Child Outcomes

The Early Childhood Center assessed 213 EEMG children (randomly selected from all EEMG programs across the state) using the Peabody Picture Vocabulary Test (PPVT), Bracken School Readiness Assessment-3 (BSRA-3), the Indiana Standards Tool for Alternate Reporting of Kindergarten Readiness (ISTAR-KR), and the Social Competence and Behavior Evaluation (SCBE). The purpose of administering these assessments was to determine the change in children's learning and school readiness skills from the beginning to the end of their EEMG enrollment. The Indiana University assessment team administered the PPVT and Bracken to measure academic skills and classroom teachers used the SCBE to report social and behavioral skills. Classroom teachers also completed the ISTAR-KR to rate children's performance in several academic and functional areas.

At the start of the EEMG program year, 20% to 39% of the children showed delays in their receptive language (PPVT) and concept development (BSRA-3). These numbers were nearly halved by the end of the program (11% and 18%), respectively. Changes in children’s developmental status were also captured in the ISTAR-KR measures. At the beginning of the program year, 46% of children were delayed in two or more English/Language Arts skill areas, 65% were delayed in two or more Mathematics skills areas, and 64% were delayed in two or more Social-Emotional skill areas. By the end of the program year, these numbers were reduced to 20%, 28%, and 42%, respectively.

According to ISTAR-KR, while children made significant gains in their social-emotional skills areas, a large percentage of children (42%) were missing skills that should have been acquired by all five year-olds. These skills typically involve important social-cognitive skills like problem solving and self-regulation. Self-regulation encompasses abilities such as finds alternate strategies/solutions, applies creativity to activities, applies rules to situations, uses strategies to manage emotions, and applies strategies to regulate input. It may be important to determine how well teachers are able to assess these skills, as well as, how well their current curricula emphasize children learning these skills.

While there was significant variation among programs and classrooms; no significant differences were found in children’s learning and school readiness between facilities that offered full versus half-day programs. Additionally, there were significant differences observed between Paths to Quality Level 3 and Level 4 programs.

The lack of significant differences could have important policy implications going forward. It is important to note that the sample of Level 3 and half-day programs was small for Year 1 of EEMG. Year 2 programs will include greater numbers of children served in Level 3 and half-day programs. This will provide another opportunity to determine if the lack of differences continues.

There were few significant relationships between our child learning and school readiness measures and our measures of classroom instruction and quality. Classrooms that scored higher in the Emotional Support domain of the CLASS yielded higher scores on the English/Language Arts domain of the ISTAR-KR. We also found that classrooms that spent proportionally more time in teacher-structured activities showed higher gains in this same measure. In addition, classrooms that scored higher in the CLASS Classroom Organization domain were significantly associated with decreases in children’s anger/behavior as measured by the Anger subscale of the SCBE-30; however, classrooms that scored higher on the CLASS Emotional Support domain were associated with increases in children’s anger as measured by the same tool. While it is clear why increased instruction and classroom organization can have positive influences on children’s learning and behavior management, it is less clear why strong Emotional Support would be associated with teacher’s observations of increased anger-related behavior.
Two classroom observation measures were used for the year one EEMG evaluation: the Classroom Assessment Scoring System (CLASS) (Pianta, LaParo & Hamre, 2004) and the Timed Observation tool. Classroom observations were completed by the Early Childhood Center assessment team in 38 classrooms. These observations required three-four hours per classroom to complete and had the goal of determining what types of experiences children enrolled in EEMG programs were having throughout their day. The CLASS focuses on the interactions that characterize children’s classroom experiences. It describes three broad domains of teacher-child interactions (Emotional Support, Classroom Organization, and Instructional Support). Each of the three broad domains is made up of several dimensions. On the other hand, the Timed Observation Tool provides a picture of the activities and curriculum the children experience during the classroom day. The Timed Observations gave two pieces of information: 1. The activity the child was involved in, and 2. The curriculum focus (if any) of that activity.

EEMG teachers were found to be generally emotionally supportive of the children in their care (average score was 5.64 out of 7 on the CLASS). This score shows that teachers had positive classroom climates with a presence of warm, respectful connections; an absence of expressed negativity; an awareness of and responsiveness to children’s needs; and an emphasis on children’s interests and growth in responsibility. Teachers also demonstrated relatively good classroom organization skills (average score of 4.97 out of 7). This means that the teachers’ skills in effectively facilitating lessons, fostering student interest and having clear learning objectives was not observed as often and received an average score of 4.07 out of 7.

EEMG teachers demonstrated the weakest skills in the Instructional Support domain. This domain measures their ability to promote deeper understanding of ideas and facilitate language growth. The average Instructional Support score was 2.32 of a possible 7. This domain does not measure whether content areas are being addressed, but rather, how they are being addressed. The lowest score in this domain was in the dimension of Concept Development. A low score indicates a lack of frequency, depth and duration in the use of instructional discussions and activities that ask children to think deeply about ideas and connect them with what they already know and to their own experiences. These experiences should include how and why questions that encourage children to utilize a higher level of thinking.

