Methods for collecting attendance data in out-of-school-time programs depend on program goals, characteristics, and design.

Present and accounted for:
Measuring attendance in out-of-school-time programs

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Evidence that youth programs have real benefits has prompted efforts to get young people in the door of out-of-school-time (OST) programs.\(^1\) Once youth are enrolled, attendance plays a key role in the participation equation. Children and youth will not benefit unless they attend programs regularly, and evidence is emerging that those who attend more frequently and for longer periods of time benefit more than their peers whose attendance is more sporadic.\(^2\) As researchers and evaluators begin to tackle such questions as, “Why do youth benefit from programs?” and “How much does participation matter?” attendance data are the key to linking program participation with youth outcomes. Program leaders also need attendance data for program planning and to demonstrate to funders, government agencies, and other stakeholders that they are serving their targeted numbers and populations of youth well.

OST programs vary widely in the amount and frequency of services they offer, and young people vary in how often they take
advantage of these services. Some OST programs require daily attendance, while others operate on a voluntary drop-in basis. As a result, simply checking a box for “present” or “absent” does not provide enough information to link attendance to outcomes. Researchers and program personnel should also ask: How often do children attend, for how many hours per week, and for how many years? Techniques for measuring attendance and for answering these questions should be driven by the goals and needs of individual programs; there is no one method for measuring attendance that fulfills all purposes at all times.³

Why should programs measure attendance?

Attendance data in OST programs can be used for the following purposes:⁴

- To gauge demand for services (in general and for specific activities). Attendance data are a quick indicator of how attractive a program is to children and parents. If staff plan a special activity and attendance does not go up, chances are the activity did not work well. Directors also can use attendance data to identify services and staffing patterns that cause an increase or drop-off in participation. At many after-school programs, programming changes weekly. Directors can compare attendance rates on days when students work on academic activities with days when they take field trips to ascertain which schedule students prefer.

- To support program-level planning and management. Attendance data can help managers determine how many staff to hire, how much space to obtain, and how many supplies to order. The data also can reveal programming needs across age groups. For example, if the program serves grades K–8 but attendance data show that half the participants on a typical day are in grades 3 or 5, then it makes sense to concentrate resources on those grades.

- To facilitate case management. Some OST programs link participants with other services they may need, such as medical or
mental health assessment and care. For example, the after-school drop-in center operated by the P. F. Breeee Foundation in East Hollywood, Los Angeles, uses magnetically encoded swipe cards to track every activity a participant engages in each day. When administrators examine the attendance data, they also consider data on participants' school activities, hobbies, career goals, medical needs, and other factors. If a youth is not making progress, administrators can see whether factors other than inconsistent attendance are involved. Staff can then target interventions to specific youth.

- To support student rewards, incentives, and sanctions. Some OST programs offer financial incentives for participants or provide stipends for work performed in the program and in internships. Attendance data can track these activities for payment purposes. After School Matters, which operates after-school programs at thirty-five sites in Chicago, offers apprenticeship programs in the arts, technology, communication, and sports (for which students are paid a stipend) and drop-in clubs (which do not carry a stipend). Teachers at the sites enter attendance data into an on-line database, and school clerks use the information to generate students' paychecks.

- For staff self-reflection, training, and education. The After-School Corporation (TASC) sponsors 242 after-school projects, primarily in New York City, that serve students in grades K–12. Staff examine weekly attendance reports for each site to see if the site is achieving its standard. If it is not, program officers talk with the site coordinator about possible barriers and solutions. The administrator of TASC's database also uses attendance data to help site coordinators evaluate their programs. He may encourage a director to examine attendance by date, for example. If the site serves two hundred youth on Monday and Tuesday but by Friday has only one hundred participants, the director may decide to change the Friday activities.

