

CSWs by the Numbers: A Statistical Portrait of Community Science Workshops

Introduction

This module provides a set of quantitative snapshots of the Community Science Workshops (CSWs) to complement the other reports that comprise the [CSW Evaluation Portfolio](#)—the Description of CSWs, the Benefits to Youth, and the Evaluation Brief modules—and to build a solid representation of the scope and scale of the CSW's work and accomplishments.

The snapshots are organized around the following question areas. (If you wish, you may click any question to go directly to that section of this module.)

1. [How many CSW workshops are there, where are they, and how long have they been there?](#)
2. [What are the characteristics of the youth and communities that CSWs serve?](#)
3. [How many programs do CSWs offer? What kinds of programs do the CSWs offer? How many of each kind of program do they offer? How many hours of programming are devoted to the various types of programs offered by the CSWs?](#)
4. [How many students do CSWs serve in their core programs? How many youth and community members do the CSWs serve in other programs? How much exposure does the average participant have to key CSW programs?](#)
5. [How have the CSWs expanded and grown since 1994?](#)
6. [What does a typical workshop accomplish in a year?](#)
7. [What support do CSWs attract from their local communities?](#)
8. [What level of staffing and funding is needed to run a CSW site?](#)

Our findings are based on the following data sources:

- Monthly program reports from national workshops 2001-05 (programs offered, hours of programming, participants)
- Annual site reports from national workshops 2001-05 (staffing, partnerships, funding)
- Program and site reports from California workshops during 1998-99, the last year of NSF funding of the California CSW sites

- One-year program reports from two California sites for 2004-05

Data sources for “CSWs by the Numbers”

	1998-99	2000-01	2001-02	2002-03	2003-04	2004-05
Calif. Workshops	Data for 8 sites	NA	NA	NA	NA	Data for 2 sites
National Workshops	NA	NA	Data for 1 site	Data for 4 sites	Data for 5 sites	Data for 6 sites

The interested reader can also consult the [Methodology section of this report](#) for a brief discussion of our methods of collecting quantitative data about the CSWs and lessons that we learned. We believe that our reflections will be of use to others charged with documenting the scope and scale of similar programs.

1. How many CSW workshops are there, where are they, and how long have they been there?

As of July 2006, there were CSWs operating in 12 cities in seven states.

- Six California cities are served by workshops established under the CSW's first NSF grant (awarded in 1995). ¹

**California communities served by sites
established under the first CSW NSF grant in 1995**

City	CSW Workshop(s)	Year established	Status in 2006
San Francisco	Mission Science Workshop	Early 1990's, with first formal support from San Francisco State in 1992	Active
Oakland	Brookdale and West Oakland Discovery Centers	1995-96 (operated programs prior to receiving NSF grant)	Active in 2 locations
Fresno	Fresno Community Science Workshop	1996-97	Active in 2 locations; also operates a ScienceMobile
Los Angeles	University of Southern California MESA Mission Science Workshop	1996-97	Active in 10 locations
San Jose	Joseph George Science Workshop and Computer Studio	1996-97	Active again after a hiatus
Watsonville	Environmental Science Workshop	1997-98	Active

¹ Three other sites established under the first grant are now defunct.

- Six other cities across the country are served by CSWs established under a second NSF grant in 2001 to expand the program nationally.

National Community Science Workshops funded by the 2001 NSF grant

City	CSW Workshop(s)	Year established	Status in 2006
Washington, D.C.	Columbia Heights CSW	2001	Active
Houston	The Children's Museum of Houston Science Workshops	2002	Active in 5 locations
New Orleans	New Orleans CSW	2002	In August 2005, the site destroyed by Hurricane Katrina, but being rebuilt. Providing outreach to schools.
Miami	Citizens for a Better South Florida's CSW	2002	Active in 3 locations
Newark	New Jersey CSW	2004	Active
Boston	Boston CSW	2004	Active

2. What are the characteristics of the youth and communities that CSWs serve?

CSW workshops are located in poor, mostly urban, heavily minority communities where children are unlikely to have access to the kind of opportunities that the CSWs provide.

- We identified eight schools that house and/or are heavily served by a CSW. Eighty-four percent (84%) of the students in these eight schools are eligible for free and reduced lunch. Nine in ten students attending these schools are of African American (58%) or Hispanic (35%) descent.
- We have district data, but not school level data for another five communities served by the CSWs that provided data used in this report. In those cities and towns, 67% of the students are eligible for free and reduced lunch. Forty-seven percent of the students are Hispanic, 24% are African American, and 16% are Asian. CSW workshops are located in some of the poorest neighborhoods in these communities.

Poverty measure and student ethnicity for schools and districts served by CSWs

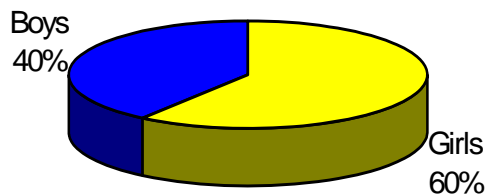
	Students eligible for free and reduced lunch	Student Ethnicity					
		Amer Ind	Asian	Hisp	Black	White	Other
Schools served by CSW							
Citrus Grove Elementary, Miami	94%	0.1%	0.2%	96.8%	1.7%	1.2%	0.0%
Holmes Elementary, Miami	98%	0.0%	0.0%	3.6%	96.4%	0.0%	0.0%
Crocker Elementary, New Orleans	88%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
Montgomery Academy, Newark, NJ	90%	0.0%	0.0%	18.3%	81.7%	0.0%	0.0%
Edison Middle School, Houston	91%	0.0%	0.0%	98.7%	0.6%	0.7%	0.0%
John D. O'Bryant Math and Science School, Roxbury (Boston)	63%	0.5%	22.9%	17.4%	47.7%	11.6%	0.0%
Cole Elementary, Oakland	77%	0.0%	6.4%	15.8%	76.7%	1.1%	0.0%
Maxwell Elementary, Oakland	71%	0.0%	5.8%	30.5%	60.5%	1.1%	2.1%
School Average	84.0%	0.1%	4.4%	35.1%	58.2%	2.0%	0.3%
Districts served by CSW							
District of Columbia Public Schools	62%	0.0%	1.7%	9.7%	83.6%	4.9%	0.0%
Los Angeles Unified	75%	0.3%	6.3%	72.5%	11.8%	9.1%	0.0%
San Francisco Unified	61%	0.6%	51.3%	21.4%	14.5%	9.6%	2.6%
Pajaro Valley Unified School (Watsonville, CA)	59%	0.2%	2.0%	76.3%	0.6%	20.7%	0.1%
Fresno Unified	79%	0.7%	16.6%	53.7%	11.5%	17.5%	0.0%
District Average	67.2%	0.4%	15.6%	46.7%	24.4%	12.3%	0.6%

(Source: National Center for Educational Statistics (NCES) Common Core of Data, 2003-04)

At the national CSW workshops in 2004-05, the typical youth attending after-school programs was a girl between eight and twelve who was Hispanic or African American.

