# Methodology

The methodology of the SLIDE interviews—the questions and answers and their analysis—was rooted in evolutionary organizational theory. Developing the purposive sample for this qualitative research effort was a challenging, multi-stage effort; but, one that yielded a substantial number of interviews, particularly considering that much of the work involved in recruiting and conducting interviews occurred in the midst of the COVID-19 pandemic. The coding and analysis of the completed interviews was dictated by a comprehensive analysis plan whose key steps are reported herein.

## Theoretical Perspective: Evolutionary Organizational Theory

This descriptive study assessed the status of school librarian employment and explored the decision-making processes that lead to increased or decreased librarian full-time equivalents (FTEs)[1], and, in some cases, hiring of related positions. The four processes of evolutionary organization theory (Evolutionary organization theory, 2013)—variation, selection, retention, and competition—were utilized to explain how school librarianship is changing and evolving. Variation results from decision-makers seeking different skill sets they believe will better meet needs of their schools. Selection happens when school leaders choose from known or created alternatives. Retention occurs when decision-makers become committed to chosen alternatives that meet expectations and produce results. Competition enters the process when scarce resources motivate school leaders to favor one staffing model over another, deciding that the advantages, disadvantages, or tradeoffs associated with their decision options favor either adding, restoring, or retaining school librarians or reducing, eliminating, combining, or reclassifying those positions in favor of other positions.

## Research Questions

The SLIDE study's interview phase addressed two of the project's four research questions and three of the four processes of evolutionary organization theory.

- What factors affected how school decision-makers chose to staff library/information resources? (Selection and Retention)
- What advantages or disadvantages did decision-makers perceive in their chosen models for staffing library/information resources compared to other alternatives they considered? (Competition)

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[1] "Full-time Equivalency (FTE): The amount of time required to perform an assignment stated as a proportion of a full-time position and computed by dividing the amount of time employed by the time normally required for a full-time position" (NCES, n.d.). For example, one individual working 38 hours per week (i.e., full-time) and another working 15 hours per week (i.e., part-time) equals 53 hours divided by 38 for 1.39 FTEs.

## Selection, Recruitment, and Scheduling of Interviews

Initially, the project leaders hoped to recruit 100 school leaders who made staffing decisions concerning school librarian positions sometime since the 2015-16 school year. Decision-makers at either the school or district levels were sought and categorized into three groups—schools or districts that gained librarians, lost some librarians, and eliminated or lost all librarians. This strategy employed purposeful or purposive sampling in which interviewees were selected "on purpose" due to the decisions they made that were needed in our sampling. Notably, random sampling was rejected, because there were too many uncontrollable, self-selection biases involved to achieve randomness. Randomness was also unnecessary, because the project did not aim to characterize the total extent of variation in staffing models for library and information resources; but, rather, to identify variations among districts that have reported changes in librarian FTE gains and losses since 2015-16. Districts with little or no change in librarian staffing—including those where there have been no librarians for years—were excluded as being less likely to contribute to answering the interview questions. To maximize representativeness to meet the 100-interviews target, snowball sampling based on the same criteria was used.

Prior to recruiting potential interviewees, the SLIDE project director completed Antioch's Institutional Review Board (IRB) application and the project was awarded exempt status. As an exempt study, the project assured the voluntary participation of interviewees and guaranteed them complete anonymity. Interviewees were assured that the fact of their being interviewed and their responses to interview questions would be confidential: no identifying information about them or their school districts would be revealed in the SLIDE report, unless their permission was sought. All interviewees were made aware of the purpose of the project, the research questions, the project leaders, the role of Antioch University Seattle, the federal funding source, and how results of the interview would be used and published.