- To fulfill accountability requirements. Program funders typically use attendance data to determine the daily cost per child, verify grantees' compliance with a targeted level of service (the utilization rate), and substantiate reimbursement claims made to city, state, or federal funding streams.
- To advocate for more funding or for the use of specific strategies. Baltimore's Safe and Sound Campaign, a citywide effort to improve the lives of infants, children, and youth, includes OST programs that serve about four thousand K–12 students every day. The campaign uses geocodes to array OST attendance data and program capacity by U.S. Census tract. After-school leaders can identify which neighborhoods have (and are filling) the most OST slots and which neighborhoods could benefit from more programs.

- To monitor the quality and effectiveness of an overall initiative.

Data on OST participants' start and end dates and daily participation can reveal variations in attendance patterns over time. When combined with an internal performance monitoring system, these data suggest relationships between program implementation, attendance, and outcomes.

- To evaluate participant outcomes. Evaluations of OST programs and initiatives often compare attendance to data on student outcomes, such as academic achievement, prosocial behaviors, and emotional adjustment. These evaluations allow program staff and researchers to assess the effectiveness of the program in improving the lives of youth.

A program's method of measuring attendance depends on the purpose for collecting the data. For example, if the purpose is to support program planning and management, or leaders want to know whether their program is reaching the target population, they will have to measure attendance and demographic data of the individual children and youth attending the program. If the purpose is to gauge demand for services, a measure of the total number of youth attending will be important. If the purpose is to assess program quality and results, leaders need to know whether activities are appealing across grade levels and activities, whether the schedule serves families' needs, and whether the program has an impact on participants. To answer those questions, program staff or evaluators will need to collect attendance data by child, by grade level, and by activity.

Options for collecting attendance data fall on a continuum from minimal to extensive use of technology. In the traditional pen-and-paper approach, someone—usually an instructor, program assis-
tant, or parent volunteer—makes a mark on a hard copy of the enrollment roster for every student who attends on a given day. Alternatively, students may sign in every time they attend, and the sign-in sheets are collected daily.

Programs that aggregate daily attendance data by the week, month, or year need to enter their data into a database in which numbers can be combined and manipulated. The simplest of these is housed on a personal computer. Several types of software are available to support databases.

Web-based systems offer more choices and flexibility in analyzing and reporting data. They are a growing trend in OST data tracking because they make program-level data available to a broad audience. The major systems marketed to OST programs (YouthServices.net, QSP, and KidTrax) customize the data elements, level of analysis, and reporting formats to the needs of each customer.

Programs that need detailed data with minimal burden on staff sometimes use swipe cards. Students receive ID cards with individual bar codes, which they present to electronic scanners as they enter and exit each day (or sometimes for each activity). The data are stored in Web-based systems or stand-alone PCs. This system requires the purchase of proprietary software and at least one scanner and computer per site, so it is the most resource-intensive option.

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**Four indicators of attendance: Absolute attendance, intensity, breadth, and duration**

Just as OST programs have a variety of reasons for collecting attendance data, programs and researchers have several ways of measuring attendance. Through a comprehensive review of the literature on school- and community-based OST programs, Simpkins, Little, and Weiss have identified four separate indicators of attendance.²

Policymakers, program directors, funders, and other stakeholders are particularly interested in the use of attendance data to
evaluate participant outcomes. The ultimate goal of OST programs is to promote positive outcomes for youth—socially, behaviorally, academically, and in other ways—and a substantial body of research demonstrates that OST programs do benefit young people.\textsuperscript{6} However, key questions remain. How often must participants attend in order to benefit? Does participating in multiple activities produce greater benefits than focusing on one activity? In order to answer questions such as these, researchers and program personnel must clearly understand and measure program attendance. However, most research has relied on a simple yes-or-no classification system for attendance, which has limited the ability of the field to answer these important questions.

Simpkins, Little, and Weiss identified over eighty research and evaluation studies that linked OST attendance with youth outcomes and included quantitative results with tests of statistical significance.\textsuperscript{7} These studies included four indicators of attendance: an absolute indicator of attendance, intensity of attendance, duration of attendance, and breadth of attendance. Most research has relied on absolute attendance, the most basic indicator, and the fields of both practice and research are ripe for more detailed measures of attendance.

