Appendix D

Observations

Classroom Assessment Scoring System (CLASS)

What is CLASS?

The Classroom Assessment Scoring System (CLASS) is a classroom observation tool developed at the University of Virginia's Curry School of Education. It aims to provide a common lens and language focused on classroom interactions that encourage student learning.

CLASS observations break down the complex classroom environment to help educators focus on boosting the effectiveness of their interactions with learners of all ages. Observations rely on categorizing interactions within the CLASS framework.

The CLASS tool organizes teacher-student interactions into three broad domains: Emotional Support, Classroom Organization, and Instructional Support. The upper elementary and secondary tools include an additional domain, Student Engagement. Within all domains except Student Engagement, interactions are further organized into multiple dimensions. **Table 1** lists the domains and dimensions for each level.

Emotional Support: Students' social and emotional functioning in the classroom is increasingly recognized as an indicator of school readiness, a potential target for intervention, and even as a student outcome that might be governed by a set of standards similar to those for academic achievement. Students who are more motivated and connected to others are much more likely to establish positive trajectories of development in both social and academic domains. Teachers' abilities to support social and emotional functioning in the classroom are therefore central to ratings of effective classroom practices.

Classroom Organization: The classroom organization domain assesses a broad array of classroom processes related to the organization and management of students' behavior, time, and attention in the classroom. Classrooms function best and provide the most opportunities for learning when students are well-behaved, consistently have something to do, and are interested and engaged in learning tasks.

Instructional Support: The theoretical foundation for the instructional support domain is based on research on children's cognitive and language development. Thus the emphasis is on students' construction of usable knowledge, rather than rote memorization, and metacognition—or the awareness and understanding of one's thinking process. As a result, the instructional support domain does not make judgments about curriculum content; rather, it assesses the effectiveness of teachers' interactions with students that support cognitive and language development.

Student Engagement: Unlike other domains, student engagement focuses strictly on student functioning, and measures the overall engagement level of students in the classroom.

Table 1: CLASS Domains and Dimensions

Domain	Dimensions			
	Pre-K	**Lower Elementary**	**Upper Elementary**	**Secondary**
Emotional Support	Positive Climate Negative Climate Teacher Sensitivity Regard for Student Perspectives	Positive Climate Negative Climate Teacher Sensitivity Regard for Student Perspectives	Positive Climate Teacher Sensitivity Regard for Student Perspectives	Positive Climate Teacher Sensitivity Regard for Adolescent Perspectives
Classroom Organization	Behavior Management Productivity Instructional Learning Formats	Behavior Management Productivity Instructional Learning Formats	Behavior Management Productivity Negative Climate	Behavior Management Productivity Negative Climate
Instructional Support	Concept Development Quality of Feedback Language Modeling	Concept Development Quality of Feedback Language Modeling	Content Understanding Analysis and Inquiry Instructional Learning Formats Quality of Feedback Instructional Dialogue	Content Understanding Analysis and Inquiry Instructional Learning Formats Quality of Feedback Instructional Dialogue
Student Engagement	n/a	n/a	Student Engagement	Student Engagement

Based on research from the University of Virginia's Curry School of Education and studied in thousands of classrooms nationwide, the CLASS

- focuses on effective teaching
- helps teachers recognize and understand the power of their interactions with students
- aligns with professional development tools
- works across age levels and subjects

CLASS-based professional development tools increase teacher effectiveness, and students in classrooms where teachers are observed to demonstrate and earn higher CLASS scores achieve at higher levels than their peers in classrooms with lower CLASS scores.[1]

[1] Teachstone Inc. http://www.teachstone.org/about-the-class/

CLASS and Program Evaluation

APS conducts CLASS observations for all program evaluation reports, starting in the 2010-11 school year. In the fall of 2010, the Office of Planning and Evaluation recruited retired teachers and administrators to become certified CLASS observers. Certification is managed by the University of Virginia. Trainees undergo in-depth training to help them use the tool effectively in the field. An assessment is used to ensure that the observers have demonstrated reliability with the CLASS tool.

Each observation lasts approximately 30 minutes and observers are instructed to view either the beginning or end of a class. Ten additional minutes are provided for coding of the observation. Self-contained classrooms that serve ESOL/HILT students or students with a disability, as well as mainstream classrooms with ESOL/HILT students or students with a disability, are included.

CLASS Scores

CLASS dimensions are scored on a 7-point scale consisting of Low (1, 2), Mid (3, 4, 5), and High (6, 7) ranges. A score in the low range indicates an absence or lack of the behaviors associated with a given dimension, while a score in the high range indicates a high presence of such behaviors. Scores in the high range are desirable for all dimensions except for Negative Climate. With this dimension, the goal is a low score, or an absence of negativity.

Research Foundations of CLASS

The CLASS framework is derived from developmental theory and research suggesting that interactions between students and adults are the primary mechanism of child development and learning.

