

# **Baseline Measures and Mid-Program Progress for the Well-Rounded Access Program**

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## Formative Evaluation Report for the Oregon Department of Education

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## INTRODUCTION

In October 2020, the U.S. Department of Education awarded the Oregon Department of Education (ODE) a 5-Year \$9.8 million grant to fund the Well-Rounded Access Program (WRAP), aimed at increasing availability of and access to high quality STEAM and Arts opportunities for all Oregon K-12 students. The project focuses on three main components to accomplish its goals: course development to create the widespread availability of STEAM and Arts courses; course access structures to ensure that available courses are equitably accessible for all students; and communication around these efforts to all interested parties, including teachers, administrators, parents, students, and community education partners.

In April 2022 the STEM Research Center (SRC) at Oregon State University was contracted for approximately 10% of the grant funding as the independent external evaluator for WRAP, to monitor progress and provide timely feedback to ODE to ensure success of the project. The first phase of the evaluation effort focused on a formative evaluation designed to collect baseline data for a number of measures in order to be able to document changes in the future, and to provide actionable feedback to the WRAP team if needed to modify communication, course development or course access efforts in support of mid- and long-term outcomes. Note that baseline data describe the current landscape and are used to provide context for guiding current project decision-making and for interpreting later results; they are not meant as the foundation for a pre-post data comparison.

ODE and SRC collaboratively developed thirteen questions designed to guide the evaluation of WRAP, organized within the three areas of concentration: Course Development, Course Access Structures, and Communication (Figure 1). In this report, we provide baseline summaries, and preliminary results when available, for seven of these items (noted with an asterisk in Figure 1) for which preliminary data existed. We also discuss the actions undertaken so far by WRAP for each item and how data will be collected in the future to assess the outcomes for each evaluation question. Finally, we reflect on the progress of WRAP as we approach the halfway point of the project.

## Figure 1. Evaluation Questions

<p><b>Course Development</b></p> <ol style="list-style-type: none"><li>1. * To what extent did the WRAP lead to increased arts availability and access for public K-12 students and for which students?</li><li>2. * To what extent did access to high quality STEAM-based or arts specific curriculum increase for educators in both in-person and online settings?</li><li>3. * To what extent did instruction time increase (either through STEAM-based integration practices or individual content instruction) for elementary school students in the content areas of Science, Computer Science, Technology, or Engineering?</li><li>4. To what extent did educators feel support with the WRAP courses they used, and to what extent are they likely to continue them? Why or why not?</li><li>5. To what extent were WRAP courses applicable and accessible across regions and geographic locales?</li></ol>
<p><b>Course Access Structures</b></p> <ol style="list-style-type: none"><li>1. How did students in WRAP courses experience self-efficacy, relevance, and enjoyment, and did it differ for different groups of students? To what extent were students engaged with the course content and to what extent do students see themselves using the skills and knowledge they learned in the future?</li><li>2. * What barriers to participation in well-rounded education persisted and for whom and why?</li><li>3. To what extent did WRAP create sustainable options for course access and why?</li><li>4. What strategies were most successful at improving WRAP course access and why?</li><li>5. To what extent did WRAP-sponsored professional development opportunities increase the implementation of social-emotional learning, trauma informed, culturally responsive, and linguistically inclusive teaching practices within the WRAP courses?</li><li>6. * To what extent did teachers utilize course-sponsored PD and course materials made available by WRAP and why or why not?</li></ol>
<p><b>Communication</b></p> <ol style="list-style-type: none"><li>1. * To what extent did this program increase community, students, families, and educators awareness of what STEAM and Arts education are and their benefits?</li><li>2. * To what extent did school administrators understand their funding options for access to well-rounded courses and to what extent were these funding options utilized?</li></ol>

Note: This report focuses on the evaluation questions marked with an asterisk for which we had preliminary data for analysis.

## METHODS

This evaluation utilized a mixed methods approach, drawing on both quantitative and qualitative datasets from a variety of sources (Figure 2). The gathering and analysis of data was guided by the evaluation questions and data were summarized for the period corresponding to the beginning of WRAP activities to serve as a baseline for later comparison. Quantitative data included statewide datasets focused on STEAM and Arts courses and enrollment. It also included several surveys developed by the SRC. Qualitative data were summarized from a number of sources including the community engagement sessions and open-response items on surveys.

**Figure 2. Description of datasets and sources used to calculate baseline data**

Acronym	Dataset	Source	Focus	Sample size	Participants
NA	WRAP Engagement Survey (1/2022)	ODE	Learning ecosystem	222	Teachers, families, administrators, community partners
AS	Administrator survey (3/2023)	SRC	HS students	44	Administrators (e.g., principals, superintendents)
CPS	Community partner survey (5/2023)	SRC	K-12 students	11	STEM Hubs, community & tribal education organizations
ES	Elementary teacher survey (9/2023)	SRC	K-5 students	270	Elementary teachers (classroom, arts/music, etc.)
CES	Community engagement sessions (7-10/2021)	ODE	K-12 students	30 Sessions 80 Partners	STEM Hubs, community & tribal education organizations
ORASK	Oregon ASK survey	OregonASK	Expanded learning ecosystem	60	BOD, ODE, Hub Directors, CBOs Educators, Industry
ODE	ODE art course data (2019-22)	ODE	K-12 students	162 MS 199 HS	Middle and high schools
HSS4A	HSS4A PD registration and attendance data (2017-23)	PMSP	HS Science teachers	1879 participant spots	HS Science teachers
ECS	ECS PD registration and attendance data (2018-22)	ECS PD group	HS CS teachers	75	HS CS teachers
DA	Data Analytics (2021-2023)	ODE	Web visitors	N/A	Educators, administrators, community partners, general public

## KEY FINDINGS AND RECOMMENDATIONS

The purpose of this report was to provide a formative assessment of WRAP activities and progress to date and to identify any issues that need to be addressed in order to stay on track toward meeting the project's long-term goals and objectives. Through the examination and analysis of multiple data sets designed to measure a variety of STEAM and Arts education elements and opportunities across Oregon, we were able to construct an overview of the STEAM and Arts education landscape as it appeared in the period corresponding to the beginning of WRAP activities. We were also able to assess early progress for some elements of WRAP. A detailed discussion of these efforts in relation to each Evaluation Question makes up the remainder of this report. Here we provide our key findings and recommendations at the mid-way point of the project:

1. **WRAP activities are proceeding well.** All the various teams have been assembled and some fundamental work has been done toward meeting the goals of WRAP. We see no red flags and no course correction is needed at this time based on the formative measures reported here.
2. **Course Development in particular is showing good progress** with three partners in place and PD ongoing for two STEAM curricula (HSS4A and ECS) and beginning for Arts, Care & Connection. ***We already see a significant increase in participation in HSS4A PD since WRAP activities began.***
3. **There are several avenues of Communication in place** including the WRAP website, WRAP newsletter, and Arts Education newsletter. There are also several STEAM and Arts resources available including a funding webinar and the Arts Access Toolkit ***However, based on preliminary data analytics it may be beneficial to consider other more targeted forms of communication*** to reach the audiences you would like to influence.
4. **The success of Course Access Structures will become more evident in the future** with more widespread implementation of the Course Development activities which address the challenges to teachers and students in providing and accessing STEAM and Arts courses.
5. **Because some of the background work (e.g., finalizing contracts for partners) took longer than expected, it may be difficult to measure large changes from baseline in the time remaining for some evaluation questions.** We can work with the WRAP team to revise evaluation activities as needed to better fit the constrained timeline.

# BASELINE DATA AND SUMMARIES

## Course Development (CD)

There are currently inequities in the availability of high-quality STEAM and Arts courses, particularly between rural and urban schools. Course development addresses this issue through the expansion of two existing STEAM courses (High School Science for All and Exploring Computer Science) and the development of a new Arts course for elementary students (Arts, Care, and Connection) with associated Professional Development opportunities for teachers.

