For example, one participant said their arrangement was designed to "attract, retain, and provide access to a more non-traditional population," noting, "It's all about access. Many of the students are nontraditional and work during the day and find it hard to attend classes."

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Leveling bridge course. Another partnership developed a "leveling bridge" program that intentionally focuses on the differences in the level (100 or 200 versus 300 or 400) of the courses offered at the two-year and four-year institutions. The partners identified four courses that would not transfer because of differing levels of instruction, although the content covered is very similar and, in some instances, even the same textbooks are used. After examining the depth and content needed to bring the instruction to the 300-level course, the partners built a bridge to fill the gap between the two-year and four-year courses. This leveling bridge coursework is taught over the summer, incorporating an "additional package" of extra material that will make the courses equivalent, and each of the one week segments has a final project that matches the final exam at the four-year institution. Successful completion of the projects enable students to get credit for the four courses that otherwise would not articulate.

ECE 2+2 articulation agreements. New ECE-specific 2+2 articulation agreements were developed by many of the four-year institutions. Several programs already had general 2+2 articulation agreements in place for students who earned an AA or AAT degree, but few had a specific ECE pathways that allowed students to obtain a bachelor degree in two years, and even fewer had an agreement incorporating courses taken as part of the AAS degree. Several participants noted that the AAS degree is "more heavy on major coursework and lighter on general education coursework, which makes them more challenging to connect with in terms of the transfer agreement." This is due in part to the number of general education courses that the State of Illinois requires to obtain a teaching degree. Therefore, many of the new 2+2 ECE agreements do not lead to licensure, but could result in Gateways Credentials. Participants believe these pathways are likely to appeal to students in AAS programs and those who are already working in the field or who aspire to work in settings outside of Illinois public schools and thus do not require a PEL through ISBE.

However, for students who earn an AAS and then decide they want to pursue licensure, some of these new agreements specify how this can be done by taking a few additional courses at the four-year institution in order to obtain a Professional Educator License in three years or

less. Although this would make them "2+2.5" or "2+3" programs, these students would not be required to "start over," as in the past. "We have opened the door for these AAS degrees to go further, if they need to go further," disclosed a two-year partner, who also mentioned that if she had this pathway as a student, she would have been out in the workforce a year sooner.

New non-licensure programs. Generally, the new non-licensure programs were created to allow greater flexibility for students seeking jobs that do not require a PEL through ISBE. For example, one institution added a new early childhood undergraduate degree in Human Development and Learning and kept ECE licensure at the master's degree level for those transfer students who wanted to work as an educator in a public school. Another partnership noted that prior to the EPPI project, no early childhood education courses articulated between the 2-year and 4-year institutions. However, with the addition of a couple of courses at the two-year level, the partnership was able to create a non-licensure pathway based on new Gateways Credentials that they had been piloting. The partners have now agreed on six courses that will articulate. As one partner stated, "We weren't pushed in by the rules and regulations related to licensure. We were able to be more flexible. That was a key point."

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Holistic AAS transfer. Rather than cherry-pick courses for transfer, one four-year institution decided to accept a holistic AAS transfer, applying all credits towards a non-licensure program and allowing students to complete it in two years. This institution had a general non-licensure program in place that they could build upon, but the new innovation is a more intentional Early Childhood track leading to a bachelor degree with the possibility of subsequently completing the requirements for a PEL. Another key change this partnership implemented was to separate their infant and toddler courses from those addressing Early Elementary, making it easier for two-year students to transfer their courses that specifically cover the early elementary grades.

Transferology. Rather than develop new articulation agreements, one partnership decided to take advantage of the "Transferology" online transfer assistance tool provided through the statewide iTransfer website (www.itransfer.org/mycreditstransfer/). Transferology is a nationally available tool accessed through Illinois' MyCreditsTransfer initiative. This tool offers students specific and detailed information on how their coursework will transfer between institutions, degree requirements that will be satisfied by courses taken, and different majors that institutions offer. Although not a direct course-to-course pathway, Transferology allows more flexibility for institutions to match their courses. According to one partner, "it's student-based" and does not require changes at the two- or four-year institutions. This model puts more focus on individual advising than institutional transfer, and counselors help the students stay on track to take the courses needed for the credential/degree they want.

Common Features of Articulation Innovations

Although the partnerships shaped somewhat distinctive articulation pathways, there are many similarities in the critical components identified. These components relate to drafting formal articulation agreements, learning about each other's programs, involving other stakeholders throughout the process, acknowledging that the need to modify courses goes both ways, adopting common credentialing requirements and learning standards, and taking advantage of resources developed by others to make the process less complex.

Formal articulation agreements. With regard to drafting formal articulation agreements, the partnerships tended to go in one of two directions: some determined what they had in place was adequate and moved on, whereas others determined it was necessary to secure new or revised formal articulation agreements. Those partnerships that indicated that their existing agreements were adequate, made claims like, "We learned this didn't need to be a huge part of the project because that work was pretty well done." Partnerships in this position were able to review what was in place and then spend their time addressing other ways to improve the pathways for their students.

The majority of the partnerships, however, concluded that it was useful institutionally to secure the support and approval of other internal committees and offices involved in curriculum matters and the transfer process. Drafting and obtaining all of the necessary approvals at each of the partnering institutions consumed much of the time and energy of these partnerships. However, they recognized the importance of these formal agreements, noting that, "We need that articulation agreement to be signed at the top level and then it is in place, making it hard to go against something that is official and agreed upon." Formal approval of the articulation agreements was viewed as necessary in order for the changes proposed by the partnerships to outlast the individuals involved. Because of the weight the agreements carry, working to avoid these obstacles was viewed as critical.

A number of the institutions involved in the EPPI project were simultaneously developing new articulation agreements and doing IBHE-ISBE program redesign work or preparing for ICCB reviews. After a lengthy description of the approval process involving their community college partners, their internal Academic Affairs Committee, and ISBE, a project leader said, "If we're able to, those things will happen in some ways in tandem. So that should be something that will start this semester and may carry on until next year. We're all committed to continuing on with the process until fully completed, however long that takes." One program director added that these two initiatives together provided the opportunity and momentum needed to restructure the program completely. Several participants noted that articulation was not a "one and done" process, and instead will need to be an ongoing project to keep the courses aligned. As one of them stated, "It's a continuous improvement process, so the work is never really done because we always have to review and reflect and keep abreast of new mandates."

Learning about partner institutions. Several faculty members commented about not being very familiar with their partner institutions prior to the EPPI grants. Over the duration of the grant, however, programs began to recognize that learning about each other's institutions was one of the most important tasks of the partnership. One participant observed, "I didn't have any experience working with community colleges and didn't fully understand the different pathways available to students through community colleges. The EPPI grant provided a good learning opportunity." According to another participant, "It took time to decide what everyone really needed—what our long-range goals were for the courses to be offered at the two- and four-year levels. As we worked and learned to know each other better and the needs that we see, both for our teacher candidates and the community, things started kind of, I'd say, mushrooming from there." Someone else noted, "The project expanded and grew bigger than initially anticipated. After beginning discussions with the partners, more contingencies, variables, and topics were identified that needed to be sorted out." Examples of these topics included discussions about moving beyond course articulation plans to examining

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course objectives and the possibilities for aligned assessments, along with recognizing the emerging importance of cross-advising.[4] A number of institutions also created new advisory boards that included the two- and four-year partners (as well as community stakeholders) in order to stay informed about each other's programs. One partner commented that "the grant money enabled multiple meetings where we learned from the four-year institution the changes that were in progress. We used this information to review and align our curriculum with the changes being made by the four-year."

Involving other stakeholders. As the EPPI partners began to better understand the scope of their work more clearly, the importance of involving a broad array of stakeholders early and throughout the process became more obvious. One partner described how they "were able to have the right people at the table to provide institutional history and give us insight about what was possible. That helped everyone to know exactly what was needed and what was practical to get done. " Another participant advised that "It helps to have at least one face-to-face with the people you are talking with," including the dean and advisors, "so you know who they are and they know who you are." This helped to get important players "in on the loop" and aware of the pathways work that was taking place.

The important role advisors have in the process should not be underestimated. As one project leader lamented:

> *We might have included advisors in the process more. They were included along the way, but it may have been helpful to have had a meeting with them earlier in the process. The advisors at the four-year are very helpful in figuring things out, and the advisors at the two-years had ideas on what the work should look like.*

Although their input was included at the end of the process, the conclusion was that their input and vision might have been even more helpful earlier on, and this partner noted that what faculty see as a vision may not always be what advisors see.

The participants offered a number of suggestions for reaching out to involve faculty in other departments. One partner observed that School of Education colleagues who were not familiar with ECE were willing to learn about the articulation process and how it might be adapted to fit their programs. It was noted that, "The faculty were good at using their different skill sets for adapting existing teaching methods and investigating intuitional supports and we were able to accomplish much more than I could have done alone." At another university, collaboration between the Psychology and Education Departments fostered increased knowledge about different ECE pathways within the university. In order to get the level of collaboration desired, another partnership "decided to use some of the grant money during the first round to pay small honorariums ($200-$300) to the reading program chair, the TESOL [Teaching English to Speakers of Other Languages] chair, special education person, practitioner teacher, and the licensure officer." During the second round of funding they involved the math department chair and the licensure director. This partnership also repurposed grant funds that had been allocated for an external consultant in order to pay their Director of Licensure for her input,

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[4] Cross-advising refers to providing both an academic and cultural bridge between the two- and four-year institutions, rather than within a single institution. For more information, see the "Pathways Innovations: Advising and Supporting Students" section of this report.

because she was the person the project kept turning to for answers. The project leader expressed the rewards of her efforts, saying:

> *Now, [the Licensure Director] has been so involved with the rewrite that she can defend it in Springfield on my behalf. The stipends showed respect for their time and helped to get the right people together. Folks were invested, they knew what we were doing and why. They were then able to help to get approval at each level. This has helped things to move more quickly. It was a natural progression to get everyone involved—not just our two-year partners. It was a true collaboration. I wasn't telling people what to do, I was asking for their advice. I gave them the standards and asked what could we do to meet them. Everyone had a voice and I listened to them—from the beginning. We showed them that the people in early childhood play nicely with everyone—we know how to work cooperatively and build something together.*

For some programs, involving other stakeholders was key to overcoming cynicism about participating in this initiative. A two-year partner said that her institution was apprehensive about this project due to previous failures with articulation agreements. This partner emailed her dean and vice president after every meeting and informed them about everything being accomplished, including what the pathway will look like for the transferring students. After seeing progress being made, these administrators became increasingly supportive. She advised, "Think about what the roadblocks are going to be. Think ahead for potential problems. You need to consider the culture of your institution. Consider what approvals are needed and what procedures to follow. You don't want to lose your momentum and run into roadblocks when you're ready to launch the program."

Recognizing that changes are needed at both the two- and four-year levels. During the course of the grant period, most partnerships came to the realization that the articulation process requires that the two- and four-year programs be open to being influenced by each other. As one project leader said, "We didn't start with an outcome, we started with a possibility." Typically, this process began with the partnership reviewing each course to identify similarities and differences and possibilities for pathways. The partners then took ideas back to their institutions and sought input from faculty members about where courses could articulate. After this, the partnership met again to share their findings and develop a "side-to-side" plan. This often resulted in the realization that multiple two-year courses might be required to equate to one four-year course. Reviewing courses this way often resulted in plans for modification and/or new courses at *both* the two- and four-year institutions. In more than one instance, though, the four-year faculty decided to use the two-year's syllabi and materials to follow the same model of instruction. In another instance, the partners jointly developed a new course that is now offered at all of their institutions. In the end, two-year partners were generally satisfied that four-year institutions were accepting credit from as many as four to six courses, instead of only two, as was previously the case.

Adopting common credentialing requirements and learning standards. Credentialing and learning standards have provided partners with a set of "guiding principles" and helped them to confirm the quality of each other's programs. One of the two-year partners described how once the institutions discovered that they were all entitled to award the Gateways to Opportunities (www.ilgateways.com/en/) credentials, this became the "common ground" and proof that institutions covered all the necessary components. For a significant number of

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partnerships, the Gateways requirements were used as the starting point for alignment. Having both the two- and four-year institutions entitled to award Gateways Credentials was described as a huge benefit. Even though most of the two-year institutions and many of the four-year institutions were entitled prior to the grant (or were in the process of obtaining entitlement), partners indicated that EPPI helped them align the credentials to better facilitate transfer. As one of the partners observed, having the programs aligned with the Gateways requirements would prevent any "hiccups" in working with IBHE and ICCB.

A number of partnerships also noted they made sure the courses were meeting the Illinois Professional Teaching Standards, as well as the appropriate ISBE student learning standards. This often included examination of community college courses, even though they did not lead directly to teacher licensure. Another project leader mentioned that in addition to offering the Gateways Credentials at their level, the partners were all accredited by the National Association for the Education of Young Children (NAEYC), and the leader pointed out that "NAEYC accreditation is the Good Housekeeping stamp of approval. [Our partners] are meeting the same standards that we are." She said that this provided the trust and external validation that transfer students were going to be adequately prepared to meet the standards her university considered essential for their students.

Several partners noted that as the core courses in all the associate programs align to the same learning standards and Gateways Credential requirements, it should make it easier for the two-year programs to work with additional four-year programs and to transfer more courses. The research team found two courses that are currently twice as likely to be identified for articulation than any others. They are Child Growth and Development, which is one of two ECE courses approved as part of a statewide transfer system discussed below, and a Health, Safety, and Nutrition course, which has been designed to meet Gateways requirements. Introduction to Early Childhood Education and Exceptional Child/Learner courses were also quite commonly accepted, as were courses with various titles related to Infant/Toddlers, Curriculum Planning, Family and Community, Literature, Language and Literacy Development, Art and Music, Math and Science, and Diverse Populations.

Use of the Illinois Articulation Initiative. The Illinois Articulation Initiative (IAI) is a statewide transfer agreement among more than 100 participating public and private colleges and universities in Illinois. It is designed for students who know their major but are undecided on the four-year institution that they will attend to obtain their bachelor degree. Public institutions of higher learning are required to participate in IAI, but participation by private institutions is optional and, prior to the EPPI project, faculty at several of the private four-year institutions were not aware of IAI. According to researcher Tronie Rifkin (2000), "the success to date of the Illinois Articulation Initiative has been attributed largely to the state's emphasis on having two- and four-year faculty collaborate on the content of the statewide core general education curriculum that is the initiative's keystone" (p. 3). One of IAI's strongest principles is that community colleges and public universities are equal partners in delivery of the first two years of post-secondary education and should work together to make student transition from one institution to the other as effective as possible. The IAI is responsible for determining all Illinois Transferable General Education Core Curriculum (IAI GECC) recommended courses. Students pursuing majors in Early Childhood Education should take courses completing the entire GECC package (three in Communications, one in Mathematics, two in Physical and

Life Sciences, three in Humanities and Fine Arts, and three in Social and Behavioral Sciences). The IAI has also convened an ECE Major Panel that has developed two ECE major course descriptors (Child Growth and Development and The Exceptional Child).[5] Two of the project leaders interviewed are members of the ECE Major Panel, and they indicated that work on developing one or two additional course descriptors is likely to resume now that ISBE has issued the Early Childhood standards.

Several partnerships used IAI as a means for increasing the number of articulated courses, and others noted that they first became aware of IAI through the EPPI project. All who spoke about IAI expressed satisfaction with the influence of the system on improving the articulation process. For instance, one project leader described how he and his partner were aligning courses and recognized that the Child Growth and Development and the Exceptional Learners courses were both addressed through IAI. They said to each other, "We're just connecting with that process and saying, 'OK, then they'll be transferrable between our schools as well.' That's two more."

A number of participants described efforts to develop IAI-type articulation agreements within their partnerships and beyond. One such effort was formation of the Chicago-Area Consortium for the Redesign of Early Childhood Education (CACRECE), which included four four-year institutions and eight two-year institutions. One of the goals of this consortium was to modify their courses to ensure all the four-year institutions would agree to accept the same ones from the two-year institutions, so that individual articulation agreements would not be necessary. Two other partnerships indicated that the IAI panels inspired them to create a common course that will articulate across their institutions, and another partnership used the IAI model to develop an infant/toddler course and an early childhood science and math course that students can take at either institution.

Sharing resources. Participants were also eager to take advantage of resources developed by others to make the articulation process less complex. Many participants spoke about the learning opportunities provided at the EPPI grantee meetings where they could share ideas and adapt them to fit their partnership. One partner in particular noted that the state of Illinois has done a lot to help these efforts and has been a key champion for dissemination of this work. The HERO website was also cited as a valuable resource. Events like the Gateways Higher Education Forums provided another place for colleagues to gather and learn about resources to better inform the articulation work of the partnerships.

Lessons Learned about Articulation

As previously indicated, several participants mentioned that it has been beneficial to attend the grantee meetings and participate in the conference calls to learn about the activities of other grant recipients. Partners were also informed about each other's EPPI grant activities through the IL ACCESS group and the Higher Education Forums. These resources helped the partners learn what has been done with articulation agreements, who did it, and how to get in touch with them, enabling them to see various ways the tasks could be accomplished. One of the partners specifically said that the transfer agreement was something that was affected

Several partnerships used IAI as a means for increasing the number of articulated courses, and others noted that they first became aware of IAI through the EPPI project.

These resources helped the partners learn what has been done with articulation agreements, who did it, and how to get in touch with them, enabling them to see various ways the tasks could be accomplished.

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[5] For more information see: www.itransfer.org/IAI/majors/default.aspx?file=iai&section=students&t=ECE&p=ECE

by exposure to the work others were doing. She said, "I think anyone can do these things with help from someone else or just using someone else's model so you don't reinvent everything. It does take some time, but start slowly and do one articulation agreement and go from there." Another partner suggested that others considering this undertaking should:

> *...find out what other people have done and then try to piggyback off of that, so that you are not doing all of it yourself. This is especially important for those that are in one-person offices at the community college level. …You need to find out what other people have done and use that for leverage to do what you need with a particular school.*

This partner also advised that programs need to "find out which schools your students are going to" because they "don't need to do it with everyone—the majority of your students are probably going somewhere you know of or you should be able to get."

Tools like the Transferology program can also be used to help transition to a more flexible model of transfer policies, and some said this may be something that other universities should consider. One partner reports that she followed the EPPI grant activities of all the partnerships and has been tracking which courses the different colleges are taking. She says "they are picking and choosing from our courses, but a lot of them are the same one over and over." She reports that child development and health and nutrition are ones that are commonly accepted. She argued that within all the associate programs, health and nutrition and other core courses should all look the same because they are aligned to the Gateways Credentials. This should make it easier for the four-year programs to accept these core courses.