Elementary CLASS

Research provides evidence about the types of teacher-student interactions that promote positive social and academic development. The Classroom Assessment Scoring System™ (CLASS) provides a reliable, valid assessment of these interactions[2]

Selected studies demonstrate:

- Higher levels of instructional support are related to preschoolers' gains in pre-reading and math skills.[3]
- High levels of emotional support contribute to preschoolers' social competence in the kindergarten year.[4]
- High levels of emotional support are associated with growth in reading and math achievement from kindergarten through fifth grade.[5]
- High levels of classroom organization are associated with gains in first graders' literacy.[6]
- Kindergarten children are more engaged and exhibit greater self-control in classrooms offering more effective teacher-child interactions.[7]

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[2] Karen LaParo, Robert Pianta, and Meghan Stuhlman, "Classroom Assessment Scoring System (CLASS): Findings from the Pre-K Year," Elementary School Journal, 104:5, pages 409-426.
[3] Mashburn, Pianta, Hamre, Downer et al., Child Development,79, pages 732-749.
[4] Timothy Curby, Jennifer Locasale-Crouch, Timothy Konold, Robert Pianta, Carollee Howes, Margaret Burchinal et al., "The Relations of Observed Pre-K Classrooms Quality Profiles to Children's Academic Achievement and Social Competence," Early Education and Development, 19, pages 643-666.
[5] Robert Pianta, Jay Belsky, Nathan Vandergrift, Renee Houts, Fred Morrison, and NICHD-ECCRN, "Classroom Effects on Children's Achievement Trajectories in Elementary School," American Education Research Journal, 49, pages 365-397.
[6] Claire Cameron Ponitz, Sara Rimm-Kaufman, Laura Brock, and Lori Nathanson, "Contributions of gender, early school adjustment, and classroom organizational climate to first grade outcomes," Elementary School Journal, 110, 142-162.

- First-grade children at risk for school failure perform on par with peers, both socially and academically, when exposed to classrooms with effective teacher-student interactions.[8]

Moreover, studies conducted in over 6,000 classrooms provide evidence that students in PK–5 classrooms with higher CLASS ratings realize greater gains in achievement and social skill development.[9]

Secondary CLASS

Research using the more recently developed secondary CLASS tool has shown that teachers' skills in establishing a positive emotional climate, their sensitivity to student needs, and their structuring of their classroom and lessons in ways that recognize adolescents' needs for a sense of autonomy and control, for an active role in their learning, and for opportunities for peer interaction were all associated with higher relative student gains in achievement.[10]

Alignment with APS Initiatives

Differentiation

The four domains measured by the CLASS are essential in effectively differentiated classrooms. In addition, dimensions such as teacher sensitivity, regard for student/adolescent perspectives, and instructional learning formats specifically address behaviors necessary for effective differentiation.

Teacher Evaluation (Danielson)

The CLASS tool is heavily aligned with Charlotte Danielson's Framework for Teaching[11], which sets forth standards for teaching behaviors in the areas of planning, instruction, classroom environment, and professional responsibility. Danielson's Levels of Performance rubrics are the foundation for all T-Scale staff evaluation in APS.

Cultural Competence

There is strong alignment between Gay's Exemplars of Culturally Responsive Behaviors[12] and classroom behaviors identified in the CLASS tool. The APS Council for Cultural Competence was established in 2003 to develop the framework for permanent, systemwide cultural competence activities including ongoing cultural competence training for all staff. Cultural competence is a set of attitudes, skills, behaviors, and policies that enable organizations and staff to work effectively in cross-cultural situations.

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[7] Sara Rimm-Kaufman, Timothy Curby, Kevin Grimm, Lori Nathanson and Laura Brock, "The Contribution of Children's Self-Regulation and Classroom Quality to Children's Adaptive Behavior in Kindergarten," Developmental Psychology, in-press. See also NICHD ECCRN, "A Day in Third Grade: A Large- Scale Study of Classroom Quality and Teacher and Student Behavior," Elementary School Journal, 105, pages 305-323.

[8] Bridget Hamre and Robert Pianta, "Can Instructional and Emotional Support in First Grade Classrooms Make a Difference for Children At Risk of School Failure?" Child Development, 76, pages 949-967.

[9] Website http://curry.virginia.edu/uploads/resourceLibrary/CLASS-MTP_PK-12_brief.pdf Center for Advanced Study of Teaching and Learning Charlottesville, Virginia, **Measuring and Improving Teacher-Student Interactions in PK-12 Settings to Enhance Students' Learning**

[10] Joseph P. Allen, Anne Gregory, Amori Mikami, Janetta Lun, Bridget Hamre, and Robert C. Pianta, "Observations of Effective Teaching in Secondary School Classrooms: Predicting Student Achievement with the CLASS-S." Submitted.

[11] Charlotte Danielson (2007), *Enhancing Professional Practice: A Framework for Teaching*, Alexandria, VA: ASCD.

[12] Geneva Gay (2000). *Culturally Responsive Teaching: Theory, Research, & Practice.* New York: Teachers College Press.

SIOP

Many of the dimensions of the CLASS are aligned with components of the Sheltered instruction Observation Protocol (SIOP)[13], an approach to teaching that promotes content-area learning and language development for English language learners. SIOP encourages teachers to adapt grade-level content lessons to the students' levels of English proficiency, while focusing on English language development to help students increase their proficiency in academic English.