Teachers also scored low on the Quality of Feedback dimension that measures to what extent teachers are prompting thought processes by asking children to explain their thinking, using follow-up questions, offering hints and expanding/clarifying information. A low score on this domain indicates that teachers are not providing feedback to children that increases their learning and encourages their active participation. Finally, the extent to which teachers are using language in frequent conversations, open-ended questioning, and elaboration of ideas is reflected by low scores in the Language Modeling dimension. According to data from the Timed Observation tool, teachers used their planned instructional time to help children learn new ideas 90% of the time, but are only taking advantage of the teaching opportunities that exist during the rest of the day 25% of the time.

Overall, our observations found that the most frequently observed curriculum area across all settings was Language and Literacy. The least frequently observed area was Personal Care. It was not uncommon for there to be no curriculum area observed. For example, 48.9% of classroom time, on average, was spent with no teaching. EEMG classrooms appeared to organize most of their instruction to take place during teacher-led activities (whole and small group work). At other times, experiences were more child-directed and with less teacher involvement. The teacher-led instructional times had the highest observed instances of intentional teaching (activities which include clear objectives and purpose).

Given the above findings, it was surprising to find that there were few significant correlations between the classroom quality measures and the child assessment measures. Classrooms with higher CLASS scores in the Emotional Support domain tended to have larger gains on the ISTAR-KR in English/Language Arts. Teachers that reported lower instances of anger-related behaviors (on the Social Behavioral Competence Scale) had higher levels of Classroom Organization (as measured by the CLASS). Lastly, children made higher gains in their English/Language Arts skills when a higher proportion of their day was spent in activities including instruction.
All parents of children enrolled in EEMG programs completed the Family Involvement Questionnaire-short form (FIQ, Fantuzzo, et al., 2013) to measure family engagement. The FIQ is a family engagement measure that was developed with a strong theoretical foundation and in conjunction with parents of young children in Head Start (Fantuzzo, et al., 2000; Manz, et al., 2004). The FIQ has three empirically validated categories: Home-based Engagement (e.g. working on reading skills at home), School-Based Engagement (e.g. volunteering in the classroom), and Home-based Communication (e.g. attendance at family-teacher conferences). Classroom teachers completed a modified version of the FIQ to evaluate their perceptions of family engagement. The teacher measure had two categories instead of three: School-based Engagement and Home-School Communication.

On average, both families and classroom teachers reported significant increases in family engagement over the program year. This data suggests that family engagement seems to change over time and that EEMG programs found ways to engage families throughout the school year. Families and classroom teachers reported increased home-school communication and increased engagement by families in their child’s classroom. One family-reported measure, their level of engagement in children’s learning at home, did not significantly increase. Families reported very high levels of engagement at the beginning of the year, and maintained that level of home-based engagement throughout the year. School-based Engagement significantly increased throughout the school year, but was still relatively low according to both parents and teachers (1.9 out of 4 for parents and 1.6 out of 4 for teachers).

Although the increases in family engagement are positive, it is important to note that an element of social desirability bias may be present. The Home-Based Engagement subscale was most directly related to family behavior and families may have wanted to be perceived favorably by the program and the researchers.

Teachers, on average, tended to rank family engagement lower than families. There could be many possible explanations for this finding. It is possible that families tended to over-report given negative social-stigmas for disengagement. Also, teachers may not perceive family engagement accurately, since they were asked to complete the measure on all EEMG children in their classroom.

In addition to measuring family and teacher perceptions of family engagement, the Early Childhood Center also assessed what activities and efforts programs were carrying out to address family engagement. To this end, The Family Involvement Assessment (FIA) designed by Langill, et al. (2013) was used. The FIA is also currently being used in Purdue’s Paths to QUALITY evaluation study. Program directors rated a series of activities related to communicating and engaging with families based on frequency from Daily to Weekly to Monthly to Quarterly to 1-2 times/year to Never.

According to data from the FIA, EEMG programs indicated that they engaged in a number of activities to facilitate family engagement. The majority of programs reported that they held 1-2 Family-Teacher conferences over the year, disseminated a monthly newsletter, took advantage of morning drop-offs and afternoon pick-ups to have conversations with families, and offered daily contact sheets to inform families about their child’s classroom activities.

Analyses did not find strong relationships between higher levels of family engagement and children’s learning. This contradicts what other researchers have found, and we do not have an explanation for this finding. It may be that implementing evidence-based family engagement practices is relatively new for many early childhood programs. Recent efforts by the Indiana Early Learning Advisory Committee and its Family Engagement Subcommittee may assist programs in carrying out higher quality family engagement practices in the future.