\textbf{Absolute attendance}

Most studies that have measured attendance in youth programs have used a yes or no indicator of absolute attendance. This general measure provides a minimal amount of information: whether a young person attended a program at all, regardless of the number of days or weeks. Absolute attendance is the most common indicator of attendance in OST programs. Among the eighty-three studies reviewed, fifty-six collected only absolute attendance data, and only twenty-seven used a more detailed measure of attendance. A likely explanation for this finding is that absolute attendance is often the easiest, fastest, and most cost-effective indicator to measure.

The level of information provided by absolute attendance is useful for some purposes. For example, local and national organizations and government agencies publish statistics on the number and
percentage of youth attending OST programs to make a case for investments in the OST field. Their goal is to present the forest rather than the trees, that is, to provide a broad picture rather than a highly detailed one. However, absolute attendance excludes the information needed for program planning, accountability requirements, and assessment of youth outcomes.

Intensity

Attendance intensity is defined as the amount of time youth participate in an OST program in a given period of time. Intensity is also referred to as dosage, drawing on medical terminology for the amount of exposure to a treatment. Intensity can be measured on several time scales—hours per day, days per week, sessions per month, percentage of days the program was offered, and others—depending on how the program is designed. For instance, if activities change every few hours during the day and program leaders want to know whether students who attend for two hours every day have different outcomes from those who attend for half an hour per day, the program will need data in hours per day.

Simpkins, Little, and Weiss found that evaluators and researchers measured intensity in three ways depending on the goals of the evaluation and the program.⁶

Hours per day or per week. Petit, Laird, Bates, and Dodge classified intensity of participation by creating a variable for high, medium, and low participation, where high participants attended for four or more hours per week, medium participants attended for one to three hours per week, and low participants did not attend for any hours.⁹

Days or sessions per week. Some programs measure intensity by the number of days per session or per week that youth attend. For example, evaluators of programs sponsored by TASC classified youth as active participants if they attended the program for three or more days per week, as nonactive participants if they attended for fewer than three days per week, and as nonparticipants if they did not attend at all.¹⁰ Another approach, which
was taken by evaluators of the Boys & Girls Clubs, is to divide
the group of program participants into three categories accord-
ing to who attended most and least often in order to create
groups of high, moderate, and low attenders.11

Days or sessions in the past year. Some programs have used the num-
ber of sessions in the past year to define participants and non-
participants (for example, ten or more sessions versus fewer
than ten sessions)12 or to categorize high and low participators
(thirty-five or more days per year versus less than thirty-five
days).13 One evaluation of programs in central Ohio classified
high and moderate participators based on the percentage of
available program days in which youth participated (79 percent
or more the days the program was offered versus less than 79
percent of the days).14

Intensity data serve several functions. They can inform programs
about patterns of participation among individual families and
groups of families. For example, if children attend the program an
average of one day per week, families probably are not using the
program as their primary means of OST supervision. Intensity data
can also help determine how much participation matters. Research
generally shows that young people who attend with high levels of
intensity have more positive academic, social, and behavioral out-
comes than youth with low intensity. In the academic realm, stu-
dents who participate with more intensity demonstrate higher
grades and test scores, more homework completion, more positive
attitudes toward school, and higher rates of high school comple-
tion than their peers.15 In the social and behavioral realms, those
who participate with high levels of intensity engage in more com-
"munity service, less problematic behavior, and less substance use,
and they report more optimistic views of the future and better
emotional adjustment.16 Although most research indicates that high
intensity is preferable, some research suggests that a moderate level
de of intensity is best. This finding may suggest that adolescents who
are heavily involved in one extracurricular activity (for example, a
sports team) are constrained from pursuing other beneficial activi-
ities. It also highlights the insight that can be gained from collecting intensity data.