[13] Website http://siop.pearson.com/about-siop

Alignment of the Classroom Assessment Scoring System (CLASS) With APS Best Instructional Practices

Domain/ Dimension	Grades Observed	Description of CLASS Dimensions	Alignment with			
			Differentiation[1]	Responsive Education[2]	Danielson[3]	SIOP[4]
Emotional Support						
Positive Climate	Pre-K - 12	Reflects the emotional connection and relationships among teachers and students, and the warmth, respect, and enjoyment communicated by verbal and non-verbal interactions.		X	X	
Teacher Sensitivity	Pre-K - 12	Encompasses the teacher's awareness and responsiveness to the academic, social-emotional, and developmental needs of individual students and the entire class. At the younger levels, it also includes the teacher's ability to consistently provide comfort, reassurance, and encouragement.	X	X	X	X
Regard for *Student/Adolescent* Perspective	Pre-K – 3	*Student:* At the younger levels, it captures the degree to which the teacher's interactions with students and classroom activities place an emphasis on students' interests, motivations, and points of view and encourage student responsibility and autonomy.	X	X	X	X
	4-12	*Adolescent:* At the older levels, it focuses on the extent to which the teacher is able to meet and capitalize on the social and developmental needs and goals of (pre)adolescents by providing opportunities for student autonomy and leadership. Also considered are the extent to which student ideas and opinions are valued and content is made useful and relevant to (pre)adolescents.	X	X	X	X
Classroom Organization						
Behavior Management	Pre-K - 12	Encompasses the teacher's use of clear behavioral expectations and effective methods to prevent and redirect misbehavior.		X	X	
Productivity	Pre-K - 12	Considers how well the teacher manages time and routines so that instructional time is maximized.			X	
Negative Climate[5]	Pre-K - 12	Reflects the overall level of expressed negativity among teachers and students in the classroom; the frequency, quality, and intensity of teacher and student negativity are important to observe.		X	X	
Instructional Support						
Concept Development	Pre-K – 3	Measures the teacher's use of instructional discussions and activities to promote students' higher-order thinking skills and cognition and the teacher's focus on understanding rather than on rote instruction.	X		x	X

[1] Differentiation or differentiated instruction is an approach that recognizes that all students must master a common body of knowledge and skills, but each student learns a different way and needs an approach most appropriate to his or her learning needs. Differentiation relates to content (what students learn), process (how students learn), and product (how students demonstrate what they've learned). Students differ in readiness (prior mastery of knowledge, understandings, and skills), interest (curiosity and passion to know, understand, or do more), and how they prefer to learn (Tomlinson, 1999).

[2] Responsive education or culturally responsive teaching is a pedagogy that recognizes the importance of including students' cultural references in all aspects of learning (Ladson-Billings, 1994).

Alignment of the Classroom Assessment Scoring System (CLASS) With APS Best Instructional Practices

Domain/ Dimension	Grades Observed	Description of CLASS Dimensions	Alignment with			
			Differentiation[1]	Responsive Education[2]	Danielson[3]	SIOP[4]
Content Understanding	4-12	Refers to both the depth of the lesson content and the approaches used to help students comprehend the framework, key ideas, and procedures in an academic discipline. At a high level, this refers to interactions among the teacher and students that lead to an integrated understanding of facts, skills, concepts, and principles.		X	X	X
Analysis and Inquiry	4-12	Assesses the degree to which the teacher facilitates students' use of higher-level thinking skills, such as analysis, problem solving, reasoning, and creation through the application of knowledge and skills. Opportunities for demonstrating metacognition, i.e. thinking about thinking, are also included.	X	X		X
Instructional Learning Formats[6]	Pre-K - 12	Focuses on the ways in which the teacher maximizes students' interest and engagement in learning. This includes the teacher's use of interesting and engaging lessons and materials, active facilitation, and clarity of learning objectives.	X	X	X	X
Quality of Feedback	Pre-K - 12	Assesses the degree to which feedback expands and extends learning and understanding and encourages student participation. (At the secondary level, significant feedback may be provided by peers)		X	X	X
Language Modeling	Pre-K-3	Captures the quality and amount of the teacher's use of language-stimulation and language-facilitation techniques.			X	X
Instructional Dialogue	4-5	Captures the purposeful use of dialogue- structured, cumulative questioning and discussion which guide and prompt students- to facilitate students' understanding of content and language development. The extent to which these dialogues are distributed across all students in the class and across the class period is important to this rating.			X	X
Student Engagement	4-12	Intended to capture the degree to which all students in the class are focused and participating in the learning activity presented or facilitated by the teacher. The difference between passive engagement and active engagement is of note in this rating.		X	X	X

[3] Danielson's Domains of Teaching Responsibility frame the APS teacher evaluation process and are based on Charlotte Danielson's Enhancing Professional Practice. The domains are the areas in which T-Scale employees are evaluated and are the foundation for Best Instructional Practices. For classroom based teachers they include: Planning and Preparation, Classroom Environment, Instruction and Professional Responsibilities. For non-classroom-based teachers the domains are: Planning and Preparation, Environment, Delivery of Service, and Professional Responsibilities.

[4] Sheltered instruction Observation Protocol (SIOP) is an approach to teaching that promotes content-area learning and language development for English language learners. Teachers adapt grade-level content lessons to the students' levels of English proficiency, while focusing on English language development to help students increase their proficiency in academic English.

[5] This dimension falls under the Emotional Support domain at the pre-K and lower elementary levels.

[6] This dimension falls under the Classroom Organization domain at the pre-K and lower elementary levels.