Acknowledging that this work would be "definitely doable" for other partnerships, another participant noted, "the community colleges have very similar programs, very identical courses. So, I think that by creating these pathways, we are now opening the door up for other community colleges to jump on the pathway as well, and to develop a partnership with a similar college." She added that she "is not sure about other four-year institutions because they want to appear different, whereas the two-years want to appear similar and help and share with each other."

Challenges to Articulation

Institutional culture. The biggest challenge with the articulation pathway was the amount of time required to get agreements and transfer plans approved at all of the necessary levels by all of the institutions involved. Almost half of the partnerships identified this as a major challenge. A related issue was identifying the right people to work with on articulation at each institution, because titles and functions varied widely, which was confusing for those who had not done this sort of work previously. One participant described the difficulties she was having because her community college did not offer an ECE associate degree, causing courses in the major to be viewed as electives and limiting their transferability. One of the two-year partners noted that her institution placed more emphasis on awarding certificates than Gateways Credentials because the certificates are a measure of "completers" whereas the credentials are not. In response, she aligned the credentials with the certificates to eliminate this concern. Another interviewee advised:

The biggest challenge with the articulation pathway was the amount of time required to get agreements and transfer plans approved at all of the necessary levels by all of the institutions involved.

"Think about what the roadblocks are going to be. Think ahead for potential problems. You need to consider the culture of your university. Consider what approvals are needed and what procedures to follow. You don't want to lose your momentum and run into roadblocks when you're ready to launch the program."

A few partnerships also discussed additional challenges related to issues involving either out-of-state students or students who wanted to transfer to a four-year institution in a neighboring state. In one situation, more students are electing to transfer to out-of-state schools to pursue their bachelor degree online, which is not offered by the closer in-state institution. Another program noted that students are unable to complete their student teaching out-of-state and be licensed in Illinois, which they say is a particularly thorny issue for four-year programs located near the state border. However, in response to this issue, ISBE is currently in the process of changing administrative rules to remove this barrier and allow candidates to secure out-of-state student teaching placements (S. Bernoteit, personal communication, November 4, 2016).

Buy-in. Not all two- and four-year partners saw eye-to-eye on the issue of articulation. In one case, the project leader expressed that it had been very challenging to align the courses between institutions, explaining, "We have very different goals. The two-years have applied degrees which are structured very differently." Several participants also cited a lack of administrative support and buy-in from their colleagues. Other interviewees discussed the difficulty in "selling" the proposed course changes to the other faculty in their programs and that some colleagues are reluctant to do anything above and beyond the minimal requirements, a problem in all employment fields. Other interviewees commented on the challenges related to selling the new programs to students. For example, one said that in the past, agreements were reached with four-year programs but were not well known to students, professors, or advisors at the four-year institution. "Now, we do not get into agreements," she said, "unless we are going to make it really well known to our student body." This partner also observed that course articulation information should be publicized so that it is accessible to anyone, and another partner added that "getting the word out and getting students on board is probably the most challenging." This partner recommended that programs discuss their work with counselors so that they can "sell it for us." This partner also hosted an "information night" where one of the four-year faculty came on campus and answered questions from students interested in transferring.

Limited capacity for reform. Several partnerships said it was difficult to find the time to do this work and keep the articulation efforts a priority. One participant said, "We still needed to meet more often than monthly. I would suggest that you check-in even more frequently." Another partner mentioned the importance of keeping the work moving so it does not become stalled. An additional partner discussed how successful articulation and transfer agreements require prioritization of the work in the institutional mission.

Next Steps for Articulation

Numerous programs hoped to continue this pathways work by expanding their articulation agreements to additional partners. In addition, several two-year programs noted that it is their intent to not only articulate with their EPPI four-year partner, but also to also make sure their

Some partnerships indicated that they now plan to work together to concentrate on recruiting and cross-advising students.

programs are on par with other cohort colleges so that their students will be able to easily transfer to other colleges and universities. However, they note that not all potential partners have been especially supportive of these efforts in the past. One interviewee recommended increased training for teaching faculty on how to view courses that can be transferred and to help build the capacity of the four-year faculty to be more savvy about the needs of transfer students.

Some partnerships indicated that they now plan to work together to concentrate on recruiting and cross-advising students. Others have plans to evaluate the effectiveness of their innovations in attracting more transfer students. More than one institution expressed the intent to become entitled to offer more Gateways Credentials. Some will be working to troubleshoot problems that emerge during implementation of their new programs. One of the four-year programs is considering options for providing credit for prior work experience, and another partnership plans to introduce the edTPA process at the community college level "so that students would be able to jump from the two-year experiences to the university without having a bit of a meltdown."

Sustainability of Articulation Innovations

Participants expressed confidence that the articulation innovations would be both sustainable and scalable to other partnerships. Many suggestions for sustainability centered on pursuing formal agreements to institutionalize the program-level work that has been completed. As a partner said:

> That's one of the reasons we wanted this to be institutionalized because then it is more sustainable. People come and go in programs. Sustainability is supported if the agreement is there and it's not simply a word of mouth of this is how we used to do it. Here is the piece of paper that we used. So that's one of the reasons why we're really wanting to get that done.

In moving forward, this partner is determined to make sure that the knowledge of this agreement is placed everywhere so that it can be found after the current partners leave the institutions, saying "This is our biggest issue." This partner believed sustainability could be reached by informing as many people as possible, adding that the course equivalences will be sustainable once they are approved, placed on the website, and added to the advising documents at the transferring centers. Another participant echoed these sentiments:

In addition to having formal agreements in place, the importance of continuing to maintain communication with the other members of the partnership was viewed as essential.

> Once the courses are articulated, they will have been reviewed and will have gone through the curriculum committee; the courses, requirements, and master course syllabi will be updated to the institutional research program. This information will be there for any new faculty or staff members to see the articulation agreement. It's something that is in the system and will not be forgotten even if I leave.

In addition to having formal agreements in place, the importance of continuing to maintain communication with the other members of the partnership was viewed as essential. One of the partners indicated that building these connections was important for sustaining the "changing of the guard." A number of participants recognized that sustainability is also likely because the changes involved were such a group effort. As another partner stated, "each member is now

invested in it. Previously, this work was done on a one-to-one basis, but this project has allowed us to gain the two-year institutions' perspective as a whole."

Although most of the partners believe that the changes are sustainable, they recognize that there may need to be some minor adjustments. "The field is changing, the requirements or what is needed are changing. We have to listen to the workforce and the community and address what those needs are," noted one of the participants. She added, "the partnership needs to be flexible and address whatever the field is requiring." Another partner added that these changes are sustainable as long as the institutions are all entitled to offer the Gateways Credentials, noting that the high demand for Gateways Credentials reflects the needs of the workforce across the state.

More than a half dozen participants also indicated that their articulation innovations are scalable to other locations. An interviewee whose institution was experiencing much turmoil, believes creating an articulation plan that makes sense for both partners is scalable to a lot of institutions. She said, "If we can do it under these circumstances, anybody can do it." There was much agreement over the important role the Gateways credentialing process has played in facilitating this work. "This can absolutely be transferred universally across the state of Illinois," stated one of the participants, who observed that bringing these articulation innovations to scale was a "no-brainer" because:

> it is a very easy way for our state to allow our students to be more successful and to contribute to the field in a much more meaningful way as far as having a higher degree, specifically in early childhood.

She concludes by saying, "I think it would be a very big lost opportunity for our state if we didn't pick this up and continue it on."

Impact of Articulation Innovations

Building on the Gateways system was supported by a number of participants as a way to move forward with articulation. One of the interviewees said:

> I think that we do need to have a much larger conversation about the Level 4 to the Level 5, and the idea of supporting students to obtain stackable, truly stackable, credentials. That will give us a lot of flexibility, as we all agree and we have this entitlement and we say this is what's important in our field. We can document that and stay entitled. We could allow places to have that flexibility to build and adjust their curriculum as it's appropriate and outlined through INCCRRA, through their Gateways entitlements. With a partnership with ISBE, and of course IBHE, that we could support that sort of approach to transfer would be fabulous for students.

Additionally, there is much optimism about the new opportunities for articulation with the AAS degree. As one of the participants concluded, "If this works, if we get a number of students coming—students will ask why other universities aren't doing this and the others will change."

Finally, some participants recommended making collaboration between two- and four-year institutions a requirement for program approval in order to greatly enhance workforce preparation. As one participant said, "It is unrealistic not to have this level of cross collaboration

from the onset. This needs to be business as usual." She suggested that the partners submit an articulation plan, but not enter into formal agreements until after the redesign is approved. She contends:

> There is an army of people who go through community colleges in early childhood and many of them would be successful in licensure with a little encouragement. I would love to collaborate and have articulation agreements with as many community colleges in the area as possible. I hope that this real collaboration model will work with them. It will certainly help us all at both ends.

Alignment of Assessments

Motivation for Assessment Alignment

As one of the partners explained, "To me, the next step in articulation, if we're going to really work hard at making sure that students have a common experience, is looking at the assessments." She was not alone, as several partnerships mentioned their efforts to align key assessments. The most frequently referenced catalyst expressed for these undertakings is to prepare students for the edTPA. Another interviewee summed it up this way:

> We wanted to backward map edTPA to know what skills were needed to support and better prepare effective ECE candidates to use evidence-based instruction and data driven decision making. We wanted to look at how can we help our candidates to be better prepared for using scientific methods to make decisions and provide evidence-based instruction and actionable feedback to young children.

As of September 1, 2015, the state of Illinois required all teacher candidates for licensure to pass the edTPA in order to apply for licensure and complete their preparation program (ISBE, 2016b). The edTPA is an evidence-based assessment of teacher effectiveness that is meant to be a capstone within teacher preparation programs. It is administered in teacher preparation programs throughout the nation to measure key competencies in five areas: planning, assessment, instruction, reflection, and academic language (Stanford Center for Assessment, Learning, & Equity, 2016). Research has found evidence of validity of this assessment process and that it accommodated various pedagogical approaches (Goldhaber, 2016; Sato, 2014).

Another motivation for aligning assessments was to help simplify the standards and benchmarks set by various credentialing and accreditation organizations. As one interviewee pointed out, at one point there were 347 benchmarks associated with the various Gateways Credentials,[6] and students could take courses to obtain these credentials at multiple two-year institutions, making it even more difficult to obtain the desired credential or transfer the courses without common assessments among the two-year colleges. Other participants noted that an aligned assessment system would allow students to take more courses at more convenient and affordable community colleges, as well as help more students to complete degrees.

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[6] The 347 benchmarks have since been reframed and approved as 56 competencies.

Assessment Alignment Innovations

Cross-institutional assessment system. One of the most ambitious assessment innovations implemented through the efforts of this project is the cross-institutional assessment system (CIAS). The CIAS incorporates not only the Gateways benchmarks, but also the standards established by NAEYC, ISBE, and the Council for Exceptional Children. Participants report the CIAS has led to a better alignment of existing systems of higher education and the Gateways Credentials to create a more seamless, stackable credentialing system for early childhood teacher preparation.

According to one of the partners:

> *Aligning assessments is the last step of this whole overall process. If we look at it step-by-step fashion, the first step is looking at what unifies us across the two- and four-year system and the unifying standards are the Gateways standards.*

Thus, the partners typically began their process by examining all of the Gateways Credential benchmarks to identify the required knowledge, skills, and proficiencies needed to meet the benchmarks and workforce needs. For example, the partnership looked at the requirements for specific employment positions (e.g., teacher associate, lead teacher, master teacher) and then cross-referenced these with the Gateways benchmarks and other standards, backwards-mapping them to courses at both the university and community college institutions. After eliminating redundancies, they synthesized the benchmarks into what has been nicknamed, "uber competencies." (The complete list of benchmarks are still there to serve as individual indicators if educators want to use them.) To create the CIAS, the partners explored ways to assess the competencies and how a common assessment strategy could be designed. As a result, they developed a common rubric based on the approximately 50 "uber competencies" so that any institution can develop assessments based on these rubrics that would align with their existing assessment system. One partner noted that, although she is the last person to seek a one-size-fits-all solution, the "uber competencies" may be a one-size solution that is beneficial in reaching agreement.

Bridge assessments. As discussed in the Articulation section of this report, one of the partnerships has developed a "leveling bridge" course to match their two-year and four-year courses. To design this bridge program, the partners developed common assessments by analyzing current research and professional teaching standards. They shared syllabi for the four courses that they planned to articulate and used the course goals and objectives to jointly develop common, aligned assessments for each course. Now, each one week segment of the summer bridge course has a final project that matches the final exam for the four-year institution's courses, and successful completion of the exams will enable students to get credit for the four courses that would not have otherwise articulated. The partnership believes that these courses will reflect higher-level thinking skills and that the assessments are appropriately challenging. One of the two-year partners mentioned that the process was very collaborative and she feels confident that the assessments will be challenging, but manageable for the transfer students.

Common portfolio software. The Chicago Consortium described earlier has not had the chance to follow through on developing a key assessment for each of the courses that would be common across the institutions, as planned. However, they recognized the need

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for a common cloud-based system to house the artifacts for key assessments related to the edTPA process. They have discussed utilization of the same software to ensure transferability of students' experiential assignments. Because a number of the institutions already use LiveText as an assessment platform, they are trying to arrange the system so that students who save their work in LiveText will be able to make it available to the other institutions. A next step for the Consortium will be to explore any legal hurdles potentially related to the Family Educational Rights and Privacy Act (FERPA) and other privacy issues.

Similar documentation. The City Colleges of Chicago took a different approach to aligning assessments and facilitating the completion of various Gateways Credentials. Recognizing that many of their students attend multiple institutions, the partners looked at what they could do to minimize their different entitlement processes and artifacts required to document learning. Previously, students had to provide a lot of documentation when they applied for their credentials because assessments were not aligned. However, once the two-year partners agreed to have students work on specific documents and specific courses, it became obvious that changes in the curriculum would be needed. One of the partners said:

> I have found, because we've tried to be so agile in our curriculum, we've done really complete, dramatic re-writes twice in ten years. I think it's pretty impressive. As long as things make sense, people are willing to grow and adjust their curriculum. So preparing to go into one program, we all submitted similar documents of entitlement that say we know if you take 109 credits at any of our two-year colleges, you're not going to have an issue because you did the same work in that entitlement route. It was not complicated. It's not a difficult thing and we're pretty used to that kind of thinking. We also have our five agreed upon NAEYC assessments. I think that people did have to make changes, but I did not see faculty stressing about them. People thought that they were good, appropriate changes.

Now that the two-year partners aligned their credentials, they all use the same artifacts and documentation for each course.

Shared assignments. In order to help make courses more comparable, one of the community colleges has adopted a case study assignment used in their four-year partner's child development class, which is one of the major assessments that contributes to teacher candidates' portfolios. For the case study, students pick one child to study and describe him or her in all major domains of development using a variety of methods to gather data, such as interviews, assessments, and observation. In addition, this case study provides the two-year students with some exposure to working directly with children, which had been lacking previously. The four-year program also reviewed the syllabi for the courses offered at the two-year college and provided faculty with materials to supplement their text with additional assignments and resources they can use with dual language learners, including articles that are available on the ISBE website about working with English language learners.

Common Features of Assessment Alignment

Although the five innovations described above are quite different from one another, they share several common features. For the most part, all of the aligned assessments take into account the Gateways Credential requirements and the Illinois Early Learning and Developmental

In addition to the four-year grantees learning from each other about edTPA through the EPPI project, many participants noted that the two-year partners were also gaining a better understanding of this assessment process and its standards.

Standards, as well as at least one other national standard, with the NAEYC standards being mentioned most often.

Implementation of the edTPA process by ISBE has motivated much of the interest in aligned assessments. In addition to the four-year grantees learning from each other about edTPA through the EPPI project, many participants noted that the two-year partners were also gaining a better understanding of this assessment process and its standards. Although the two-year programs are not directly involved in edTPA because the assessments have not generally taken place during the first two years of teacher preparation, several of the two-year partners mentioned they were pleased to have the opportunity to learn more about it. A number of two-year partners indicated that they have begun to utilize the vocabulary of edTPA in their programs so that students are familiar with it should they transfer.

Lessons Learned about Assessment Alignment

In the past, getting courses articulated was the main focus and key assessments often halted the articulation of specific courses. According to one of the interviewees, partnerships rarely explored "how students were being assessed or how knowledge and skills are acquired." Now, however, the work with aligned assessment described above "really circumnavigates the persistent problems we had with articulation." "Competency based systems are so concrete," another participant said, "so I really see value in helping teachers teach. This makes things very clear since standards are nebulous, whereas competencies are concrete, they are clear and direct. This helps you make improvements."

Focusing on competencies gained rather than course hours accumulated, will be "a way to get out of the existing boxes way of thinking about 'these classes and these courses' and the other hang-ups in this work related to differences about what can be offered at the 400- and 200-levels." Another interviewee explained that:

> Comparing the formatting of two- and three-credit courses was not as easy as we thought it would be. We had to give much more robust consideration of course content and practicums for alignment. In order to articulate, we had to take into consideration what standards had to be covered in the different course syllabi for various accrediting organizations that cover high school though four-year college course content.

Even partnerships that used a more traditional syllabus review process indicated that they have plans to examine objectives and competences when more time is available. Partners noted that designing and implementing these innovations provided the opportunity to engage in self-study and assessment of their own programs, while also opening the door to other possibilities for alignment.

The CIAS project leader says she believes the project is sustainable "because there was so much integrity in how it was done, so I think that is huge. I also think it is sustainable because it makes so much sense." The partner reports that the idea is simple and can be simply applied now that the arduous development process has been completed. To aid these efforts, the CIAS group has developed a web-based assessment toolbox that covers program evaluation, assessment tasks, assessment task tools, a master rubric, custom rubrics, and data analysis tools. As one partner noted, "We are all more likely to use data more deeply, if our time is less spent on the logistics."

The Cross-Institutional Assessment System group has developed a web-based assessment toolbox that covers program evaluation, assessment tasks, assessment task tools, a master rubric, custom rubrics, and data analysis tools.

The CIAS partners also believe that this innovation could easily be scalable across the state, and would like to see Gateways and the Professional Development Advisory Council formally adopt the competency based system.

Challenges for Assessment Alignment

Whereas some partnerships had success in developing aligned assessments, others noted problems related to requirements that key assessments have to "live" in courses taught at the four-year institutions. According to one of the partners, the Council for the Accreditation of Educator Preparation (CAEP, formerly NCATE) specifies that assessments be tied to specific courses at the four-year level. Because of this, the courses could not be transferred from the community colleges. However, participants are hopeful that efforts like those related to the "uber competencies" and edTPA will support their work around assessment and become the basis of shared systems that can be used across programs so that more courses may articulate. Thus, by focusing on benchmarks and competencies, rather than where these "live," students would be able to cover the material in a course offered at any institution.

