Creating a Communications and Technology Infrastructure to Meet Maryland Family Engagement Goals

A Communications and Technology Plan

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Introduction

For nearly a decade, Maryland has been leading the nation in the development of innovative early childhood family engagement policies and practices that support child well-being, school readiness, and family economic security. As early as 2008, the Maryland Early Childhood Advisory Council highlighted the importance of family engagement by making it a major goal of the state's three-year action plan to improve school readiness and school success.[1] In 2011, the state's successful Race to the Top—Early Learning Challenge grant secured funding to create a statewide family engagement coalition and framework that would be implemented by the state's 24 local early childhood advisory councils. The Maryland Family Engagement Coalition published the Maryland Early Childhood Family Engagement Framework in 2013, which set forth common goals for family engagement and shared best practices with early care and education providers.[2] The Framework was incorporated into Maryland's Prekindergarten Expansion Act of 2014 as a guide to engage parents and guardians in early education programs and services. Today, the state continues to build on this work with the development of a family engagement toolkit for providers and grant support to local early childhood advisory councils for family engagement initiatives.

The next step in Maryland's early childhood family engagement work is to create a statewide communications and technology infrastructure that can serve as a national model for connecting state agencies, early care and education providers, and parents around the state's family engagement goals. To fully realize the benefits of Maryland's early childhood family engagement initiatives, this work must now be better coordinated with the state's K-12 family engagement initiatives. In addition, the field's technological innovations and best practices must be identified and employed to overcome common, persistent barriers to family engagement. As a national leader in early childhood family engagement, it is also important that Maryland develop technical assistance materials to support other states that are looking for guidance in developing stronger family engagement policies and practices.

To support this next phase of Maryland's work, a plan for a statewide family engagement communications and technology infrastructure was developed based on the goals of the Maryland family engagement framework. Specifically, the goals of the plan are to:

1. Recommend strategies to develop, implement, and maintain a statewide early childhood family engagement communications and technology infrastructure that links Maryland's early childhood family engagement initiatives with other state initiatives and disseminates best practices in early childhood family engagement across the state;

2. Outline effective family engagement communication practices and technological innovations to assist Maryland and local providers in improving their family engagement efforts; and,

3. Offer strategies regarding how Maryland can support other states in the development of statewide family engagement strategies and practices.

This plan is designed for use by Maryland policymakers and administrators to support the implementation of statewide, coordinated communications and technology initiatives for family engagement, and provides early childhood practitioners with information on the latest innovations in family engagement nationally.

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[1] Maryland Early Childhood Advisory Council. (2008). *What Success Looks Like: Three Year Action Plan 2009-2012*.

[2] Maryland Family Engagement Coalition. (2013). *The Early Childhood Family Engagement Framework: Maryland's Vision for Engaging Families with Young Children*

Methods

This plan draws on multiple sources of national- and Maryland-specific information. These resources helped to define the early childhood family engagement context in Maryland and explore the relevant innovations. The data collection methods and sources consulted to inform the recommendations of the plan include:

Scan of the literature and review of reports, initiatives, and websites

The family engagement practices of early care and education practitioners are receiving significant attention from researchers, policymakers, and national advocacy organizations. As a result, a growing body of early childhood family engagement literature is emerging. For this plan, major articles and meta-analyses on early childhood family engagement that focused on communications and technology were reviewed. In addition, federal and state agency reports (e.g., U.S. Department of Education's national technology plan) and websites (e.g., the Early Childhood Knowledge and Learning Center), were also reviewed, as well as work of national organizations and initiatives focused on early childhood family engagement (e.g., the Harvard Family Research Project and National Parent Teacher Association).

State family engagement initiatives and communications

In large part due to the federal Race to the Top–Early Learning Challenge (RTT–ELC) grant program, a number of states have engaged in innovative family engagement initiatives. Accordingly, a scan of the family engagement initiatives of the 20 RTT–ELC states was conducted with a specific emphasis on state use of communications strategies and technology to promote family engagement. In addition, the compendium of state Tiered Quality Rating and Improvement Systems (TQRIS) was reviewed to better understand how states are measuring family engagement and promoting it through these systems.

Examination of innovation in education technology related to early childhood family engagement

As the early childhood field has increasingly recognized the importance of family engagement, it has spurred innovation. Accordingly, family engagement publications and reports were reviewed to better understand the latest technological innovations designed to support early childhood family engagement. The innovations were reviewed for their relevance for Maryland's early childhood practitioners and alignment to the state's early childhood family engagement goals.

A review of Maryland specific reports and initiatives

To better understand the context within which the technology and communications plan will be implemented, a number of Maryland-specific reports were reviewed including the *Maryland Educational Technology Plan for the New Millennium (2007-2012)*, *the Maryland Technology Inventory Summary Report* (2009-10), the family engagement best practices legislative report, and the PreK-12 Family Engagement Framework.

Consultation with the Maryland family engagement coalition

Finally, the plan was developed with consultation from the Maryland Family Engagement Coalition. Two meetings were held with the coalition over the project period to solicit feedback.