To identify districts that gained, lost some, or lost all librarians, NCES data from 2015-16 to 2018-19 (the most recent data available at the time) were examined. A spreadsheet of identified districts in these three categories by state was created and shared with the 51 "state intermediaries" (50 states plus District of Columbia) as confirmed in the original grant proposal. Each of these intermediaries was a contact person who served either in state government advising on school library programs or a school librarian leader in a state library organization. These state intermediaries were instrumental in identifying and contacting prospective interviewees via their state networks. Additionally, project leaders and the SLIDE Advisory Council also recruited via email and social media in their networks and among known school library leaders across the U.S. Since NCES data were only available at the time through 2018-2019, school leaders from districts not identified via that data, but which experienced more recent changes of the types under study, were accepted as interviewees.

School leaders willing to be interviewed completed an interviewee recruitment form. (See Appendix A.) A SLIDE project staff person vetted these prospective interviewees to confirm that they were involved enough in decision-making to be able to address the interview questions. While 81 prospective interviewees were recruited initially—

close to the hoped-for 100 interviewees—several were excluded, as they only advised about staffing decisions; they did not have any decision-making authority. In most cases, staffing decisions were not made by a single individual, but by a district leadership team or ad hoc group of leaders. Thus, every effort was made to ensure that the scheduled interviewee would be able to address the interview questions. The recruitment process began in August 2021 and ended in September 2022.

Unfortunately, just as interview scheduling began, the COVID-19 pandemic dramatically disrupted K-12 public education. Consequently, many of the original interview recruits withdrew, and some did not respond to three follow-up contacts. Interviews began in November 2021 and concluded in October 2022, resulting in 49 completed and usable interviews. Three other interviews were attempted, but discarded as incomplete and unusable, due to the interviewees failing to answer key questions required for the analysis.

Four interviewers were contracted and trained via several online sessions designed to ensure consistency in asking and recording responses to the survey questions. Each interviewer conducted a practice interview, and the interviewer team reviewed and critiqued these together. For each interview, there was a transcript of the Zoom session as well as an interview report form completed by the interviewer. (See Appendix B.)

Throughout this process, the eight education and library leaders comprising the Advisory Council reviewed and made suggestions, enabling the project to recruit appropriate interviewees and assisting in the development of the interview questions. (Advisory Council members are acknowledged by name at the beginning of this report.)

## Interview Questions

With the recruitment phase underway, interview questions included in the grant proposal were reviewed, expanded, and refined. The project director and principal investigator, Advisory Council members, and the interviewer team developed the final versions of the interview questions during a series of meetings devoted to an iterative process.

The following open-ended questions were asked in the course of each interview of a school leader who had made, or participated substantially in, a decision that changed a district's or school's staffing levels for school librarians.

1. Does your district or school provide formal or informal instruction on topics such as information literacy, educational technology, use of the school library, digital citizenship, or the like? This might be a stand-alone curriculum or integrated into a broader curriculum.
2. Which staff positions instruct students on those topics? For example, librarian, ed tech specialist, STEM coach, computer or makerspace teacher.
3. You were recruited as an interviewee because your district or school changed its staffing in these areas sometime since 2015-16, perhaps very recently. Over the last five years how did your staffing change? For example, did you add, reduce, eliminate, or combine positions?
4. What others were part of the staffing decisions that were made?

5. Beyond budget, what factors motivated the staffing change? For example, changes in personnel, policy, priorities, organizational restructuring, or legislation or regulations.

6. What were the trade-offs (advantages and disadvantages) that had to be accepted when making this decision?

7. Which of the factors you identified in your response to question 5 were most important when finalizing the staffing change?

8. Which single one of the factors you identified in your response to question 5 was the highest priority when finalizing the staffing change?[2]

9. How have your previous interactions (positive and/or negative) with school librarians, media specialists, and/or ed tech staff influenced your perception of the importance or value of this staff to the student learning experience?