Because some four-year institutions are trying to increase the number of endorsements included in their licensure programs, students must begin to fulfill their requirements sooner. Though some of these requirements could be included at the community colleges, edTPA requirements are proving to be a challenge. For example, a two-year college could offer part of the ESL requirements, but teacher candidates would need to prove where they were assessed and how they demonstrated they had meet the required standards. However, some participants note that innovations like common portfolio software could help alleviate this problem.

Advising and Supporting Students

We next describe the EPPI grantees' activities to support transfer students through cross-advising, development of advising guides, increasing accessibility, and bridge programs. Although advising at the collegiate level has been practiced for over three centuries, formal theories for advising have only been developed in the past 40 years. O'Banion's (1994) team approach includes a combination of the student, faculty, and a professional advisor working together to meet the student's academic and non-academic needs. In this approach, the student is responsible for decision making, the advisor helps student explore life and vocational goals, and faculty assist students with choice of program and courses. This team approach has typically been situated within a single institution, and it was not until recently (Webb, Danztler, & Hardy, 2015) that theories have been developed to specifically address the transfer advising process. Webb, Danztler, and Hardy's (2015) Influence Theory includes five factors that "play a prominent role in the transfer advising process: institutional, cultural, contextual, advisor, and student" (p. 619). The factors have numerous properties, with some corresponding directly to issues pertaining to advising and supporting transfer students that were mentioned by the participants in this study. For example, components of the institutional factor include clear communication and concern for students. We learned from participants that the cross-advising activities were developed to give four-year faculty the opportunity to describe and explain their programs directly to potential transfer students at their community college location. In addition, a number of interviewees expressed concern for students as reflected in this statement by one of the project leaders, "the

institution is dedicated towards students completing degrees and we don't want them to complete degrees that don't have value."

Motivation for Advising and Supporting Students

Many of the EPPI grantees focused their efforts to improve the transition of two-year college students to a four-year institution by addressing student advising and supports to reduce the "transfer shock"[7] that can result in drop out. Townsend and Wilson (2006) found that both traditional and non-traditional transfer students have trouble with this transition. Smith and Miller (2009) sought to identify promising practices for reducing transfer shock and argue for structured pathways such as dual enrollment or articulation agreements; individualized attention through support or bridge programs; and culturally sensitive leadership that consists of people from diverse backgrounds. A number of EPPI partnerships addressed the culture shock that transfer students often face by developing summer bridge programs that brought students to the four-year campus and encouraged them to become more familiar and comfortable with the faculty, setting, and resources.

A previous IERC report on the implementation of the EPPI grant (Lichtenberger et al., 2015) described the work completed by the first-round grantees. Most of these initial partnerships focused on helping students become academically and culturally oriented to the four-year setting and included innovations such as institute days, summer bridge programs, and upper-division course work taught at the two-year institution. Some partnerships continued their work from year one by expanding their activities to include additional services or community colleges in their partnerships, whereas others developed new plans. Many of these grantees crossed historical barriers between two-year and four-year institutions to support early childhood students who wanted to continue their academic careers to the baccalaureate level. In the past, advisors and faculty often stayed within their institutions, leaving many students to make this transition on their own. Such students often faced significant challenges, such as a lack of course articulation and incomplete information regarding course selection and career options, which increased the time and cost to complete their degree.

Innovations in Advising and Supporting Students

Cross-advising. Several EPPI grantees worked to improve the transition process and share information by establishing cross-advising strategies. Cross-advising refers to providing both an academic and a cultural bridge between the two- and four-year institutions, rather than within one institution, which is critical to the success of transfer students. In these instances, early childhood faculty and advisors from both institutions carry out the cross-advising activities. For many of the EPPI grantees, the cross-advising typically occurred when four-year faculty and advisors met with potential transfer students at the two-year site. The faculty and advisors shared their in-depth knowledge about the specific requirements for their degree programs, and provided a contact point to help students transition to the four-year environment. By working closely on the grant activities, two- and four-year faculty and advisors have become more thoroughly informed about one another's curricula and requirements for transferring.

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[7] *Transfer shock* (Hills, 1965) describes the decrease in academic performance in students who have transferred from a two-year to a four-year institution, as well as the cultural transition to the four-year environment.

A number of EPPI partnerships addressed the culture shock that transfer students often face by developing summer bridge programs that encouraged students to become more comfortable with the faculty, setting, and resources at the four-year campus.

The faculty and advisors shared their in-depth knowledge about the specific requirements for their degree programs, and provided a contact point to help students transition to the four-year environment.

Two-year advisors reported being better equipped to inform students about the opportunities and requirements of their four-year partners. For example, one two-year advisor said, "I think we are trying to tell students early on what courses they will need to take for what institution and what that degree would look like, certified or noncertified." At another partnership, the two-year advisors discuss with students the best career path to take depending on their interests and assist students in determining if they are ready for each step in the process, with some students deciding to complete an associate degree and others a bachelor degree.

In some partnerships, four-year faculty and advisors visited their community college partners to meet with potential transfer students to discuss career options and requirements for transitioning to the four-year institution. These one-on-one meetings and group sessions help students make personal connections with the four-year institution and demonstrate the four-year faculty's interest for in students' success. In one such partnership, a four-year advisor maintains an office at the two-year institution where she dually advises students with the two-year advisor. Some of the four-year institutions have also intentionally selected the same faculty member(s) to work with transfer students to increase consistency and continuity with the transfer process.

Maintaining small student cohorts at the four-year level is another strategy used to support transfer students by building their connections with faculty and classmates and enabling faculty to more closely monitor students' progress and address problems early. At one four-year institution, faculty meet weekly with transfer students and note that they "have pretty close ties to every student who comes through—there is no one who slips through the cracks ever." These close connections provide opportunities to motivate students and to assist with their needs, both inside and outside the classroom, including finances, health care, child care, and life-coaching. One faculty member described this process as "a little bit of hand holding, but not doing it for them."

> The advising guides served two distinct purposes: increasing knowledge and awareness among all advisors about the early childhood curriculum and available career paths; and providing a communication tool to inform students of these options.

Advising guides. Many partnerships devoted a significant amount of grant time creating materials to help communicate degree and credential requirements and pathways between two- and four-year institutions and careers. In developing these advising guides, early childhood faculty worked closely with advisors to help them understand the complicated ECE profession and the numerous routes for students to reach their goals. Four-year faculty members hoped this initiative would increase understanding of the field, and reduce the number of two-year advisors who steered students away from early childhood education because they did not understand the profession. Advising guides also provide a tool to easily communicate to students the complicated transfer process, and provide a "common language [for students] making them feel more comfortable." One strategy for doing this involved utilizing graphic design experts in developing the guide so it effectively communicated the intended messages of the faculty and advisors. Another program used their advising guide to encourage more students to transfer and help them to reduce credit loss during the process. Thus, creating the advising guides served two distinct purposes: increasing knowledge and awareness among all advisors (two-year and four-year) about the early childhood curriculum and available career paths; and providing a communication tool to inform students of these options.

Flexibility in scheduling and location. Mechanisms to improve accessibility for transfer students took many forms to meet students' needs for flexibility in scheduling. Several partnerships increased options for blended courses (i.e., online and in-class components) at

both their two- and four-year institutions or offered courses in the evenings or on Saturdays to accommodate students' family and work schedules. Another institution is in the process of designing a new early childhood program to be offered entirely online to reach students in more geographically isolated areas. Two institutions plan to offer introductory baccalaureate courses at their partnering two-year institution that would lead to both the certified or non-certified credential. Another four-year institution partnered with an early childhood center so that several teachers could enter a cohort program together and support one another's work and assist with transportation needs. Two other four-year institutions worked with their local Head Start programs to increase awareness of the new programs and provide on-site professional development (PD) to Head Start staff. One partnership expanded their existing bridge program to allow students to complete their baccalaureate coursework at the two-year site. As one faculty member from the four-year institution indicated, "The real focus is trying to meet our community needs of students who have families and are trying to work at the same time and giving them that option of night and online."

Financial support. Financial barriers also restrict some students' access to ECE preparation programs. To address these issues, two partnerships have scholarships available for transfer students, and one four-year institution has used another grant to provide electronic textbooks and other materials to enhance students' experiences. As one four-year partner commented, "It doesn't make it realistic for them to attend a four-year university if tuition assistance and other supports are not put into place." When scholarships weren't available, some partnerships identified courses that could be completed at the two-year institution to help keep tuition costs down. A few institutions also provide financial assistance through free on-campus child care and transportation. Gateways to Opportunity has also offered scholarships to offset costs for baccalaureate tuition and other needs.

Academic support. Some students also needed academic supports to improve their access to these ECE programs. For example, to specifically address inadequate math preparation, one institution encouraged two-year students to take the required math courses at their four-year institution, with the assistance of math tutoring services provided at the four-year institution, so that students could avoid repeating math courses once they transferred. Partners in our study provided academic supports such as tutoring for English and math, as well as general academic skills such as note taking, both face-to-face and through online modules. To address academic barriers, institutions at both the two- and four-year level provided test preparation for exams, such as the TAP, SAT, or ACT, that are required for entrance into licensure programs, and most offered these services for no fee.

Cultural support. Many of the partnerships developed bridge programs to help students acclimate to the four-year setting. Typically, these programs brought students to the four-year campus during the summer to increase their exposure to campus life, faculty, and resources such as the library or tutoring center. One four-year partner described that their summer bridge was intended to, "familiarize [students] with learning new management websites. Where do I get my ID? Some of those things that are totally non-academic, yet can be barriers for students sometimes, while they are really minute things in the grand scheme." Capitalizing on her prior interactions with students at the two-year institution, she went on to describe her plan to help transfer students adjust to the four-year institution, "It's me who is familiar, taking them to an unfamiliar place but now I am connecting them to these unfamiliar people so that when they come back it is not so bad." Another summer bridge program was intentionally designed to

orient the student to their style of early childhood program, saying, "[It is] all about getting students into the mindset of what it means to be successful in a field-based program." Another four-year partner believes the summer bridge program "will build a sense of community" among students, which will be beneficial as they transition to the four-year institution. As an added benefit, students attending summer bridge programs have the opportunity to start some of their course work early, thus reducing their load their first fall semester at the four-year institution.

Common Features of Advising and Supporting Students

Simplifying the transfer process. All of the partnerships interviewed for this study worked to simplify the transfer process. They noted that it can be overwhelming to understand all of the necessary coursework and other requirements for smooth transitions, and that this becomes even more complicated when students are unsure of or change their minds about their academic and career plans. For example, advising guides helped communicate the requirements and the process for transferring, and also increased knowledge of the EC field and career paths for individuals in influential positions, such as recruitment, admissions, and advising. Some partnerships reduced complexity by creating a simpler pathway from the AAS degree to the four-year institution. This was a significant hurdle to address the needs of students who initially earned a terminal associate degree, but then decided to pursue a bachelor degree. Establishing this AAS-BA pathway allowed two-year advisors to communicate, "All you need to do is complete the AAS pathway that has already been discussed with the [four-year institution]," and eliminated the need to discuss course-by-course transfers, which are overwhelming for some students.

Strong communication. Communication was another significant factor in advising and supporting transfer students. In addition to strengthening relationships between individuals and institutions, strong communication was critical to partnership development for both new grantees and those with continued funding. Over the course of the grant, increased communication occurred both within and between two- and four-year institutions across several audiences (e.g., faculty, advisors, transfer centers) around multiple topics, including recruitment, program requirements, course equivalency, and transfer processes. Improving communication with transfer students was also a significant focus for the development of advising guides, cross-advising with four-year faculty, and offering bridge programs that eased transitions to the four-year campus. Many programs also discussed plans to continue the strong communication to monitor transfer students' and their progress into the four-year institution.

Although partners communicated electronically, many preferred the face-to-face interactions with colleagues and students. Four-year faculty visits to their two-year partners' campuses were viewed as especially effective in demonstrating commitment to the initiative, as well as concern for potential transfer students. In addition, several partnerships reached out to practitioners to inform them of opportunities for PD and advancing their qualifications.

Lessons Learned about Advising and Supporting Transfer Students

One of the most important lessons learned about supporting transfer students was the need to involve advisors and their supervisors early in the process to get buy-in and to hear their perspectives. Grantees also found that it was essential to gain support from other institutional

One of the most important lessons learned about supporting transfer students was the need to involve advisors and their supervisors early in the process to get buy in and to hear their perspectives.

members, such as the administration of the school of education and the provost. Participants warned that the complexity of this work should not be underestimated. As two put it, "[this is a] complex institutional system to navigate to work on a complex problem" and "every step of the way each piece of our work has had kind of made its way through all of these different stakeholders so that it could make sense to the institution because the institution is so complex."

Interviewees also noted that it was helpful to involve other faculty in their school or department in order to expand others' knowledge of ECE and help ECE faculty gain different perspectives on transfer and articulation issues, as well as learn how to make better use of institutional supports. They noted that supporting transfer students requires both knowledge of various content areas and a short- and long-term understanding of the direction the field is heading. As one partner said:

> *What's really valuable is having folks understand that the documents that were created only help give advisors and students a base to understand where to drive the conversation. They help to know how to get them what they need for their work right now, and also helping them meet their long-term goals. It requires a deep understanding of the field.*

For another partnership, a prime lesson learned was the "life-changing" power of making their degree audit system available to students. This partner made the system accessible through the institution's student portal, showing requirements for courses and progress towards degree completion and allowing students to schedule appointments with advisors and tutors. Prior to implementing this service, the institution was doing all of these activities on paper, and the interviewee reports that many community colleges continue to do so in that manner.

Challenges to Advising and Supporting Transfer Students

Illinois' state budget crisis posed challenges to many of the grant innovations, but none more so than those related to advising and support services for transfer students. For example, one institution described how administrative cuts in response to the state funding situation led their departmental advisors to be moved to a central advising center, where they became responsible for advising all students in the institution. As a result of this organizational change, the four-year partner believed the new structure "demolished the really solid advising" that had been put in place with departmental advisors who were very familiar with the program and its students. Faculty from other institutions described how they will not be able to continue to provide campus visits and other support activities financed with the grant due to a lack of resources at their institutions.

Another challenge that cut across many of the innovations, but was particularly felt in these areas, was the perceived low status of the ECE profession. The partnerships experienced these perceptions firsthand when they realized some two-year advisors were steering students away from ECE degrees at the two- and four-year programs. Although the advisors may have had good intentions with regard to the economic return on investment, their lack of knowledge about ECE degrees and career pathways hindered students' desires to enter the field of their choice and the partnership's ability to recruit students. Upon realizing these misperceptions, several partnerships increased communication with advisors and developed materials to increase the advisors' awareness of and knowledge about the field.

Some two-year advisors were steering students away from ECE degrees at the two- and four-year programs.

Next Steps for Advising and Supporting Transfer Students

A number of partnerships plan to continue working out the details for their bridge activities and other efforts to support transfer students. One partner described this as "the troubleshooting phase—finding out if everything is aligned correctly, have the changes been effective, and are the transferring students having little or no problems in the transition." These efforts also include outreach to staff at the two- and four-year institutions in order to increase awareness of transfer issues and of their new programs. This partner also mentioned a desire to work with the four-year faculty "to make sure the transferring students stick out the next two years and finish their bachelor degrees and go on to a wide variety of professions within the field." Similarly, another four-year partner described plans to track incoming transfer students to evaluate the success their bridge program. One four-year partner intends to seek funding to continue their efforts to assess awareness of the ECE field for everyone in the transfer pipeline including recruiters, transfer coordinators, and professional advisors.

Another area that will continue to receive attention from partnerships is making sure that transfer students receive the financial support required to complete the new programs. Partnerships have also worked to ensure accessibility via the development of online courses and efforts to schedule classes at times convenient for working students. Many partnerships plan to continue their efforts to identify and recruit potential transfer students who can take advantage of all of the supports and activities developed by the grant work.

Sustainability of Innovations in Advising and Supporting Transfer Students

The partnerships are taking several approaches to sustaining their efforts to support transfer students. Programs that produced advising guides indicated these materials will persist, however, ongoing training will be needed to ensure that they are used appropriately. Several participants mentioned the need to institutionalize the processes for cross-advising, supportive activities, and bridge programs so that the continuation of these activities is tied to the resources of the institution rather than depending "on personalities or the goodwill of faculty." As one four-year partner stated, "It must become an ongoing process that the institution values strength-based advising, and supports faculty in the advising and support role." O'Banion (1994) also recommends that institutions recognize the importance of faculty in these roles and consider their contributions during evaluations for rank and pay or through reduced course loads.

One four-year partner indicated that their activities would be sustainable because the work "created systems that will support themselves because they align with structures already in place at the four-year," such as academic success centers and early warning monitoring systems. Interviewees also felt that organizational changes that identified a particular faculty member as the primary contact for transfer students would be sustainable. One participant also mentioned the important role of having "people who are very dedicated to seeing our students move to make this transition." This commitment, coupled with low turnover, will be a significant factor in sustaining the grant efforts. Lastly, the strong positive relationships developed during this grant were viewed as essential for the continuation of grant outcomes. As one four-year partner explained, "We like each other so much" that the members in the partnership want to keep the communication going due to the strong relationships and friendships. Additionally, when institutions keep in contact with students and do not hesitate to contact their partners for additional assistance, participants believe this creates a positive effect on students.

Content Area Innovations

This section describes the innovations undertaken by EPPI grantees in three specific content areas: early math, English language learner instruction, and programming for infants and toddlers. For each area, we discuss the grantees' rationales for addressing the issue and describe related innovations, strategies, and activities. This is followed with a discussion of lessons learned, including challenges with implementation and early evidence of impact, where appropriate.

Early Math

Motivation for Early Math Innovations

The Illinois Preschool for All Program Evaluation (Gaylor, Spiker, Fleming, & Korfmacher, 2012) found that child outcomes were generally positive, except in early math. These findings are consistent with those in the report issued by the National Association for the Education of Young Children (NAEYC) and the National Council of Teachers of Mathematics (NCTM) that declared the need for improvement in early math teacher preparation in the United States was an "urgent priority" (NAEYC & NCTM, 2002, p. 10). A major barrier in addressing this need is that many teacher preparation faculty do not feel adequately prepared to teach early math content, or view other subjects as more important (Austin, Whitebook, Kipnis, Sakai, Abbasi, & Amanta, 2015; Horm, Hyson, & Winton, 2013). However, recent work of the Erikson Institute to address these barriers, coupled with the revision of the ISBE Early Childhood educator preparation program standards to reflect the best national thinking about early math learning and the preparation EC teachers, served as catalysts for a number of partnerships that elected to address this content area.