Defining the Context: Family Engagement Goals, Barriers to Engagement, Preferred Communication Methods, and Current Practice
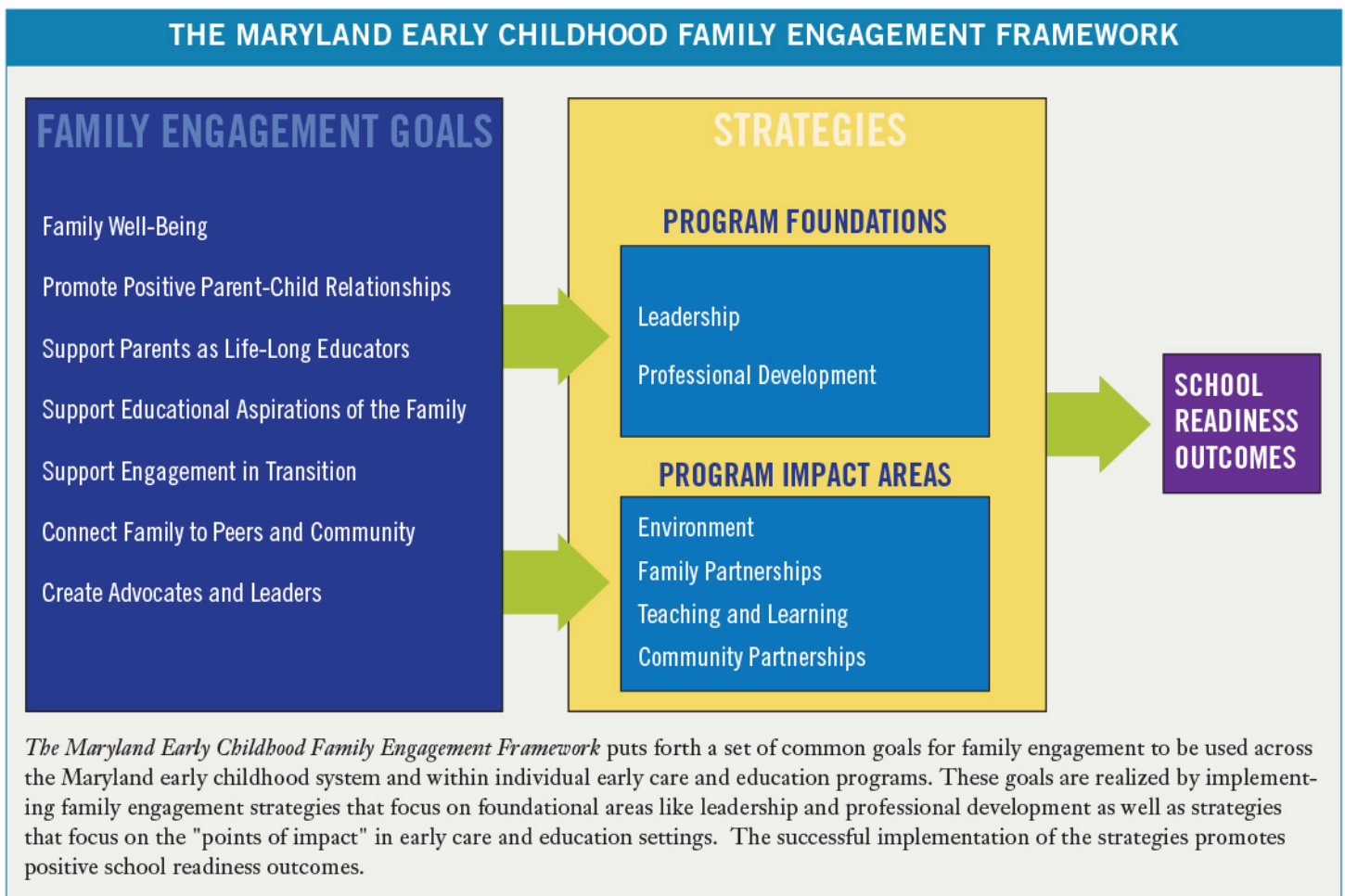
Maryland's communications and technology plan must be created in light of the state's goals for early childhood family engagement, the barriers that families face when attempting to participate in family engagement initiatives, and the preferred communication methods of Maryland families with young children. In addition, the plan's recommendations must reflect current practice in order to build upon the state's current work and include the appropriate infrastructure supports to ensure successful implementation. These elements of Maryland's context are discussed below.

Maryland's Family Engagement Goals[3]

Maryland defines family engagement, in part, as a "shared responsibility of families, schools, and communities for student learning and achievement..." To achieve the vision articulated in the state's definition of family engagement, the Maryland Early Childhood Family Engagement Framework outlines a series of goals for the early childhood system and for Maryland's early care and education programs. **Figure 1** below provides a logic model related to how the state's family engagement goals support stronger school readiness outcomes. The Framework identifies seven goals:

1. Promote family well-being

Families can only support student learning and achievement when they are financially stable, have secure housing and adequate food, and can access health care. Children fare better in their early development when these conditions are present.[4] Accordingly, Maryland family engagement initiatives must support the health, mental health, financial stability, food security, and safety of families with young children.

