



Data Direction 3: Engaging an External Research Partner to Help Use Linked Data

Van-Kim Lin, Dale Epstein, and Kelly Maxwell, *Child Trends*

This is one of a set of five “Data Directions” that present issues ECE staff may encounter if they are interested in or attempting to share or link their data with other agencies. Each Data Direction presents a hypothetical scenario, and then outlines possible action steps programs could use to address the issues raised. This third Data Direction offers ideas about how to engage an external research partner to assist with a data linking project, including steps to take before reaching out to a possible partner and ideas for locating and selecting a partner.

Mrs. Barone is the director of a dual language immersion child care center that serves children from birth to age five who are Dual Language Learners (DLLs). Approximately half of the children have a home language of Spanish and half have a home language of English. In her center, bilingual teachers teach and interact with children in both English and Spanish. Many of the children in her program will attend an elementary school located in the neighborhood. Recently, Mrs. Barone asked Mr. Wallace, the principal at the local elementary school, how children from her center were doing in kindergarten. While Principal Wallace could provide his impression of how the kindergarten students were doing as a whole, he told her that the school did not have a way to determine which children came from which child care center.

Mrs. Barone and Principal Wallace already knew each other well, which made it easy for Mrs. Barone to approach him about her interest in linking data. This isn't always the case, though. To learn more about developing data partnerships with other organizations, please see *Data Direction 4: Building a Data Sharing Partnership with Other Organizations*.

Mrs. Barone thinks that linking data¹ from her center with data from the elementary school could help her understand how well the children do in school after they leave her program. She believes that her program supports strong English language development for all children, but she would like to see if the children from her program whose home language is Spanish have similar English language skills in kindergarten as children whose home language is English. If the children are doing well, she would like to include that information in a grant application requesting additional funds to serve more children. If some children are not demonstrating strong language skills in kindergarten, she would like to work with her teachers to explore reasons why this might be happening. Principal Wallace is also interested to see the relationship between children's performance in early education and at the start of public school to help his kindergarten teachers support children's transition into kindergarten.

Both Mrs. Barone and Principal Wallace think a data sharing partnership between the child care center and the elementary school is a great idea. Mrs. Barone plans to ask parents for consent to link their children's data with data from the elementary school. She has a good relationship with families and hopes that many will agree once they understand how she will use the information.² However, Mrs. Barone and Principal Wallace recognize that carrying out the project would require extensive time and expertise that they and their staff do not have. These tasks can include identifying the specific questions of interest that Mrs. Barone would like to answer; determining what data are needed from her program and the school to answer her questions; further defining or expanding the list of research questions based on available data; linking the data; analyzing the data; and finally writing a report that explains the findings using non-technical language that can be shared with teachers, board members, and families. Mrs. Barone decides that she will need to look outside of her program to find someone to help them with this project.

Action Steps

Below are steps Mrs. Barone can take to engage an external research partner to link and use linked data to understand how children in her program are doing as they transition to elementary school. She knows an external research partner may be able to help throughout this process, with tasks such as identifying research questions and the data available to explore those questions, as well as helping to determine how to securely link and later analyze the data. The research partner can also help her and Principal Wallace ensure that they follow any data sharing policies and data security requirements that their two organizations may have. This could include consulting with the data governance entities for both the child care center and Principal Wallace's elementary school, if such groups exist.³ Although Mrs. Barone has a specific task she needs help with now, she hopes that this initial collaboration will lead to a long-term relationship with a research partner who can help her with other projects in the future.

Summary of Action Steps

1. Identify the questions to be answered.
2. Identify potential external research partners.
3. Select a research partner.
4. Work with the research partner to develop a plan.
5. Identify possible low-cost strategies to accomplish the work.

1. Identify the questions to be answered.

In order for Mrs. Barone to find an external research partner who will best meet her needs, it will be helpful to first specify her general question(s) or area of interest. These questions will help her identify the kinds of data needed and think about the kinds of expertise she should look for in an external research partner. Once identified, the research partner can also help refine the specific questions or develop new questions that might be helpful to answer. Mrs. Barone is generally

¹ In this resource, data are considered linked when information from two or more separate data systems are shared, connected, combined, or merged. These data systems or databases may be housed in the same program or in multiple programs or agencies. Linking can occur in various ways ranging from simple, (e.g., sharing a spreadsheet) to more complex (e.g., merging two databases into a single file), to very complex (e.g., fully integrating data across multiple agencies). However, all linked data have the potential to provide useful information to support ECE program improvement.