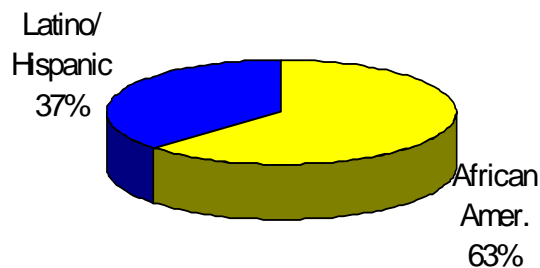
- Girls comprised 60% of the youth served by the after-school programs, and boys 40% (based on data of 709 youth attending scheduled, after-school programs at five CSW national workshops in 2004-05. Sites felt most confident about their ability to track participants accurately at this type of program.)

Gender of participants in scheduled, after-school programs (2004-05)



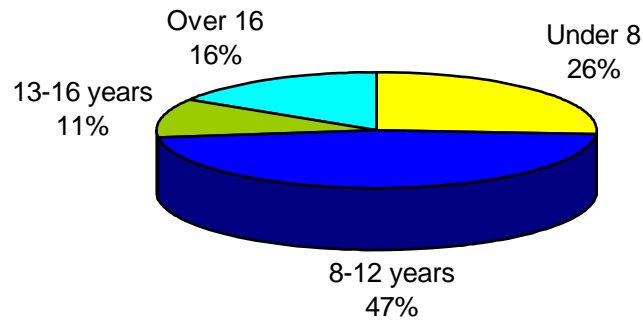
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- Almost two-thirds (63%) of the youth were African American; the other 37% were Hispanic.

Ethnicity of participants in scheduled after-school programs (2004-05)



- Youth from eight to twelve years old comprised nearly half (47%) of after-school program participants in 2004-05. Twenty-six percent were younger, 11% were 13-16 years old and 16% were over 16.

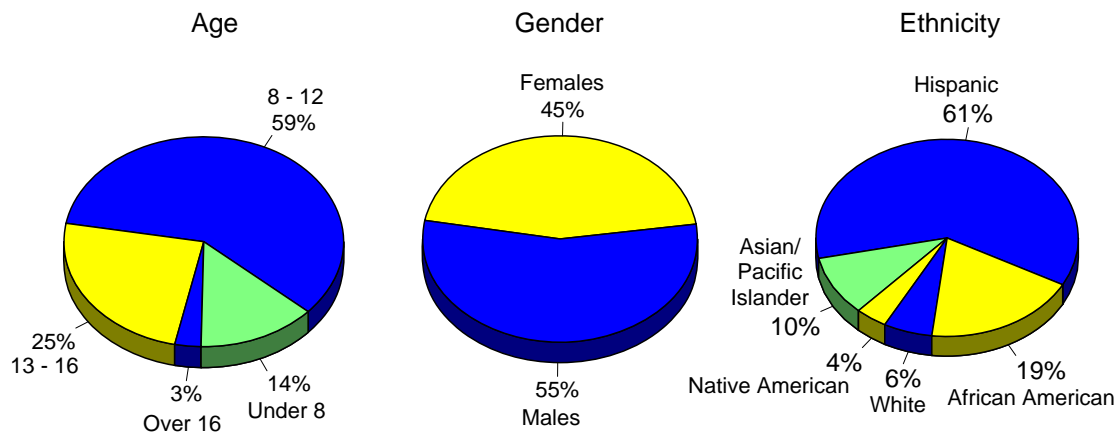
Age of participants in scheduled after-school programs (2004-05)



The current profile of youth served by the CSW national workshops (as described above) is consistent with the foundational commitment of the California CSWs in the 1990s to serve poor children of color who have little if any access to enrichment opportunities.

- Since their beginnings, the CSWs have served poor, underserved children. In 1998-99, the typical CSW participant at the California workshops was a Hispanic boy or girl between eight and 12 years old. Fifty-five percent were boys and 45% were girls. While Hispanic participants were in the majority (61% of participants), CSW programs attracted a rainbow of students: 19% African American, 10% Asian or Pacific Islander, 4% Native American, and 6% white.
- Site directors estimated that 95% of the participants were from lower socio-economic families, and 77% had few similar enrichment opportunities. Thirty-seven percent were seen as being at very high risk of entering the juvenile justice system. (Source: Data for all programs from six California sites in 1998-99.)

A profile of CSW student participants (California, 1998-99)



Evaluator comments: Youth and communities that the CSW's serve

There appear to be several differences between the youth served in California and nationally. Compared to the national workshops in 2004-05, the California CSW workshops that were established in the 1990s attracted more boys and fewer girls, and more Hispanic youth and fewer African American youth. The gender shift is of particular interest. The data suggest that the proportion of girls participating has increased from 45% to 60%. Several factors may account for this apparent shift. Workshops certainly have striven to attract and hold girls. In addition, many of the site directors at the national workshops are women, so they may make girls feel more comfortable at the workshops and serve as role models. Finally, many of the recent national programs have been provided on a set schedule rather than on a drop-in basis. We suspect that in the rough neighborhoods where CSWs are located, young girls' parents and guardians may be more willing to let them attend regularly scheduled programs. We wonder if the girls themselves favor one type of program over the other.

3. How many programs do CSWs offer? What kinds of programs do the CSWs offer? How many of each kind of program do they offer? How many hours of programming are devoted to the various types of programs offered by the CSWs?

CSW workshops offer a diverse portfolio of science-based programs in informal science settings that serve youth and also reach out to serve and find support in their local communities.