The IERC's 2015 EPPI grant report (Lichtenberger et al., 2015) found that grantees were highly motivated to improve early math teacher preparation and the authors recommended building capacity in multiple content areas, including early math. Similarly, current grantees believe strongly in the importance of early math instruction and many interviewees are highly involved in research and advocacy for the content area through their local communities and on state committees. Ongoing grant activities, such as needs assessments of current teachers and analysis of state math assessments have further demonstrated the need for improvement in early math instruction.

Although no partnerships were identical in their approach to improving early math instruction, each site addressing this area was motivated by the desire to improve the content area by making instruction more intentional than what was previously taught to our earliest learners. One interviewee illustrated the field's evolution to a more research-focused early math approach as:

Developmentally appropriate practice has changed to a strong focus on what is happening with the child and how can we help them to be more successful in the classroom. In the past, the focus was on simplifying the curriculum—almost diluting it, rather than thinking about STEM and early literacy. How can we better understand what the young child is thinking and experiencing? How can we build on the knowledge the child already has?

According to interviewees, this desire to improve early math instruction deviates from the status quo and calls for a more individualized approach that takes into account the child's developmental ability and home language. Interviewees discussed the importance of early math to future school success, and noted that current early childhood educators often lack the understanding of what mathematical concepts children can understand at various stages of development.

These factors motivated the partnerships to align early math content both across two- and four-year institutions and within the workforce. Aligning early math across institutions was viewed as advantageous in order to prepare community college students to transfer to four-year institutions and reduce the shock of transfer through exposure to similar content across both institutions. They felt alignment within the workforce was important to ensure instructional cohesion across all teachers in the community, regardless of preparation pathway. Despite the strong need for improved early math instruction, resource and capacity limitations often prevented this demand from being met.

Confronting teachers' fear of math was another motivating factor across partnerships who focused on this issue. Interviewees noted that this fear spanned across both pre- and in-service teachers, to the point that some developed a "cold sweat." One interviewee illustrated how detrimental this anxiety can be to the field:

If a teacher is fearful of a topic or doesn't like the topic, that child is going to get that message. And if there is a close relationship between that child and the teacher, that dislike of the topic is going to transfer to the child and that's a disservice. We've got to stop it.

Partners noted that math anxiety needs to be overcome in order to improve instruction. Some linked fear of early math to teachers lacking awareness of the simplicity of the math intervention that is needed for the earliest learners, and noted that fears quickly dissipated upon being shown demonstrations of updated early math instruction strategies.

Early Math Innovations

Numeracy. The partnerships aimed to improve early math instruction by implementing changes in course content and developing professional development (PD) workshops. Partners often discussed how early math instruction courses and PD should focus on developing strong fundamentals by exposing children to the basics of addition, subtraction, multiplication, and division. These topics were often referred to as numeracy (rational and rote counting), subitizing (instant recognition of a number pattern without counting), and math vocabulary. Interviewees described how these strategies "help young children make important connections among physical, pictorial, graphic, symbolic, verbal and mental representations of mathematical ideas."

> Interviewees noted that current early childhood educators often lack the understanding of what mathematical concepts children can understand at various stages of development.

> Some noted that fear of early math quickly dissipated upon being shown demonstrations of updated early math instruction strategies.

Working with dual language learners. Three partnerships discussed current and future work in the integration of early math and instruction for children who are dual language learners. One partner reported having modified all early math instruction materials to include information on how to provide education to dual language learners. Another partner discussed how the integration of these two areas represents how the field has "a strong focus on what is happening with the child and how we can help them to be more successful in the classroom."

Coursework. Within teacher preparation programs, early math strategies were primarily integrated into a math pedagogy course. Multiple four-year interviewees noted that many preparation programs do not have a stand-alone math course, and that math content is often integrated with science. This was described as both a challenge to articulation and illustrative of the lack of shared understanding about the importance of early math in ECE. As a result of the grant, one four-year partner that did not previously have a standalone math course is in the process of implementing such as course.

Early math content was also integrated into curriculum courses and field experiences. These often included activities where preservice teachers have the opportunity to instruct and assess an early math intervention. One partner discussed the importance of teachers immediately practicing the new intervention and, as a result, all partnering institutions have placed the math material in the semester preceding the practicum experience.

One program reported it had fully integrated early math instruction with a hands-on learning approach. Preservice teachers videotape themselves providing early math instruction to children at the field site, then their classmates view the videos and provide feedback on how the instruction could be improved. After re-teaching the lesson, the preservice teacher and a mentor teacher reflect on how the math intervention went. Thus, preservice teachers get feedback from a mentor, a university instructor, and their peers. To prepare for this innovation, the partnership provided early math PD to in-service teachers who would be serving as mentors, which allowed them to provide more meaningful feedback and a common language to discuss early math.

Professional development. Many partnerships integrated early math content into PD for in-service teachers, though the format varied across partnerships. One partnership teaches early math through a semester-long, blended course for in-service practitioners. Another institution focuses the university's existing short-term PD on early math activities. Two other sites provided a one-time PD that spanned over two days. (Both of these sites discussed how this PD was solely a result of the grant and that they lacked the funds to continue this training beyond the grant.)

Site visits. One partnership used site visits to expose two- and four-year students to early childhood centers that were implementing the math teaching strategies introduced in the preparation programs. At these site visits, preservice teachers observed teaching practices and were able to ask the center coordinator questions about the teaching strategies. The partnership also invited students from both institutions to attend related PD sessions offered by the Erikson Institute.

Common Features of Early Math Innovations

Standards. Each of the early math strategies discussed above utilized a set of standards or a framework to which these innovations could be aligned. A wide variety of standards and frameworks were used, and the most frequently cited included the Illinois Early Learning and Development Standards, the Gateways Credential benchmarks, and the NAEYC's Professional Development Standards. Standards that were cited less frequently included the Division for Early Childhood's Recommended Practices and the Reggio Emilia approach. Texts such as the Committee on Early Childhood Mathematics report, *Mathematics and Learning in Early Childhood: Paths Towards Excellence and the Equity* (Cross, Woods, & Schweingruber, 2009), *Teaching Math to Young Children: A Practice Guide* (Frye, Baroody, Burchinal, Carver, Jordan, & McDowell, 2013), and *Teaching Early Math: The Learning Trajectories Approach* (Clements & Sarama, 2014) also helped structure these innovations. Several partnerships also cited working with the Erikson Institute Early Math Collaborative and using their "Big Ideas in Early Mathematics Education" (see http://earlymath.erikson.edu/).

Technology. Audio/visual technologies were utilized by multiple partnerships to improve early math instruction. These partnerships made exemplar video clips of early math lessons available to teacher candidates and PD participants. Though it is not clear how frequently the videos were utilized by pre- or in-service teachers, one partnership discussed the importance of having math instruction demonstrations readily available to the field. Further, they noted that the digital format would be sustainable and "prevent the necessity of having a person with a PhD to come in and conduct training."

External expertise. The grant funding was especially important for partnerships focusing on early math because it allowed them to collaborate with experts in the field. All early math partners utilized experts on early math for training or consultation. The partnerships which focused on rewriting early math content often used a consultant or collaborated with an early math faculty member. In addition to receiving expert advice, one partner who is an expert in early math said having a consultant was beneficial because it "was a good second pair of eyes." Multiple partners also discussed the importance of having a community partner, whether they were a provider or advocate for ECE involved with the partnership activities, because these varied voices allowed the early math work to reflect the concerns of all levels of stakeholders in the field. Many also noted it was beneficial to have partners who shared a belief in the importance of math in early childhood education.

Curriculum materials. Grant funds were also used for materials that were required to implement the interventions. Multiple partnerships used the funds to purchase materials to aid the teaching of early math, such as manipulatives or exemplar videos. For example, one site used the funds to purchase video equipment that was needed to record the preservice teachers at the field placement site. Other sites used the funds to build early math libraries at their laboratory school, their parent/child resource center, and/or the two- and four-year campuses.

Data. The partnerships that focused on early math content tended to emphasize data collection and collected more data than other partnerships. One reason behind this may have been that many early math innovations featured short PD interventions on which data could easily be collected using pre- and post- measurements for teacher candidates, PD participants, and faculty. For example, data collected from PD participants at one site suggested that the

intervention reduced fears about early math instruction and increased early math instruction skills. Other early math data collection efforts (both current and planned) included both qualitative and quantitative methodologies, such as written and recorded course assignments, needs assessments, and focus groups. One partnership used local data from state math assessments to target PD efforts to areas of the community most in need of assistance.

Challenges to Early Math Innovations

Math anxiety. Fear of math and low math competency were also identified as a "huge challenge" associated with the EPPI grant. Numerous interviewees said that their students were often required to take multiple math courses before being accepted by four-year institutions, which delayed or restricted their ability to transfer. Others noted that preparation in early math was further complicated by the high standards required by Illinois' teacher assessments and INCCRA's changing math standards.[8]

Faculty turnover. A challenge to sustainability of early math efforts was faculty turnover. Interviewees noted that, though content may remain because it reflects best practices, the individuals with a passion for early math will not always be at the institutions. Interviewees frequently observed that a catalyst to this work was having a partner who supports the importance of early math. As with other innovations where sustainability is susceptible to turnover, these grantees hope the next generation of childhood teacher educators will also recognize the need for foundational math in early learning.

Funding. A challenge to the scalability of these early math activities is funding. Partners also reported that scheduling PD time for current practitioners, including those who are currently enrolled in a preparation program, was also challenging. Though many community partners would like to participate in early math training, interviewees also noted that funding is needed to meet their scheduling needs.

Lessons Learned about Early Math

Interviewees generally report that the early math work is highly relevant for ECE, and plans for future work often consisted of scaling and disseminating early math interventions to other sites. These interviewees discussed the need to broaden the focus on early math efforts into their communities through meetings with legislators or advisory boards. For instance, one partnership is organizing an advisory board of community stakeholders to disseminate the products of their early math work. The partnership that centered their activities around the Reggio Emilia philosophy discussed forming a Midwest alliance of ECE preparation programs and community centers that have adopted this educational approach.

> Fear of math and low math competency were also identified as a "huge challenge" associated with the EPPI grant.

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[8] It should also be noted that changes have been made to the Gateways Level 3 requirement, moving from "transferrable math" to "credit-bearing math" in order to address a number of barriers noted here. The changes were intended to emphasize the importance of math competence for early childhood educators and that the workforce would benefit from more opportunities inside higher education to take courses specifically about early math. In addition to these changes, a model course syllabus has been placed on the HERO site to disseminate this information to the field (S. Bernoteit, personal communication, November 4, 2016).

English Language Learner Instruction

Motivation for English Language Learner Instruction

Many partnerships utilized the grant to bolster bilingual programming or add English Language Learner (ELL) endorsements to their early childhood education offerings. The primary catalyst driving these efforts was extremely high demand statewide for bilingual or English as a Second Language (ESL) credentials. This is especially true in ECE, because ISBE now requires all public pre-K programs enrolling 20 or more students of limited English proficiency of any single language to establish a transitional bilingual education program that must be taught by a teacher with endorsements in Early Childhood AND bilingual education (Illinois State Board of Education, 2014).

Demographic shifts—and increasing awareness of these shifts—have also contributed to a greater need for educators who understand and know how to teach children who are dual language learners. Participants say this is true even in areas with little prior demand:

> I just did a workshop … at one of the high schools where they used to have just a [mono-lingual] farming community. Now they have students who speak 36 different languages. So how do we change the thinking of teachers that we're not educating farmers to be in the farm, but actually to have a much more global view that we have to be aware of? So the whole ELL issue goes with the understanding of enlarging the worldview, I believe.

As a result, every program interviewed for this study reported great demand for bilingual early educators from at least one partner, and often from all of their partners.[9] They note that there is a shortage of qualified ESL teachers and that some positions are going unfilled. As one interviewee was told by a local school district, if a student hits the market with an early childhood ESL endorsement, "they are golden." A four-year partner added, "I get phone calls every semester asking me for anyone who has that endorsement that could come. And even more so, I'm asked for bilingual educators." We also heard that some principals simply will not hire early childhood teachers who do not have the ESL endorsement. Thus, partners note that bilingual or ELL-endorsed candidates have little difficulty obtaining employment upon completion. As a result, there is a great demand among both pre- and in-service teachers to earn the ESL endorsement. For example, one two-year partner said they have been receiving phone calls from current practitioners requesting courses in ELL and were aware of a teacher who had quit her job because her employer required her to return to school for the endorsement.

Faculty interest also motivated partnerships to pursue improvements to ELL programming. One administrator noted that her program had faculty with ELL experience who were excited to expose their (mostly mono-lingual) candidates to a variety of different linguistic backgrounds. Another four-year partner who worked in the same department as the Bilingual

Every program interviewed for this study reported great demand for bilingual early educators from at least one partner, and often from all of their partners

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[9] Thirteen partnerships cited great demand from all partners, whereas only four reported that just some of their partners expressed great demand for ELL educators.

Education program said she had been looking forward to an opportunity to help early childhood candidates earn their ESL credentials.

Other faculty spoke to the desire to meet the educational needs of ELL students, pointing to a disconnect between the preparation of current teachers and the needs of today's diverse students. In the words of one interviewee:

> *We weren't as reflective in the past. Now, there is more focus on diversity—especially on children who are linguistically and culturally diverse. There is a more specific/tailored focus on language and mathematics development, particularly with dual language learners. Developmentally appropriate practice has changed to a strong focus on what is happening with the child and how can we help them to be more successful in the classroom.*

The grant also served as a catalyst for work on these efforts. According to one participant, the grant allowed the partners to have collective conversations that helped them better understand the landscape of ELL in their region. One program used a portion of their grant funds to pay small stipends to key personnel, including the Bilingual/ESL chair, to show their work was respected and to gain their investment in the redesign effort.

Innovations in English Language Learner Instruction

Embedded ESL coursework. [10] Almost all of the programs interviewed for this study offered the bilingual/ESL endorsement through either undergraduate or graduate coursework. About half of the partnerships in this study reported that they embed the ESL endorsement in their ECE licensure program, requiring all candidates to take the ESL courses and student teaching required by ISBE. For instance, one four-year partner noted that ESL requirements were embedded into an English course, a diversity course, an ELL assessment course, an ELL methods course, and a language development course, as well as 100 hours of field experiences. Another four-year program offers ELL content through several courses from their ESL Department, plus two courses—the Child, Family, Culture and Community and Beginning Linguistics and Language—that count toward three different endorsements (early childhood general education, special education, and ESL). Still another four-year program even noted that they make sure transfer students experience all of the ESL coursework from years one and two to ensure they can graduate with the endorsement.

Still other partners are planning to embed ESL endorsement or additional coursework in their programs in the near future. Two- and four-year programs also reported working together through their partnership to map the local ELL landscape or align coursework through the grant. This work led one two-year program to redesign their coursework to include two ESL courses to aid in the transfer of the AAS degree. And several partners mentioned that large proportions of students in their two-year programs are Hispanic/Latino or serve largely ESL populations. As one partner noted:

> *We've talked a lot about that, the bilingual endorsement and how the students see that they bring a lot to the table, especially our students who already speak,*

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[10] For information about ESL field experiences, see the "Quality Field Experiences" section of this report.

who are already bilingual. They bring a lot to the table and to the early learning and education environment in general and how they can support children and families. How they can catapult that into a lot of great opportunities for themselves professionally.

Another two-year partner says:

What we've found as we've been getting transfers of folks from other colleges, is the handouts and our rubrics and our communications sometimes can be confusing to non-native English speakers. So, we've actually had the faculty in the ESL Department read our documents, our rubrics. I know one faculty member who even took a quiz. And since then, I've paid more attention to see if my non-native English speakers are struggling with something. We get advice on how we're utilizing and creating those documents. And they've been invaluable. They are a very active group and they have been willing to partner with us whenever.

Many programs noted that ESL content was embedded throughout their programs, and beyond the 18 hours of coursework and field placement required for endorsement. Therefore, candidates in two-year programs or those who are not pursuing the endorsement can still learn the skills necessary to work with today's shifting demographics. For example, one two-year college offers what they call "PPD," personal and professional development, such as Spanish for English-speaking teachers, which provides information on how to support children and families whose native language is Spanish. This same two-year institution was also able to get ISBE approval to offer the ESL endorsement at a community college. Further, as one interviewee noted:

Actually, a lot of the early childhood students have gone ahead and done the ESL courses now as they take their early childhood courses, even though it's not a part of their program because they know that this is something they're going to need.

Even where ESL is not part of the ECE curriculum, some partners report increased collaboration with ESL faculty members. For example, one participant says:

What we do here, quite a bit, is we partner with our ESL department. We have a very strong ESL department….So we do some things where we partner where I may come in and meet the students in the ESL program before they come to child development and they may read part of a textbook in early childhood. I'll come in and talk to them about the reading within the discipline of early childhood.

In addition, several programs offer some or all of the courses required for ESL endorsement online. For example, one program offers online ESL endorsement coursework that can lead to a Master's degree or a five-year bachelor degree. Another partnership reports that they are working to complete modules for early math for ESLs that will be posted on the HERO website and shared with other programs.

Although the majority of the work associated with the relevant ESL endorsements is housed within the four-year partners, several two-year programs are also working to boost their bilingual education coursework. The two-year program in another partnership embeds the ESL material in coursework by offering three courses in their linguistics department for students on

the licensure track. Another two-year program recently added a new child development course focusing on infant and toddler dual language learners in response to heavy demand for this content. Several two-year partners reported advising their candidates on the importance of the ESL endorsement and the steps needed to meet the requirements at their four-year partner.

Professional development for working with ELLs. Another major innovation brought about by the grant was a focus on PD for current educators working with ELL students. Several grantees noted that this was important because practicing early childhood professionals may not have received the high quality ELL training that current candidates are receiving. For example, one partnership hosted an ELL workshop because current practitioners reported needing help in this content area. Another partnership hosts monthly PD sessions for home care providers, several of which have focused on ELL/ESL topics. One partner noted that she advocates using PD as a "stepping stone towards a credential," in a process similar to how some in-service training is accepted through the Gateways framework. Further, some programs report that many experienced ECE teachers are returning to school to earn their ESL endorsement, often completing the required coursework at both the two- and four-year institutions.

> Practicing early childhood professionals may not have received the high quality ELL training that current candidates are receiving.