**Duration**

Attendance duration refers to the length of participation over time, usually measured in number of years. For example, one youth's attendance may have a duration of one year, while another youth's attendance may have a duration of two years, even though they both attended the same program with the same intensity of three days per week. Duration may also be measured in number of weeks, number of terms, or number of program sessions, depending on the needs and design of specific programs. Data on attendance duration show whether children are in the same program year after year. They can inform program stakeholders about the OST needs of the community, and they can help program staff and evaluators assess whether youth who participate for longer periods of time benefit more than their peers who participate for shorter periods of time.

Of the studies Simpkins, Little, and Weiss reviewed, relatively few measured attendance duration. Those studies that did found longer attendance duration to be associated with more positive youth outcomes. For example, an evaluation of a 4-H program found that youth who attended the program for at least one year engaged in less delinquent and substance abuse behavior and had more positive attitudes and relationships with adults than youth who attended for shorter periods of time. In another 4-H study, those who participated for more than a year had more positive outcomes than those who participated for less than a year in the areas of communication, conflict resolution, grades, homework, and volunteering. Children who participated for less than a year benefited more than those who had not participated at all.

In the studies described, greater attendance duration of any length was related to increasingly large benefits for youth. In other cases, however, there may be a minimum threshold for duration; that is, participants must attend for a certain amount of time in order to benefit. For example, studies of programs supported by TASC (New
York) and Los Angeles's Better Educated Students for Tomorrow found that participants had higher academic achievement than non-participants, but only after participating for two years.\textsuperscript{20}

\textit{Breadth}

Program staff and researchers know that young people have many choices for OST activities, and many participate in multiple programs and activities.\textsuperscript{21} Breadth of attendance refers to the range of programs and activities in which youth participate. Some youth achieve breadth by attending several programs during the week, while others participate in one program that includes a combination of activities.

Although many programs offer breadth in activities, few evaluations measure this information or attempt to tie it to youth outcomes. Most studies focus on youth attendance in one program and do not include information on the specific activities experienced within programs. Even when researchers use an experimental evaluation design to assign youth to a program or control group, the control group's attendance in other OST programs or their participation in multiple activities within the program often is ignored. One reason may be the difficulty of gathering reliable data on which activities youth participate in within a program (although computerized attendance tracking systems are making this more feasible). Similarly, evaluators may find it cumbersome or even intrusive to ask participants about their other OST pursuits outside the program.

Although breadth of attendance is the hardest indicator to assess and the least researched, it can yield valuable information and results for youth programs. Programs may need breadth in order to achieve intensity and duration.\textsuperscript{22} In other words, providing a range of interesting activities may be necessary to retain participants' interest and attendance. The limited research that has been conducted so far also suggests that breadth is associated with more positive youth outcomes. One study of a multicomponent OST program in Texas examined how many activities youth participated in within the program; elementary school children who participated in three or more
activities received higher grades and test scores than those who participated in one or two activities. This finding is particularly striking because the study found no difference in some of the outcomes on the basis of absolute participation. The results therefore suggest that breadth offers important information above and beyond other indicators of attendance, but more research is needed to determine whether breadth is in fact related to more positive youth outcomes.

Combining indicators

Attendance intensity, duration, and breadth can be combined for a rich portrait of youth participation in OST programs. For instance, the indicators collectively can answer questions about the benefits of attending every day for a short period of time versus attending sporadically over a longer period of time. Few studies to date have combined the indicators, but those that have show the value of this approach.

An evaluation of TASC projects combined intensity and duration. Youth who were highly active (or had high levels of attendance intensity) for two years had the highest increases in math test scores and school attendance. Scores on these outcomes were higher than those of youth who were active for two years, which were in turn higher than those of youth who were active for only one year. Nonactive participants (those who attended on an irregular basis) did not demonstrate any academic gains. Similarly, an evaluation of the SFBI, which runs OST youth and family centers at public schools in low-income neighborhoods, combined duration and breadth, examining attendance in terms of the number of sessions (fall, spring, and summer) and the number of activities (educational activities only or educational plus other activities). Youth who attended the program during all three sessions and participated in educational and other activities experienced increases in leadership behavior, school effort, and feelings of self-efficacy. In contrast, participants with the same duration (three sessions) but less breadth (educational activities only) experienced increases only in school effort.
Which attendance data should programs collect?