- We identified five distinct CSW program types:

Drop-in programs provide the opportunity for youth to come on their own accord during regularly scheduled times, when they can work on their own projects. These programs are offered both during the school year and sometimes in the summer, depending on the site. This is the format for many California CSW programs.

Special focus programs have a set theme or one project that all youth work on at the same time (like building a wooden box, gardening, dissection sessions, robots, or a creek-water analysis project). The national workshops offer many staff-led programs that meet regularly after school and/or over the summer. During a typical session, staff introduces a phenomenon and then oversees and encourages students as they engage in a related activity.

Outreach programs are when CSW staff go into the community (often into schools, but sometimes to Park and Recreation centers, community festivals, etc.), and conduct hands-on science and art programs there.

Field trip programs are provided for school groups and their teachers visiting the Workshops.

Other programs fall into a “grab-bag” category of a few miscellaneous activities and events whose format and intended audience don’t fit easily in the other categories (e.g., “speakers,” when it is unclear if the audience is children or the community).

CSW programs

Collectively, CSW workshops mount and provide a large number of programs each year.

- Summarizing for the years and for the workshops that we documented², CSWs offered a total of 181 programs.

In this section we report data about programs for three different time intervals: 1998-99 (last year of the California CSW grant), 2004-05 (last year of the national grant, when data for two California sites was also collected); and 2001-05 (duration of the national grant).

- In 1998-99, eight California CSWs provided 37 programs for youth and their communities.
- In 2004-05, eight CSW workshops reported collectively that they provided a total of 90 programs.
- Between 2001 and 2005, the six national CSW workshops provided a total of 110 programs.³ [Note: This data overlaps with the total above for 2004-05, but we use cross-year data to portray program growth.]

The majority of CSW programs are designed for children and are mostly conducted at the workshops. However, a substantial minority of CSW programs reach out to the broader community.

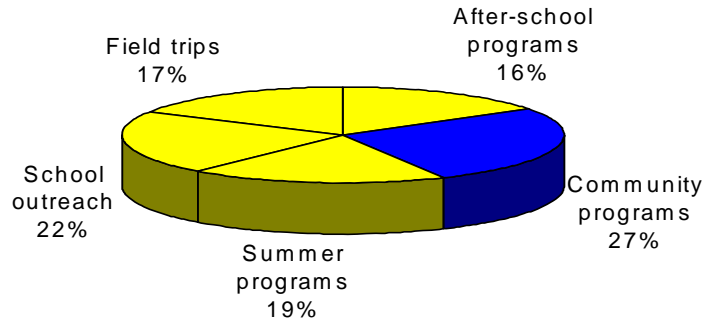
- Of the total 181 CSW programs we documented, CSWs offered 143 programs (79%) designed for children and another 38 (21%) programs that reached out to the broader community (including children).
- In 2004-05, 66 programs (73%) served children at the workshops or in schools. The remaining 24 programs (27%) publicized the CSWs and met the needs of the larger community through activities like booths at environmental fairs, speaker programs, etc.
- Looking more closely at 2004-05 programs, we see that 31 programs were ongoing after-school (16%) and summer (19%) programs at the workshops. Another 35 programs served school groups either in their schools (22% of

² Eight California sites in 1998-99, six national sites between 2001-05, two California sites in 04-05.

³ Each year a program was offered, it was considered a separate offering. We present data for 2004-05 unless trends or changes since 1998-99 merit comment.

programs) or through field trips to the workshops (17%). The remaining 24 programs (27%) publicized the CSWs and met the needs of the larger community through activities like booths at environmental fairs.

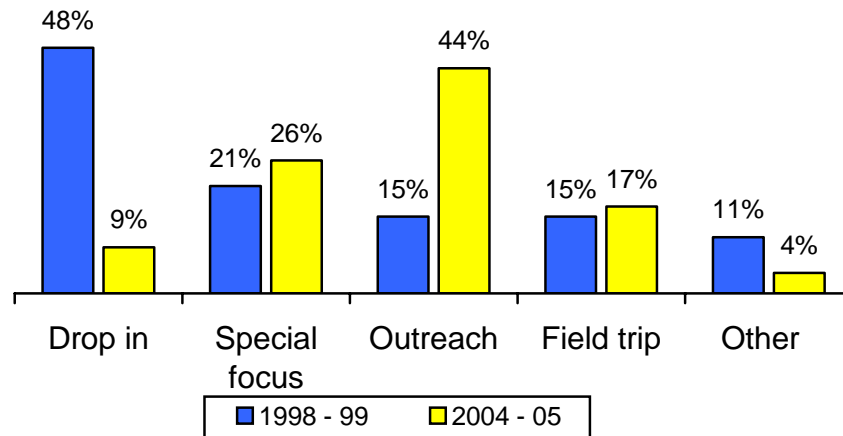
Types of CSW programs (2004-2005)



Workshops operate year round, tailoring their mix of programs to the needs and opportunities in their communities and to their own evolving capabilities.

- In 1998-99, the eight California workshops' 37 programs included 16 drop-in programs (48% of their program portfolio); seven special focus programs (21%); five each of outreach programs and field trips to CSW workshops (15% each of total programs); and four (11%) of other programs.
- In 2004-05, 40 of the 90 documented CSW programs at eight workshops were outreach programs (44% of all the programs), 23 were special focus programs at the workshops (26%), and 15 were school field trips to the workshops (17%). There were also eight drop-in programs (9%), and four (4%) of other programs.

**Percent of CSW programs by type of program:
Comparison between 1998-99 California programs and
2004-05 California and National programs**



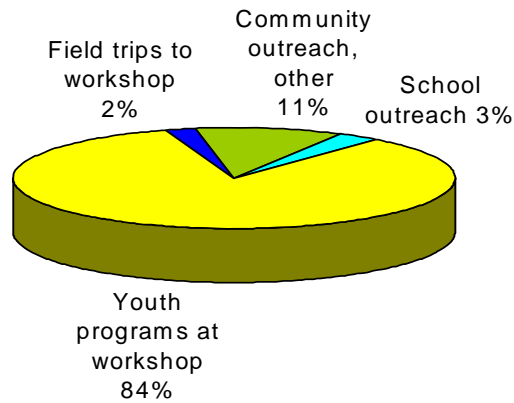
(Source: Data provided by eight California sites in 1998-99 and six national sites and two California sites for 2004-05)

CSW Program Hours

The great majority of CSW program hours are devoted to programs for children, with the most hours provided for ongoing, scheduled/organized programs.