## Reflexive Thematic Analysis

Interviews of school leaders were analyzed via reflexive thematic analysis (RTA). RTA is a theoretically-flexible approach to qualitative analysis that is compatible with evolutionary organization theory. It permits analysis of qualitative data answering questions about people's experiences, views and perceptions, and representations of a given phenomenon—in this case, their own decision-making processes (Brule, 2020). RTA was employed to identify patterns of meaning across the interviews that help to answer the research questions. These patterns were identified by reviewing videos and transcripts, coding patterns that recur across the interview dataset, and developing themes that summarize those patterns.

## Deductive Latent Coding Orientation

The coding of patterns discerned through RTA may be primarily inductive or deductive and primarily semantic or latent. We conducted deductive latent coding of our interview data. Deductive coding was driven by the study's theoretical framework, research questions, and the knowledge of the researchers about K-12 education and school librarian staffing. (Inductive coding is used for more exploratory studies in which the end result is theory development.)  Also, the coding was latent, as it focused conceptually on the interviewees' experiences, perceptions, expectations, and priorities. (Semantic coding is used when one is conducting a word-for-word analysis of qualitative data, and that was not the purpose of this study.)  Dedoose, a web-based application designed to facilitate qualitative analysis was utilized to code interview responses and to analyze patterns in those responses.

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[2] Limited answers received to questions 7 and 8 were not included in the analysis. Responses could be elicited from fewer than half of interviewees in both the positive and negative decision groups, and responses to question 8, asking for a single determining factor, sometimes included multiple factors. Ultimately, it was decided that analyzing co-occurrences of factors identified in question 5 was more revelatory about the often-complex motivations for decisions than these two questions.

## Coding Process

For each of the major interview questions, initial coding was done by the interviewers using the interview report form. (See Appendix B.) The report form was developed by the project leaders and the interviewers and reviewed by the Advisory Council. Since these project leaders well understood the K-12 school environment and hiring practices of schools, they identified potential responses for the interview questions which were then developed into codes. These codes were loaded into Dedoose with some subsidiary codes ("child codes") added as needed. Descriptions for some codes were added in Dedoose to ensure consistency of use. For example, "stand-alone instruction" referred to instruction of information literacy, critical thinking, media literacy, or digital literacy. "Change in priorities" referred to a change in district or school goals whether or not it was associated with a change in administration or other codes regarding specific priorities associated with library programs. As the need for additional codes arose, additions to, and refinements of, the coding scheme—both on an iterative basis and after all interviews were completed—were made by the research team (i.e., by the principal investigator, other RSL researchers, and a volunteer). The project director and principal investigator reviewed all coding changes, and interacted with other research team members and interviewers as needed to ensure coding reliability and validity.

## Formal/Informal Instruction Provided

Answers to the question about formal or informal instruction provided were coded as one or more of the following.

- Information literacy
- Educational technology
- Use of school library
- Digital citizenship
- Other (recodes included: makerspace, media literacy, social/emotional learning, and STEM)

## Staff Providing Instruction

Answers to the question about who provides the above instruction were coded as one or more of the following.

- School librarian / teacher librarian / library media specialist
- Educational technology professional (whether teacher, coordinator, consultant, coach, etc.)
- School librarian / educational technology (combined position)
- Specific other specialist teacher (reading, social studies, STEM, etc.)
- All teachers
- Paraprofessionals
- Other

## Nature of Librarian Staffing Changes

Answers to the question about how the school or district's librarian staffing changed were coded as one or more of the following.

- Added positions or hours (e.g., part-time to full-time)

- Restored positions or hours (i.e., additions that re-established a pre-existing status quo)

- Reduced positions or hours (e.g., full-time to part-time)

- Eliminated all positions supporting a library program

- Combined positions or split assignments (e.g., librarian and educational technology staff)

- Reclassified positions (e.g., library aide to librarian or vice versa, librarian or educational technology staff to classroom teacher)

- Changed job title (which may have affected how the hours were reported to NCES)

- Other

## Other Positions Involved in Staffing Decisions

Answers to the question about who else played a part in staffing decisions were coded as one or more of the following.