**CD-1. To what extent did the WRAP lead to increased arts availability and access for public K-12 students and for which students?**

### Data Sources

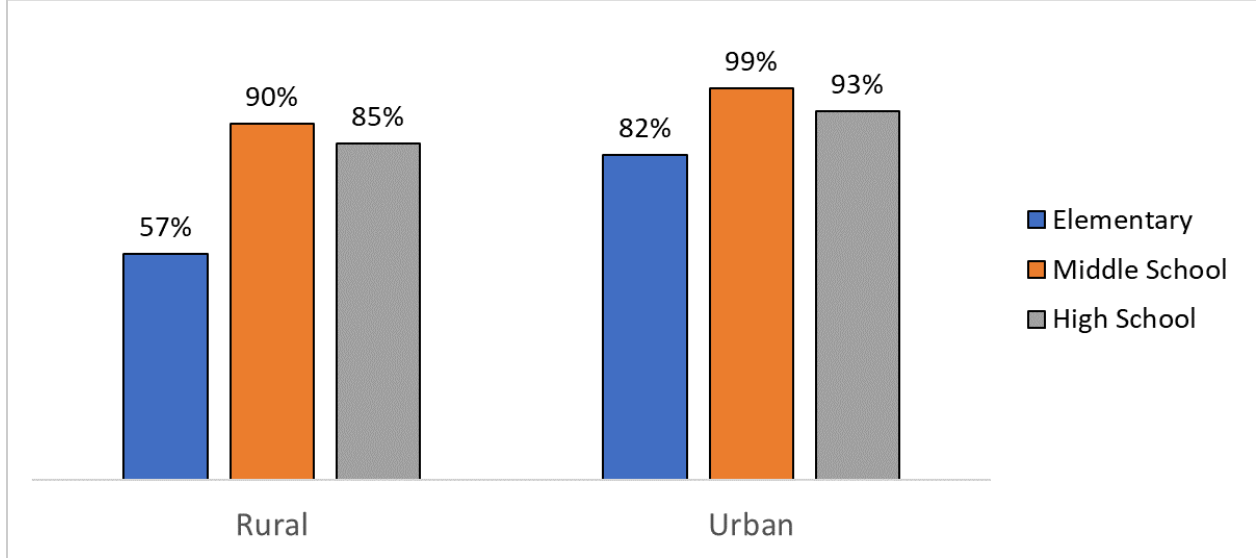
- 1. ODE course availability and enrollment data (2019-2020 and 2021-2022)
- 2. Elementary teacher survey (2023)

### Background

ODE tracks the availability of arts courses at each elementary, middle, and high school in Oregon. However, enrollment data are only collected at the middle and high school level. Therefore, the elementary teacher survey was used to estimate the frequency and amount of arts instruction occurring in elementary schools before implementation of WRAP. We used enrollment as a proxy for access.

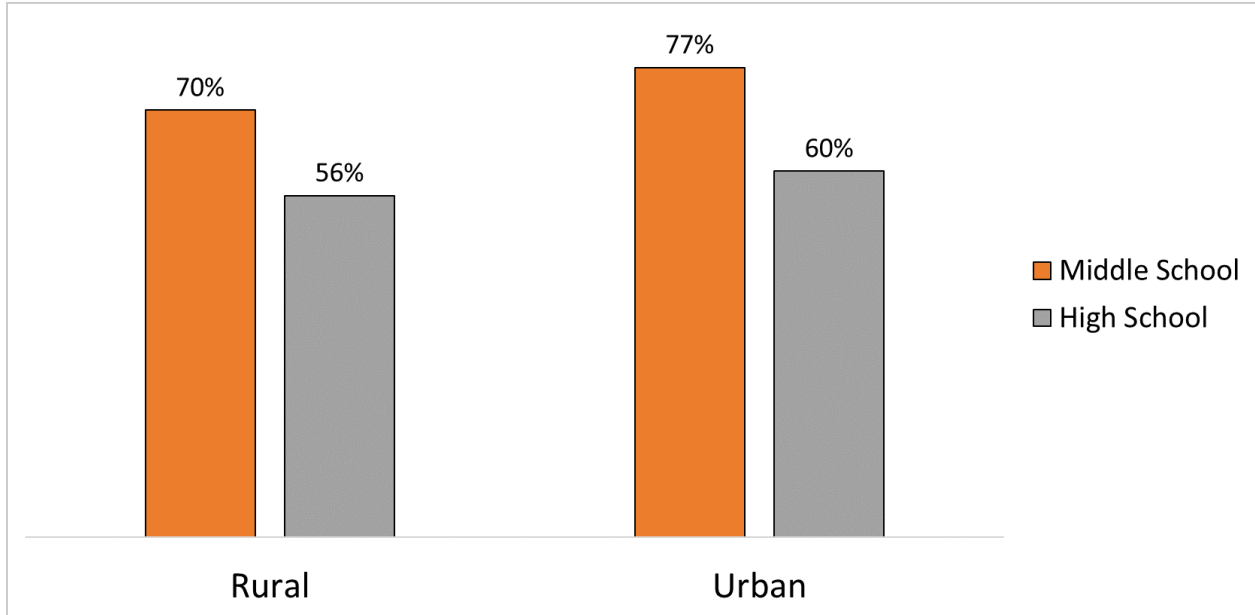
### Baseline Arts Availability

Figure 3. Percentage of rural and urban Oregon schools with at least one Arts course (2019-20).



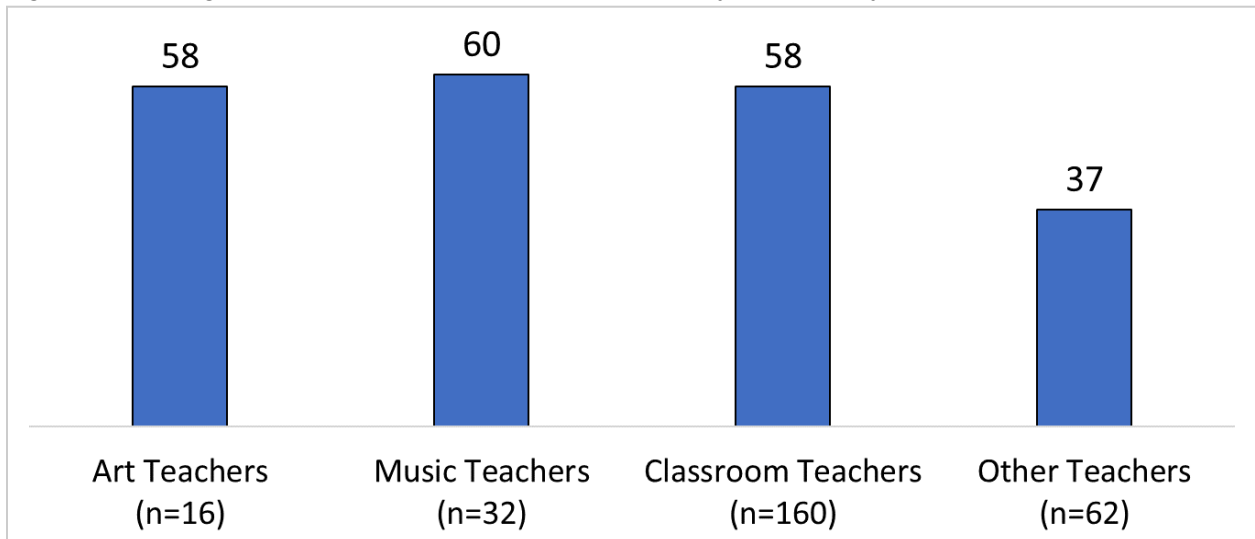
### Baseline Arts Access- Middle and High School

Figure 4. Percentage of urban and rural middle and high school students enrolled in Arts courses (2021-22).



### Baseline Arts Access- Elementary School

Figure 5. Average minutes of Art instruction per week by elementary teachers.