Figure 1: Maryland's Early Childhood Family Engagement Goals

THE MARYLAND EARLY CHILDHOOD FAMILY ENGAGEMENT FRAMEWORK

FAMILY ENGAGEMENT GOALS

Family Well-Being

Promote Positive Parent-Child Relationships

Support Parents as Life-Long Educators

Support Educational Aspirations of the Family

Support Engagement in Transition

Connect Family to Peers and Community

Create Advocates and Leaders

STRATEGIES

PROGRAM FOUNDATIONS

Leadership

Professional Development

PROGRAM IMPACT AREAS

Environment
Family Partnerships
Teaching and Learning
Community Partnerships

SCHOOL READINESS OUTCOMES

The Maryland Early Childhood Family Engagement Framework puts forth a set of common goals for family engagement to be used across the Maryland early childhood system and within individual early care and education programs. These goals are realized by implementing family engagement strategies that focus on foundational areas like leadership and professional development as well as strategies that focus on the "points of impact" in early care and education settings. The successful implementation of the strategies promotes positive school readiness outcomes.

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[3]Maryland's family engagement goals and their description have been adapted from the federal *Head Start Parent, Family and Community Engagement Framework* and publications developed by the National Center for Parent, Family and Community Engagement as part of its *Research to Practice* series.

[4]See, for example, Chazan-Cohen, R., Raikes, H., Brooks-Gunn, J., Ayoub, C., Pan, B. A., Kisker, E. E., … Fuligni, A. S. (2009). Low-income children's school readiness: Parent contributions over the first five years. Early Education & Development, 20(6), 958–977.

2. Promote positive parent-child relationships

The relationship between a parent and child is the foundation for early learning. Positive parent-child relationships support emotional well-being,[5] coping and problem-solving abilities, and a child's future capacity for relationships.[6] Through positive parent-child interactions, children learn skills to succeed in different environments, manage their emotions and behaviors, establish healthy relationships with adults and peers, adjust to new situations, and resolve conflicts.[7] As such, Maryland's family engagement initiatives must support families in developing positive, nurturing relationships with their children.

3. Support parents as lifelong educators of their children

Through engaging in learning activities with their parents, children develop social competence, motivation, persistence, and an overall love of learning.[8] Accordingly, Maryland's family engagement initiatives must work to support and empower families in the role of their children's first teacher.

4. Support educational aspirations of the family

Formal education and training can help families find and keep regular employment, and contributes to financial stability. Staying in school is especially important for young parents. Teen mothers who stay in school, for example, are more likely to provide safe, nurturing, and healthy environments for their children.[9] To that end, Maryland family engagement initiatives must support parents and families in advancing career skills through education and training.

5. Support families through the transitions of early childhood

Parent participation in the transition from one early childhood setting to another supports children's self-confidence, liking of school, and overall happiness in the new setting.[10,11] Accordingly, Maryland's family engagement activities must help children and their families learn about new settings, build relationships, and support the continuity in curriculum and assessments across the birth-to-five continuum of early childhood settings.

6. Connect families to peers and their community

Many families rely on social networks, community institutions, and informal relationships with neighbors to support their children's education and healthy development. Families often keep these relationships when their children transition to kindergarten, and continue to rely on them as they grow older. As such, Maryland family engagement initiatives must work to connect families with social service programs in their communities, as well as provide opportunities for parents to build peer relationships.

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[5]Dawson, G., & Ashman, S. B. (2000). On the origins of a vulnerability to depression: The influence of the early social environment on the development of psycho-biological systems related to risk for affective disorder. In The Effects of Adversity on Neurobehavioral Development: Minnesota Symposia on Child Psychology (Vol. 31, pp. 245-278). Mahwah, NJ: Lawrence Erlbaum and Associates.

[6]Lerner, R. M., Rothbaum, F., Boulos, S., & Castellino, D. R. (2002). Developmental systems perspective on parenting. In M. H. Bornstein (Ed.), Handbook of parenting (2nd ed.) (pp. 315-344). Mahwah, NJ: Erlbaum.

[7]Rogoff, B. (2003). The cultural nature of human development. Oxford University Press, USA.

[8]See, for example, Dunst, C. J., Bruder, M. B., Trivette, C. M., & Hamby, D. W. (2006). Everyday activity settings, natural learning environments, and early intervention practices. Journal of Policy and Practice in Intellectual Disabilities, 3(1), 3-10.

[9]Sullivan, K., Clark, J., Castrucci, B., Samsel, R., Fonseca, V., & Garcia, I. (2011). Continuing education mitigates the negative consequences of adolescent childbearing. Maternal & Child Health Journal, 15(3), 360-366.

[10]Hubbell, R., Plantz, M., Condelli, L., & Barrett, B. (1987). The transition of Head Start Children into public school: Final report. Washington, D.C.: Administration for Children, Youth, and Families.

[11]Ahtola, A., Silinskas, G., Poikonen, P., Kontoniemi, M., Niemi, P., & Nurmi, J. (2011). Transition to formal schooling: Do transition practices matter for academic performance? Early Childhood Research Quarterly, 26, 295–302.

7. Support the development of parents as educational leaders and child advocates

Families must be advocates for their children's early childhood development. When family members lead efforts to influence the programs, policies, and practices that shape their children's lives, it supports better family and child outcomes. Accordingly, Maryland's family engagement initiatives must support parents and families in becoming child advocates and educational leaders.

These seven, related goals drive early childhood family engagement initiatives in Maryland. Accordingly, the communications and technology plan must align with these goals and work to support them.