² For more information about how to discuss data use and linking with families, please see *Data Direction 2: Discussing Data with Families*, another resource in this series.

³ For more information about creating a data governance entity, see *Data Direction 1: Creating and Managing a Data Governance Entity*, another resource in this series.

interested in understanding the English language skills of children in kindergarten. She asked Principal Wallace about his questions of interest and learned that he is also interested in the English language skills of children who have a home language of Spanish, regardless of whether those children attended her dual language immersion child care or another early learning setting. The three main questions of interest are: (1) What percentage of children from her program meet the district's recommended guidelines for English language skills, based on their kindergarten entry assessment scores? (2) What are the English language skills in kindergarten for children who attended her center for two years compared to only one year? and (3) Are English language skills in kindergarten similar for children from her program whose home language is Spanish vs. English?

Based on her questions of interest, it may be helpful to find a partner who is familiar with language development and dual language learners, as well as someone who has experience analyzing child assessment or kindergarten entry assessment data.

2. Identify potential external research partners.

Mrs. Barone may find it useful to talk with colleagues in her network or share information with various organizations as a way to “get the word out” about her interest in finding an external research partner. She may also already know of colleagues in her community who serve on boards or committees with her and who have research expertise. One of these individuals may be interested in partnering with her. Below are some ideas about people or organizations that might be helpful in identifying a research partner, if she does not have someone in mind already. Some of these partners may be willing to provide free or low-cost services because of their mutual interest in the project.

Possible partners might include:

- **Community colleges or area universities:** If there is a community college or university nearby, Mrs. Barone could contact a faculty member and ask about the possibility of working with faculty or students on this project. Faculty in departments like early childhood, human development, education, psychology, or public policy may be particularly interested in this kind of work. If Mrs. Barone knows a faculty member, it might be easiest to begin the conversation with that person.
- **Research organizations:** These independent organizations are contracted to provide research services in particular areas of expertise. For example, they could provide research advice, help analyze a program's data, or design a study and collect new data. If there are research organizations in the community that focus on early childhood or education, they may have staff who are interested in working on this project. Mrs. Barone may try an online search for research organizations in her area, or for similar on-going projects in the local community that involve assessing language development of children from diverse backgrounds.
- **Local statistical consultants:** Mrs. Barone might be able to locate a statistical consultant in the area who is interested in working on this project. She could search online or ask colleagues at a local university, school, or other child care programs for recommendations for a consultant.
- **Local businesses.** Some community businesses may have staff with the expertise to link and analyze data. These businesses might be interested in working with Mrs. Barone on this as a service project at no charge. The local Chamber of Commerce may have suggestions about possible businesses to approach about this opportunity.



Mrs. Barone may also want to talk with the following individuals to identify possible research partners:

- **Other local child care program directors or school administrators:** Mrs. Barone could ask other child care center directors if they have ever partnered with an outside research organization or individual researcher to help with data-related tasks. School administrators, like Principal Wallace, may also know possible partners. These colleagues could provide the names of partners they would recommend.
- **State or Regional Head Start Collaboration Director or State Head Start Association:** The Head Start Collaboration Director or State Head Start Association office may be able to provide information about how to find external research partners to assist programs with data linking projects.
- **Technical assistance providers:** A technical assistance provider could help Mrs. Barone think through the purpose of the project, help her identify questions of interest and required work, and possibly help her find a research partner. More information on technical assistance for Head Start and child care programs is available at <http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/ohs-tta/centers.html>

3. Select a research partner.

As a next step, Mrs. Barone will want to talk with interested researchers before deciding whether to work with a specific individual or organization on this project. If her child care center has a data governance entity, Mrs. Barone should ensure that she adheres to governance policies for bringing on a third party to access and use data and ensure safeguards are in place for proper use of the data. She may invite data governance representatives, or parent/community representatives to help interview and select a research partner.⁴

Here are a few questions that Mrs. Barone and her team could ask interested research partners:

- Could you please describe any similar work you've done?
- Could you show any sample reports from similar work? (Mrs. Barone could review these to see if they are easy to understand.)
- How does your organization ensure that researchers follow best practices in protecting the participants of the research (i.e. the children and families) and ensure data security?
- What do you see as some of the promises and challenges to linking and using this linked data? How would you resolve these challenges?