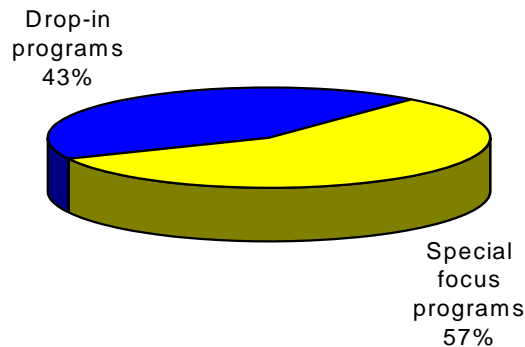
- In 2004-05, CSW workshops provided 7,880 hours of programs. The majority, 6,643 hours (84%), were for ongoing programs at the workshop. They also provided 239 hours (3%) of outreach programs at schools, 131 hours of field trips to the sites (2%), and 867 hours (11%) of community outreach plus a few hours of miscellaneous other programs.

CSW program hours by audience and program setting (2004-2005)



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- Of the 6,643 hours of ongoing youth programming provided by the workshops in 2004-05, 3,814 hours (57%) were given to special focus programs for youth, while the other 2,829 hours (43%) were offered as drop-in programs.

Percent of program hours for ongoing youth programs by program type (2004-2005)

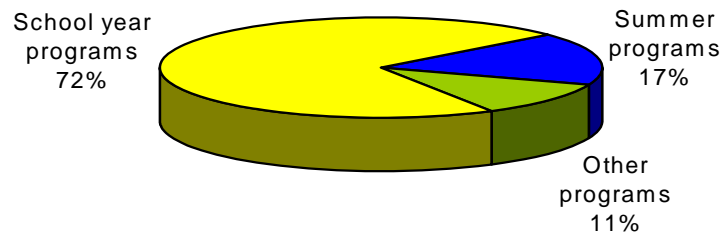


The CSWs provide steady and substantial programming year round.

- In 2004-05, over two-thirds of CSW program hours (5,315 hours, or 67% of the total hours) were devoted to sustained **after-school programs** at the site. During the school year, they also provided another 370 hours (5% of total

- hours) of school outreach and school fieldtrips to the sites during the school year.
- Workshops provided 1,327 hours (17% of the total) of drop-in and special focus **summer programs** for youth.
 - The rest of the program hours (867 hours, or 11% of the total) were given to community outreach and a few other short programs offered throughout the year.

Percent of program hours by time of year the programs are offered (2004-2005)



Evaluator comments: Programs offered by CSWs

In a relatively few years, the CSWs have been able to establish and run a notable variety of programs benefiting underserved youth and their communities. While our five program categories help portray CSW programs in broad strokes, they can hide differences in programming across workshops. For example, in 2004-05 both California and national sites provided outreach programs. The newer national workshops often reached out to their communities through activities like booths at festivals, and special program days at Parks and Recreation Centers – activities that would raise community awareness of their presence. In contrast, the better established California workshops provided most of their outreach programs in schools and classrooms, although they also continued to do some broad community outreach as well. Interestingly, in 2004-05 there was a jump in the number of school field trips at the national workshops; perhaps this is indicative of their deepening relationships with local schools.

4. How many youth and community members do CSWs serve? How many students do they serve in their core programs? How much exposure does the average participant have to key CSW programs? How many youth and community members do the CSWs serve in other programs?

An estimated 6,500 to 8,250 individuals were served by the national CSWs funded by the second CSW grant between 2001 and 2005.

It is not possible to state precisely the total number of individuals that benefited from the national CSW programs, because CSWs were not able to track individual participants from year to year. We estimate the number of individuals served by the national CSWs based on our knowledge of the programs:

- We know that if each individual participated in only one program and only one year, 5,127 young people would have participated between 2001 and 2005. The true figure of youth served could be estimated at between about 2,500 (which assumes that each youth attended two programs or attended two years) and about 3,750 (which assumes that about half the youth attended more than one program or more than one year).
- In other CSW programs such as fairs and open houses, 5,628 youth and adults would have been reached if each individual participated just once. Given the nature of that type of programming, it seems likely that most individuals participated just once. Conservatively, we estimate that roughly 4,000-4,500 individuals benefited from CSW programs that met community needs or drew in community speakers.

Using these estimates then, we make a conservative calculation that between 6,500 (i.e., 2,500 at youth programs and 4,000 at other programs) and 8,250 (i.e., 3,750 at youth programs and 4,500 at other programs) individuals were served by the national CSWs (other than CA) between 2001 and 2005.

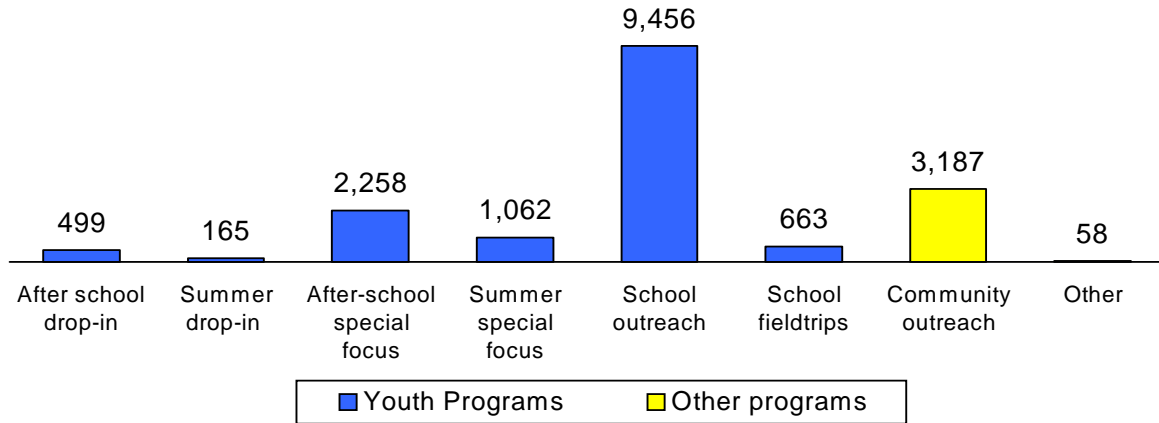
In 2004-05, the six maturing national sites and two well-established California CSW workshops collectively served over 17,000 individuals, the great majority of whom were youth.⁴

- In 2004-05, the national and California CSW workshops that provided figures for this study served a total of 17,438 youth and others. There were 14,193

⁴ Again, it is important to remember that not all of the California sites operating that year provided information for this report. However, the combined participation figures for the two California sites and the six national sites gives a fairly accurate snapshot of total CSW reach in a single year.