Barriers to Family Engagement Goals

While the goals of Maryland's early childhood family engagement framework are clear and backed by the latest research, early childhood programs often struggle with meeting them. Parents and providers alike face multiple barriers that make family engagement difficult, and the communication and technology plan must take these barriers into account. A recent study by the Rand Corporation articulated six barriers to family engagement and how technology and better communication can work to overcome them.[12] These barriers are:

- **Parent and provider schedules:** Parents and early care and education providers lead busy lives. Low-income parents work long hours, often with inflexible schedules outside of the traditional 9-to-5 work day. In Maryland, 72 percent of children with families under 6 years old have all available parents in the labor force.[13] Providers are also busy and under-resourced, making it difficult for them to implement initiatives that support family engagement. These time constraints limit the communication between parents and early care and education providers to "infrequent, formal conferences" instead of on-going, relationship-based communication that is at the heart of true family engagement.

- **Language barriers:** Maryland has a growing immigrant population and over 17 percent of children in Maryland speak a language other than English at home.[14] As is true in all states, language barriers can impede the communication between early care and education providers and their families.

- **Poor channels of communication:** In many cases, the extent of the communication between early childhood programs and parents involves hanging a sign on a door or placing communication documents in a child's backpack. These methods are clearly "suboptimal" forms of communication that do not facilitate successful two-way communication, and that do not support Maryland's family engagement goals.

- **Program/Provider-centered approaches:** Unfortunately, it is true that some early childhood providers do not consider the needs of families in their programming and do not prioritize two-way communication with families.

- **Parent attitudes toward family engagement:** Parents also have different perspectives on the role they should play in their children's education and different feelings about their efficacy as teachers. Some may fear or be intimidated by school-based settings, while other parents see early childhood providers playing the major role in educating their children.

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[12]L.Daugherty, R.Dossani, E. Johnson, and C. Wright. *Families: Powered On*. Santa Monica, Calif.: RAND Corporation. RR-673/5-PNC (2014). www.rand.org/pubs/research_reports/RR673z5.html

[13]Population Reference Bureau, analysis of data from the U.S. Census Bureau, 2008 - 2014 American Community Survey.Derived from American Fact Finder table B23008 (factfinder2.census.gov/).

[14]Population Reference Bureau, Analysis of data from the U.S. Census Bureau, Census 2000 Supplementary Survey, 2001 Supplementary Survey, 2002 through 2013 American Community Survey.

- **Lack of information:** Largely the result of suboptimal communication and program/provider-centered approaches, many providers simply do not supply information that supports parent engagement. Without information, parents have no foundation to build a relationship with teachers or support learning at home.

Given these barriers to family engagement, Maryland's communication and technology infrastructure must provide information that works to overcome barriers in an effort to meet the state's family engagement goals.

Preferred Methods of Communication Among Young Parents

The average age of a Maryland mother at the time of the birth of her first child is 26.1 years old.[15] This means that a large majority of Maryland parents with young children were born in during the 1990s. This generation of parents has its own style of parenting and preferred methods of communication that differ from other generations. The communications and technology plan must take into account the preferred communication methods of Maryland's parents.

National statistics[16] on today's millennial parents indicate that they rely heavily on information accessed through technology, including:

- Parenting websites,

- "Mom blogs",

- Social media, and

- Parenting apps.

While a millennial's own parents are a key source of parenting information, this generation of parents is significantly more likely to get information from parenting websites, social media, mom blogs, and parenting apps than they are from their health care provider. A fundamental issue with gathering information in this way is that it is difficult to find trusted, vetted sources of information and distinguish between those sources of information and sources that are less credible. Internet-based information vehicles are "noisy," providing volumes of both accurate and inaccurate information without a guiding framework. This reality makes it difficult for parents to make informed decision about parenting and is an issue that needs to be addressed in a family engagement communication and technology plan.

Maryland's Current Use of Technology for Family Engagement

Currently, Maryland utilizes many common forms of communication to provide information to families and early care and education providers. These forms of communication include:

- **"Partners" newsletter:** This is a quarterly newsletter mailed out to early care and education providers in Maryland that can also be found on the Maryland Department of Education (MSDE) website. The newsletter contains both general information about early care and education in Maryland and specific information related to new requirements, resources, and upcoming events. The quarterly publication schedule of the newsletter limits its utility in providing timely information to providers.

- **MSDE Early Childhood Development website:** MSDE has a number of pages on its website dedicated to early childhood development. The early childhood development landing page includes three main tabs: families, child care pro-

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[15]Mathews TJ, Hamilton BE. *Delayed childbearing: More women are having their first child later in life*. NCHS data brief, no 21. Hyattsville, MD: National Center for Health Statistics. 2009.

[16]See, for example, "Most commonly used sources for parenting-related information according to Millennial mothers in the United States as of December 2014" http://www.statista.com/statistics/456916/us-millennial-mom-weekly-parenting-information-resources/

viders, and "Pre-K-Grade 2." It also includes news and announcements and featured topics. The website is not family engagement focused with the "Families" tab dedicated to information on choosing the best provider options and not the goals of the Maryland Family Engagement Framework. The website is a valuable source of information but it is difficult to find and access through the broader MSDE website and does not contain easily accessible information aligned to the Framework.

- **MSDE Early Childhood blog:** MSDE also publishes a monthly "Foundations of Early Learning" blog containing important information to support parenting. It is focused on key issues of early childhood development and the topics align with the goals of the Maryland Family Engagement Framework. However, it is difficult to find on the MSDE website and the information provided, while helpful, is infrequent and only captures a fraction of the important information available to support families. It is also unclear the extent to which it is accessed by Maryland early care and education providers and families.