## Baseline Summary

- **Arts courses are widely available in middle and high school** (Figure 3). However, not all students are accessing arts courses, particularly in rural high schools (Figure 4). For example, in rural middle schools 70% of students enrolled in arts courses while in rural high schools only 56% of students took an art course in 2021-22.
- **Arts courses are less available in elementary schools, especially in rural areas** (Figure 3). Only 25% of the 138 Elementary Survey respondents indicated that art was part of the daily schedule.
- **In elementary schools that provide art, students received an hour or less of arts instruction each week**, mostly music and visual arts (Figure 5).

## WRAP Actions

WRAP will address availability and access issues primarily at the elementary school level in several ways:

- WRAP partners have created a course and associated PD for classroom teachers called Arts, Care & Connection. This course provides lessons for elementary classrooms, focused on the integration of arts and social emotional learning. The curriculum and PD have been developed and are currently in the pilot stage.
- WRAP will also be working with Tribes and Tribal organizations to offer K-12 Tribally developed and Intertribal Native Arts Lessons.
- WRAP has also created an Arts Access Toolkit that is available for download on the WRAP website with an associated informational webinar.

## Future Data Collection

- SRC will continue to monitor course availability and enrollment data to document changes over time.
- In addition, we will track elementary teacher participation in the Arts, Care & Connection PD to document if and how it affects availability of and access to arts education across Oregon, particularly in rural areas.
- Teacher panels will allow us to examine challenges to providing arts education and identify potential actions to increase arts opportunities for students.
- We will re-administer the Elementary Teacher Survey in early to mid-2025 to document any changes in arts access and availability.

**CD-2. To what extent did instruction time increase (either through STEAM-based integration practices or individual content instruction) for elementary school students in the content areas of Science, Computer Science, Technology, or Engineering?**

**Data Sources**

1. Elementary teacher survey (2023). Note that the sample size varies for different analyses based on how many survey respondents completed all of the questions.

**Background**

The elementary teacher survey data was used to estimate the frequency and amount of Science instruction occurring at the elementary school level before implementation of WRAP.

Figure 6. Elementary school classroom teacher science instruction frequency and topics taught.

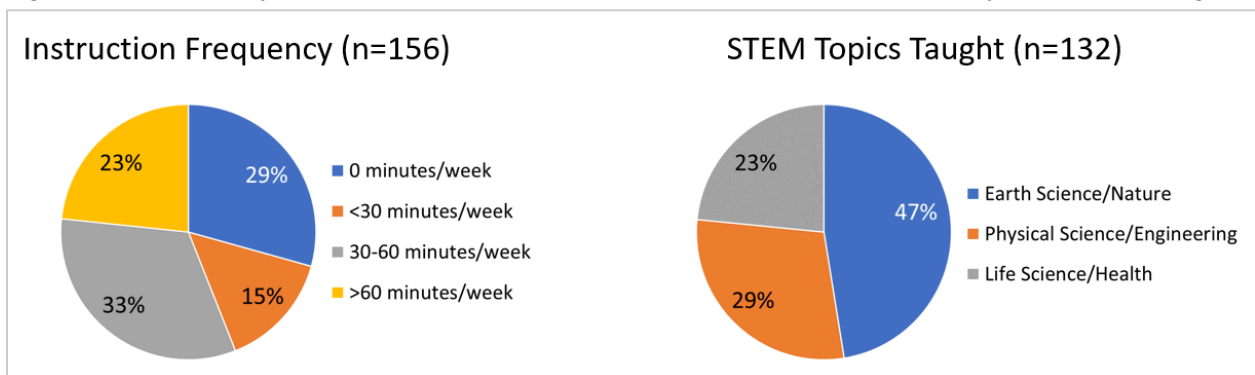


Figure 7. Number of classroom teachers who integrate science into other subject areas (n=151)

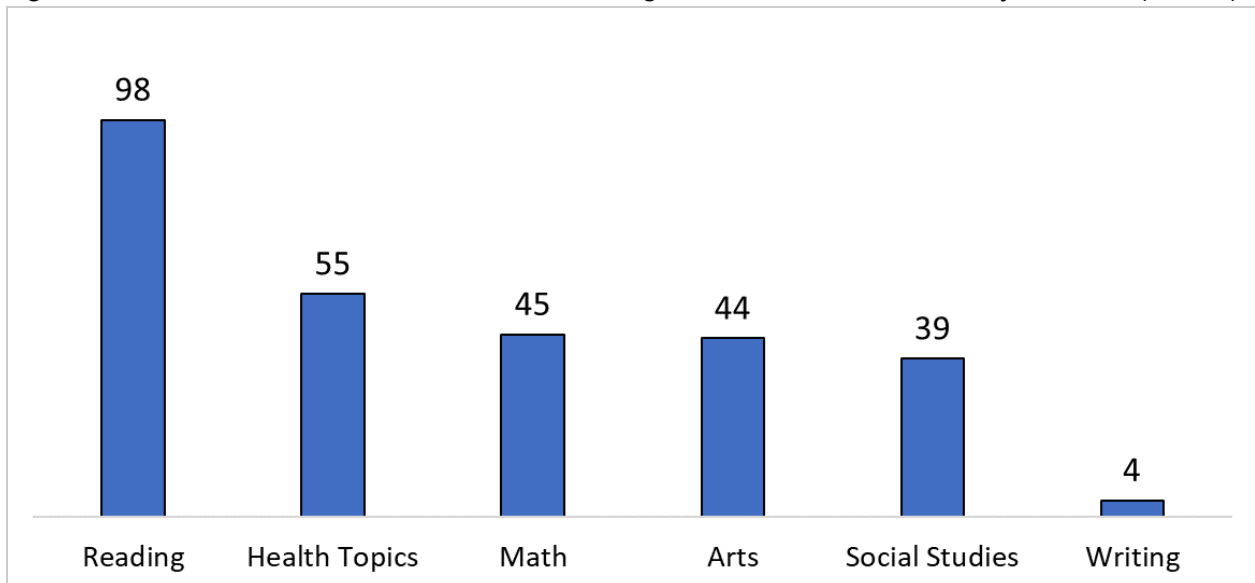
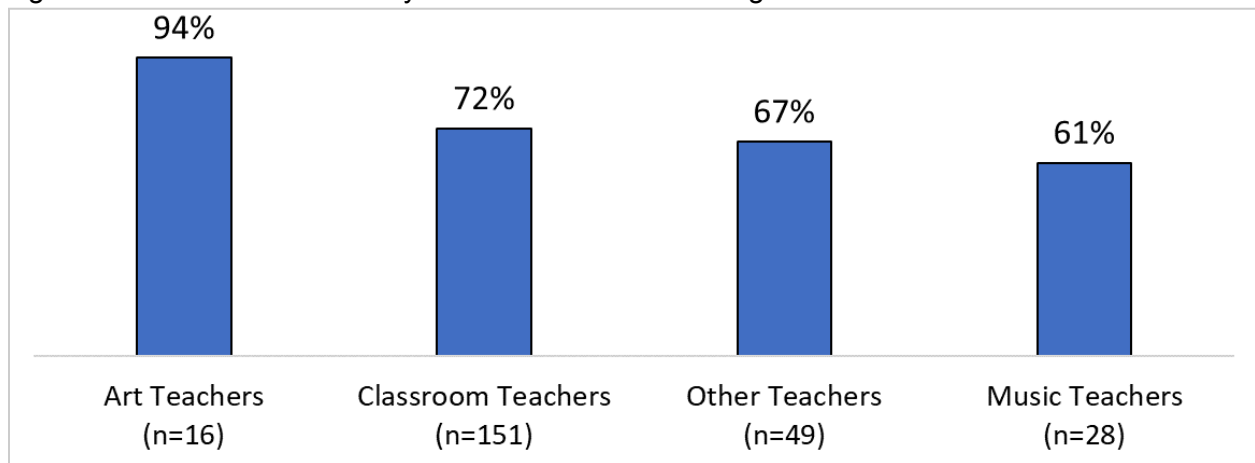


Figure 8. Percent of Elementary school teachers who integrate science into their instruction.