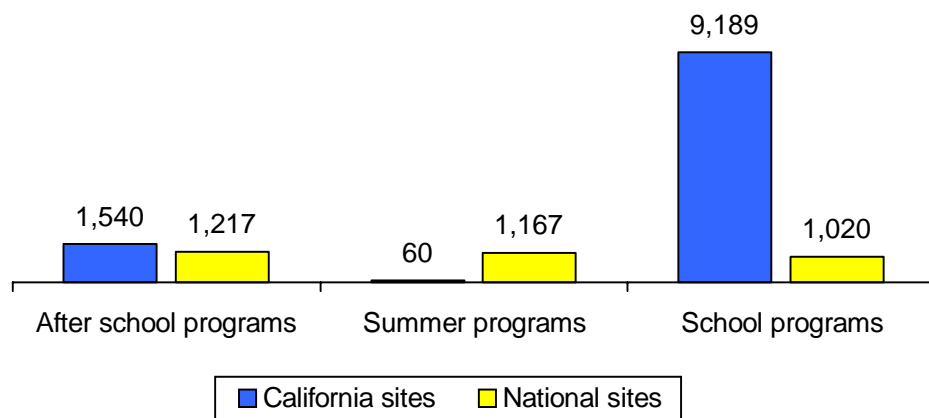
young people who participated in youth programs (81% of all individuals served over the year). Another 3,245 youth and adults (19% of total participants) were reached by other CSW programs such as fairs and open houses. By far, the largest number of youth were reached by school outreach programs.

Number of participants at CSW programs by type of program (2004-2005)



- The **national workshops** served 3,044 youth through after-school programs, summer programs and programs for school groups. The longer established **California workshops** served 10,789 youth, the majority through school outreach programs at one of the two sites.

Number of participants in youth programs by program type (2004-05): Comparison between California and national sites

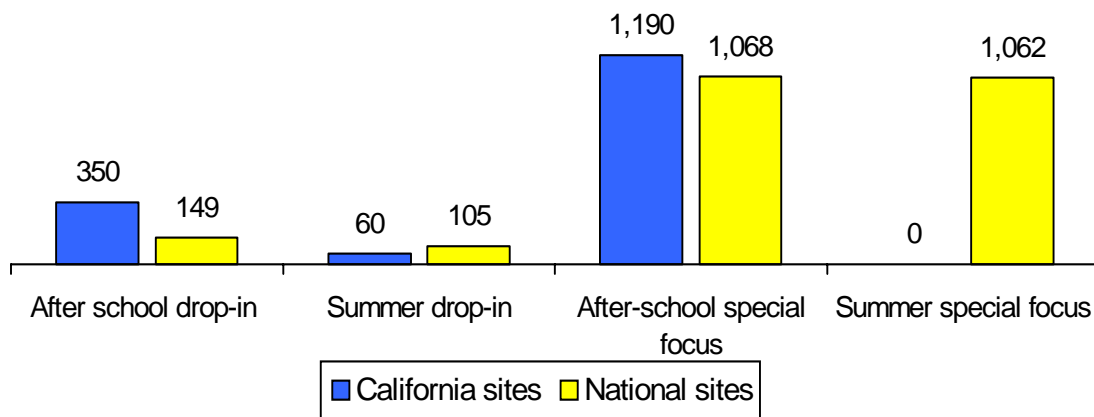


(Source: Data provided by six California sites in 1998-99 and six national sites and two California sites for 2004-05)

In 2004-05, the national and California CSWs served 3,984 individual youth in their core programs (i.e., ongoing special focus and drop-in programs at the site).

- Of these youth, 80% were engaged in scheduled, organized special focus programs.

Individual youth participating in CSW core programs by program type and time of year (2004-05)



- At the four workshops that provided information about attendance at after-school programs, average attendance ranged from seven to 59 students per day.

CSWs provide sustained service to most of the youth that attend their programs.

- In 2004-05, the after-school programs operated on average three to five hours a week for over eight months. Summer programs were typically several weeks to a month long, and operated for partial to full days.

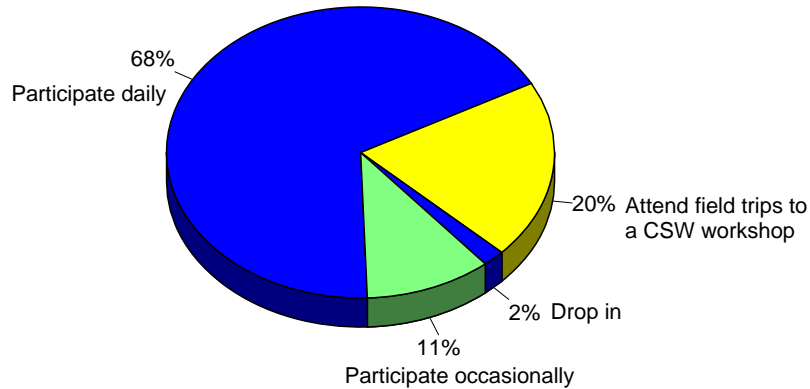
More than 2/3 of the children who participated at California workshops in 1998-99 came nearly every day that their program was offered. This is our most complete data on participant “exposure” to the CSWs; we present findings for that year below:

- The average workshop served 154 youth through programs that were heavily weighted to drop-in programs.
- An estimated 68% of the children attended nearly every day the program was offered, and another 20% participated on a more occasional basis. The group

of “regulars” slightly changed composition every few months when new youth discovered the Workshop and others drifted away.