- District superintendent

- School principal

- Other district official

- School board member(s)

- Other school official

- Parents / community

- Other school staff

- School librarian

- Human resources

## Decision-Making Factors

A variety of factors were identified by interviewees as influential in their decision-making about library and information resources staffing changes. Factors identified by interviewees who reported adding or restoring librarians were coded as one or more of the following:

- Addressing special student needs

- Change in administration

- Change in priorities

- Collaboration with teachers

- Equity of student access to library staff

- Grant/funding requirements

- New funding

- Opened a new building or increased enrollment

- Planning time for teachers

- Social/emotional learning
- Stand-alone instruction by librarians
- Standards-based test preparation/scores
- State government mandate
- Strategic plan

Factors identified by interviewees who reported reducing, eliminating, combining, or reclassifying librarians were coded as one or more of the following:

- Budget constraints
- Change in administration
- Change in priorities
- Closed a building or decreased enrollment
- Difficulty finding qualified candidates
- Hired other specialists/coaches
- Needed incumbent in another position
- Needed more teachers in classrooms
- Position deemed obsolete
- Retirements/resignations
- Strategic plan

## Types of Factors

An evolving two-tier coding scheme was applied to understand the factors that motivated decisions to make staffing changes.

Interviewee responses about factors motivating staffing decisions were coded using two sets of initial codes, one for gains and another for losses of librarians. (See Tables 1 and 2.)

Factors identified as motivators of staffing decisions were assigned to three categories: structural, pragmatic, and strategic. The development of these three categories was based on the evolutionary organization theoretical perspective, existing knowledge about decisions impacting school librarian employment, and the initial review of interviews.

**Structural factors** are ones that drive decisions automatically, such as state mandates, opening and closing of school buildings, and formulas and guidelines, sometimes enshrined in legal rules and regulations. "Pipeline" issues—whether or not and where school librarians are available to schools or districts—may also drive structural decisions. A school leader in a rural area, for example, might wish to hire a school librarian, but be unable to find qualified individuals to consider for the position. So, as a result, another position is filled instead. Conversely, a school leader in an urban area—perhaps one near a library school that trains school librarians—might choose to hire

more librarians partly because they are available. Structural factors may explain the presence or absence of school librarians as well as their increasing or decreasing presence.

**Pragmatic factors** are ones that motivate school leaders to address practical, often logistical issues that demand some kind of resolution in order for a school or district to function efficiently. "Coverage" is the umbrella term often used by decision-makers to explain such decisions. For example, a frequently reported pragmatic decision is moving a librarian with teaching qualifications from managing the library program to teaching in a classroom. This sort of decision might eliminate a librarian job altogether or change it from full-time to part-time. No external policy or structural factor is mandating such a specific reassignment, and it is not being made to meet some specific strategic goal. It is simply a matter of ensuring that there is a qualified teacher in every classroom. The COVID-19 pandemic also presented many decision-makers with urgent needs to re-assign staff. Pragmatic considerations could drive decisions that increase, reduce, eliminate, or otherwise change librarian employment; although, most such factors explained reduction or elimination of librarian positions.

**Strategic factors** are ones at the discretion of school leaders, but driven less by practical concerns than by their anticipated and perceived contributions to specific ends the decision-maker wishes to achieve. A common example of such a decision is when librarian jobs are cut because the decision-maker prioritizes hiring reading, writing, or math coaches to help raise students' scores on state tests. Conversely, a decision-maker might decide to hire more librarians if they perceive that librarians make a substantial contribution to higher scores on reading or writing tests by promoting inquiry-based learning and teaching information literacy skills. Like structural decisions, strategic ones can result in gains, cutbacks, or elimination of school librarians.

Structural, pragmatic, and strategic factors involved in decisions to add or restore librarians are listed in rank order in Table 1.