- **Maryland EXCELS website:** EXCELS is Maryland's Tiered Quality Rating and Improvement System website. It is well-designed and contains information on thousands of Maryland's early care and education providers. EXCELS is an essential component for improving the quality of child care in Maryland and is an important resource for families in choosing high-quality early care and education. It aligns with the goals of Maryland's family engagement framework in that it provides information about child care subsidies (aligning with the goal of promoting family well-being), helps with a parent's choice of high-quality care, and contains quality standards that focus on the number of opportunities families are given to engage within an early care and education program.

- **Facebook and Twitter:** MSDE also has a Facebook page and Twitter feed that provide agency news and information about agency-sponsored events, activities, and publications. The Facebook and Twitter outlets provide a wide range of information that is not specific to early childhood education and only infrequently relates information that supports the family engagement goals outlined in the Maryland Early Childhood Family Engagement Framework.

Clearly, the communication mechanisms that push information out from MSDE to Maryland stakeholders are not intended or designed to provide targeted, on-going information to parents to foster the positive development and well-being of their children. Although the newsletter, blog, and EXCELS website provide valuable information to families, more can be done to coordinate, enhance, and supplement these communication vehicles to better support the family engagement goals contained within the Maryland Early Childhood Family Engagement Framework.

Recommendations

In examining the current communication methods in Maryland, the preferred methods of communication for millennial parents, current barriers to family engagement, and the technological innovations in the early childhood field, a number of recommendations for the state emerge. The recommendations below offer suggestions to build a stronger family engagement communication infrastructure for a state and national audience of stakeholders; enhance the family engagement capacity of early care and education providers; and support implementation of the latest technological innovations in the field of early childhood family engagement.
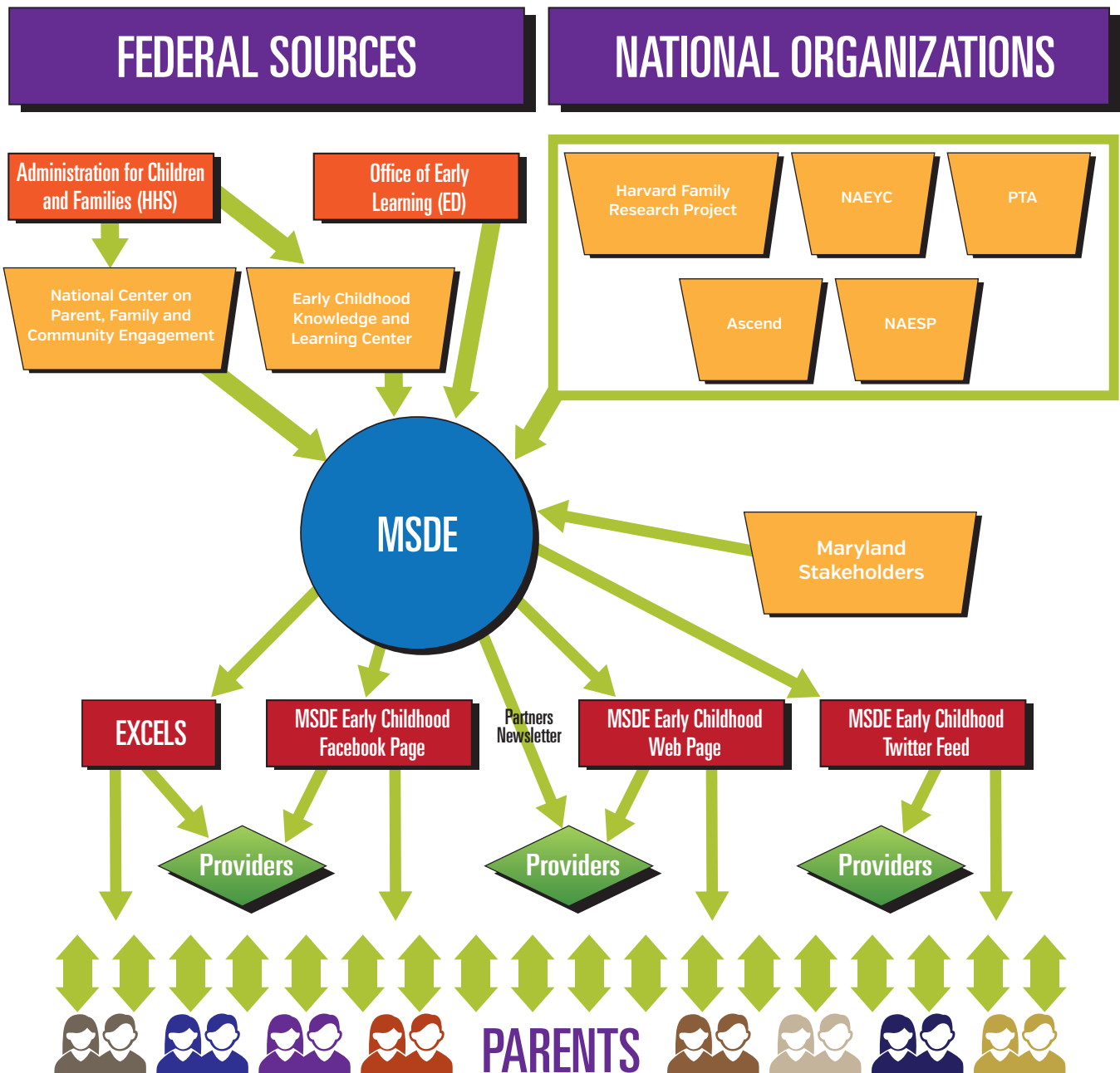
Recommendation 1: Develop a statewide family engagement communication system with MSDE as the hub