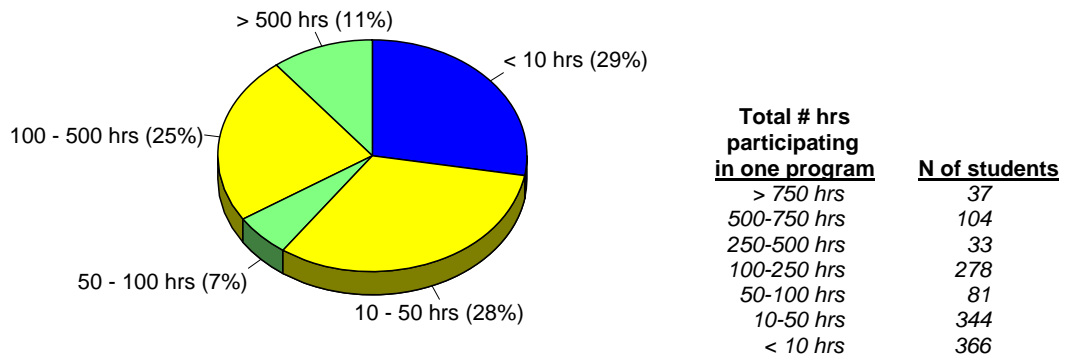
- Thirty students (different from the “regulars”) visited the typical workshop on field trips.

Patterns of student participation in CSW programs (California 1998-99)



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- Almost half (43%) of the youth served by the CSWs in 1998-99 participated at least 50 hours or more during the year, and more than one-third (36%) participated for 100 hours or more. Under one-third (29%) participated in a CSW activity for less than ten hours.
 - Site directors reported that many youth stayed with the workshop site for multiple years, as the figure below implies, given the number of youth who participated for hundreds of hours.

Hours of student participation in CSW programs (California 1998-99)



Note that a student who participates in more than one program is counted as a participant in each program he or she attends.

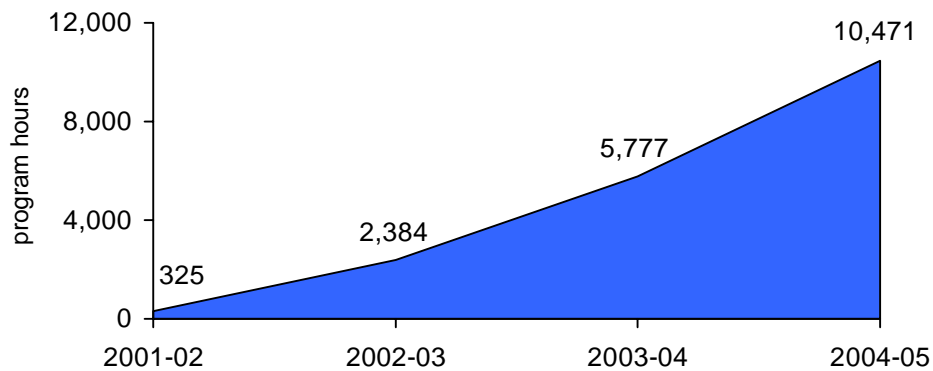
5. How have the CSWs expanded and grown?

Since the first CSW workshop was established in 1994, the CSWs have grown to serve 12 communities in seven states.

As new workshops came on board through the national CSW grant between 2001 and 2004, the hours of programs they offered rose from 325 hours in 2001-02 (at one site) to nearly 5,000 program hours by six sites in 2004-05.

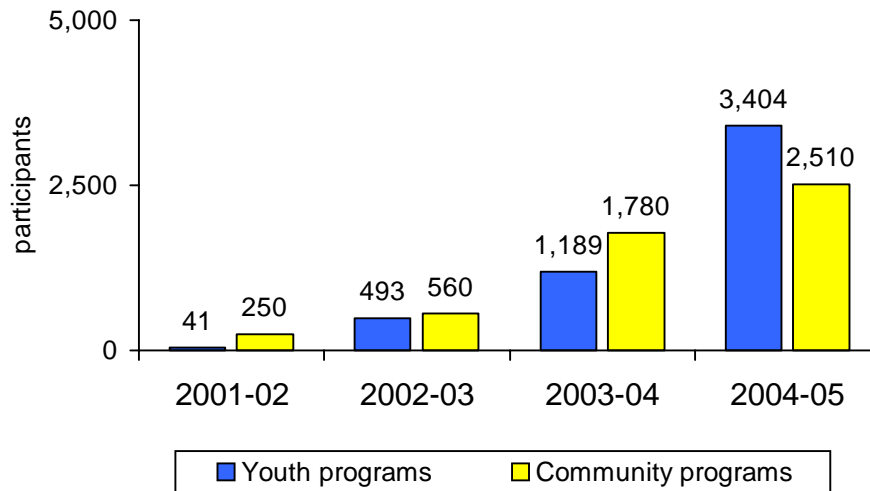
- By June 2005, national CSW workshops had provided a total of over 10,471 hours of programs, 10,259 (98%) of which were youth-focused. This is equivalent to 29 months of six-hour school days of programming.

Cumulative hours of programs at CSWs funded by the national grant (2001-2005)



The number of individual participants served annually by CSW programs for youth and CSW programs for the community rose rapidly over the same period.⁵

Growth in annual number of individuals served by the CSWs (2001-2005)



While we do not have data that permits a full description of the growth of California sites from 1998-99 to 2004-05, we do have data that suggests that their capacity to reach large numbers of youth has increased substantially⁶.

- In 1998-99, eight California sites provided 7,423 hours of youth programs that served 1,232 youth. In 2004-05, just two California sites provided 2,476 hours of youth programming that served 10,789 young people. In 2004-05, one of these sites reached large numbers of young people through school outreach programs while continuing also to run robust programs at the workshop.

⁵ Individuals were counted for each program they attended, so within a year there is a small amount of over-counting of participants. Moreover, as noted elsewhere, some children participated for multiple years, so it would be misleading to present this data as "cumulative."

⁶ For the California CSW grant in the 1990's, Inverness Research Associates documented programs and participants only for the final year (1998-99); therefore we cannot document growth during those years. As noted elsewhere, however, the California sites operated year-round, and in the final year of the grant implemented 37 programs, provided 7,423 program hours, and served an estimated 1,232 children.