**Table 1. Factors in Decisions to Add or Restore Librarians by Type in Rank Order**

| Structural Factors | Pragmatic Factors | Strategic Factors |
|---|---|---|
| New funding (8) | Planning time for teachers (7) | Change in priorities (13) |
| Opened a new building/enrollment increase (7) | | Direct/stand-alone instruction (11) |
| State government mandate (4) | | Equity of student access to staff (10) |
| Grant/funding requirements (2) | | Change in administration (9) |
| | | Collaboration with teachers (7) |
| | | Standards-based testing (4) |
| | | Special student needs (3) |
| | | Social/emotional learning (2) |
| | | Strategic plan (2) |

Decision-making factors in decisions to reduce, eliminate, combine, or reclassify librarians are listed in rank order in Table 2.

**Table 2. Factors in Decisions to Reduce, Eliminate, Combine or Reclassify Librarians by Type in Rank Order**

| Structural Factors | Pragmatic Factors | Strategic Factors |
|---|---|---|
| Budget constraints (17) | Needed incumbent in another position (6) | Change in priorities (12) |
| Closed a building/enrollment decrease (6) | Needed more teachers in classrooms (5) | Hired other specialists/coaches (7) |
| Pipeline issues finding qualified candidates (4) | | Position deemed obsolete (6) |
| Retirements/resignations (2) | | Change in administration (4) |
| | | Strategic plan (2) |

In reality, decisions were rarely made exclusively on the basis of structural, pragmatic, or strategic factors. More often, multiple types of factors were involved in most decisions about school librarian employment.

## Advantages, Disadvantages & Tradeoffs

To ascertain the relative costs and benefits of their decisions about school librarian employment, interviewees were asked about the perceived advantages, disadvantages, and tradeoffs they weighed in their decisions. In some cases, advantages were perceived in win-win terms and disadvantages in lose-lose terms. Increasing the presence of librarians enabled them to do more for students and teachers; decreasing their presence meant they had to do less for those constituencies. In other cases, tradeoffs were perceived in win-lose terms or lose-win terms. If librarians gained, other positions were cut; if librarians were cut, other positions gained.

Answers to this question were coded as one or more of the following, depending on whether their decision was positive or negative in its impact on librarian employment and positive or negative in its other consequences:

- Added or restored librarian / other staff cut, not filled
- Added or restored librarian / other-than-staff loss
- Reduced, eliminated, combined, or reclassified librarian /other staff added or increased
- Reduced, eliminated, combined, or reclassified librarian/other-than-staff gain
- Increased or decreased specific types of staff activity, specifically: stand-alone instruction by librarian, collaboration between librarian and teachers, and teacher support by librarian
- Increased or decreased the utility of the library space
- Other

## Interviewee's Interactions with Librarians

Answers to the question about the interviewee's interactions with librarians[3] were coded as one or more of the following.

- Worked with librarian as classroom teacher
- Worked with librarian as district or school administrator
- Supervised librarians
- Librarian supported my or my teachers' design and/or delivery of instruction
- Collaborated with me or my teachers on design and/or delivery of instruction
- Received in-service from librarian
- Personally related to or influenced by someone in these fields
- Other

To reiterate, the coding system grew and was refined on an iterative basis as interviews were completed. As the number of completed interviews increased, other codes, other than those anticipated or identified previously (e.g., prioritizing test preparation), were added to make these lists more comprehensive. Initial coding by the interviewers using the interview reporting form was reviewed by at least one other member of the research team. When needed, adjustments to coding were made in consultation with the interviewer and/or other members of the research team.

## Theme Development

The development of the themes derivable from the decision-maker interviews involved analyzing their coding from multiple perspectives:

- Whether the district or school made positive or negative staffing decisions about librarians;
- Patterns in the co-occurrences of structural, pragmatic, and strategic decision factors; and
- The research questions (selection, retention, competition).

The themes were developed on an iterative basis as interviews were completed, and reviewed once all interviews were completed.

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[3] While this interview question included educational technology staff, almost all of the responses concerned librarians or ones whose positions also included responsibility for educational technology.