### Baseline Summary

- **Science instruction appears to be widespread in elementary school.** Most (94%) of the 160 classroom teachers surveyed reported that they teach science either as a dedicated topic, integrated into other classes, or both.
- **The amount of time spent on science instruction was low** with 77% of surveyed classroom elementary teachers reporting they teach <60 minutes of science per week, mostly earth science and nature topics (Figure 6).
- **72% of classroom teachers integrate science into other topics** including reading, health topics, math, arts (STEAM), social studies and writing (Figure 7).
- In addition to classroom teachers, **many music, arts, and other teachers integrate science content** into their instruction (Figure 8).
- Surveyed teachers report that challenges to teaching science in elementary classrooms include their lack of science knowledge, insufficient curriculum and resources, lack of instructional time, which is primarily dedicated to math and literacy, and lack of funding for resources and curriculum.

### WRAP Actions

- At this time, WRAP does not explicitly address science instruction at the elementary school level. However, the data gathered for WRAP regarding elementary science will help inform other activities across the state to support this area of need and may have a long-term impact on student participation in high school STEAM-based courses beyond the grant timeframe.

### Future Data Collection

- Teacher panels will include classroom teachers who can identify challenges to providing science education and identify potential actions to increase science opportunities for students.
- We will re-administer the Elementary Teacher Survey in early to mid-2025 to document any changes in science instruction time.

**CD-3. To what extent did access to high quality STEAM-based or arts-specific curriculum increase for educators in both in-person and online settings?**

**Data Sources**

1. Enrollment in professional development sessions supplied by Portland Metro STEM Partnership and the Exploring Computer Science group.

**Background**

We used teacher participation in High School Science for All (HSS4A) and Exploring Computer Science (ECS) professional development as a proxy for measuring access to high quality STEAM-based curriculum. We assume that participation in professional development will lead to classroom implementation.

Figure 9. Number of schools with at least one teacher participating in HSS4A PD before and after WRAP activities started.

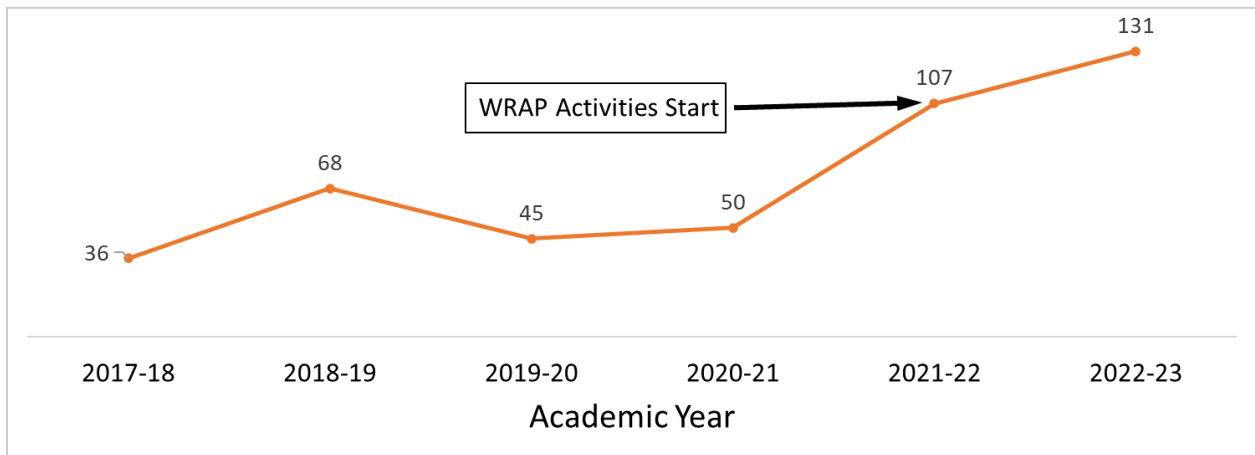


Figure 10. Number of schools that had teachers enrolled in ECS PD prior to WRAP funding. ECS PD uses a cohort model. In 2018-19 there was only one cohort, each subsequent year includes both cohort 1 and cohort 2.

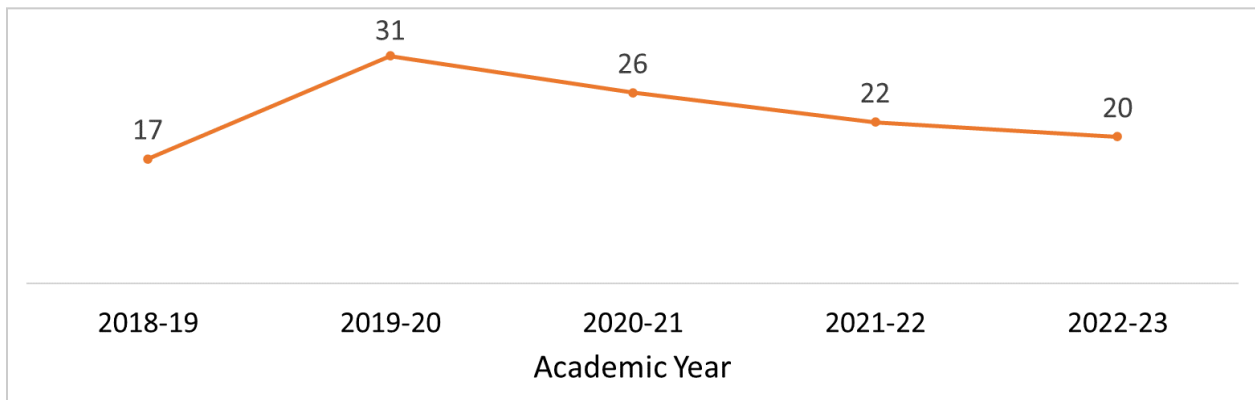
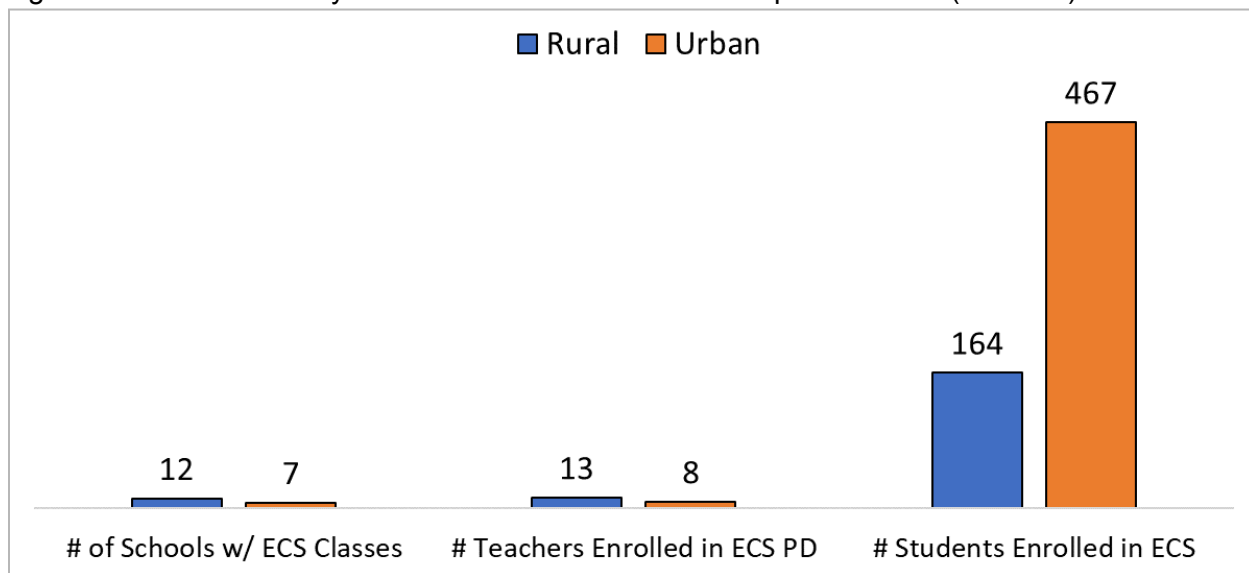


Figure 11. ECS availability and enrollment before WRAP implementation (2021-22).