Professional development for working with ELLs was the primary focus for one grantee. Their goal was to make their programs more available and valuable to their local community, so the four-year partner is currently working to help practicing teachers obtain the ESL/bilingual endorsement. Describing their target audience, they say:

> *These are educators who are coming back. They might be classroom assistants who are interested in this. It might be folks from [school name] that serve English language learners who are planning to also complete their degree. They might have a different undergraduate degree. Or it might be, for instance, this newest recruit who works at the Early Childhood Center. She has a degree in elementary ed, but she wants to come back, wants to do both—to finish, to do her ESL endorsement which she is starting now, and then she also wants to also finish her degree in early childhood ed.*

They report that their collaborative work has helped raise awareness of the new requirements for the ESL endorsement. However, recruiting candidates has been their biggest challenge and the focus of much of their initial work, with one participant noting that "the outlying schools that I hoped would be sending teachers still just don't see the need" and "even though we're supporting them with $3,000 toward tuition, it will still be almost $5,000 for them and that still is a challenge for teachers." Recruitment was helped by building relationships with local principals and Head Start administrators. One program's relationship with the local Head Start began five years prior to the grant work, and has continued to grow and serve as the foundation for providing PD to the staff. As one interviewee noted:

> *The whole idea of relationship building is a real strong entity in this whole thing because if you don't have a good relationship with the people you're working with, it's not going to work at all. Sometimes people come in and do in-service and leave. Period. So I think the professional development idea is more like an ongoing, relationship building and empowering them, engaging them.*

Buy-in from the staff receiving the PD was also an important component of this work—"the staff has to really want it, need it, understand that they are part of it, and it's being pushed on them." One participant reports:

> It's rare for me to say such a thing, but they want to be here. They're excited about taking the courses and I feel that they will be very strong advocates for ELLs in their communities. It's because they want to be here. To some degree, they've decided that this was important and I think they're learning more and more degrees of how important it is.

The program hopes to expand their ELL PD efforts in the near future by working with an additional early childhood center whose director wants her staff to learn more about how they can meet the needs of the dual language students they serve. In the short term, the partnership plans to purchase additional ESL/bilingual materials and develop libraries to serve ELLs with books that reflect their home language and culture. As one interviewee noted, these libraries can also help to sustain their efforts through continued use in after school programs and practicums.

Common Features of English Language Learner Instruction

The partnerships implementing ELL innovations used several sets of standards and guidelines to support their work. The WIDA (originally World-Class Instructional Design and Assessment) standards were widely utilized in these efforts. WIDA represents a group of universities and states, including Illinois, that have collaborated to improve language development and academic achievement for linguistically diverse students through standards, assessments, research, and PD. The Illinois Professional Teaching Standards for English as a New Language (ENL), and the Teaching English to Speakers of Other Languages (TESOL) standards were also mentioned by multiple interviewees.

In addition, ISBE's requirements for coursework and field experiences drove the efforts of programs working to implement ESL endorsement programs. Several programs mentioned working closely with ISBE staff to ensure that all of the necessary components were in place, often as part of the program redesign process. Other statewide initiatives also supported this work. For example, Illinois community colleges:

> … developed seven core courses several years ago [that were] reviewed by general and special educators at the two- and four-year levels, and then they were reviewed by bilingual educators at the four-year level, and as well by a national team. And what was done at that point was to ensure that what was in these seven core courses, supported early childhood students, adult students, in knowledge and skills that they would need to support dual language learners in their classroom environment. With that though, because it is not enough to just have it in the syllabus if you don't know how to teach it, one of the things the state of Illinois offers is co-currently was sponsoring a variety of different trainings, supporting webinars, et cetera, to foster knowledge and skills of faculty to train their students.

Challenges for English Language Learner Innovations

Field placements. Finding appropriate field placements with supervising teachers who have the ESL/bilingual endorsement has proven to be one of the biggest challenges for implementing these innovations. For example, one partnership reports that they have had difficulty identifying appropriate field placements beyond their local Head Start, and have resorted to cold calling early childhood centers to see if they would be interested in hosting student teachers. As this program notes, "You can't really practice working with ELLs if you don't have any ELLs." Similarly, another partner reports, "It's challenging because we would like them to be with teachers that have the endorsement so they could see good examples, but there just are not enough around." As a result, some programs try to reserve those limited sites for candidates who specifically request fieldwork with ELLs. Finding appropriate placements has been particularly difficult for some two-year programs and, in addition, some two-year programs do not require field experiences to explicitly address ELLs or placements in diverse classrooms. As one two-year partner says, "We have students who are at bilingual centers, but we do not have a built-in of an actual experience at our level."

Recruitment. Another challenge has been recruiting bilingual students away from other programs and into the ECE profession. One partner added that principals and other education leaders need to have a better understanding of the growing importance of early childhood ELLs, saying, "We need principals who have more of a knowledge base on what does this mean. If principals could take one or two courses, they can advocate for their teachers. We need principals who have this knowledge base; it would be much more powerful." Having recognized this need, Illinois requires that principal preparation programs now include early childhood and ELL content and field experiences in their newly redesigned preparation processes (Baron & Haller, 2014; Reeves, & Van Tuyle, 2014).

Lessons Learned for English Language Learner Innovations

In order to overcome misconceptions and anti-immigrant sentiments, preservice teachers must have intentional contact with ELLs (Pappamihiel, 2007). Additionally, research indicates that it is imperative for preservice teachers to see techniques in action and have the support in practicums to work with ELLs. It is also critical that their first job in a school is supportive and allows them to implement the information learned in their courses. It has been demonstrated that they are actually less likely to implement what they learned in courses and less likely to continue implementing the knowledge and application techniques they learned in their preparation program when they lack these experiences (Hughes, 2006; Lane, Lacefield-Parachini, & Isken, 2003; Ross, 1987; Stuart & Thurlow, 2000). However, the shortage of trained EEL mentor teachers makes it difficult to provide these field experiences. Yet one interviewee noted, the current cohorts of early childhood educators who are about to enter the field will be the ones who will be able to provide quality field experiences for the next generation of educators and administrators: "I have no doubt they will go out and impact the communities. So we're always here then to support them, but they are the ones that will take it forward."

Infant and Toddler Programs

Motivation for Innovations in Infant and Toddler Programs

Several partnerships focused on implementing new or improving existing programs to train teachers for infant and toddler classrooms. One of the main motivations behind this is high demand from the field for the credential. For example, one of the outcomes of the Chicago Consortium was recognition of the need to develop non-licensure bachelor degree program for infant and toddler specialists. Another program pointed to Gateways data showing growing demand and increased salaries for qualified infant and toddler professionals.

One program noted that their three credit infant and toddler course was one of their most highly attended, due to interest in the credential and because many employers want their staff to earn this credential. As one participant noted:

> *The Gateways Credential is now more marketable than ever, even without a licensure degree. It opens employer doors to you. Gateways provides scaffolding that needs to be in place for lifelong learning for early childhood educators. Universities need to accept Gateways credential earning courses for credit.*

Others saw an educational need to boost the qualifications of infant and toddler teachers. Participants cited a recent Institute of Medicine report (IOM & NCR, 2015) emphasizing the need for improved toddler programming noting that the field had historically lacked quality preparation and typically employed minimally qualified educators. As one interviewee commented:

> *The more we find out about early development, starting with early brain development, the more I think people should be the best qualified ones working with the infants and toddlers. We shouldn't be putting personnel in those programs that are minimally qualified and are there only because they can't get a job somewhere else.*

External forces, such as state policy, also promoted the improvement of infant and toddler programming. Illinois' new Early Learning Guidelines provided standards and guidance for beginning this work. The ExceleRate and Gateways programs in Illinois also promote improving the credentials of infant and toddler professionals. Others noted that increased focus on our youngest students was necessary to bolster national efforts to improve education and eliminate achievement gaps.

Infant and Toddler Program Innovations

Non-licensure degrees. One partnership identified infant and toddler programming as a focus area from the outset of this project. They realized that many of their candidates were struggling with ISBE's Basic Skills examination, but that only a very small proportion of their early childhood graduates were going into positions where this exam was required. The partnership decided to target some of their grant work around serving the needs of these students so they could come out of the program, gain employment in early intervention, and have the skills to succeed.

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Once infant and toddler programming was identified as a critical need, the four-year institution built on their existing non-licensure program and focused on solidifying both an undergraduate and graduate degree program. Their infant and toddler cohort consists of professionals who are currently working in the field and want to upgrade their credentials or begin their own program. The Master's program leads to the Infant Toddler Specialist degree and includes coursework such as Introduction to Infant Toddler Mental Health, Infant Toddler Development, Infant Toddler Curriculum and Environment, and an internship. Further, this four-year institution was able to design their program such that Gateways pays for the tuition and fees, and the university provides books, in order to reduce financial burden on candidates.

Common Features of Infant and Toddler Program Innovations

Alignment. Many partnerships worked on articulation efforts and adding or updating coursework to align infant and toddler programs across the two- and four-year institutions and with the Gateways Credentials and early learning standards. For example, one four-year program acknowledged that their two-year partners were "much better at addressing infant toddler content regarding methods and development," so one of their goals for the grant was to collaborate with and learn from their two-year partner. Another four-year institution worked with their two-year partner to add infant and toddler coursework and credentials, including a human development and family studies degree for those students who want to serve children and families outside of the classroom.

Field experiences. As a result of the grant, some programs were also able to add supplementary field experiences with infant and toddler populations to meet Gateways credentialing requirements. Portions of this fieldwork often occur in social services agencies working directly with infants and toddlers. For instance, one program has field experiences in four courses prior to student teaching that begins with work in an infant or toddler classroom, including assessing and documenting growth and development and home visits with an early interventionist.

> Many partnerships worked on articulation efforts and adding or updating coursework to align infant and toddler programs across the two- and four-year institutions and with the Gateways Credentials and early learning standards.

Challenges with Infant and Toddler Programs

Partnerships have encountered several challenges implementing or improving their infant/toddler educator preparation programs. Some programs are finding it difficult to recruit candidates because infant and toddler positions typically have lower pay than teachers working with older children. Others have had difficulty retaining students due to the demands on their time, because many candidates are already employed in the field. And despite the inclusion of infant and toddler programs in the ExceleRate program and the new Early Learning Guidelines, some participants voiced the perception that infant and toddler education is not valued statewide or is a low priority for the state right now. As one interviewee said:

> *We have to get the policy behind it so that other institutions see the value of it. I do think that early childhood people see the value of it, but we're all kind of struggling with our enrollment, so adding another degree option is not always going to be looked upon favorably. I think it is scalable, but again, I think it comes back to policy. I think the state has to come out and say we need this and here is an incentive for it, go for it.*

Lessons Learned about Infant and Toddler Programs

To overcome these challenges, programs focusing on infant and toddler programming recommend building on existing strengths and learning from the experiences of programs that have already been through the process. Several programs in our study noted they were willing to share infant and toddler course syllabi and other materials to facilitate dissemination statewide and help bring their success to scale.

Field Experience Innovations

Motivation for Improving Field Experiences

Although the majority of EPPI partnerships worked to improve their students' field experiences to some extent, four partnerships were identified as having a strong focus on improving the quality of field experiences for their preservice teachers. The strategies for improving the field experiences varied across all of the partnerships, but each stressed the importance of providing active learning experiences. Previous research suggests quality field placements are related to future instructional effectiveness (Ronfeldt, 2012; Jackson & Bruegmann, 2009). In this study, participants also felt that improving the quality of field experiences could increase preservice teachers' motivation and confidence by providing "real-world, practical problems to solve on a daily basis."

Many interviewees noted that field sites varied in their commitment and philosophies, were often selected out of convenience, that training for mentor teachers tended to be brief (if it occurred at all), and that interactions with cooperating teachers prior to the field experience were minimal. Inconsistency in field placement experiences was attributed to a variety of factors, including high turnover rates within the sites and new sites that do not have a history with the preparation program. Thus, the partnerships recognized that formalized training procedures were necessary to ensure more consistent and unified field experiences.

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Innovations for Improving Field Experiences

Networking. Partnerships implemented diverse strategies aimed at improving site selection and the activities performed during the field placement. Networking was one strategy for increasing both the quantity and quality of field placement sites. One partner reported:

> *Having a robust relationship with your community partners across sectors—both the community colleges and in the community, for example, the YWCA, Circles of Learning, the public school district, and other service providers—enhances field placement opportunities across different sectors for our candidates, as well as job opportunities.*

Along with contacting Head Start and cold-calling child care sites, multiple partners reported using local meetings of ECE professionals, such as workshops and other PD events, to help build a list of potential field sites for preservice teachers.

Site selection. Some partnerships sought to improve field experiences by adopting a more intentional approach in site selection, whereas others sought to increase the quantity of sites available. Those who sought a more intentional approach were motivated by aligning their coursework pedagogy with the field placement experience. Partnerships sought to increase the number of field sites by developing outreach efforts to identify sites serving specific populations, particularly dual language learners, infants and toddlers, or students with special needs. Research supports the importance placed on identifying sites with diverse populations—a recent longitudinal study (McDonald, Tyson, Brayko, Bowman, Delport, & Shimomura, 2011) found that field placements with demographically diverse populations helped improve the preservice teachers' instruction by incorporating the child's experiences in ways that improve their opportunities to learn.

Field experiences with dual language students. Field experiences with ESL students were addressed across many programs, and the vast majority of partnerships indicated a desire to increase the number of field sites available with children who are dual language learners. One factor driving this demand was that a number of four-year institutions had incorporated the ESL/bilingual endorsement, which requires a 100-hour practicum supervised by an ESL/bilingual certified teacher (ISBE Educator Licensure, 2016a). Others suggested that ESL field experiences have value for all preservice teachers, saying, "The state has said it is important that they have experience with English language learners. It's not so much whether the teacher has the endorsement or not, but that our students have experience working with English language learners."

One partnership in particular focused on this area for their grant work. They chose ELL fieldwork because they wanted to ensure that candidates at their two-year programs had experiences working with diverse students in order to reduce transfer shock after they moved to their four-year partner. The fieldwork was embedded across several courses and some candidates are able to complete all 100 hours at their place of employment, whereas others worked with university placement offices to find settings with ESL/bilingual classrooms. Some programs had practicum experiences that focused on ELL issues, such as assessing language development or observing multiple models of ESL instruction, whereas others simply required that placement sites had some minimum proportion of English language learners or that accommodations for dual language students were addressed in lesson planning. One two-year partner said they prioritized placements for students at their campus child development lab, because it enrolls students whose families speak multiple languages, saying, "We have designed our lab so it has the diversity that the students will interact with later."

Another partnership believed that it was important for students at the two-year partner to have "preliminary experiences" with ESL students before starting coursework at the four-year institution. So, they decided to share field placement sites with high populations of dual language learners. As a consequence, the partnership must now look for more locations serving bilingual children and are concerned that placing too many preservice teacher observers in one room may hinder the young children's learning experiences.

Training and support to mentor teachers. A number of partnerships sought to improve the field experience by providing training to the mentor teachers at the placement sites. Prior research has found that this type of training can improve mentoring skills and build

> "We have designed our lab so it has the diversity that the students will interact with later."

relationships between cooperating and preservice teachers, and that perceptions of support are associated with preservice teachers' self-efficacy (Paulsen, DaFonte, & Barton-Arwood, 2015; Moulding, Stewart, & Dunmeyer, 2014). This training generally aimed to help cooperating teachers provide more detailed, actionable feedback and to shifting the field experience from passive observation to a more hands-on approach. One partner described in detail the need for improving this aspect of the field experience:

> *Many coordinating teachers do not understand that they are supposed to be mentoring, giving feedback, and providing specific direction and criticism to the teacher candidates so that they can change and be more effective. This is an especially relevant challenge for this field as many of the people within have not been trained to deal with direct conflict. Coordinators tend to not say anything negative, and when they do it tends to come across in a tear producing way, rather than as a positive, confidence building suggestion. I'm hoping that this is going to be the outcome.*

One partnership is creating online modules to train mentor teachers that include units on skills such as constructive criticism, self-reflection, and building mentor-mentee relationships. The modules will each take less than an hour to complete, will be accessible on mobile devices, and will provide a certificate upon completion. The partners believe the modules will help to "assure some degree of consistency across all placements," especially new field placement sites and sites that have high rates of turnover.

Aside from training in mentorship and supervision, some partnerships offered PD to cooperating teachers to help improve field experiences. This PD often focused on a content area and was designed so that mentor teachers could better assess and support the university's approach to instruction. One partner using this approach added that it could also produce higher quality observations of the preservice teacher.

> Aside from training in mentorship and supervision, some partnerships offered PD to cooperating teachers to help improve field experiences.

Gateways Technical Assistant Credential. Partners often have trouble identifying individuals who would be good cooperating teachers for the students at their institution. However, one two-year partner has been piloting a Gateways Technical Assistant Credential that they believe will enable them to identify educators who would be competent mentors for future field placements. This credential will be available to current practitioners who have had three years of experience in the ECE field and have at least one year of mentoring experience. The partner noted that this credential will demonstrate that recipients are willing to take additional steps towards professionalism.

Criteria for home day care placements. One partnership is in the planning stages of an effort to develop criteria for home day care placements that go beyond the basic licensing requirements of the Department of Children and Family Services. These partners observed wide variation in licensed day care settings, so they collaborated to create common standards for placement sites, including set schedules, effective communication with parents, assessments, and planned units of instruction. The proposed criteria include a three-tiered recognition rating (gold, silver, and bronze status) that the partnership would award to the field placement sites. The partners anticipate that this system will encourage home day care providers to participate as a placement sites and serve as a signal to consumers about quality.

Common Features of Field Experiences Innovations

Embedded field experiences. A number of partnerships spoke about embedding field experience activities within courses. Examples of embedded field experiences included a preschool curriculum course that involved preservice teachers creating and presenting a lesson plan at a laboratory school, and a math course that requires preservice teachers to teach and assess four different early math activities. Embedded field experiences were often associated with instruction in a specific content area. Interviewees spoke of embedding observations at field sites that practiced a particular instructional technique for presenting early math concepts or an ESL pedagogy that mirrored that being addressed in the university course. One interviewee articulated the impact high quality observations have on the preservice teachers' understanding of the course content:

> We could talk about it and we could try things out and we could do mock lessons. But when they can try things in their community placement, and to actually go to a center where we can say, "OK, these are people who are doing what we're talking about, really well."

Although the work was done outside of the scope of the EPPI grant, one partner has completely fused their field experiences and course content. Coursework at this site seldom includes only formal instruction, rather they focus on active learning at child care centers and schools where preservice teachers capture videos of their instruction that allows peers and instructors to provide feedback. This integration of field experiences represents the belief, held by multiple partnerships associated with this grant, that instruction for the preservice teachers should be tied to immediate practice.