With multiple reasons for collecting attendance data and many options for measuring the data, which attendance indicators should programs collect? In an ideal world, programs would collect data on all four indicators of attendance. That expectation is unrealistic for many programs, however, due to the time and cost burdens. Most programs have to choose just a few types of data to collect, and the right approach depends on the goals of the program.

If the program aims to build skills (such as academic and cognitive skills), knowing the intensity of participation might be most important.26 If the program aims to foster social competence, knowing the duration of each participant's engagement might be most important. If program staff want to know whether competing activities prevent some youth from attending regularly, collecting information on the breadth of activities attended outside the program will be important.

Program design also influences the choice of indicators. If a youth is allowed to attend for only one year, for instance, then duration is not an important indicator.

Once the indicators of attendance have been chosen, there are practical factors to consider:

- Complex data systems are harder to feed and maintain than simple ones, so it is best to keep data collection as simple as possible. Researchers and program directors suggest that the following data elements represent a good minimum standard: site name (if part of a multisite initiative or citywide database); total number of students enrolled; total head count per day, week, and month; student names; individualized student number (such as a school- or district-assigned identification code); age or grade in school (or both); each student's first and last date of enrollment; and each student's demographic information (for example, gender, ethnicity, neighborhood).

- Is the program open every day? Attendance data usually are collected daily (or on every day the program is offered).
attendance can be aggregated to obtain the monthly attendance rate, but the reverse is not possible.

- How large is the program (that is, how many children need to be tracked)? A small number can be tracked using pen-and-paper methods, but a large number may require electronic capacity.

- If the program is school based, do students leave the building between the regular and after-school day? If so, the after-school program cannot necessarily rely on data collected by the school program (for example, through the school system's scanners and swipe cards) and will have to reenter its own data.

- Do all students participate in the same activity at the same time, or do groups of students rotate through activities? If everyone does the same thing at the same time, it may be possible to gauge the effects of participation by collecting data on which students walked in the door at the beginning of each day.

- Do some activities occur offsite? If so, a centralized sign-in location at the main program site will not be sufficient to capture data on all students.

- How much money and staff time are available for data tracking, and how important is it for the program to invest resources in the activity? (Invest too little in data collection, and the effort will not produce the information needed for accountability reports or program improvement. Invest too much, and scarce resources may be wasted.)

- What is the age of the young people served by the program? Age is a key consideration in determining optimal patterns of attendance and methods of data collection. For example, it is reasonable to expect elementary school-age children to participate in programs with an intensity of four to five days a week, but the reality for middle and high school students is quite different. Competing demands of work, play, and the desire to hang out with friends render five-days-a-week attendance expectations unrealistic. Many programs for middle and high school youth set their thresholds for maximum participation at three days per week, in recognition of these competing demands.
Because the needs and goals of OST programs are diverse, there is no one right approach to collecting attendance data. For example, considerations such as cost, personnel, and data analysis will vary according to the needs and resources of individual programs. These logistical considerations play an important role in the processes of getting and using attendance data. Similarly, there is no one right indicator of attendance. However, it is clear that measuring attendance in absolute terms—that is, participation versus nonparticipation—is not sufficient. This measure does not provide enough information for linking participation to outcomes, for programs’ self-reflection and improvement, or for meeting the accountability requirements that are increasingly a reality for OST programs. Appropriate measurement of attendance is the cornerstone of a thoughtful evaluation to demonstrate effectiveness and inform program improvement. Engaging in a process of self-reflection about individual needs and goals can help programs to decide why and how to collect attendance data and to understand how these data will play a role in improving the program and the lives of youth.

Notes

1. See Chapter Four, this volume.


24. Welsh et al. (2002).


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