Maryland should consider developing a statewide communication infrastructure tailored to providing developmentally and culturally appropriate information on child development and learning, as well as other topics, to both parents and child care providers in the state. **Figure 2** outlines one approach for this family engagement communications infrastructure. Within this approach, MSDE acts as an information hub that accesses bests practices and information on key topics related to child development from

credible sources in the field, synthesizes the information, and disseminates it through a communication network that includes a new early childhood specific website, Facebook page, and Twitter feed. MSDE should also strongly consider translating these materials into Spanish and Chinese, two of the most common non-English language spoken in the state.[17]

Vetted information would be drawn from federal agencies focused on early childhood education, including the Office of Early Learning within the U.S. Department of Education and the Administration for Children and Families within the U.S. Department of Health and Human Services. In addition, research-based practices developed by national organizations would also be tapped.

STATEWIDE COMMUNICATION INFRASTRUCTURE FOR DISSEMINATION OF BEST PRACTICES RELATED TO EARLY CHILDHOOD FAMILY ENGAGEMENT

FEDERAL SOURCES

NATIONAL ORGANIZATIONS

Administration for Children and Families (HHS)

Office of Early Learning (ED)

Harvard Family Research Project

NAEYC

PTA

National Center on Parent, Family and Community Engagement

Early Childhood Knowledge and Learning Center

Ascend

NAESP

MSDE

Maryland Stakeholders

EXCELS

MSDE Early Childhood Facebook Page

Partners Newsletter

MSDE Early Childhood Web Page

MSDE Early Childhood Twitter Feed

Providers

Providers

Providers

PARENTS

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[17] *Language Diversity in Maryland*. Infographic prepared by the Maryland Office of Minority Health and Health Disparities using 2008-2012 American Community Survey data. Retrieved from: http://dhmh.maryland.gov/mhhd/Documents/Language-Diversity-in-Maryland-Infographic.pdf

These organizations include, but are not limited to:

- Harvard Family Research Project

- National Association for the Education of Young Children

- National Parent Teacher Association

- National Association of Elementary School Principals

- Ascend

In addition to these national sources of information, a process would be created where best practices developed by Maryland's stakeholder community could be vetted and disseminated throughout the state. At MSDE, at least one FTE would be dedicated to the gathering, synthesizing, and disseminating this information, as well as coordinating with MSDE communications team and K-12 family engagement initiatives.

In addition, as part of this process, new dissemination tools would be created that are specific to early childhood and designed to push out information that directly align with Maryland's early childhood family engagement goals. Effective communication requires information that is specifically tailored to users' needs. Currently, early childhood content is combined with other MSDE content, which makes communication "noisy," particularly on the MSDE website, Facebook page and Twitter feed. It is recommended that MSDE create a specific early childhood website, Twitter feed, and Facebook page. There are a number of examples of states creating these dissemination vehicles with Rhode Island's *Exceed* (https://exceed.ri.gov/) and Massachusetts' "Brain Building in Progress" (http://brainbuildinginprogress.org/) websites being two good examples.

Finally, Maryland should also investigate the use of texting as a means of promoting positive parent/child interactions. Research from the National Bureau of Economic Research indicates that positive results can be obtained using a parent curriculum that is delivered through text messages.[18]

Recommendation 2: Conduct additional research that is specific to the demand and use of technology among early childhood stakeholders in Maryland

Maryland-specific research was reviewed to develop the recommendations for this paper, including the *Maryland Education Technology Plan for the New Millennium (2007-2012)*. While Maryland's education technology plan and other related research have a good deal of information on improving student learning through technology, there is little focus on stakeholders in Maryland's early care and education community. Accordingly, it is important that new research on education technology in Maryland focus equally on both K-12 and the early childhood systems. Key research questions related to early childhood stakeholders could include:

1. What is the technological capacity of Maryland's early care and education providers? What standards, professional development, and resources should be put in place to support the use of technology among early care and education providers?

2. What are the preferred methods of communication among parents of young children in Maryland?

3. How much access do parents with young children have to technology and how does it differ by location, socioeconomic status, and race/ethnicity?

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[18]York, B. and Loeb, S. (November 2014). "One Step at a Time: The Effects of an Early Literacy Text Messaging Program for Parents of Preschoolers." NBER Working Paper No. 20659.

Recommendation 3: *Disseminate information and provide technical assistance on technological innovations to support stronger connections between providers and parents*

The increased attention on the importance of family engagement in early childhood and the challenges associated with implementing effective family engagement practices has spurred significant technological innovation. From technology that fosters better teacher-child interactions to parenting curricula delivered through text messages, the field of early childhood family engagement has advanced significantly in the last five years. As such, MSDE should disseminate information and provide technical assistance to support the use of these technological advances in meeting the state's family engagement goals.