Classroom Assessment Scoring System (CLASS)
Domain and Dimension Scores

CLASS is an observation tool developed at the University of Virginia's Curry School of Education to help analyze the interactions between teachers and their students in order to boost the effectiveness of teaching and learning.

The CLASS tool organizes these teacher-student interactions into three broad domains: Emotional Support, Classroom Organization, and Instructional Support. The upper elementary (grades 4–5) and secondary tool includes a fourth domain: Student Engagement.

CLASS observations were conducted throughout the 2014-15 school year. In order to analyze the relationship between participation in professional development and high quality instruction, CLASS results were matched to teachers' total hours of professional development for the school years 2011-12, 2012-13 and 2013-14. Only teachers who taught during these three school years were included in this data analysis.

Table 1: Average Number of Professional Development Hours, 2011-12 through 2013-14

CLASS Level	N	Average Number of PD Hours for Three Years
Lower Elementary	435	118
Upper Elementary	121	129
Secondary	291	101

Figure 1: Lower Elementary Professional Development Hours for Three Years

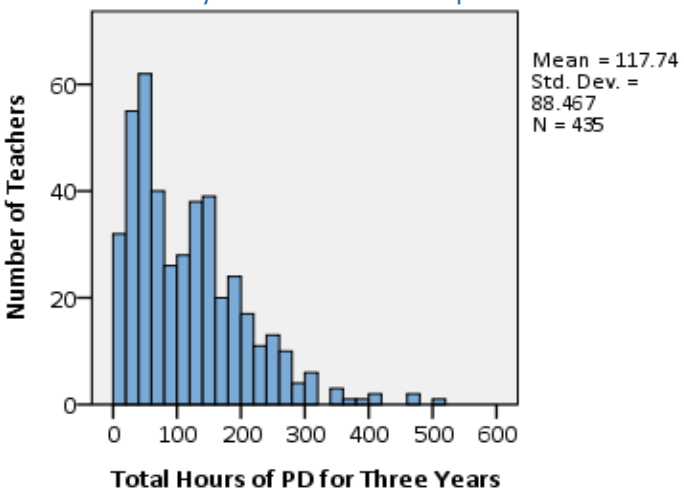


Figure 2: Upper Elementary Professional Development Hours for Three Years

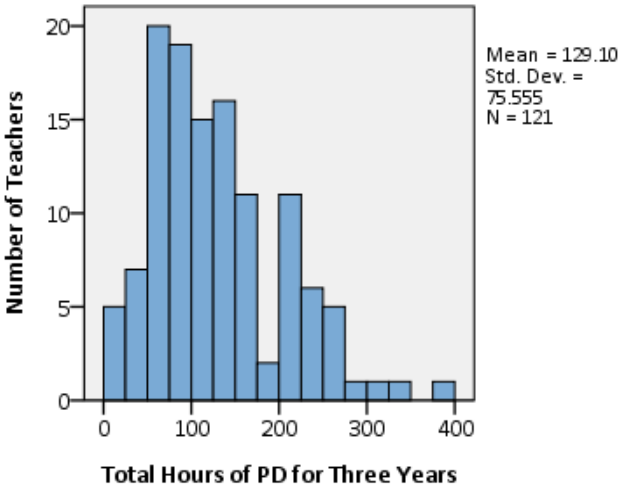


Figure 3: Secondary Professional Development Hours for Three Years

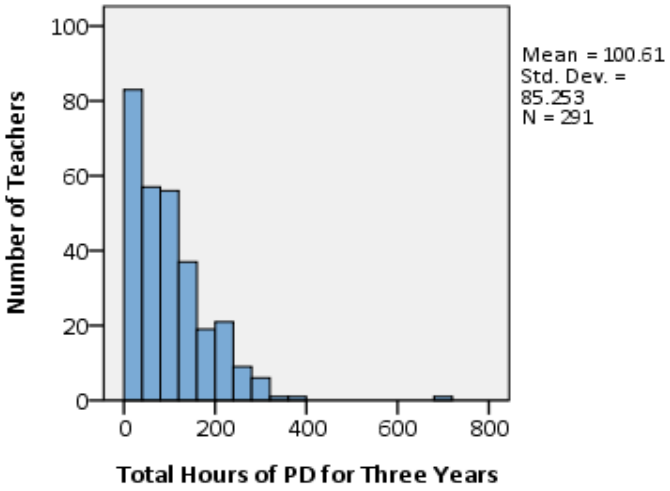


Table 2: Lower Elementary CLASS Scores by Total Hours of Professional Development