Evaluator comments: CSW growth

In a multiyear project, one hopes to see evidence of expanding capacity both to provide programs and also to attract and serve clients. This is exactly the pattern that we see for the national CSWs between 2001 and 2005. The program remained relatively small its first two years, as national staff sought out the right locations and local leadership and then equipped workshops. As new workshops came on board, and the established workshops gathered momentum, program growth took off. It is notable that the national workshops provided nearly half of their total hours of programs and served nearly half of the total number of children and community members during the final year in which we collected data. As their capacity grows, sites must decide for themselves the best balance between serving fewer children in more depth and more children but at a lesser depth. Moreover, they must decide how much energy to expend on programs at the workshops and how much to give to outreach to schools and the community.

6. What does a typical workshop accomplish in a year?

Based on data provided by sites in 1998-99 and 2004-05, we found that in a year the hypothetical typical CSW site:

- provides four to eleven programs
- offers approximately 800-1,000 hours of programming
- serves between 550-1,200 youth at programs targeted to young people
- reaches another 400 youth and other community members at outreach programs.

- In 2004-05, **the average site**:
 - offered eight youth programs and two or three community outreach programs;
 - provided 985 hours of programs;
 - served 1,774 young people at youth programs and reached another 406 individuals (youth and adults) at outreach programs.
- Our most complete quantitative information about the different programs operated by the CSWs was provided by California sites in 1998-99. That year, the **typical CSW site** offered four or five different programs for youth⁷: two drop-in programs, and one each of special focus programs, outreach programs, and field trips to the workshop. Depending on the type of program, they ran for between 10 to 413 hours and were attended by between 16 and 50 students each day they operated.

⁷ In interpreting the numbers, it is important to note that although the average number of participants in a drop-in program is 27 compared to 48 in field trips to the workshop, an average drop-in program serves individual young people many more hours than does a field trip program.

**Participation rates and program duration for CSW programs by type of program
(California 1998-99)**

	Drop-in programs	Special focus programs	Outreach programs	Field trips to CSW Workshop
Number of programs	2	1	1	1
Number of students attending the average program of this type each day they operate	27	18	50 ⁸	48
Average number of weeks in each year the programs of this type operate	35	13	14	NA
Average number of hours per week the average program operates	14	10	3	NA
Average total hours each program operates each year	413	72	53	10
Estimated annual participant contact hours for each program	8,971	1,796	1,730	414

Evaluator comments: Accomplishments of the typical CSW site in a year

Sites vary greatly in their capacities, levels of development, settings, and strategies for serving youth in their communities. Therefore it is not a surprise that sites vary considerably in how many programs they mount, how many individuals they serve, and how many hours of programming they offer. However, based on the profile of the typical site, we can generalize to say that the workshops mature to become quite productive, especially given the fact that they operate with limited staff and financial resources.

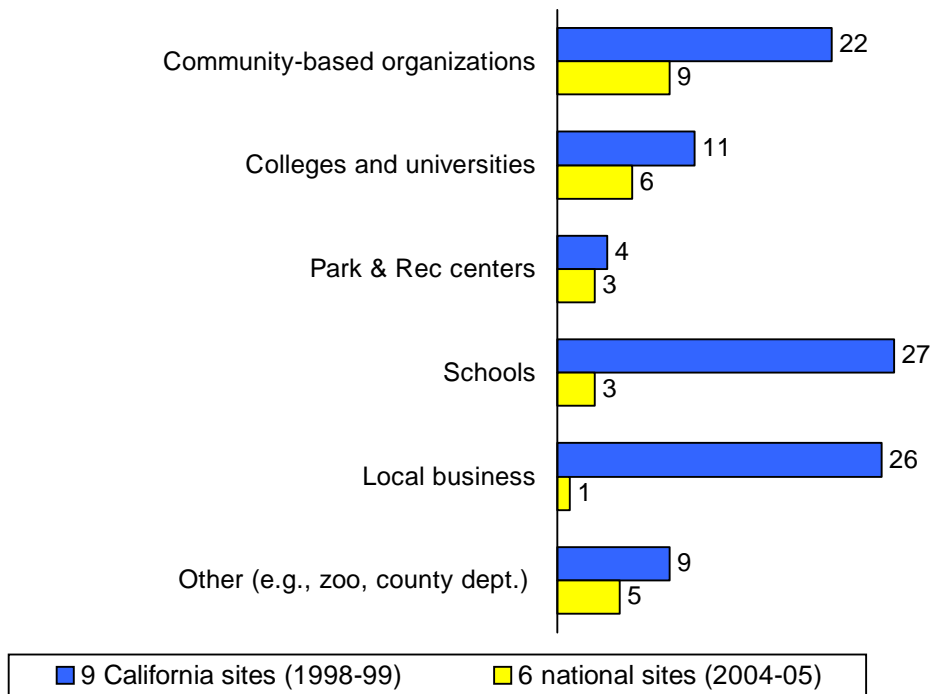
⁸ Two programs reached large numbers of students (53 and 135 students); three involved 20 students each.

7. What support do CSWs attract from their local communities?

The number and range of CSW partners and supporters speak to the wide appeal of the CSW concept.

- On average, each National CSW site had formal partnerships or informal relationships with six other organizations in 2004-05. They established the greatest number of relationships with community-based organizations and colleges and universities.
- California CSW sites operating under the original grant forged even more relationships with community supporters, averaging 14 links per site in 1998-99. They established links with many local businesses, schools and community-based organizations.

Organizations that played roles at CSWs (1998-99 and 2004-05)



Data was reported by five of the six national sites funded under the second CSW grant.

The partners that CSWs attract provide a range of supports and resources – from building materials, to interns, to administrative services – that also link the CSWs to their communities.

Below we list a sample of ways that workshops link to their communities.