### Baseline Summary

- **School participation in HSS4A PD was fairly steady pre-WRAP, and has increased significantly since WRAP-related activities began** (Figure 9). So far for the 2023-24 time period, 296 teachers from 124 schools have participated in HSS4A professional development.
- Participation in ECS PD decreased somewhat pre-WRAP (Figure 10). Because funding for ECS began later than expected, we do not have a full year of post-WRAP data yet for comparison.
- **Availability of ECS classes is currently small in scope** (19 high schools) although student enrollment is high where ECS is available, especially in urban schools (Figure 11).

### WRAP Actions

- WRAP provides funding for HSS4A, ECS, and Arts, Care, & Connection to provide PD and curriculum materials for teachers across Oregon.
- WRAP provides avenues of communication including the website and newsletters to promote high quality STEAM and Arts PD and curriculum across Oregon.

### Future Data Collection

- We will continue to track participation levels in HSS4A and ECS professional development programs.
- In the future, we will work with the HSS4A and ECS teams to better understand the differences based on rural/urban location.
- Teacher panels will include some teachers who participated in HSS4A and ECS professional development and some who did not. From these groups we will learn more about benefits and challenges to implementation of these two STEAM curricula.

**CD-4. To what extent did educators feel support with the WRAP courses they used, and to what extent are they likely to continue them? Why or why not?**

**Data Sources**

1. Exit ticket data from High School Science for All professional development sessions, January to August 2023.

**Background**

The High School Science for All team has collected exit ticket data from teachers who attended professional development webinars and sessions offered January-August 2023. Although there were no questions that specifically asked if they felt supported, some of the questions do support teacher satisfaction with the PD offerings.

**Baseline Summary**

- 84% of exit ticket respondents agreed or strongly agreed that the webinar was useful and 85% agreed or strongly agreed that they will use what they learned in the webinar in their teaching. Also, 74% of responders agreed or strongly agreed with the statement “Patterns is my primary curriculum.” The combination of responders' satisfaction with the PD and that Patterns is their primary curriculum suggests that these educators are being supported by the WRAP supported professional development activities.

**WRAP Actions**

- WRAP will continue to provide funding for HSS4A teacher professional development.

**Future Data Collection:**

- Teacher panels will allow us to explore how and why teachers felt supported when implementing WRAP courses.

**CD-5. To what extent were WRAP courses applicable and accessible across regions and geographic locales?**

**Data Sources**

1. Teacher professional enrollment data from both Exploring Computer Science and High School Science for All teams.

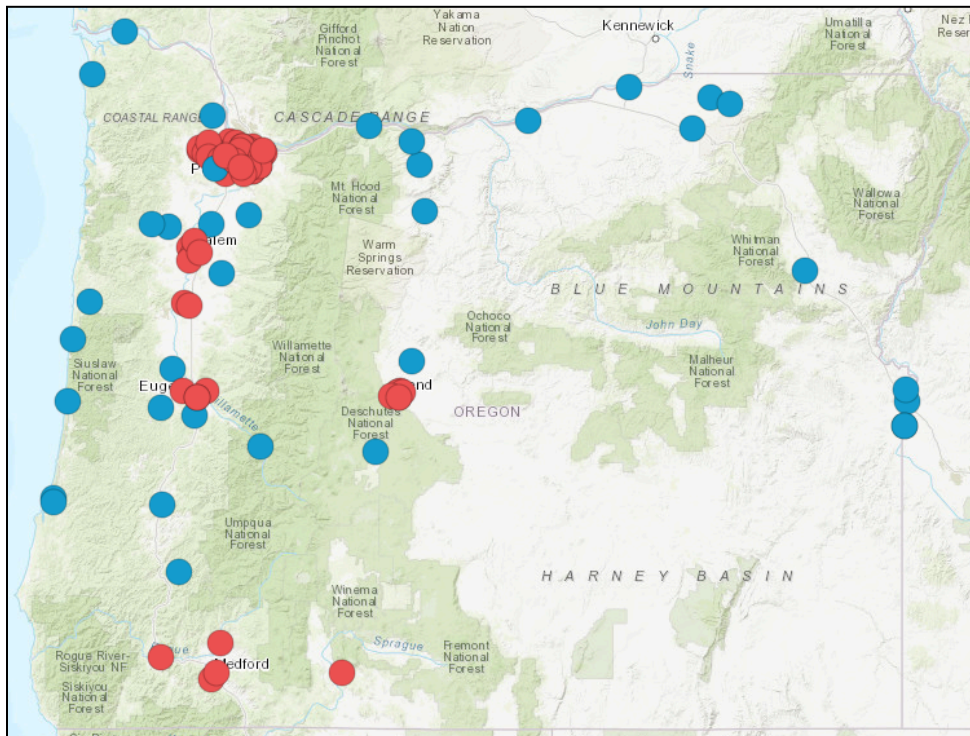
**Background**

We use participation in WRAP funded teacher professional development as a measure of course accessibility under the assumption that providing learning opportunities for teachers in both science content and classroom practices will enhance student access to STEAM courses. We tracked the teachers through their school locations and separated them based on if they teach at rural or urban schools.

**Baseline Summary:**

- The Exploring Computer Science (ECS) 2021 and 2022 cohorts consisted of 20 high school teachers. 12 teachers were from rural schools and 8 from urban schools. The geographic distribution was: 5 teachers from Oregon coast schools, 2 teachers from the Coast Range area, 8 from the Willamette Valley, 1 from Redmond, 1 from Warm Springs and 1 from Adrian High School at the Oregon-Idaho border.
- In 2021-22, teachers from 60 urban and 36 rural schools participated in High School Science for All (HSS4A) online professional development. A map of the geographic distribution of the schools is shown in Figure 12. Participating teachers came from across Oregon including the eastern border with Idaho, the Columbia River corridor and schools on the west coast. There are also clusters through the Willamette Valley and in the Bend-Redmond area. Clusters of urban schools are found in all Oregon metropolitan areas: Portland, Salem, Albany/Corvallis, Eugene, Medford and Bend. The population density in southeastern Oregon is low and there are few schools, none of which have teachers who have participated in HSS4A professional development.

Figure 12. Location of teachers enrolled in HSS4A professional development in 2021-22. There are 36 rural schools shown in blue dots and 60 urban schools shown in red.