	1-50 PD Hours (n=60)		50-100 PD Hours (n=62)		101-150 PD Hours (n=72)		151-200 PD Hours (n=54)		More than 200 PD Hours (n=66)	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Emotional Support	5.4	0.4	5.6	0.5	5.6	0.5	5.6	0.4	5.7	0.4
Positive Climate	5.4	0.7	5.4	0.8	5.5	0.8	5.6	0.8	5.8	0.6
Negative Climate[1]	1.1	0.3	1.0	0.1	1.0	0.2	1.0	0.1	1.0	0.2
Teacher Sensitivity	5.6	0.6	5.8	0.7	5.9	0.7	5.8	0.7	5.9	0.7
Regard for Student Perspectives	3.9	0.8	4.1	1.0	4.1	0.8	3.8	0.9	4.2	0.8
Classroom Organization	6.1	1.3	6.2	0.4	6.0	5.4	6.0	0.5	6.1	0.4
Behavior Management	6.2	0.7	6.5	0.5	6.3	0.8	6.3	0.7	6.4	0.5
Productivity	6.4	0.7	6.4	0.6	6.2	0.6	6.4	0.6	6.4	0.5
Instructional Learning Formats	5.6	1.9	5.5	0.6	5.6	0.7	5.5	0.6	5.6	0.6
Instructional Support	3.5	0.9	3.8	0.8	3.8	0.8	3.7	0.8	3.9	0.8
Concept Development	3.3	1.0	3.5	0.9	3.6	1.0	3.6	0.8	3.7	1.0
Quality of Feedback	3.6	1.0	3.9	0.9	4.0	0.9	3.9	0.9	4.1	0.8
Language Modeling	3.7	1.0	3.8	0.9	3.8	1.0	3.8	1.0	4.0	0.9

[1] A lower score is desirable for the Negative Climate Dimension. The Negative Climate score is reversed when calculating the Classroom Organization Domain score.

Table 3: Upper Elementary CLASS Scores by Total Hours of Professional Development

	1-50 PD Hours (N=12)		50-100 PD Hours (n=39)		101-150 PD Hours (n=32)		151-200 PD Hours (n=13)		More than 200 PD Hours (n=25)	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Emotional Support	5.0	0.7	5.0	0.7	5.1	0.6	5.1	0.6	5.3	0.7
Positive Climate	5.4	1.0	5.3	0.9	5.5	0.8	5.7	0.7	5.7	0.8
Teacher Sensitivity	5.7	0.9	5.8	0.6	5.7	0.8	5.9	0.7	6.0	0.7
Regard for Student Perspectives	3.8	0.9	3.9	1.0	3.9	0.7	3.7	0.9	4.4	1.0
Classroom Organization	6.6	0.4	6.6	0.4	6.6	0.4	6.5	0.4	6.6	0.3
Behavior Management	6.4	0.7	6.4	0.6	6.4	0.6	6.5	0.5	6.4	0.5
Productivity	6.4	0.7	6.4	0.6	6.5	0.6	6.1	0.9	6.3	0.5
Negative Climate[2]	1.0	0.1	1.0	0.2	1.0	0.2	1.0	0.0	1.0	0.1
Instructional Support	4.1	0.7	4.1	0.8	4.0	0.8	4.5	1.0	4.8	0.8
Content Understanding	4.5	1.0	4.6	1.0	4.3	1.0	4.7	1.2	5.3	0.8
Analysis and Inquiry	3.2	1.1	3.2	1.3	3.1	1.1	3.7	1.3	4.0	1.2
Instructional Learning Formats	5.5	0.7	5.4	0.7	5.3	0.7	5.2	1.2	4.7	1.0
Quality of Feedback	4.3	0.9	4.0	1.0	4.0	0.8	4.8	1.1	4.7	1.0
Instructional Dialogue	3.7	0.8	3.9	1.1	3.8	1.0	4.3	1.1	4.6	1.0
Student Engagement	5.8	0.6	5.8	0.6	5.7	0.8	5.4	1.0	5.9	0.6

[2] A lower score is desirable for the Negative Climate Dimension. The Negative Climate score is reversed when calculating the Classroom Organization Domain score.

Table 4: Secondary CLASS Scores by Total Hours of Professional Development

	1-50 PD Hours (N=100)		50-100 PD Hours (n=67)		101-150 PD Hours (n=56)		151-200 PD Hours (n=26)		More than 200 PD Hours (N=39)	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Emotional Support	5.3	0.9	5.3	1.0	5.4	1.0	5.8	0.6	5.4	0.8
Positive Climate	5.6	0.8	5.5	0.9	5.6	1.0	6.0	0.4	5.7	0.7
Teacher Sensitivity	5.4	0.9	5.5	0.9	5.5	1.0	6.0	0.6	5.6	0.9
Regard for Adolescent Perspectives	4.8	1.2	4.9	1.3	5.0	1.3	5.3	1.0	4.9	0.7
Classroom Organization	6.3	0.6	6.4	0.5	6.2	0.8	6.4	0.4	6.2	0.7
Behavior Management	6.0	0.8	6.2	0.7	5.9	0.9	6.1	0.5	5.8	0.9
Productivity	6.0	0.8	6.0	0.8	5.9	1.0	6.1	0.6	5.9	0.8
Negative Climate[3]	1.1	0.3	1.1	0.3	1.3	0.8	1.1	0.1	1.2	0.5
Instructional Support	4.8	1.1	4.8	1.2	4.8	1.2	5.3	0.9	5.0	0.7
Content Understanding	5.3	1.1	5.3	1.2	5.1	1.3	5.5	0.9	5.5	0.7
Analysis and Inquiry	4.2	1.6	4.1	1.8	4.4	1.6	5.0	1.3	4.5	1.2
Instructional Learning Formats	5.3	0.9	5.3	0.9	5.3	1.0	5.6	0.8	5.4	0.6
Quality of Feedback	4.7	1.3	4.7	1.3	4.7	1.3	5.3	0.8	4.8	0.9
Instructional Dialogue	4.5	1.2	4.4	1.3	4.6	1.3	5.1	1.0	4.7	0.8
Student Engagement	5.6	0.9	5.6	0.9	5.5	0.9	5.9	0.6	5.4	0.9

[3] A lower score is desirable for the Negative Climate Dimension. The Negative Climate score is reversed when calculating the Classroom Organization Domain score.