Expanding the types of early childhood placements. Although expanding the variety of early childhood settings where preservice teachers complete their field experiences was not a primary focus of partnerships, the diversity of placement sites was noteworthy. Sites ranged from "corporate, for-profit, tuition based placements to Early Head Start classrooms and everything in between," according to one participant, including laboratory schools on the campus of the two- and four-year institutions, public and private school classrooms, and home-day care centers. Interviewees also discussed having specific field sites for preservice teachers wishing to gain Gateways Infant/Toddler credentials and for those seeking an ESL/Bilingual endorsement. Partnerships who are having trouble identifying sites with children who are dual language learners discussed tracking where preservice teachers have had their field experiences in the past and making plans with each preservice teacher to ensure they are exposed to diverse placements.

Technology. Multiple partners discussed using video and audio recording at field sites to improve the preservice teachers' instruction through feedback from peers and instructors. One of the programs teaches students how to record themselves during their field placements in order to prepare them to demonstrate edTPA competencies. They report that this approach "requires the [preservice teacher] to articulate their knowledge in ways they have not previously done."

The partnership developing online training for mentoring teachers is planning to use e-learning software (Articulate's Storyline and Canvas for Teachers) to create and track completion of the

Interviewees spoke of embedding observations at field sites that practiced a particular instructional technique for presenting early math concepts or an ESL pedagogy that mirrored that being addressed in the university course.

modules. They note that using their own software versus hiring consultants to develop the modules gives them better flexibility and control over the content for any changes or additions they might like to add in the future. The partnership notes that this meant they had to address issues related to where the modules would be housed, ownership of the content, selecting the most appropriate software, and creating documentation that proves the mentor completed the module.

Needs assessments. Prior to planning and conducting the training for mentor teachers, several partnerships conducted needs assessments or pre-surveys to gauge the knowledge and opinions of current practitioners. One partnership used this component to identify areas on which to focus PD, whereas another used it to prioritize their grant activities. Information was gathered from an online survey sent to the Child Care Resource and Referral agency serving the catchment areas of each partner's program. In describing the findings, one of the partners said:

> When we got feedback from the stakeholders' surveys and just reaching out to our stakeholders, a lot of what we heard back from them, particularly people who hire graduates from our institution, was that they were really focused on the field experiences, the classroom experiences, that our students had prior to graduation. They were not concerned with just the number of hours, but even more so it seemed the quality of their field experience and their ability to really develop their disposition, bringing serious practice in the classroom, being able to understand why they were doing what they were doing in the classroom, those type of things.

Measuring growth. Measuring knowledge and skills gained through the mentor teacher interventions was a component of several innovations. Multiple sites that provided training to current practitioners noted that post-intervention measurements would be used to identify gains in the targeted content and competencies. For example, the partnership working on online mentoring modules is planning to include questions about the scenarios used within the modules, and their future plans involve modifying the modules based on this information, if necessary.

Challenges to Improving Field Experiences

Meeting the needs of working students. Several partners noted that it is difficult for students who are employed in early childhood education centers to fulfill the typical two-week, full-time field experience. One reason for this is that some employers are reluctant to let employees take much time off because they need to meet their staffing requirements. As one partner described it, "people take a week's vacation, go on lunchtime, or just hop around to get their 25 hours of observations. It's not very coherent or educative." One solution that has been suggested is to use stipends to support students when they have to give up work to complete field placements.

Finding high quality placement sites. In addition to meeting the needs of working students, there is a growing need for high quality field placement sites. Better training and support for the mentoring teachers is seen as one way to meet this need, but multiple partnerships suggested cooperating teachers should receive credit for their service and to incentivize participation. One partnership proposed awarding continuing education units or

it is difficult for students who are employed in early childhood education centers to fulfill the typical two-week, full-time field experience.

other similar designations for completion of training modules. Partners could also support and incentivize placement sites by providing workshops to the staff of schools, centers, and home day cares that agree to host student teachers. Some of the topics a partner suggested for these workshops included: different instructional activities, classroom management, and communication with parents.

Next Steps for Improving Field Experiences

Future work in this area is likely to focus on analyzing the effectiveness of various field experience activities. For instance, some partnerships providing training for mentor teachers intend to establish on-going processes for analyzing the effectiveness of the PD and making necessary changes. Sustainability and scalability of these innovations was mainly discussed in terms of audio-visual technology and online modules associated with the field experiences. The process of recording field experiences and receiving critiques from peers and instructors was identified as sustainable and scalable to other sites. In fact, one partner has already introduced this practice into other courses within their ECE program.

Cross-Cutting Challenges

Although each of the innovations described in the preceding chapters of this report posed its own unique obstacles, our analysis also identified seven broad challenges that cut across the various initiatives. These challenges include: lack of alignment and communication across institutions; university administration and bureaucracy; external forces such as state policy; misperceptions about early childhood education and the status of the profession; student and institutional characteristics; lack of time; and concerns about sustainability of reform. In this section, we describe these challenges, along with some strategies that partnerships used to overcome them.

Lack of Alignment and Communication Between Institutions

Lack of alignment and communication between postsecondary institutions, particularly between the two- and four-year levels, is a widely acknowledged challenge that has dogged early childhood educator preparation for some time (see, for example, Lichtenberger et al., 2015). As one PI put it, "I'll tell you if I have to go to NAEYC one more time and hear about how fragmented the system is, you know, I'm gonna explode." Several interviewees noted that they did not know much about their partner institutions prior to working on the grant, and one said, "I have been told that historically, there has been tension and two-year institutions were viewed as inferior to four-year institutions." This disconnect is further exacerbated for early childhood educator preparation programs, because "pathways in the EC field aren't linear, and our students aren't linear in their behavior." That is because many ECE candidates transfer between or swirl amongst multiple programs at various levels and regions of the state. Interviewees were frustrated with the degree of variation between programs in equivalency with regard to articulation.

Lack of alignment and communication between postsecondary institutions, particularly between the two- and four-year levels, is a widely acknowledged challenge that has dogged early childhood educator preparation for some time.

Some attributed this lack of communication to "the competitive nature of institutions," who tend to view educator preparation from the institutional perspective rather than from the perspective of candidates (who often touch multiple institutions) or from a systemic perspective where institutions must work together to ensure a sufficient supply of high quality educators. In other states, one PI noted, "it seems that people in two- and four-year institutions get sent the message that they are preparing people for different jobs." Other interviewees noted that some four-year universities might not accept transfer credit for early childhood courses at the two-year level for quality assurance purposes or to ensure the four-year institution receives credit for the completer or to guarantee a minimal level of tuition income. Several participants acknowledged that some programs in the state did not have a strong track record of being "transfer-friendly," and they hoped that their grant partnership would help build the capacity of the four-year faculty to be more savvy about meeting the needs of transfer students.

Creating positive relationships between institutions was viewed as a critical step in the innovation process:

> Even when we decided to become partners in this process, we didn't understand each other's needs, we didn't understand each other's philosophies for early childhood education, we didn't understand each other's relationships to students. I don't know that we fully grasped or even trusted each other's motivations or intentions in this process. All of those things, we learned very quickly that we needed to be very unafraid and open at addressing those questions before we could start thinking about what do we do in years one through four. There has to be a space for creating those relationships, and building that trust in the sense of mutual priorities and goals before any of the nuts and bolts can be addressed. I think that's probably the biggest lesson learned. We eventually learned we had to support each other through this process.

Research supports this view, suggesting that relationships between institutions are among the most important factors in creating and sustaining community college–university transfer partnerships (Kisker, 2007; Rifkin, 2000).

Interviewees noted that it was important to build on existing relationships and to establish frequent communication with partners upfront, during the proposal phase and prior to major decision making. Whereas differences and barriers may have existed between institutions, participants emphasized that relationships are built between people, with statements such as, "The critical piece is the connection between people, not universities," and "So much of the work still depends on individuals at institutions rather than systems and structures at institutions." The grant partnerships allowed participants across institutions to realize they were part of the same system and working toward similar goals. As one interviewee observed, "We were more similar in what we were aiming to do in all of our programs than we maybe thought we were." As a result of increased collaboration, participants reported that more institutions are starting to accept more courses out of the AAS degree, and increased efforts from the four-year institutions to recruit from community colleges. However, interviewees also emphasized that alignment between stakeholders should be an ongoing process as state regulations change and programs continue to raise the bar for teacher preparedness—"It's a continuous improvement process, so the work is never really done because we always have to review and reflect and keep abreast to new mandates."

Whereas differences and barriers may have existed between institutions, participants emphasized that relationships are built between people.

Administration and Bureaucracy

Another challenge identified by study participants was excessive or restrictive administrative bureaucracy, or "institutional gridlock." Several participants pointed out that universities are slow to change or that things always take longer than initially anticipated in higher education. As one participant put it, "What you think is going to take you three months, is going to take you a year and three months—even if you are on it all the time." Partners noted long waits for administrators to sign documents, for changes to be approved, and for purchase orders to be processed. A project leader said that her lack of knowledge about internal purchasing and grant management processes was a hindrance to the partnership's efforts. Interviewees also attributed some of these difficulties to limited institutional resources to support their work or the fact that faculty are often not the ultimate decision-makers over things like schedules. But in addition, colleges and universities are complex institutions, and the grant work was particularly complicated by the broad range of stakeholders involved. For example, one PI and a partnering two-year faculty member quickly realized that their work would involve many other institutional members, including administration from the school of education and the advising and transfer offices. They eventually learned the importance of informing and involving the provost in order to make sense of all of this. As another interviewee noted:

> Everyone has such extensive institutional knowledge, but only a small part of these overall processes. It's just been fascinating that every step of the way each piece of our work has had kind of made its way through all of these different stakeholders so that it could make sense to the institution because the institution is so complex.

Some faculty faced additional difficulties, because some of them lacked experience working with grants or their institution lacked the infrastructure needed to support the grant. As one two-year partner elaborated:

> The other one main point, I would stick with, was just getting our grant department to approve it, because we don't have the systems like [four-year partner] does. So we don't have the very quick, clear process of, if you're applying for a grant or you're working on this bid, this is what you do. There seems to be a moving target of the process you're supposed to follow and that can be very difficult and frustrating. We're not just as skilled with that. That's not something we do.

Another PI also discussed the critical nature of institutional support, noting their grant had received support from the four-year dean and associate dean, as well as the program director. These individuals could be counted on for help when there was gridlock beyond the School of Education. But even with this support, they reported that it was a challenge to ensure that all involved parties viewed this work as a priority.

Strategies recommended for overcoming these institutional constraints included increased communication with and involvement of administrators and staff from multiple offices, and flexibility on the part of programs. One partner advised operating with a positive attitude of "things can get done if we put our heads together," and likened their approach to moving from a deficit model to a growth mindset that tasks can be completed through hard work and collaboration.

State Policy and Other External Forces

State and local policy changes and budget issues also posed challenges to many of the partnerships we studied. As with the "institutional gridlock" discussed above, these external forces were viewed as especially frustrating because stakeholders felt like they had little control or decision-making authority over the situation. For example, some participants worried that changes to teacher licensure and preparation standards at the state level may harm the sustainability of their efforts. As one said, "It seems like there is a constant barrage of changes in the ECE standards by ISBE. 'Do this. Don't do that.' It seems like we are constantly in a reactionary mode." Higher costs and standards associated with ISBE's Test of Academic Proficiency and the new edTPA requirements were also viewed as challenges to ECE teacher preparation. Additionally, the early childhood program redesign process and standards were not finalized until late in the first grant year, providing more obstacles to overcome.

Another example cited by multiple partners was the proposal to consolidate the ECE programs of the City Colleges of Chicago. Though implementation of this proposal is being reconsidered at the present time, both two- and four-year partners were initially upset that they were allowed to begin grant work only to learn that programs might be closing at their feeder community colleges. Partners also expressed concern about the negative impact of the proposed consolidation on students particularly in terms of scheduling and transportation issues, higher tuition rates for part-time students, and the loss of "the individuality of communities served by multiple community colleges." In fact, it was due to concerns such as these from early childhood employers and advocates that eventually led the Mayor's office to delay implementing this proposal. Tuition changes and uncertainty about Illinois' need-based Monetary Award Program (MAP) grant funding also proved disruptive and were perceived to have a negative impact on ECE program enrollment.

For these reasons, several interviewees noted that it was especially important for early childhood stakeholders to collaborate and work together toward common goals. For instance, one participant said, "Thank God we have each other! Otherwise, we would be getting lonelier and lonelier and feeling more and more threatened." Another one added, "We can build a relationship that is constant and hopefully a program that's constant despite all the other things that are constantly in flux and changing and at the mercy of systemic and political forces." Yet, another partnership observed that sometimes, external forces can exert a positive influence on project outcomes. She pointed to a local community development initiative and needs assessment process that lent widespread support and leverage to their grant work by tapping into elements of the local business community. These efforts helped to recognize the need for quality early childhood educators and to ensure that it was a priority to train and employ people to do this work.

Other partnerships observed that a broadening in the definition of the early childhood grade span and the state's push to improve the qualifications of early childhood educators through the ExceleRate system brought increased demand for ECE credentials, aiding program implementation. Equally significant has been the ISBE requirement that, as part of program redesign for EC educator preparation, all four-year institutions must also prepare their licensure candidates to meet the credentialing requirements of the Gateways ECE level 5 (baccalaureate) credential. This requirement has reinforced the value of partnering with two-year institutions, which prepare candidates to obtain the Gateways ECE levels 2-4 credentials.

> As with the "institutional gridlock" discussed, these external forces were viewed as especially frustrating because stakeholders felt like they had little control or decision-making authority over the situation.

> Sometimes, external forces can exert a positive influence on project outcomes.

Since these credentials are stackable, aligning coursework across institutions enables the four-year programs to build on the work done at the two-year institutions.

Misperceptions and Status

The perceived low status of the early childhood profession and misperceptions about early childhood education represent other significant challenges to this work. Recent data show that enrollment in teacher preparation programs is down in Illinois and nationally (Sanchez, 2014; Sawchuk, 2014), and interviewees believe that ECE is no exception. For instance, it was reported that enrollment in one four-year program has decreased from 400 to 100 in recent years. Several interviewees argued that the ECE field is not appealing because of low salaries, and because teachers with baccalaureate degrees and professional educator licenses tend to move into higher paying jobs. One partner observed that even ECE teachers who earned their BA without licensure could move into any number of positions listed on the Gateways website that offer higher salaries, such as working for prevention initiatives, social service agencies, Child Care Resources and Referral agencies, or DCFS. Several participants cited the recent National Research Council report's finding on early childhood teacher salaries, and suggested that state policymakers heed the implications of this research and work to raise the stature of the profession. Other efforts to professionalize early childhood teaching were also cited, including improving faculty and research in ECE. According to one interviewee:

> *You go to an early childhood faculty meeting, statewide meeting, you see a lot of people who are like me, in their 60s and not very many who are younger than that. So we're getting squeezed by universities that are saying why do we need early childhood? So there's this demand for early childhood professional development and degrees and so forth, but people are not going into the faculty end of it. And I will tell you when we tried to hire somebody several years ago, it looked pretty grim. ...I'm afraid for the profession, and I'm afraid for the future of the profession. I don't see any growth at the top. A lot of money and growth at the bottom, but not anything at the top to meet the needs at the bottom. I've brought it up a number of times over the past few years, but it's not on anybody's radar yet.*

Faculty in another four-year program were worried that staffing courses could become a problem if the Higher Learning Commission requires that all graduate courses be taught by faculty with a doctorate, because their program relies heavily on adjuncts.

In addition, some participants argued that there were widespread misperceptions about the nature of early childhood professions. One interviewee argued that "[w]e have to really work on helping [potential candidates] understand that, if you are going to be an educator in a day care center, it's more than just the nurturing aspect." She added that efforts like this help "elevate the profession" and "helps students understand that ECE is not just about liking children, but it's about actually teaching and educating children." Another participant said:

> *I think hidden behind that is the idea of how so much of our public and major culture is disqualifying the early ages and everyone who works with young children, calling it babysitting and all that....But [the grant work] is really professionalizing what we're doing by having tied in through that holistic lens of collaboration.*

Several interviewees argued that the ECE field is not appealing because of low salaries, and because teachers with baccalaureate degrees and professional educator licenses tend to move into higher paying jobs.

"ECE is not just about liking children, but it's about actually teaching and educating children."

Still another partner noted:

> As long as we view any segment of early childhood education as less than a profession, we're not going to be addressing these larger issues of the two-tiered field, or also the lack of recognition and respect that early childhood educators receive.

Student and Institutional Characteristics

Some specific characteristics associated with ECE students and their colleges were also viewed as challenges to innovation. Many interviewees pointed out that candidates in their programs are typically non-traditional students, working full-time in early childhood centers and taking coursework part-time to remain qualified for their positions or advance their careers. These factors limited the time and money students had available to invest in coursework and prolonged their timeline for earning credentials. As one participant said, "Nobody is getting out in two or four years, unless it is one of my 18 year olds who doesn't have any little children and doesn't work outside of going to school." Participants in rural areas also observed that colleges—especially four-year campuses—are often hours away from students' homes, making it difficult to enroll if online courses are not offered. This isolation also made it difficult for rural campuses to collaborate and meet face-to-face. This lack of proximity to partner institutions was also seen as a challenge. One partnership noted that they were able to overcome these obstacles by building strong relationships through e-mails and phone calls, and by scheduling meetings to accommodate one another's availability.

Time

Across many partnerships, time was identified as a major challenge. Partners wished they had more time to write their grant proposals, to plan their work, to make decisions, and for collaboration, and they point out that increased funding is needed to buy the time required for this work. Prior research (Kisker, 2007) also found that, even faculty who are highly interested in becoming involved in collaborative work, are often precluded from doing so because of heavy course loads and other responsibilities. Many components of the grant work, such as developing articulation plans, were viewed as complex and time consuming, and, in hindsight, some collaborations felt their plans may have been too ambitious given the limited grant funding period. For example, one partner noted, "I think the interesting part about time is that you kind of want to do everything all at once, but you can't," and another said, "It would have been really good for us to not have had such grandiose ideas." For this reason, some stakeholders cautioned partnerships to focus on simpler plans in future endeavors. Some participants also pointed out the importance of timing as well as time, and making sure that the grant work starts and ends in months that align with the academic calendar or another reasonable implementation schedule.