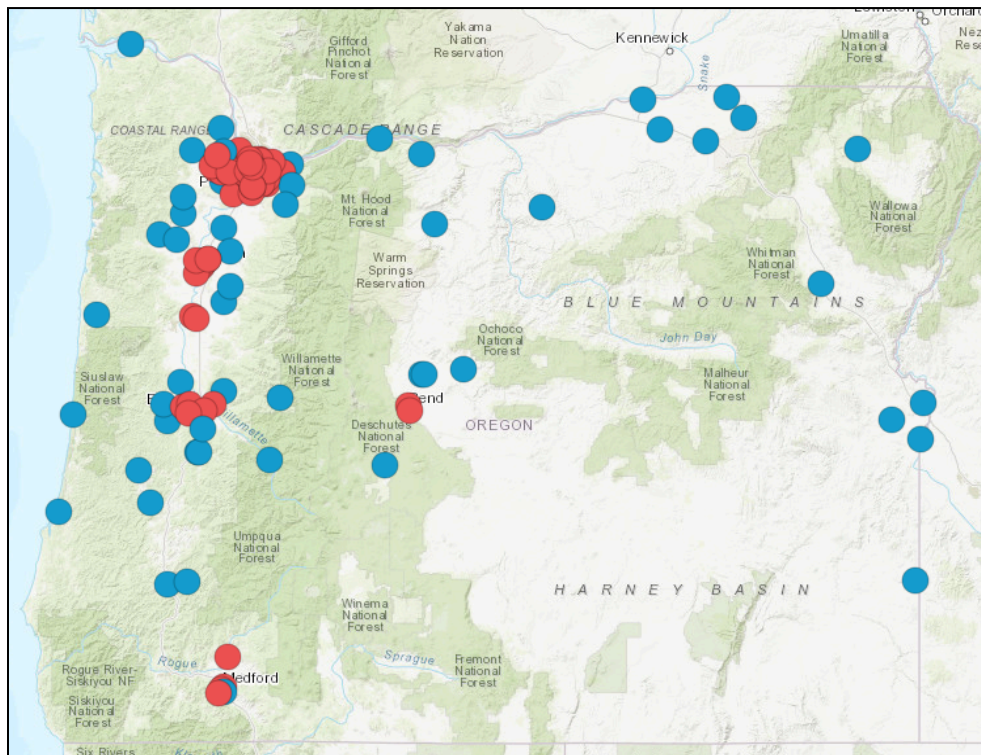




## WRAP Actions

- ECS professional development funded by WRAP is slated to start in 2024.
- In 2023, teachers from 124 schools (69 urban and 53 rural) participated in HSS4A online professional development. The geographic distribution of the schools is shown in Figure 13. The distribution of schools is similar to Figure 12 although the specific schools may have changed with some new additions and other schools that did not have continued participation. There are clear increases in the density of some of the clusters, notably in urban areas in the Willamette Valley. A WRAP priority that is being addressed through partnership with the GO STEM Hub is to increase the number of participating rural teachers and schools, especially in eastern and southeastern Oregon.

Figure 13. Location of teachers enrolled in HSS4A professional development in 2023. There are 53 rural schools shown in blue dots and 69 urban schools shown in red.



## Future Data Collection:

- Teacher panels will allow us to explore teachers' perceptions of the applicability and accessibility of WRAP courses.
- We will continue to track participation levels in HSS4A and ECS professional development programs which will provide information about accessibility across regions in Oregon.



## Course Access Structures (CAS)

The focus on course access structures addresses the issue that even where well-rounded courses were available, access to such courses was limited for some students. Activities aimed at addressing equitable access include supporting OOL and ODL, using data to better implement and make accessible well-rounded courses and providing equity-focused professional development related to content of well-rounded courses.

There are six evaluation questions related to Course Access Structures (Figure 1). However, baseline data were available for only two of them (CAS2 and CAS6). We present the future data collection plan for the evaluation questions without baseline data.

**CAS-1. How did students in WRAP courses experience self-efficacy, relevance, and enjoyment, and did it differ for different groups of students? To what extent were students engaged with the course content and to what extent do students see themselves using the skills and knowledge they learned in the future?**

**Baseline:** No baseline data available

**Future Data Collection:**

- The Student and Parent survey contains some items that measure self-efficacy, relevance, and satisfaction. We will revisit this survey with ODE to see if other items could be added.
- Teacher panels will provide an indirect measure of student outcomes.

**CAS-2. What barriers to participation in well-rounded education persisted and for whom and why?**

**Data Sources**

1. WRAP engagement survey (WES)
2. Administrator survey (AS)
3. Elementary survey (ES)
4. Community partner survey (CPS)
5. Community engagement sessions (CES)

**Background**

All four surveys asked participants to identify perceived challenges/obstacles to providing STEAM and Arts education. However, each used different methodologies/measures, focused on varying age groups, and suffered from small and potentially biased samples (see Figure 2). Because of these issues and the fact that the community engagement sessions were qualitative in nature, we provide a qualitative assessment of the baseline for these measures. We have addressed the evaluation question in two ways.

1. What are the challenges for schools and teachers in **providing** STEAM and Arts Education in Oregon (Figure 14).
2. What are the challenges/barriers for students in **accessing** STEAM and Arts courses, even if they are available at the school or in the community (Figure 15).

Figure 14. Challenges to providing STEAM and Arts Education in Oregon. Asterisks indicate challenges that are specifically addressed in the WRAP.

Challenge to providing STEAM/Arts education	Data Source				
	WES	AS	ES	CPS	CES
Inadequate staffing	X	X	X	X	X
<b>Sustainable funding*</b>	X	X	X	X	X
<b>Knowledge base of teachers*</b>	X	X	X	X	X
Inadequate time for planning	X	X	X	X	
Lack of instructional time	X	X	X	X	
<b>Lack of appropriate curriculum*</b>	X	X	X	X	
Lack of resources including technology	X			X	X
Flexibility in course schedule	X				X
<b>Lack of support from administration*</b>			X		X
<b>Understanding of the importance of content area*</b>	X				

Figure 15. Challenges for students in accessing STEAM and Arts Education in Oregon. Asterisks indicate challenges that are specifically addressed in the WRAP and therefore have the potential to improve over the course of the Program.

Challenge	Data source		Example
	NA	CES	
<b>Staff bias and gatekeeping*</b>	X	X	“Attitudes of administration and teachers about what students can do [“you have to earn your place to be able to participate”]”
<b>Course scheduling*</b>	X	X	“If there is time for design thinking, arts, etc., they are pulled for interventions - so it’s the high fliers who get the extra enrichment offerings.”
<b>Cost of courses*</b>	X	X	“If students and families are required to pay for course materials, this can serve as a barrier for students navigating poverty.”
<b>Feeling unsafe or unwelcome including due to racism*</b>	X	X	“STEAM isn’t always a seen as a safe place for BIPOC youth”  “Racism is driving a lot of these access issues. We must include antiracism activities within their DEI activities in all the programming.”
<b>Location and Time*</b>	X		“If educational opportunities are offered outside of school and/or outside of the regular school day and transportation or additional times are not offered, this has the potential to impact access for students without transportation options or have work obligations”
<b>Language barriers*</b>		X	“Communication is a barrier. Our experience with classes in the arts and sciences is that there are language barriers. “
<b>Lack of prerequisite knowledge*</b>		X	“The Arts teachers are saying that students are coming into CTE courses in High School that need basic arts skills, but they don’t have them, and this is making it very difficult for teachers to teach the CTE content because they have to teach basic art first.”
Access to technology		X	“Access to technology and the internet especially at home, even at schools is a challenge.”

### Baseline Summary

- **Challenges for providing STEAM and Arts.** There is strong consensus across data sources about the top six challenges to schools and teachers for providing STEAM and Arts education in Oregon, although several are outside the scope of WRAP (Figure 14).
- **Challenges for accessing STEAM and Arts.** Only two data collection efforts explicitly examined challenges for students in accessing STEAM and Arts education opportunities. Many of these challenges will be addressed within the STEAM and Arts curricula and PD described in Course Development above (Figure 15).

### WRAP Actions

- WRAP will directly address many of these challenges by:
  - Potentially **increasing the knowledge base of teachers** for teaching STEAM and Arts content by providing PD opportunities for 1) High School Science for All (HS); 2) Exploring Computer Science (HS); and 3) Arts, Care and Connection (Elementary) and other relevant resources (e.g., Arts Toolkit) to support teacher learning.
  - **Providing high quality curriculum materials** for the courses mentioned above that are freely accessible to all teachers in Oregon.
  - **Addressing STEAM and Arts Access** through the promotion of the STEAM and Arts curricula listed above that were developed within an equity framework that explicitly focuses on access and inclusion, including elements such as providing translations of content and focusing on no- or low-cost course materials.
- WRAP will indirectly address three other challenges through their ongoing communication efforts aimed at **informing educators, administrators, and community partners about the importance of STEAM and Arts in supporting well-rounded education, and the availability of funding opportunities.** The main communication outlets include: 1) WRAP website 2) funding webinar (on website) , 3) WRAP newsletter, and 4) Arts Education newsletter.

### Future Data Collection

- Teacher panels will provide insight into if and how barriers to participation decrease over the course of WRAP.
- Student and Parent Surveys will provide some student accessibility information. We will work with ODE to brainstorm additional survey items that address this issue directly.
- We will re-administer the Administrator Survey in early 2025 and work with ODE to get community partner input again.

**CAS-3. To what extent did WRAP create sustainable options for course access and why?**

**Baseline:** No baseline data available.

**Future Data Collection:**

- Need to operationalize “sustainable”: what is the plan for making HSS4A, ECS, etc. available after WRAP ends?