Appendix A provides information on different family engagement innovations in the field and how they align to the goals of the Maryland Early Childhood Family Engagement Framework. The matrix contains information on the creator of the innovation, a short description, the cost, and which family engagement goal the innovation addresses. The matrix also includes a website address for each innovation where additional information can be obtained.

Recommendation 4: *Review, strengthen, and highlight state-level polices and guidance*

Improving Maryland's family engagement communication infrastructure will go a long way in supporting stronger family engagement practices in the state. At the same time, it will be important to also look at state-level policies to see how state standards, guidance, and messaging can all work together to promote stronger family engagement practices. Accordingly, it is our recommendation that MSDE review the Maryland EXCEL standards and early childhood educator competencies related to technology and family engagement and strengthen those that may not be closely aligned to the state's goals and better highlight and support those that are aligned.

Recommendation 5: *Create tools to lead a national learning community on state early childhood family engagement initiatives*

As a national leader in early childhood family engagement, MSDE is often contacted by federal agencies, national organizations, and others states to present on the state's approach to early childhood family engagement. While Recommendation 1 focuses on an internal state communication infrastructure, it is also important that Maryland develop an external communication infrastructure to efficiently respond to requests for information from organizations outside the state. As such, it is recommended that Maryland partner with a national organization that frequently works with other states on early childhood issues to create a national early childhood family engagement community of practice.

Appendix A:

Summary of Technology Models that Support Family Engagement in Early Childhood Settings

Model/Technology	Publisher	Costs	Description	For more information	Maryland Family Engagement Goal						
					Family Well-Being	Parent Child Relationships	Life-Long Educators	Educational Aspirations of Family	Support in Transitions	Connect to Peers and Community	Advocates and Leaders
Message from Me	CREATE Lab; Children's School of Carnegie Mellon University; and the Pittsburgh Association for the Education of Young Children	Free for parents (school or center must be registered to use Message from Me)	Young children are able to communicate with parents about daytime activities through the use of digital devices such as cameras, microphones, email, messaging services, and other technologies.	http://www.message-fromme.org		X					
ReadyRosie	Pascal Learning Inc.	Free for parents (school district must be registered to use ReadyRosie)	An early education tool that serves to improve parent engagement through the provision of video modeling and mobile technology. Videos (provided in English or Spanish) model everyday interactions in relatable settings that aim to improve parent-child interactions and promote a learning environment wherever they are.	https://readyrosie.com		X	X			X	

Model/Technology	Publisher	Costs	Description	For more information	Maryland Family Engagement Goal						
					Family Well-Being	Parent Child Relationships	Life-Long Educators	Educational Aspirations of Family	Support in Transitions	Connect to Peers and Community	Advocates and Leaders
Remind	Founded by Brett Kopf and David Kopf	Free	Messaging application that allows teachers to connect with students and parents. Teachers can send reminders for tests and assignments, use attachment features, and start chats with parents and students.	https://www.remind.com						X	
BuzzMob	Chatter, Inc.	Free	Teachers can communicate with students and parents to provide assignments, reminders, and progress reports. Chatting features allow for direct communication and platform allows for school-wide communication and engagement between administrators, teachers, parents, and students.	https://www.buzzmob.com						X	
Class Messenger	Learn Anything, Inc.	Free	Provides a messaging service for teachers and parents to share general announcements and homework reminders as well as to send parent surveys, plan parent-teacher meetings, and recruit parent volunteers.	https://www.classmessenger.com						X	

Model/Technology	Publisher	Costs	Description	For more information	Maryland Family Engagement Goal						
					Family Well-Being	Parent Child Relationships	Life-Long Educators	Educational Aspirations of Family	Support in Transitions	Connect to Peers and Community	Advocates and Leaders
Google Apps for Education	Google, Inc.	Free	Teachers can use a variety of resources to create class groups for information and assignment sharing, calendar reminders, and chatting. Students and parents can use the platform to see all classes and related assignments. Resources provided can connect students, classrooms, schools, and school districts.	https://www.google.com/edu/						X	
SignUp.com	SignUp.com	Basic service plan is free; premium plans have monthly fees	Helps to organize school activities and group meetings and find volunteers for class activities and projects.	https://signup.com/volunteerspot/index					X		
Edmodo	Edmodo	Free	Connects teachers, students, parents, and administrators. Teachers can communicate with students, parents, and colleagues as well as share assignments and send reminders.	https://www.edmodo.com					X		

Model/Technology	Publisher	Costs	Description	For more information	Maryland Family Engagement Goal						
					Family Well-Being	Parent Child Relationships	Life-Long Educators	Educational Aspirations of Family	Support in Transitions	Connect to Peers and Community	Advocates and Leaders
Cellular Phone Enhanced Planned Activities Training	SafeCare	Yes; costs associated with SafeCare training	Mothers participating in the Cellular Phone Enhanced Planned Activities Training receive 5 home visits that involve trainings focusing on positive interactions and establishing rules. These trainings are supplemented with text messages and phone calls that provide encouragement and skill reinforcement.	http://safecare.publichealth.gsu.edu http://homvee.acf.hhs.gov/Model/1/SafeCare-In-Brief/18	X	X					
Positive Parenting Program	Triple P International	Some services are free; others require registration and payment	Program is designed to prevent and treat behavioral and emotional problems in children and teenagers by providing family support and creating encouraging environments. The program builds upon social learning, developmental, and cognitive-behavioral theories to best provide parents with the skills needed to manage family problems.	http://www.triplep-parenting.net/glo-en/triple-p/	X	X					