After talking with the possible partners, she could also consider the following:

- Did they communicate well with Mrs. Barone and her team?
- Did they seem responsive and excited about the work?
- Do they seem to have the appropriate expertise for this project?
- Have they worked with practitioners (similar to Mrs. Barone) in the past, or only with other researchers?

4. Work with the research partner to develop a plan, including defining the data needed to answer the questions of interest.

After selecting the research partner to assist with this project, Mrs. Barone and her new partner will want to work together to develop a research plan. A research plan describes important aspects of the work such as each partner's roles and responsibilities, timelines, data to be analyzed, how the data will be linked, where it will be stored, the kind of report that will be developed, and other important aspects of the work. As part of the plan, the research partner and Mrs. Barone will likely re-visit the general topics or questions Mrs. Barone originally identified, refine these questions, and possibly identify additional questions.

⁴ For more information about creating a data governance entity, see *Data Direction 1: Creating and Managing a Data Governance Entity*, another resource in this series.

They will also work together to identify the data needed to answer the questions. Mrs. Barone and the research partner may want to develop an inventory of program data. They could begin by listing the types of data the program collects (e.g., child attendance, family demographic data). Programs often collect a lot of data about children, families, teachers, and program operations, but only some of that data will be relevant to Mrs. Barone's research questions. The inventory can include a list of the specific pieces of data needed; information about how the data were recorded, coded, or defined; and where the data are stored (e.g., an electronic file). For instance, teachers may store child assessment information on paper, with a few entering the information on their laptops. The research partner will be helpful in asking Mrs. Barone and her staff questions to gather the information needed to determine which data are needed for the project. It would also be helpful for the team to gather a list of data elements the elementary school has on the individual children that could be used to answer the questions of interest.

Based on the general questions identified in the first step, Mrs. Barone and her research partner may plan to include the following data from the child care center: child assessment data, home language for each child (e.g., English, Spanish), age, gender, and years enrolled in the program. In consultation with Principal Wallace, they may plan to include the following data from the elementary school: kindergarten entry assessment scores and third grade reading scores. This initial list will help everyone, including the research partner, better understand the data that are available to answer the questions of interest.

5. Identify possible low-cost strategies for accomplishing the work.

Most child care programs have limited budgets that typically do not include funds to support a project like this. Some of the possible research partners listed in step 2 may be able to help for no or low cost. If funds are needed for the work, two possible strategies are listed below.

- **Combine funds from the center and school.** If Mrs. Barone and Principal Wallace are mutually interested in this project and can find a little money in each of their budgets, they may have enough funds to support the work.
- **Seek grant funding.** Mrs. Barone could look for a small grant to support the project that she could apply for. Possible funders might include local businesses, private foundations, or state child care organizations. The individuals and organizations listed in the previous action step may also have ideas about possible sources of funding.
- **Offer the project as a way to support a class project, thesis, or dissertation.** If Mrs. Barone has decided that she is interested in working with a local university or community college to complete her data linking project, she could talk with faculty about the possibility of completing the work as part of a class project. Alternatively, graduate students might be interested in doing the project for a Master's thesis or Doctoral dissertation. These options would likely be no cost or very low cost strategies for accomplishing the work.



Summary

Research partners can help ECE program leaders use administrative data to answer questions that are important to them. While some partnerships between researchers and ECE programs may be time-limited for a particular project, other partnerships may continue over time to address new questions or further utilize the program's data to support continuous quality improvement. The action steps in this resource provide suggestions for identifying possible research partners, questions to consider when choosing to work with a particular researcher, and initial steps in identifying the questions and the data needed to address the questions.

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