Figure 4: Lower Elementary Emotional Support Scores by Total Hours of PD

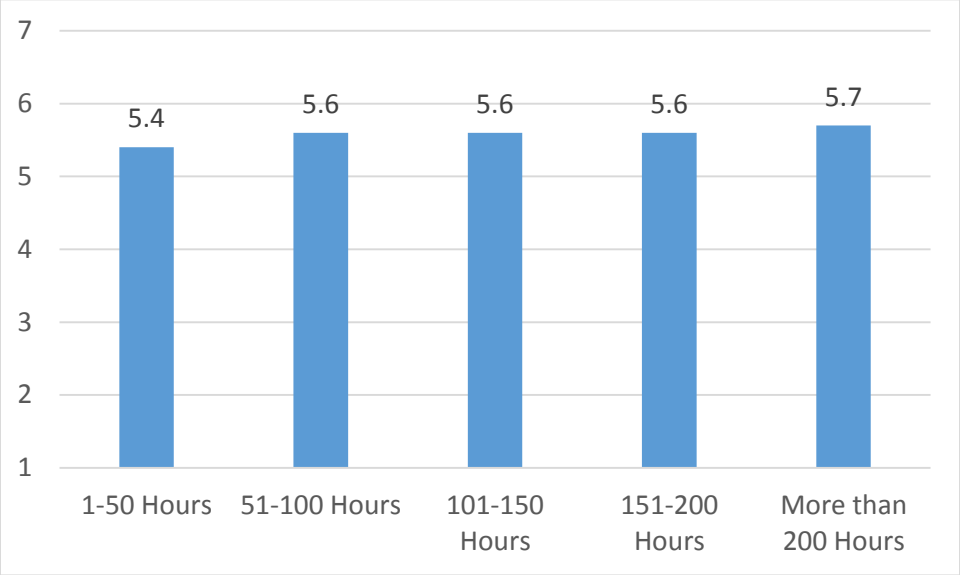


Figure 5: Lower Elementary Classroom Organization Scores by Total Hours of PD

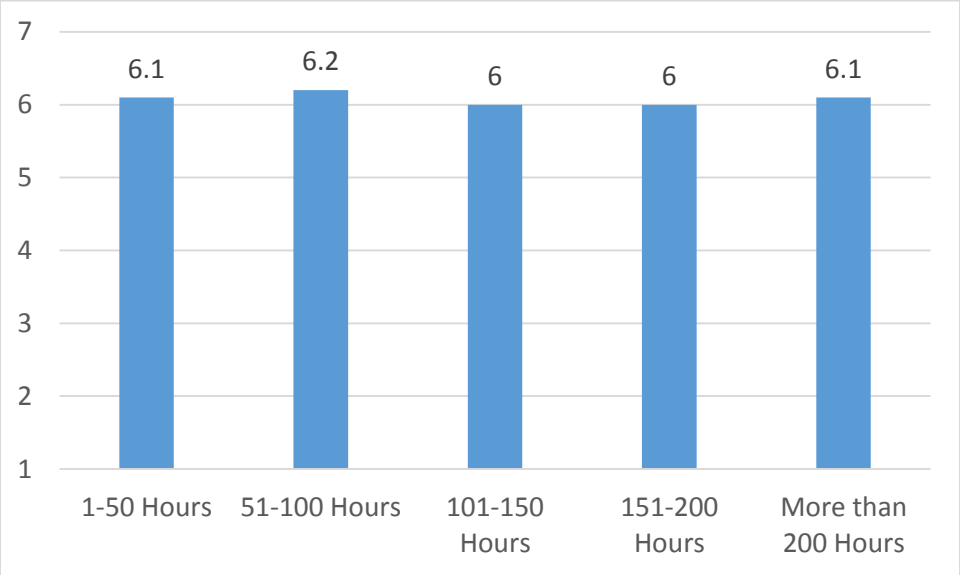


Figure 6: Lower Elementary Instructional Support Scores by Total Hours of PD

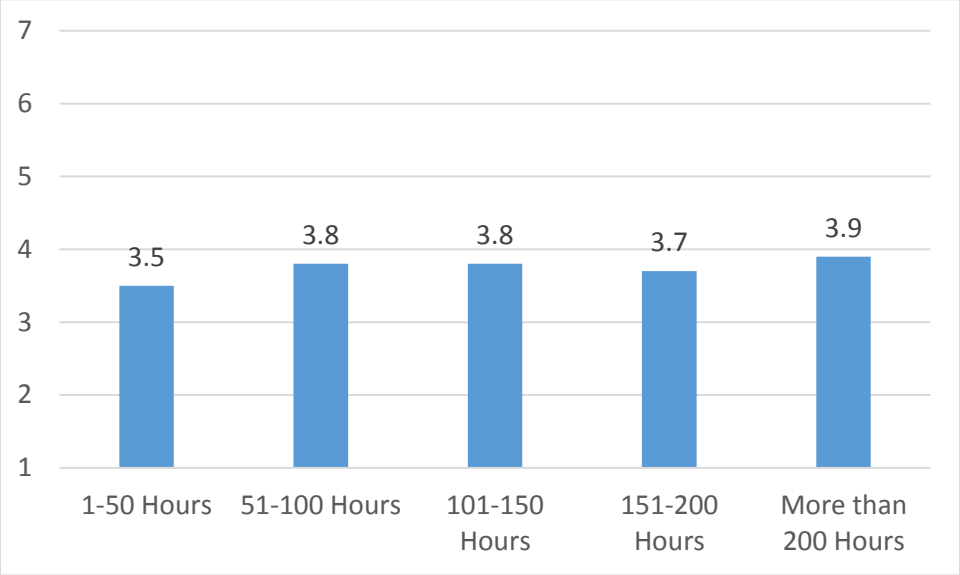