Model/Technology	Publisher	Costs	Description	For more information	Maryland Family Engagement Goal						
					Family Well-Being	Parent Child Relationships	Life-Long Educators	Educational Aspirations of Family	Support in Transitions	Connect to Peers and Community	Advocates and Leaders
Strengthening Families Program for Preschool	Strengthening Families Program	Yes; costs associated with training	Evidence-based trainings that enhance parenting skills, children's social skills, and family life skills. The program is designed specifically for disadvantaged families. The trainings are provided to parents and children separately and together.	http://www.strengthen-ingfamiliesprogram.org	X	X			X		
Parent Training Program	The Incredible Years	Yes; costs associated with training	Evidence-based trainings that seek to strengthen parent competencies and increase parent involvement in children's school experiences. These programs cover all age groups (0-12). Programs targeting parents with younger children also teach school readiness skills and parents are encouraged to work with teachers to promote their child's success.	http://incredibleyears. com/programs/parent/		X	X		X		

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					Family Well-Being	Parent Child Relationships	Life-Long Educators	Educational Aspirations of Family	Support in Transitions	Connect to Peers and Community	Advocates and Leaders
Play and Learning Strategies (PALS)	Children's Learning Institute	Yes; costs associated with training and materials	Intervention program designed to foster the parent-child relationship while promoting early language, cognitive, and social development. The program focuses on skills for parents with infants, toddlers, and preschoolers to promote their child's school success, especially in disadvantaged families.	https://www.childrens-learninginstitute.org/programs/play-and-learning-strategies-pals/		X	X				
Promoting First Relationships	Barnard Center, University of Washington	Yes; costs associated with training	Facilitates nurturing caregiver-child bonds to foster children's social-emotional development. Real-life scenarios between the caregiver and child are videotaped and feedback is provided to strengthen caregivers' skills and provide insight on the behaviors of caregivers and their children.	http://pfrprogram.org		X					

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Attachment and Biobehavioral Catch-Up (ABC) Intervention	University of Delaware Infant Caregiver Project	Yes; costs associated with training	Provides training on how caregivers can provide nurturing care and engage in mutually beneficial interactions with their infants and toddlers (6 months to 2 years). Caregivers are taught how to interpret and react to their child's emotional and behavioral signals through the use of parent coaches, who provide feedback on interactions as they happen between the caregiver and child.	http://www.infantcaregiver-project.com		X					
Abriendo Puertas (Opening Doors)	Families in Schools	Yes; costs associated with training	First evidence-based comprehensive training program developed by and for Latino parents to teach skills needed to raise their children ages 0-5. The program utilizes school and community-based data along with culturally sensitive every-day experiences to create the 10 interactive learning sessions.	http://ap-od.org/home			X			X	X

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Every Child Reads 3-5	Iowa Department of Education	Free (all materials provided on website)	Seeks to expand the capacity of early care and education systems to enhance literacy development in children ages 3-5. Through the use of language, reading, and writing strategies, the program focuses on increasing school readiness. The module curriculum is designed for both early care and education providers and parents.	https://www.educateiowa. gov/pk-12/early-childhood/ every-child-reads-3-5			X		X		
Providence Talks Project	Providence, RI	Free (but family must be enrolled to receive service)	Early intervention program that seeks to close the "30 million word gap" that exists among children from disadvantaged homes. Coaching sessions are supplemented by data collected with a "word pedometer" that measures the number of words spoken by adults and conversational interactions the child experiences. Families are instructed on how to improve word counts and what supplemental resources exist at the community level.	http://www.providence-talks.org			X			X	

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Thirty Million Words Initiative	University of Chicago Medicine, PNC Grow Up Great, and Center for Research Informatics	Currently exists at study level only	A parent-directed program that encourages parents to use dialogue to foster their children's development. The program teaches parents how to be more attentive to what their child is trying to communicate; to talk more with their child to help build their vocabulary; and to foster back-and-forth dialogue between the parent and child.	http://thirtymillionwords.org		X	X				
PreciouStatus Software Program	PreciouStatus, LLC	Free	PreciouStatus is a mobile app that connects families to educators and care providers. Through the service, family members can receive real-time updates charting the progress of their child (Pre_K and K-12).	http://www.precioustatus.com		X	X			X	
GreatSchools.org	GreatSchools	Free (sign-up for emails of articles and worksheets available)	Provides profiles of more than 200,000 preK-12 schools along with parent, teacher, and student reviews. Website also provides articles, videos, and handouts to assist parents in supporting learning at home.	http://www.greatschools.org					X	X	

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Houghton Mifflin Harcourt	Houghton Mifflin Harcourt (HMH)	Yes	Educational publisher that provides textbooks, reading materials, instructional technology materials, assessments, and reference works for students, parents, and educators.	https://www.hmhco.com			X				
Vroom	Bezos Family Foundation	Free (all materials are available for download and the app is also free)	Offers tools, activities, and a daily app for parents to help nurture their young child's (age 0-5) mind during everyday moments.	http://www.joinvroom.org/		X	X				

Works consulted

Hernandez, M.W., Markovitz, C.E., Estrera, E., & Kelly, G. (2015). The uses of technology to support early childhood practice: Parent, family, and community engagement. Sample product and program tables. OPRE Report 2015-40. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services