**CAS-4. What strategies were most successful at improving WRAP course access and utilization and why?**

**Baseline:** No baseline data available.

**Future Data Collection:**

- Teacher panels will help us answer this question from the educator perspective.
- Exit surveys from PD participants will assess motivations for participation and challenges to subsequent utilization of curricula.

**CAS-5. To what extent did WRAP-sponsored professional development opportunities increase the implementation of social emotional learning, trauma informed, culturally responsive and linguistically inclusive teaching practices within the WRAP courses?**

**Data Sources**

1. 2023 & 2024 Quarterly Reports submitted by Exploring Computer Science to WRAP.

**Background**

On November 13, 2023, the Exploring Computer Science team organized and hosted a virtual K-12 Computer Science Equity Summit.

**Baseline Summary**

- Spearheaded by Jill Hubbard at Oregon State University-Cascades, the summit brought educators, school administrators and counselors together to hear talks and engage in discussions on equitable CS instruction, strategies for providing equitable access to students, methods for teacher, students and administrator involvement and actionable steps for realizing outcomes.
- Total attendance was 92, which included attendees connected to K-12 schools, ODE personnel, STEM Hub representatives and university faculty.

**Future Data Collection:**

- We will continue to track ECS efforts at promoting equitable access to CS courses for students.
- Teacher panels will provide detailed implementation information.
- Exit surveys from PD participants particularly Arts Care and Connection will assess teachers’ implementation of these elements.

**CAS-6. To what extent did teachers utilize course-related PD and course materials made available by WRAP and why or why not?**

See questions CD2 and CD4 for details, which are related to utilization of course-related PD.

**Future Data Collection:**

- We will continue to collect PD attendance data for all WRAP-sponsored PD.
- Post-PD surveys will measure subsequent implementation behaviors.
- Teacher panels will help us understand why some teachers utilized course materials and others did not.

## Communication (COM)

The final focus area of WRAP centers around communicating the specifics and benefits of well-rounded education, and specifically the importance of Arts and STEAM education, as well as the numerous resources available to support Arts and STEAM education across Oregon.

There are two evaluation questions related to Communication (Figure 1). We present baseline measures for both which will allow us to track changes over the course of the WRAP.

**COM-1. To what extent did this program increase community, students', families' and educators' awareness of what STEAM and Arts education are and their benefits?**

### Data Sources

1. WRAP engagement survey (WES)
2. Administrator survey (AS)
3. Community partner survey (CPS)
4. Community engagement sessions (CES)
5. Oregon ASK survey (OR ASK)

### Background

All five data sources provided information about some, but not all, aspects of this question. In particular, all five instruments asked participants for their definitions of STEAM (but not Arts) education. Only the AS and CPS asked explicitly about the benefits of Arts education. We summarize the themes that emerged from the responses qualitatively in the tables below.

Figure 16. Perceived benefits of Arts Education.

Perceived benefit	Data source	
	AS	CPS
Promotes creativity	X	X
Highly engaging (e.g., hands-on, fun)	X	X
Vehicle for critical and design thinking	X	X
Builds confidence	X	X
Allows self expression	X	X
Improves a variety of cognitive skills (e.g., language, attention, problem-solving)	X	X
Supports inclusion and sense of belonging	X	





### **Baseline Summary**

- While we found evidence that both STEAM and Arts education (Figure 16) are valued across the education landscape of Oregon (including teachers, administrators, community partners, and parents), there is a need for a shared understanding of the definition and benefits of STEAM and Arts education as well as a common vision around what constitutes a well-rounded education (Figure 17).
- Integration of content and pedagogical elements (e.g. hands-on) were most frequently associated with STEAM teaching and learning (Figure 18).

### **WRAP Actions**

- WRAP will improve communication around STEAM and Arts through widespread dissemination of relevant information and resources:
  - The WRAP website contains links to numerous STEAM and Arts education-related resources
  - An Arts Access Toolkit and associated webinar have been produced and are available for download on the WRAP website.
  - A WRAP newsletter is distributed regularly, reaching over 1600 people currently.
  - An Arts Education newsletter is also available, reaching about 1400 subscribers.

### **Future Data Collection**

- Teacher panels will allow us to understand changes in the conceptualization of STEAM and Arts teaching and learning over time.
- We will re-administrator the Administrator Survey in mid to late 2025 to see if and how administrators' perceptions of STEAM and Arts education have changed.
- Future Community Partner Engagement Sessions will assess the evolving understanding of STEAM and Arts in the wider education community.
- Data analytics will be used to track WRAP website traffic and user behaviors including downloading of WRAP resources.

**COM-2. To what extent did school administrators understand their funding options for access to well-rounded courses and to what extent were these funding options utilized?**

**Data Sources**

1. WRAP engagement survey (WES)
2. Administrator survey (AS)
3. Data analytics

**Background**

Presently, there are several different programs and funding sources for well-rounded education that originate from, or flow through, the Oregon Department of Education. The AS asked about respondents' awareness of the following STEAM and Arts funding sources: SSA summer grants, Oregon-based grants, or national grants. Both the WES and AS inquired about current sources of STEAM/Arts funding and participants' perceptions of the stability of that funding.

Figure 19. Percent of administrators who identified each as a source of current funding for STEM/STEAM and Arts.

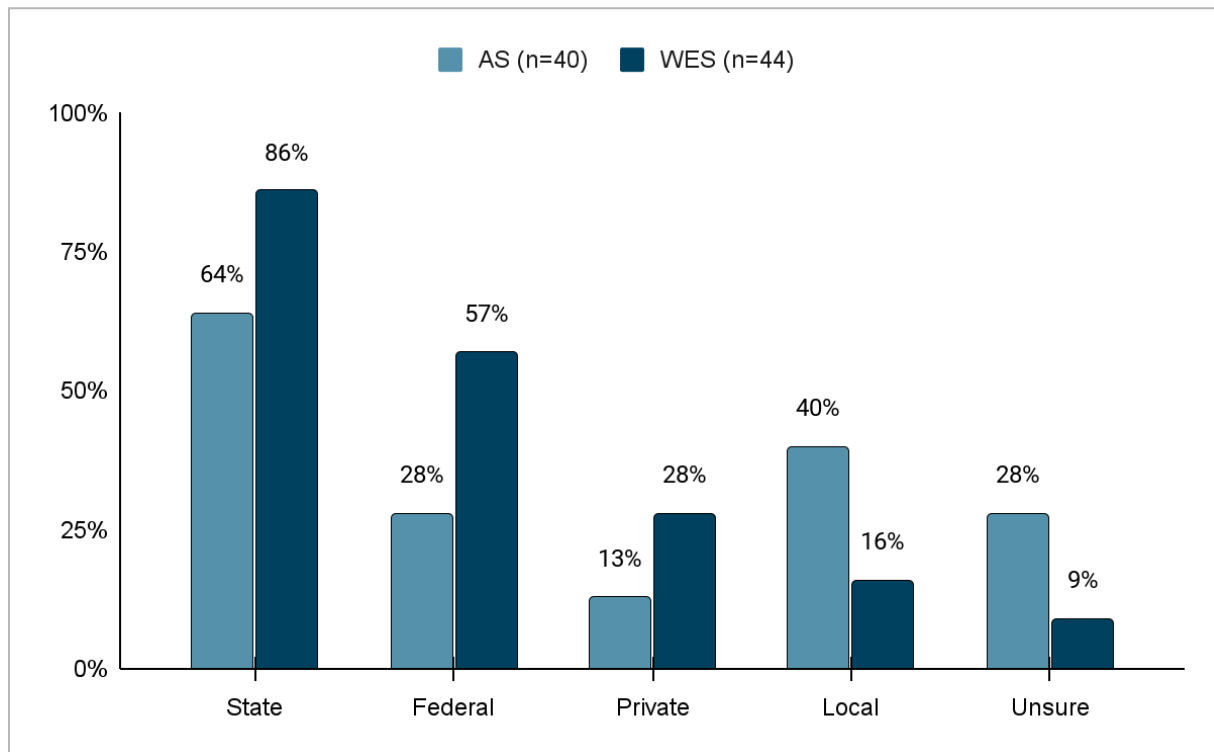


Figure 20. Administrators' perceived funding stability for STEM/STEAM and Arts education.