Sustainability & Scalability

Finally, most programs were convinced that they would be able to sustain their efforts after the grant expired. However, a few expressed concern about being able to continue their work in the midst of personnel turnover and changing state policy. For example, one partner said:

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I think with the decreasing of monies everywhere, we truly are concerned about the people changing and when somebody leaves, then some important information gets missed or misplaced....Just this kind of thing can happen in any institution with important communications. It's the tacit knowledge problem.

Another interviewee added that the future of their partnership would "hinge on what happens when [name] retires. Is someone coming in who not just wants to collaborate with me but is interested in the kind of teaching that we're doing and wants to continue the program as she's had it?"

One way programs are working to overcome this challenge is to try to ensure the innovation becomes part of the organization's' day-to-day operations. For example, one participant spoke of the need to ensure that meetings between the two- and four-year partners became "a formalized process," and not something that depended solely on relationships between individuals. Another strategy for supporting sustainability lies in widespread dissemination of the grant work. The upcoming "Voices from the Field" monograph (Bernoteit, Latham, & Darragh, in press), the HERO website, and this research study were all cited as venues to facilitate documenting best practices and sharing strategies for overcoming obstacles. Another example is the Early Childhood Educators of Central Illinois (ECECI) website created by a local collaboration. They tried to design the site in such a way that it would last and provide links to additional resources, to serve as "a vehicle, we hope, that will kind of help us going forward in the sustainability piece and start to recruit people more." Still another group presented their work at a national conference to help spread the word beyond Illinois. As one interviewee noted, the programs participating in the grant will have "responsibility for focusing on the broader impact by building up an evidence base for these practices that will allow them to spread." Another partner referred to this work as:

> Another strategy for supporting sustainability lies in widespread dissemination of the grant work.

empowering collaborative networks to develop so that everyone has a voice and you develop channels of communications that will invite those who are willing participants to create a vision that is larger than any one of the people who are involved.

This is important because network embeddedness theory suggests that an institution's external and internal social networks are the most influential factors shaping organizational behavior (Gulati, 1998; Powell & Smith-Doerr, 1994).

Conclusions & Implications

The findings presented in this report provide a systematic review of the innovations EPPI grant recipients used to address common barriers in early childhood educator preparation, and describe promising practices that have emerged from the work of the partnerships. Five prominent themes emerged from these findings and frame our conclusions: improving communication and alignment within and between institutions; understanding and acting on data about the ECE students and the ECE workforce; improving the quality of early childhood educator preparation to meet the educational needs of all students; the vital role played by state and national policy initiatives; and attaining sustainability and scalability by sharing resources and experiences. Each of these themes permeated multiple components of the grantees' work and, at different stages, provided catalysts for reform, strategies for innovation, challenges to implementation, and areas for future growth.

Communication, Alignment, and Partnership

The most prominent theme across our interviews was the importance of communication and building partnerships across institutions. Prior to the grant, lack of alignment, particularly between two- and four-year institutions, was viewed as a prime challenge to ECE pathways. It was said that programs tended to view ECE preparation from the perspective of their own institution (and see it functioning well) rather than from the perspective of candidates who may transfer amongst multiple institutions (and see the system as dysfunctional). Some degree of distrust and competitiveness existed across institutions, but by working closely together on the grant activities, faculty and advisors learned more about one another's programs and their similarities. In order to accomplish the goals of their grant, participants spoke of the importance of establishing a trusting relationship with their partner institutions early in the process to ensure that all are working toward common goals.

Negotiating and achieving formal articulation agreements required collaboration across institutions, an investment of time to work together, and alignment of requirements and standards. Throughout the project, two- and four-year institutions also partnered to recruit students from local high schools, other colleges, and the current ECE workforce. They also aligned missions to prepare students for credentials, licensure, and assessments such as the edTPA, and exhibited strong communication amongst faculty and advisors to monitor student progress. The Gateways credentialing system was viewed as vital in strengthening these relationships by providing a common language for two-year and four-year partners and a bridge to make connections between their work more explicit.

Some articulation innovations reviewed in this report expanded these partnerships beyond the two- and four-year institutions, aligning efforts with high schools and the workforce. Similarly, the early math innovations described in this report required alignment of content across two- and four-year institutions and into the workforce to ensure a common language, reinforce instructional strategies, and ease transitions between sectors.

Efforts to align assessments and support transfer students required similar collaboration. The assessment innovations required alignment not only across institutions, but also between

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several sets of standards, including the Gateways Credentials, NAEYC, and ISBE, to create a system that is coherent and stackable. Common portfolio systems and shared assignments reinforced these efforts. Innovations designed to support transfer students, such as cross-advising and bridge programs, required increased communication and a fuller understanding of each partner's program. For instance, one partnership's efforts to bring four-year faculty and advisors to the campus of their community college partner to meet with potential transfer students helped ease transitions by signaling a commitment to the success of all students in the ECE system, even those enrolled at other institutions. Tools such as advising guides were useful for making these alignment and articulation pathways more transparent for both students and advisors across institutions. Bridge programs were explicitly designed to span the gaps between institutions, facilitate seamless transitions, and reduce transfer shock. In one noteworthy example of this sort of institutional coordination, one partnership even arranged to have students complete their bachelor degree coursework on a two-year campus. Repeatedly, the grant work helped two- and four-year institutions begin to adopt similar tools and terminology with regard to preparing students for edTPA, using common portfolio platforms, creating shared assignments, and defining competencies using shared language.

Communication and alignment *within* one's institution was also viewed as an important contributor to success with the grant activities, as excessive bureaucracy and "institutional gridlock" plagued some early implementation efforts. Institutional support and buy-in beyond the ECE faculty involved was critical for prioritizing and sustaining grant work. Communication with administrators and a robust grant support infrastructure (particularly at two-year colleges) facilitated progress. Support from all stakeholders—including faculty both within and outside the department, administration, advisors, students, and community partners—was necessary to facilitate and formalize articulation agreements, update course content, and improve the quality of field experiences. Further, as several interviewees observed, these constituencies also need to understand the intricacies of the program so that they can advocate for the agreement, help recruit students for the program, and facilitate smooth and efficient student transitions between institutions.

Implications. Because of the importance of collaboration and alignment necessary for this and similar work, participants suggested that similar initiatives in the future ought to require, or at least strongly encourage, formal partnerships across institutions. Illinois' recent move to overhaul principal preparation by requiring closer partnerships with school districts (see White, Pareja, Hart, Klostermann, Huynh, Frazier-Meyers, & Holt, 2016) may help pave the way for similar efforts. Given the mobility of today's student population, and the rapid changes in demographics, the structure of post-secondary education, and workforce demands, there is now more need than ever to consider these types of system-building approaches in designing education reform.

It is also important to note that several interviewees emphasized that alignment is an ongoing process that requires continuous communication and re-confirmation as programs and state regulations evolve over time. As these partnerships move into the next phase of their work, they will need to maintain communication with one another, institutionalize initiatives that bridge across levels, and integrate these new activities within existing programs. In order to bring this work to scale, programs should continue to expand their partnerships and align their efforts with institutions that were not part of the initial collaborations. Continued state level participation

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will also be needed to facilitate this work. According to the Education Commission of the States, as indicated in the *Finish Up Illinois* report, "the critical role of selecting a primary coordinating agency or agencies to oversee state-specific policy implementation and oversight, funding, and additional issues of sustainability and coordination" cannot be underestimated (McCambly, Bragg, Durham, & Cullen, 2016, p. 5).

Meeting the Needs of ECE Candidates and the Workforce

To prepare for their EPPI grant work, many programs collected data to identify and prioritize the current needs of the workforce and the profession. This revealed important features of the workforce and changing demands for the ECE preparation programs. Recent state and federal policies, including the ExceleRate Illinois quality assurance program requirements, are driving employers in all settings to raise teacher qualifications and require credentials. However, because of the low wages paid within the profession, it is difficult to recruit highly qualified students and attract qualified workers into the field. Early childhood centers are particularly hard to staff, because teachers who earn baccalaureate degrees with an educator's license tend to move into higher paying positions with public school systems. Partnerships have responded to this by focusing on the expanding demand for early childhood personnel beyond teaching in a school system, particularly in infant and toddler programs and other opportunities for working with community agencies.

Similarly, rising numbers of non-White and dual language children are increasing the demand for racial and ethnic diversity in the ECE workforce, as well as the need for bilingual candidates and a growing need for field placement sites that provide experiences with diverse populations. These demands from the field led many programs to bolster their bilingual programming and add ESL endorsements to their early childhood education programs. Candidates who graduate with this endorsement are highly successful in the marketplace. In fact, interviewees noted that the credential is in such high demand that numerous institutions are experiencing ECE teachers returning to earn an ESL endorsement.

Programs' examination of student data also revealed that candidates in ECE preparation programs tend to differ from the traditional college student, which brings a distinct set of challenges and calls for solutions that are sensitive to this unique context. Many ECE candidates work full-time in the field and take coursework part-time. As a result, early childhood educator preparation programs created structures to attract these students by offering courses at night, on weekends, and online. Programs also had to rethink the traditional field experience because working students generally cannot take time off for a consistent two-week placement. Indeed, these types of initiatives to improve access were a prominent strategy for supporting transfer students.

For many participants, the primary catalyst for their work on this project was a personal commitment to meeting students needs and addressing issues of social and economic justice by reducing the costs to students associated with retaking courses at the four-year institutions. Recognizing that many candidates face financial barriers, both higher education institutions and Gateways to Opportunity offer scholarships and other financial assistance to help transfer students and current practitioners pay for improved credentials and other needs such as transportation and child care. Similarly, acknowledging the academic challenges faced by many candidates and the more rigorous standards in Illinois and nationally, several programs also

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offer more intense (and often free) academic supports such as tutoring, test preparation, and general academic skills courses. Additionally, cross-advising, summer bridge programs, and the creation and utilization of advising guides were all intended to help develop smoother transitions from two-year to four-year programs.

An excellent example of analyzing and utilizing data on both candidates and the workforce lies in one program that found many candidates were struggling with the basic skills examination for preservice teacher candidates, even though only a small proportion of their early childhood graduates were going into positions where this exam was required. The partnership identified the need to eliminate the examination and targeted some of their grant work around serving the needs of these students by designing a new program. The new program provides a pathway for students seeking early interventionists positions or positions that do not require an ISBE teaching license. Gateways still covers some of the student's costs, reducing the financial burden on candidates and providing them with skills that are marketable to employers. To facilitate articulation, they shared their syllabi with the two-year program, which added and updated their courses to align with the partner and the Gateways Credentials for early interventionists. As a result, students transferring to the four-year program can place out of the university's introductory infant and toddler course, making room for other courses required by the university. Conversations like these between other partners focused on establishing formal transfer agreements and developing a course-by-course articulation pathway from the AA and AAS degrees to non-licensure baccalaureate degrees.

Implications. Early childhood educator preparation programs should create structures to attract qualified and diverse students by offering courses that are accessible and that acknowledge multiple on- and off-ramps, while providing the financial and academic supports transfer students need to succeed. The Gateways credentialing system holds great promise for creating a modernized career lattice model that better meets the needs of the ECE workforce. Moving forward, this structure could be linked with salary increases to help attract, retain, and reward more qualified educators and to encourage further professional development and advancement. The framework could also be expanded beyond ECE to encompass broader areas of the education profession, for example, to reinforce Illinois' new Teacher Leader credential or other similar competencies. The Gateways Technical Assistant pilot, in particular, could provide lessons that extend beyond the early childhood sector.

Early Childhood Education Quality

Many of the innovations described in this report were explicitly geared toward improving the preparation of early childhood educators to better meet the educational needs of all young children. For example, the partners' work around early math was motivated by the notion that existing instructional practices were outdated and that many early childhood educators needed to improve their own understanding of the early development of mathematical concepts in children. Thus, innovations in this area were geared toward making instruction more research-based, taking into account the child's developmental ability and home language, and providing PD to help practitioners boost their math content knowledge and overcome math anxiety. Further, this work incorporated the most up-to-date and rigorous standards, research, texts, and training. That is, the innovations targeted both early childhood educator preparation, as well as the current ECE workforce who would not otherwise be aware of the improvements

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in preparation, to ensure young children have access to high quality and cohesive instruction across all teachers in the community.

The partnerships' other content innovations followed this same approach. Program faculty saw a need to improve instruction for dual language students in ECE settings and worked to improve both PD for teachers already in the field and preparation of current candidates. Indeed, a large number of programs worked to embed ESL content into coursework for all candidates, not just those intending to pursue the ESL endorsement. Interviewees typically spoke of this in terms of meeting the needs of all children, rather than simply improving the marketability of their graduates. Similarly, much of the innovation around improving infant and toddler programming was driven by the Institute of Medicine report (IOM & NRC, 2015) referenced earlier, emphasizing the need for improved toddler programming and calling for programs to help boost the qualifications of infant/toddler teachers.

To a large degree, the innovations around field experiences focused on helping to meet the education needs of young children. Partnerships stressed the importance of intentionally selecting field placement sites to ensure candidates have experiences working with all types of students that the profession currently serves, including children who are dual language learners, infants and toddlers, and children who have special needs. They also focused on being more selective in identifying cooperating teachers, including piloting credentials to signify which practitioners could provide high quality mentoring. Partnerships also bolstered their training for cooperating teachers to help build their skills in working with adult learners, assessing preservice teaching, and providing more actionable feedback to candidates.

> Innovations that increase teachers' utilization of research, further professionalize the workforce, and improve educator quality can also help raise the stature of the ECE profession, which many participants noted is in need of such a boost.

Implications. Amidst efforts to improve the postsecondary experiences of students preparing to become early childhood educators, programs should not lose sight of improving the educational experiences for all young children. As with the EPPI innovations, efforts to improve content area instruction and field experience ought to include avenues for improving practice for in-service educators, while also improving the quality of preparation preservice candidates receive. Innovations to support mentor teachers and provide them with opportunities to update their knowledge and skills should be supported, as they have a most direct impact on the children in their care. In addition to helping teachers improve their skills in their classroom, innovations that increase teachers' utilization of research, further professionalize the workforce, and improve educator quality can also help raise the stature of the ECE profession, which many participants noted is in need of such a boost.

State and National Policy Initiatives and Context

> The flexibility of the EPPI grants encouraged the partnerships to overcome prior "brick walls" when it came to sorting out the commonalities and differences between courses offered at the two- and four-year levels.

Another major theme emerging from our findings was the large role that state and national policies play by providing catalysts, challenges, and solutions, each at varying stages of partnerships' efforts. First, of course, the EPPI grant itself (and, by extension, the state's larger Race to the Top Early Learning Challenge grant) received much credit for improving opportunities and resources for collaboration to work on these important issues. The flexibility of the EPPI grants encouraged the partnerships to work around the difficulties articulating two-credit to three- and four-credit courses and to overcome prior "brick walls" when it came to sorting out the commonalities and differences between courses offered at the two- and four-year levels. The grants also provided greater opportunities for articulating courses and creating

new pathways leading to both enhanced ISBE ECE licensure degrees and non-licensure degrees to meet the expanding demand for early childhood education professionals outside of school systems. One of the most significant aspects of the EPPI grant was to provide the resources to "buy-out" faculty time to work on partnership activities that they have been wanting to do, but did not have time to, in some cases for decades.

Numerous state policy efforts had a direct impact on partnership innovations. The Gateways credentialing requirements, the ExceleRate quality assurance program, and new Illinois Early Learning and Development Standards were all highly influential in providing motivation and shaping the framework for much of the work described in this report. Many articulation innovations were designed in direct response to requirements set forth by Gateways and in the early learning standards. The Illinois Articulation Initiative and Transferology provided guidance and structure for many of the articulation and assessment alignment innovations.

State reforms to teacher preparation also influenced many of the EPPI innovations. The Gateways Credentials and the recent implementation of edTPA in Illinois catalyzed innovation and provided opportunities for alignment across early childhood educator preparation programs. Much of the work around aligned assessments, in particular, was geared toward preparing students to obtain Gateways Credentials and to participate in the edTPA process. In an effort to align with the edTPA assessment process, several partnerships have begun to develop common assessments and build portable student portfolios that demonstrate the key competencies required. But these initiatives also brought challenges, including integrating candidates' experiences at two-year programs into the edTPA requirements and concerns that frequent changes to teacher licensure standards might hinder the sustainability of some innovations.

At the national level, initiatives such as those spurred by the Common Core State Standards and the Lumina Foundation, helped reinforce the state's and partnerships' efforts to raise academic standards, improve transfer rates, and develop career pathways with multiple completion points. But at the same time, state and local budget issues also loomed large over Illinois institutions (both public and private programs) as they attempted to implement this work. Associated tuition changes, uncertainty about the reduced and delayed funding for the state financial aid program, MAP grants, and proposed changes within the City Colleges of Chicago system were perceived to have a negative impact on ECE program enrollment and may have hindered attempts at even more ambitious reforms.

Implications. Policy implementation does not occur in a vacuum. Many of the policies and initiatives mentioned in this report served to reinforce one another. For example, ISBE's early childhood educator preparation redesign efforts require licensure programs to be aligned with Gateways credentialing requirements and the groundwork laid by the IAI facilitated the EPPI articulation arrangements. However, other policy initiatives were not so well aligned. For instance, some efforts to align assessments were delayed by the fact that the new Early Learning Standards were not finalized until late in the first year of the grant. Programs—and policy-makers and policies—need to take context into account and seek out ways to align and leverage ongoing initiatives so they complement one another, rather than working at cross purposes, and can be implemented in a manageable and strategic fashion. Financial resources, reserved time, and the cross-system structures and support needed to do this work are essential.

The Gateways credentialing requirements, the ExceleRate quality assurance program, and new Illinois Early Learning and Development Standards were all highly influential in shaping the framework for much of the work described in this report.

Tuition changes, uncertainty about the funding for MAP grants, and proposed changes within the City Colleges system were perceived to have a negative impact on ECE program enrollment and ambitious reforms.

Sharing Resources and Experiences

Finally, sharing resources and learning from other institutions' experiences emerged as important steps for both facilitating implementation and helping ensure sustainability of the reforms. Throughout the process, grantees learned from one another through regular conference calls, collaborative conferences, and the HERO website, which exposed them to the new strategies being implemented throughout the state and allowed them to share their challenges with other partnerships. The "Voices from the Field" monograph (Bernoteit, Latham, & Darragh, in press) and this research study were also cited as potential vehicles to disseminate best practices and lessons learned. Some partnerships have created their own websites and presented at national conferences to document their work and share their experiences with a wider audience. Still other partnerships—especially those working on early math or ESL—collaborated with external resources, such as faculty from outside the department, to support their work and learn from the expertise of others.