Examples of CSW links to their communities 2002-2007

<u>CSW site</u>	<u>Partner</u>	<u>Type of support provided to CSW</u>
<i>The partnerships noted in BOLD for each CSW is the primary partnership</i>		
Boston	UMASS Boston COSMIC Center (Center of Science and Math in Context)	Financial and HR management Mentorship Content
Boston	John D. O'Bryant Math and Science School in Roxbury	CSW space Program management Recruitment of clientele
Columbia Heights	Smithsonian's National Zoological Park	Program management Development Content Volunteers/Interns Fiscal agent (Financial and HR management)
Columbia Heights	Latin American Youth Center	CSW space Recruiting clientele Development
Houston	The Children's Museum of Houston	Financial and HR management Mentorship Development Content Volunteers/Interns
Houston	Houston Independent School District	CSW space Recruitment of clientele
New Orleans (MHICSW)	My House Neighborhood Center for Learning	Financial and HR management Mentorship Development Content Volunteers/Interns CSW space (once building is reopened summer of 2007) Recruitment of clientele
Miami	Citizens for a Better South Florida	Financial and HR management Mentorship Development Content Volunteers/Interns
Miami	Miami Dade Public Schools and Miami Dade Parks and Recreation	CSW space Recruitment of clientele

<u>CSW site</u>	<u>Partner</u>	<u>Type of support provided to CSW</u>
<i>The partnerships noted in BOLD for each CSW is the primary partnership</i>		
Miami	The Children's Fund	Funding
New Jersey	Liberty Science Center	Financial and HR management Mentorship Development Content Volunteers/Interns
New Jersey	Newark Public Schools	CSW space Recruitment of clientele
New Jersey	Greater Newark Conservancy	Mentorship Content Volunteers/Interns

Data was reported in April 2007 by the CSW National Coordinator.

Evaluator comments: CSW community links

CSWs have been successful at securing outside funding, in-kind donations, and volunteers. In this way, they not only strengthened ties to their communities, but carried out their mission in a more cost-effective way which substantially leveraged the NSF investment. Through connections with existing institutions, agencies, and programs the CSWs and their work have become known and valued in the broader community. Particularly when symbiotic and collaborative relationships were established, these linkages proved to be mutually beneficial. The accomplishments of the California workshops in the 1990's in this area are of particular note, since those sites drew on resources and support from an average of 14 other entities. Were potential partners drawn to work with the workshops because the number of sites in the state lent them greater "legitimacy"? Did the project director and local site directors place greater emphasis on development of partnerships during this era? Most California workshops in 1998-99 had been in existence a few years longer than the national workshops had been in 2004-05. Based on the cumulative list of partners through 2007 for the national sites, it appears that the capacity for seeking and fostering partnerships grows after sites have been operating 3-4 years.

8. What level of staffing and funding is needed to run a CSW site?

CSWs are operated by small teams and on lean staff budgets.

- Established sites are typically staffed by a full-time director and one or two other paid staff (who often work part-time). In 2004-05, annual staffing costs at national sites ranged from about \$25,000 to \$81,000, with an average staff cost of \$50,000.⁹ In addition many sites get help from a small number of volunteers such as college students and interested community members. National program staff also provide assistance in negotiating and outfitting workshops in their first year.

Budgets vary, but it appears that the average established site can operate on a budget of roughly \$80,000-\$120,000 a year.

- In 2004-05, the average annual budget for each of five national sites that provided budget information was \$115,899. Workshops received an average of \$77,317 (67% of the total budget) in direct funding and \$38,542 (33%) in in-kind contributions. They averaged \$68,000 in NSF funding and support.
- In 1998-99, the average California site received \$50,623 in direct funding and \$26,519 of in-kind contributions for a total budget of \$77,142 annually. They averaged \$19,769 in NSF funding.

⁹ In 1998-99, the average staff cost at California sites was very similar, \$47,450.

Evaluator comments: CSW staffing and funding

CSWs serve their communities at a moderate cost, we think, due to several factors. There are economies afforded by a network, especially in a site's early years when they are establishing a site and developing activities. Moreover, there are many ways that supporters can augment core funding through small grants and in-kind support. Finally, the dedication of staff and volunteers also keeps costs down. We also know from the example of several California sites that CSWs can operate within the administrative structure of city youth and park agencies, which offers the possibility of long-term, stable support once grants end.

Methodology

Below we describe briefly our data-collection methodology and share some lessons learned about collecting ongoing data from multiple sites of an informal science youth program such as CSW.

Two approaches to data collection

Study of California workshops, 1998-99: To document the work of sites for the last year of the grant, we created a detailed form for site directors to use to report on each program over the year (June 1988–July 1999); they provided hours of programming, number and characteristics of participants, and patterns of attendance. In addition, they completed forms on staffing, community links and funding. Researchers provided guidance and clarification as site directors completed the forms.

Study of national workshops, 2001-2005: To use the evaluation to help build the long-term reporting and administrative capacity of the workshops, Inverness Research Associates designed a database for sites to use. The intent was that workshops would submit monthly updates on participants and programs, and annual updates on staffing, community links, and funding. Sites provided input into the content and format of the database and were trained in its use by Inverness staff. The final database was designed to collect information that was quite similar to the information collected in California. Inverness summarized site level data and provided annual and cumulative site reports back to sites and the national CSW office that could be used with funders and other interested parties.

Lessons learned about data collection for this kind of project

While providing sites with databases and training in using them for program documentation may be promising in some circumstances, a low-tech structured interview may be a more natural match with the culture and capacities of after-school science programs like CSW. CSWs use almost all of their staff capacity and time merely to plan for and run programs. It was a stretch for most workshops to develop the expertise and find the time to document their work using a database provided by outside evaluators, even though some of them gave input into the design of the database. Also, investment in a database approach should be generously budgeted to provide for unanticipated challenges. CSW support staff come and go, so training and consistency is an issue; reliable computer hardware and software is not always available at some sites; other priorities at the workshops are often higher than documentation; and clarification of unclear data requires considerable evaluator and site time.

It is difficult for sites to maintain histories of individual participation. Sites told us that student turnover is often high, some participants cannot or will not sign in reliably, and converting sign-in sheets to formal records is laborious and prone to error. Therefore we did not ask the workshops funded through the national grant to track individual students across programs. For many sites – funded by the national grant or not – providing participation data across time for each program was difficult and prone to error.

Collecting data twice a year, in early summer (for school year activities) and in early fall (for summer activities) may be preferable to monthly or annual data collection. The school year and summer programs are distinct at most sites serving youth.

In short, designing and implementing quantitative documentation systems for informal science programs like CSW is no minor task, especially where sites vary so greatly. In order to be successful, such documentation systems should minimize the burden on sites as much as possible.