Figure 7: Upper Elementary Emotional Support Scores by Total Hours of PD

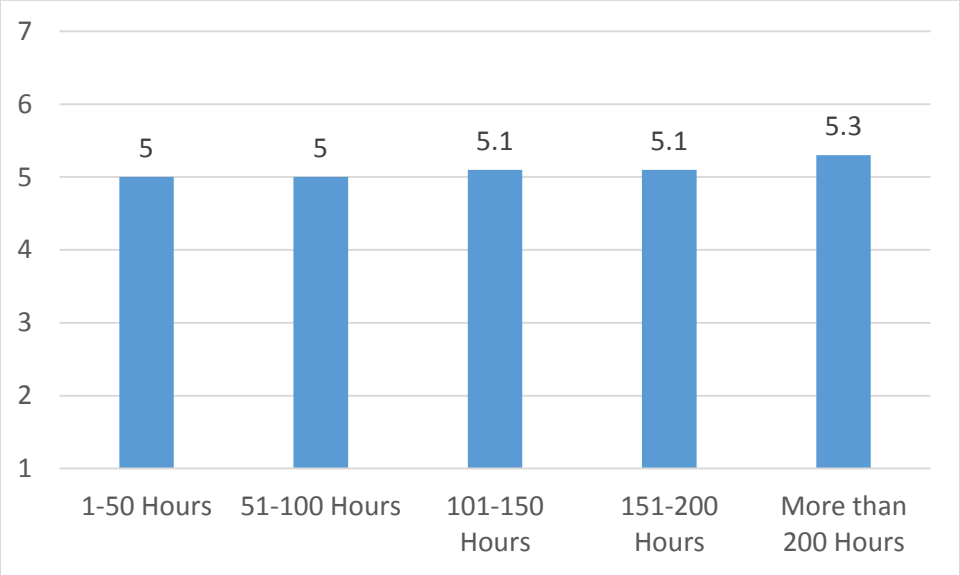


Figure 8: Upper Elementary Classroom Organization Scores by Total Hours of PD

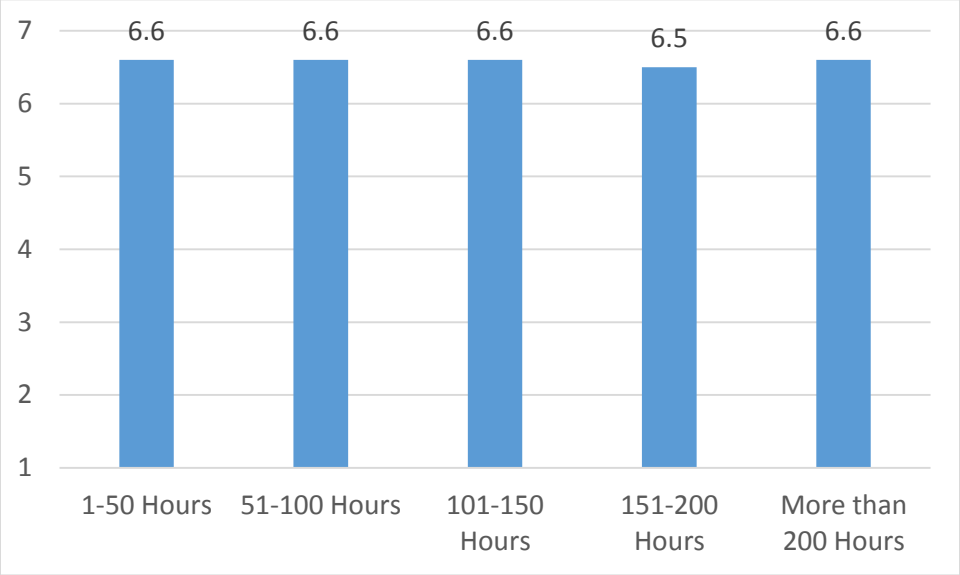


Figure 9: Upper Elementary Instructional Support Scores by Total Hours of PD