Although many of the innovations described in this report were complex and time consuming, stakeholders note that much of the arduous work has already been done through the EPPI grants. New institutions can learn from these efforts and save time by adapting the materials and other artifacts created by programs that have already undertaken similar reforms. Many partnerships noted that their innovations were scalable to other locations and that they were willing to share documents such as course syllabi to facilitate dissemination statewide and help bring their success to scale. For example, the CIAS group has developed a web-based assessment toolbox to provide other programs with sample assessment tasks, custom rubrics, and data analysis tools. One partnership created video clips of exemplary early math instruction and has made them available for other programs to use for teacher preparation and professional development. Others built libraries of instructional materials or online modules that will sustain beyond the duration of the grant. Some developed curriculum materials and teaching guides to share with field placement sites to ensure their work spreads beyond the university. To paraphrase one participant, the less time programs have to spend on these logistics, the more likely they will be to utilize these tools more deeply.

Implications. Clearly, money and time are necessary resources for implementing any major reform. But, as detailed in this study, the EPPI grantees were able to produce substantial change with fairly small grant awards in a relatively tight timeframe ($50,000 or less over approximately ten months). By providing some slight, but explicit nudges—token incentives, supports, and imperatives—the grant allowed participants to carve out the time and build the relationships necessary to carry out the work that would likely have otherwise gone unprioritized. Now that the grants have expired, the dissemination of resources and lessons learned from others' experiences are important steps for facilitating scalability and ensuring the sustainability of reforms. Moving forward, institutions can learn from the efforts of the EPPI grantees and adapt the materials and artifacts created by programs that have already undertaken similar reforms. On the flip side, it is also important for institutions to be able to distinguish the situations in which the grant innovations may be relevant only within a particular context, and not necessarily applicable on a broader scale.

> New institutions can learn from these efforts and save time by adapting the materials and other artifacts created by programs that have already undertaken similar reforms.

> The EPPI grantees were able to produce substantial change with fairly small grant awards in a relatively tight timeframe.

Closing

Participants reported tangible improvements from the status quo in relationships between two- and four-year institutions of higher education. Through new articulation and transfer agreements, cross-advising, and bridge programs, new pathways have been built to address many of the difficulties previously faced by students as they transition from two- to four-year institutions. Through participation in EPPI project meetings and related communication, participants became more aware of statewide initiatives aimed at improving transfer options for two-year students, especially the tools offered through the statewide iTransfer initiative, including Transferology and the Illinois Articulation Initiative. Innovations in early math instruction focused on providing high quality coursework and field experiences for preservice teachers, as well as PD for those already working in the field. In response to needs in the field, several four-year programs have added ESL/Bilingual and/or Special Education endorsements to their ECE licensure degrees and several two-year partners have begun to create lower level coursework to prepare their students to transfer into these programs. Similarly, four-year partners have begun to develop new or enhanced infant/toddler programs that build upon those offered at the two-year institutions. Partnerships also worked to improve training and support for cooperating teachers as a means for improving the quality of field experiences for preservice teachers, as well as a strategy for disseminating updated best practices for content instruction and expanding the availability of placement sites with diverse early learners, particularly infants, toddlers, dual language learners, and children with special needs. As one grantee said:

> We knew we had an existing workforce—we needed different ways to support them and not just create a program for high school graduates coming straight into our program. We wanted to figure out how do we help all of the people in the field to get the needed education and credentials they wanted.

However, it is important to reiterate that the data used in this study have not been triangulated or confirmed with other sources of data. Further research is needed to track the outcomes of these innovations, both on institutional change over time and student satisfaction and success. In particular, follow-up data on ECE candidates will be vital to examining whether these changes in qualifications and preparation of the workforce are making an impact on the social-emotional and academic success of our youngest children. A logical next step will be to increase our investment in those strategies that have proven successful and have the potential to be scaled statewide.

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Appendix A: General Interview Protocol

Description of the project *(Gleaned from application & quarterly reports, prepared in advance & shared with interviewee.)*

1. Describe how your project addresses state/regional early childhood educator/workforce preparation needs.
2. Describe the project goals & project activities.
3. What specific courses are going to articulate? Please provide the course titles and a brief description.
4. Who is involved in this project:
   a. 4-yr institution:
   b. 2-yr partner(s):
   c. Community Partner(s):
5. Timeframe for the project
6. Did the institutions have Gateway Entitlement prior to you receiving this grant? Which Gateways Entitlements were obtained as a result of your EPPI grant related activities?
   a. 4-yr institution:
   b. 2-yr partner(s):
7. What are the early childhood educator culminating certificates and degrees that are or will be affected by the grant activities?
   a. 4-yr institution:
   b. 2-yr partner(s):
8. In which of the following areas of innovation is your project most focused (Identify no more than two areas):
   __ Pathways for students
   __ Aligned assessments
   __ Advising/supporting transfer students
   __ Quality field experience placements
   __ Enhanced content matter:
   __ Early math learning
   __ Infant/toddler development
   __ Special education
   __ Bilingual/English language learning

Description Validation
1. Additions to the description
   a. Lead PI: Would you like to make any additional changes in the description that you returned to us?
   b. Others: Would you like to make any additional changes in the description that we provided to you?
2. Have you uploaded all of the relevant artifacts to HERO? If not, when do you anticipate having this completed?

3. IF NOT Gateway Entitlement, then ask :
   a. Why has your institution decided not to pursue Gateway Entitlement?
4. How did this project evolve or changed over time?

Innovation Focus

5. What are the core components of your innovation?
6. What have been the catalysts?
7. How is this innovation a change/ revision/improvement from the past?
8. What are the critical conditions/elements (i.e., situations, contexts, personnel, other resources) in which this innovation will be most effective? What needs to be in place for the innovation to be most effective?
9. Are you aware of this approach existing in programs in other institutions or with other partnerships in Illinois? Elsewhere?
10. Refer to Specific Questions Tailored to the innovation(s)
    a. *IF ELL/ESL is innovation focus area, then ask DEMAND for ELL/ESL COMPENTENCIES Question here*
    b. *10.A.1, 10.A.2 = first innovation*
    c. *10.B.1; 10.B.2 = second innovation*

Lessons Learned

11. What lessons have been learned about implementing this/these innovation(s) that we can share with others who may have an interest in its use? *[GO DIRECTLY TO A, B, C]*
    a. Use, modification, or application of the innovation(s)
    b. Factors that may have affected the quality of implementation (i.e., may be conducive or challenging to implementation)
    c. Any other lessons?
12. How can challenges to effective implementation be addressed proactively/anticipated?
13. What data are being collected to determine how well different aspects of the innovation(s) are being implemented (implementation fidelity and impact/effectiveness)?
14. What data are being collected to assess the performance of different individuals involved in implementing the innovation(s)?
15. How is process data on implementation shared with the team?
16. Please describe how the partners influenced the innovation(s).
    a. Who (individual/role) has been most instrumental in helping you?
    b. What, if any, institutional barriers did you encounter internally and/or with partner institutions?

Demand for ELL/ESL Competencies

17. In your part of the state, what is the demand for early childhood educators with ELL competencies?
    __ Great Demand
    __ Some Demand
    __ Little-to-No Demand
    a. *ASK FOR 4-YRs:* Does your program offer an ESL endorsement? __ Yes __ No
    b. How exactly is ELL/ESL information being implemented? Embedded? New course?
    c. What standards, research, theory, or framework was used to ensure that your program is appropriately preparing educators for students whose first language is not English?
    d. To what extent do field placements address ELL/ESL?
    e. What are you doing in this area for professional development for in-service educators?

Next Steps

18. What do you envision as the next steps with this grant-related work?
19. To what extent do you believe these changes are sustainable? Why?
20. To what extent do you see your project impacting policies and/or practices across Illinois? In what ways?
21. To what extent are these changes scalable to other sites? In what ways?

Conclusion

22. Is there anything else you would like to add about your EPPI grant-related activities?

We would like to speak with some of your colleagues and partners as well. Please provide me with the names and contact information for *<to be customized for each site>* individuals that can provide in-depth information about their experience working on the project or have a different perspective.

Specific Questions Tailored to Innovations

Questions for Pathways Innovations
1. What steps have been taken or are currently being taken to develop an articulation agreement between the participating institutions?
2. In what way have the various teaching standards and credentialing requirements been incorporated into the transfer agreement?
3. What is done to help prepare the students to pass the TAP (Test of Academic Proficiency) or meet the ACT or SAT threshold. for ISBE licensure?
4. The next questions concern non-ISBE licensure/credential options:
    a. What credentials did you offer before the grant activities?
    b. To what extent do/did your grant-related activities address non-ISBE licensure/credential options?
    c. Are other non-ISBE licensure/credentials offered?
    d. At what point in the program are non-ISBE licensure/credentials awarded?
5. Is there an option for obtaining credit for work experience?
6. Will/Does the redesigned program accommodate scheduling needs for current practitioners (e.g., online classes, cohort models, or special scheduling)?

Questions for Assessment Alignment Innovations
1. What steps had to be made or will have to be made for jointly developed assessments?
2. Was this a collaborative process or primarily led by one institution?
    a. If just one institution, which institution was the lead? Why?
3. To what extent is edTPA being utilized for preservice teacher assessment in your program?
4. What other standards are you using to align your assessments (NAEYC, NCATE, etc.)?
5. What steps had to be made or will have to be made in order to achieve stackable Gateways Credentials?
6. What steps were taken in order to establish/expand a bridge program to help students fill gaps before entering the 4-year institution?
7. *For 4-year institutions:* To what extent do the bridge programs differ between your multiple two-year partners, if applicable?
    For 2-year institutions: To what extent do the bridge programs differ between your multiple four-year partners, if applicable?

Questions for Transfer Student Support Innovations
1. What specific steps are being taken to support students before the transition, during, and after?
    a. Before?
    b. During?
    c. After?
2. Do you develop/expand a Bridge program as part of this grant? If no, skip to next question.
    a. What steps were taken in order to establish/expand a bridge program to help students fill gaps before entering the 4-year institution?
    b. *For 4-year institutions:* To what extent do the bridge programs differ between your multiple two-year partners, if applicable?

    c. ***For 2-year institutions:*** To what extent do the bridge programs differ between your multiple four-year partners, if applicable?

3. What additional resources are being provided to support students through the transition (e.g., child care, transportation, or other non-academic assistance)?
   a. Are there special efforts to accommodate the needs of current practitioners?
4. PROBE IF NOT IDENTIFIED
   a. What activities have you planned/implemented that will focus on increasing student motivation?
   b. What strategies have you planned/implemented to show interest and involvement with students?
   c. How does your project anticipate/work with students before situations that may impede their success develop?
   d. How has the advising process or activities changed to help students identify potential barriers to their academic career?
      i. Early intervention
      ii. Introduction of rules and clear expectations
      iii. Monitoring progress
      iv. Customizing interventions to target specific student needs
5. To what extent will communication be sustained between you and your partnering institution(s) regarding specific students after they transfer?

Questions for Content Area Innovations (early math learning, infant/toddler development, and special education)
1. Which standards have you used to align your new curriculum?
2. Where in the curriculum (which courses) have you placed these innovations?
3. To what extent have the teacher candidates been receptive to these interventions?
4. How is this content experienced in field placements? Please describe one or two examples.
5. What are you doing in this area for professional development for in-service educators?

Questions for Quality Field Placement Innovations
1. What standards were used to guide your enhanced field placement innovations?
2. Describe the early childhood settings for field experiences. How were they selected?
3. What training and support is provided to the field-based mentors?
4. In what ways do faculty supervisors help their students:
   a. make meaning of their field placement experiences?
   b. evaluate those experiences against standards of quality?
5. What is done to ensure that field experiences expose candidates to settings that include the cultural, linguistic, racial and ethnic diversity in families and communities

Appendix C: Codebook

Bold = Parent Colde

Italics = Child Cold

Title	Description
Challenges	**Any challenge to the grant related activities.**
Awaiting Approval	Partners have reached an unofficial articulation agreement but are awaiting for final approval from administration.
Broader issues in ECE Field	Challenges in grant related activities arise from overarching norms or practices in ECE field.
Funding	Monetary support is needed to complete or sustain the grant activities.
Institutional Challenges	Challenges to grant related work that resulted from participant's institution or partnering institution.
State Challenges	Changes to grant related work that resulted from actions from the State of Illinois
Time	Time limitations have prevented the work from completing or the work is taking longer than anticipated.
Components	**This is a parent code is made up of many child codes. It is not ideal for parent code to be used in isolation (try to use a child code)**
2yr Redesign	2-year grant related work included redesigning one or multiple courses.
4yr Redesign	4-year grant related work included redesigning one or multiple courses.
Accepting AA	The 4yr accepting the AA or AAS degree is a part of the articulation plan.
Accommodate scheduling needs	Scheduling needs for current practitioners are being accounted for through online courses, night courses, cohort models, etc.
Advising Activities	Activities that relate to working with the advising office or advising students on career/education may include a sheet or document is created for students and academic and professional advisors to clearly communicate required courses and experiences are needed for the degree.
Advisory Boards	Advisory Boards are involved in the grant related activities or in general with the program. The faculty from the patterning instructions may sit on the board.
Alignment Process	All of the activities and programs related to how programs worked towards alignment. May include, but not limited to the use of credentials or bridge programs.
Authentic Partnership	The relationship between the grant recipients is collaborative and allows all voices to be heard. Only for grant recipients.
Basic Skills Prep	The partner discussed prep work for the basic skills test being a part of the grant related work.
Buy-in	Support and acceptance of the grant related work. Also include lack of buy-in.
Campus Visit	4yr faculty visit 2yr campus or 2yr students visit 4year campus for the purpose of attracting and supporting transfer students.
Communication	Indication that communication is important for activities.
Credit for H.S. or Work Experience	The 2yrs and 4yrs will give course credit high school courses or previous work experience.
Developmentally appropriate pedagogy	Redesigning courses to ensure different stages of development were included

Title	Description
Challenges	**Any challenge to the grant related activities.**
Dissemination	Participants have shared their grant related work at conferences and/or other venues OR participants' grant work has been inspired or borrowed from other grant related work that has been shared.
Essential Components	These components are essential to the implementation of the innovation. The partner has described them as critical for the grant related work.
Faculty Sharing	Faculty member teaches coursework at 2 and 4 yr institutions.
Grant Admin Support	The interviewee experienced support from administration in grant related work.
Grant Funds	Grant funds used to buy-out time as part of project. If also mentions funding as catalyst for project, then double code with Motivation/Catalyst.
IAI Courses	The 4yr accepting the IAI courses as part of the articulation plan.
Integral Player	Partnership includes one member who acts as a point-person who leads the group in a collaborative, yet focused manner.
Learn about each other programs	The partners learned about each other's, Includes sharing syllabi, also through meetings
Necessary Players at the table	Partner discussed how all relevant stakeholders had a say in the activities. Collaboration was sought between professors, administrators, community members, field site mentors, or advisors. Collaboration went beyond grant partners.
Inter-disciplinary team	*Partners collaborated with professors from other content areas like Math, Literacy, and ESL.*
Need Assessment	A survey or other method was distributed to the field to identify key issues.
Networking	The grant work provided the participants with the opportunity to further develop or start relationships with other 2 and 4 year faculty members.
Online Instruction	Online modules or courses were used or created to teach content.
Professional Development	Professional Development, workshop, or conference was conducted to further teach content. Can include in-service professionals and/or students.
Regular meetings	Regularly scheduled meetings helped the grant related activities, includes face-to-face meetings
Recruiting	2 and 4yr programs making recruiting or advertising efforts for programs or professional development.
Scholarship Funds	Scholarships will be or are currently awarded to help attract students to a 2 or 4 year institution.
Data	
Data is being collected	Partner discusses specific plans on how data is currently being collected.
Future Plans	The partner is not currently collecting data but does have specific plans on future data.
No data at this time	There is no data being collected at this time and there is no indication of future data.
Exemplary	**Activity discussed is interesting, unique and particularly relevant; both directly related or not**
Impact on Policy/ Practices	**Should be applied to question on Impact on Policy/Practices (at end of interview); also include responses to scalability question**
Innovation	**Parent code for innovation practices**

Title	Description
Challenges	**Any challenge to the grant related activities.**
Advising/Supporting Transfers	Activities that involve proactive/intrusive advising strategies of transfer students-bridge programs, tracking performance, campus visits, or early identification of potential transfer students.
Alignment of Assessment	Any work that involves the alignment of assessments between programs and courses.
Articulation	Aligning courses at the 2-yr in order to transfer to the 4-yr for course credit. This different than non-ISBE licensure and alignment of assessment.
Chicago Consortium	Work that relates to the consortium.
Early Math	Enhanced Early math content or the implementation of it into a program.
ELL/ESL/Bilingual	Incorporating ELL content into program. Also references to ESL, bilingual and dual language learners
Field Placement	Work that relates to the improvement of field placements. Only use when field placement is the overall innovation focus.
Infant/Toddler	Enhanced Infant/Toddler content or implementation of it into a program.
ISBE licensure	Information related to ISBE licensure issues. This code should also be applied to level 5 Gateways items.
Non-ISBE licensure	Information for the demand of non-ISBE licensure or the work towards a program adopting it. Also include when discussing Gateways Credentials.
Relationships	Work that does not fall under an innovation and focuses on enhancing the partnership.
Special Education	Information on the demand of special education content or implementation of it into a program.
Motivation/Catalyst	**Use this level of the code, do not use any of the levels below. This code should be applied to reasons for participation in the grant and catalysts that have helped the work.**
Extrinsic	Partner discussed external motivating factors for grant participation.
Changes ISBE Requirements	Partners were motivated to do this work by changes in the requirements for the ECE field.
Educator Diversity	*Motivation for the grant related activities originates in the desire to better respond to the demographic needs of the ECE field.*
Intrinsic	*Partner discussed internal motivating factors for grant participation.*
Next Steps	**Applied to activities that will be sought in the future.** **Double-code with innovation area, as needed.**
Quotes	**Should be applied to an articulate statement that would be good for the final report.**
Research Cited	**Applied to any empirically supported work that was used to support grant related activities.**
Overlap	**Trying to capture how participants spanned across themes due to work being related or how work in one area is essential to work in another.**
Sustainability	**Should be applied to question or content that relates to what is needed to keep grant activities continuing into the future.**

The Illinois Education Research Council at Southern Illinois University Edwardsville was established in 2000 to provide Illinois with education research to support Illinois P-20 education policy making and program development. The IERC undertakes independent research and policy analysis, often in collaboration with other researchers, that informs and strengthens Illinois' commitment to providing a seamless system of educational opportunities for its citizens. Through publications, presentations, participation on committees, and a research symposium, the IERC brings objective and reliable evidence to the work of state policymakers and practitioners.

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