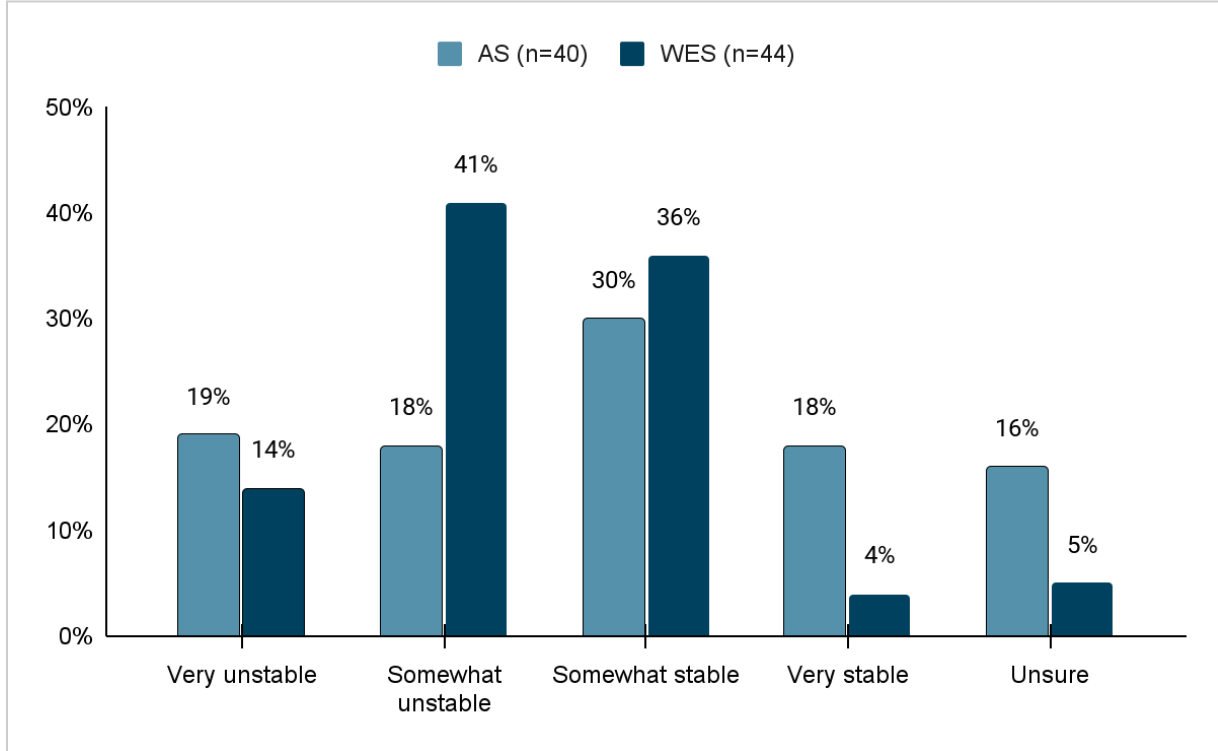
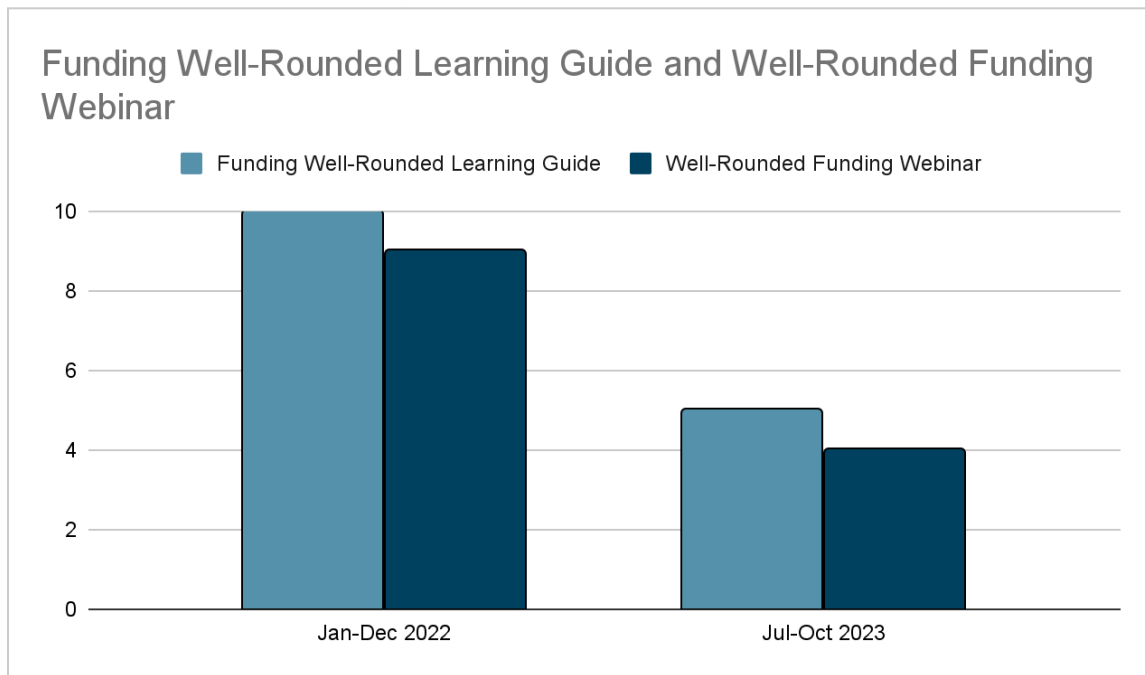


Figure 21. Number of downloads of funding information from the WRAP website over time. Data were unavailable from Jan-Jun, 2023.



### Baseline Summary

- The AS and WES showed that urban and rural administrators reported having similar funding sources for STEM/STEAM and Arts courses, mostly federal, state, and local (Figure 19). More administrators from urban districts reported having private STEM/STEAM funding than rural.
- ***Although numerous funding opportunities exist, none of the administrators in the AS sample were aware of funding opportunities*** (i.e., SSA summer grants, Oregon-based grants, or national grants) for STEAM and Arts.
- ***Both the WES and AS suggested that many administrators have negative perceptions around the stability of funding for STEAM and Arts*** education (Figure 20). The AS suggested that urban administrators were more likely than rural to perceive funding for STEM/STEAM and Arts education as unstable.
- Data analytics show that a small number of people downloaded funding information in 2022 (19) but that number has decreased (9) in 2023 (Figure 21).

### WRAP Actions

- WRAP conducted a funding webinar for administrators that took place on 10/28/22. There were 44 participants out of 103 registrants.
- The funding webinar has been made available for download and viewing on the WRAP website for those who couldn't attend.

### Future Data Collection

- We will use data analytics to continue to monitor the number of clicks and downloads for the funding webinar over time.
- We will re-administer the Administrator survey in early to mid-2025 to document changes in administrators' perceptions and knowledge of funding around well-rounded courses.

## CONCLUSION AND NEXT STEPS

The Well-Rounded Access Program is progressing smoothly at the mid-way point of the program. Course Development is ramping up with HSS4A and ECS professional development ongoing and Arts, Care & Connection PD about to begin. There are several avenues of Communication in place to promote STEAM and Arts resources and PD opportunities.

**However, because of the slower-than-expected rollout, the second phase of the program may need to be more accelerated in order to meet the long-term objectives of WRAP.**

In the next phase of the project, SRC will continue to monitor the progress of WRAP as outlined in this report in order to provide timely feedback to ensure the success of this program. In particular, the addition of teacher panels in the coming months will provide valuable feedback to inform the Course Development and Course Access Structure activities. All information learned will be shared with ODE and other WRAP partners in a timely fashion.

The last funded year of the project will focus on project impacts. Depending on the degree to which course roll-out proceeds, some of the data that will inform the summative evaluation might still be preliminary, likely providing only initial estimates for systemic impact of the project.