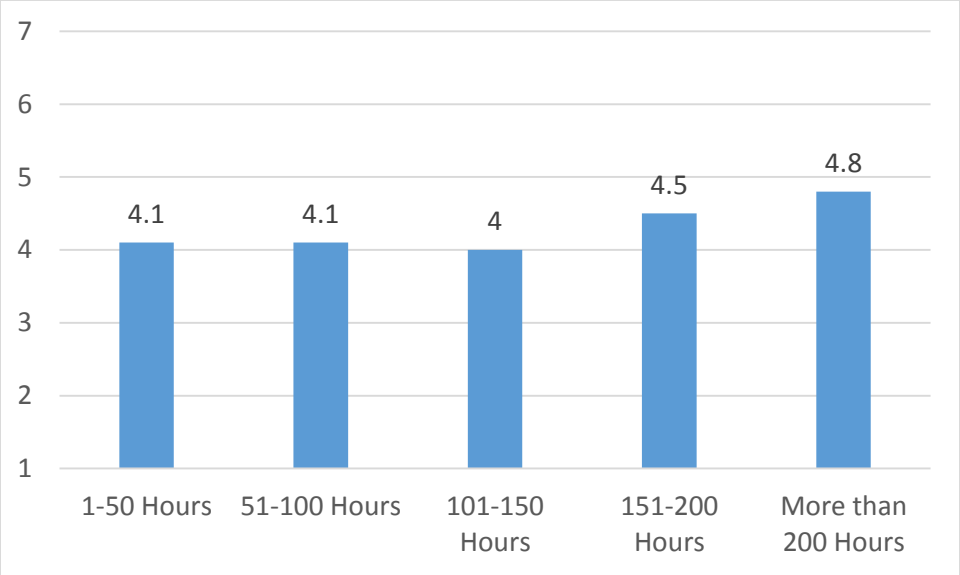


Figure 10: Upper Elementary Student Engagement Scores by Total Hours of PD

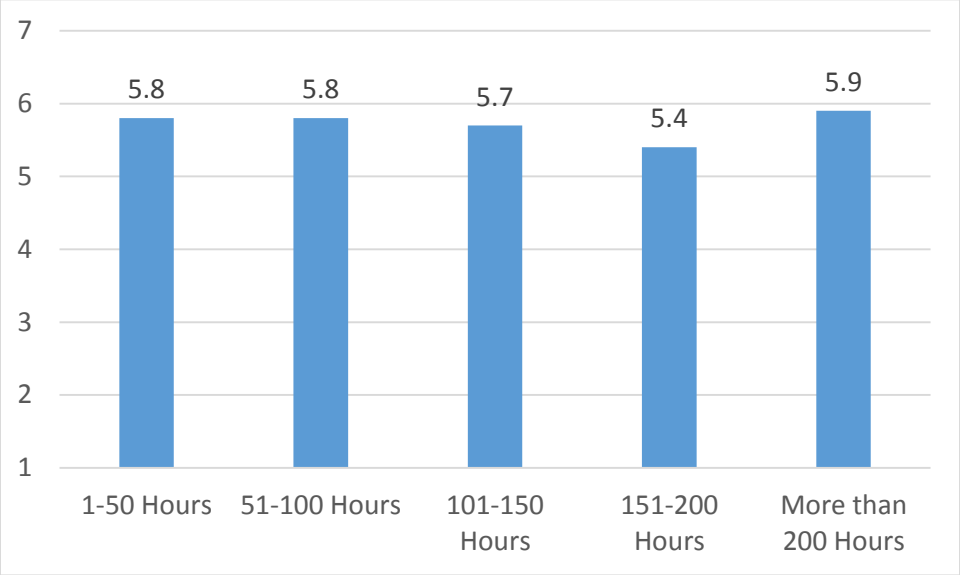


Figure 11: Secondary Emotional Support Scores by Total Hours of PD

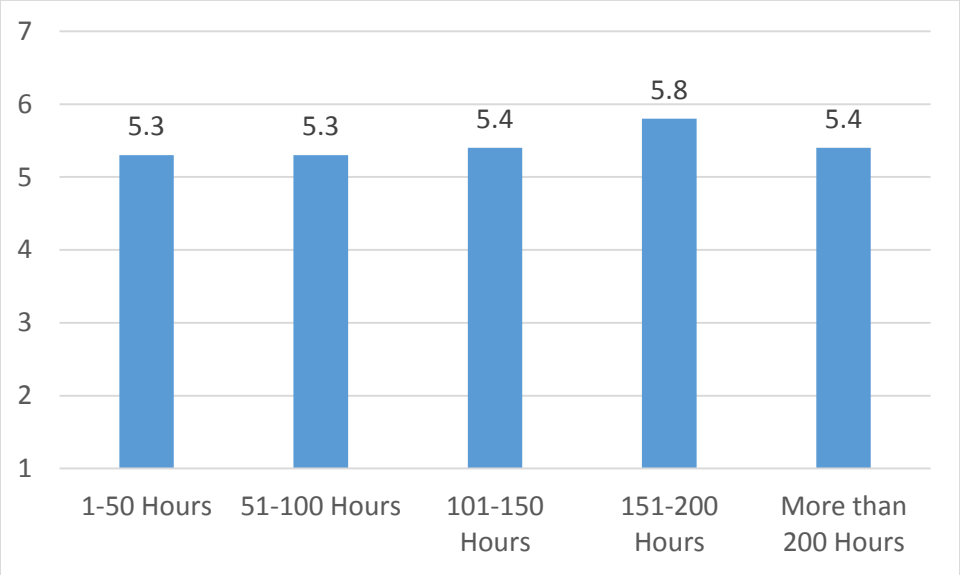


Figure 12: Secondary Classroom Organization Scores by Total Hours of PD

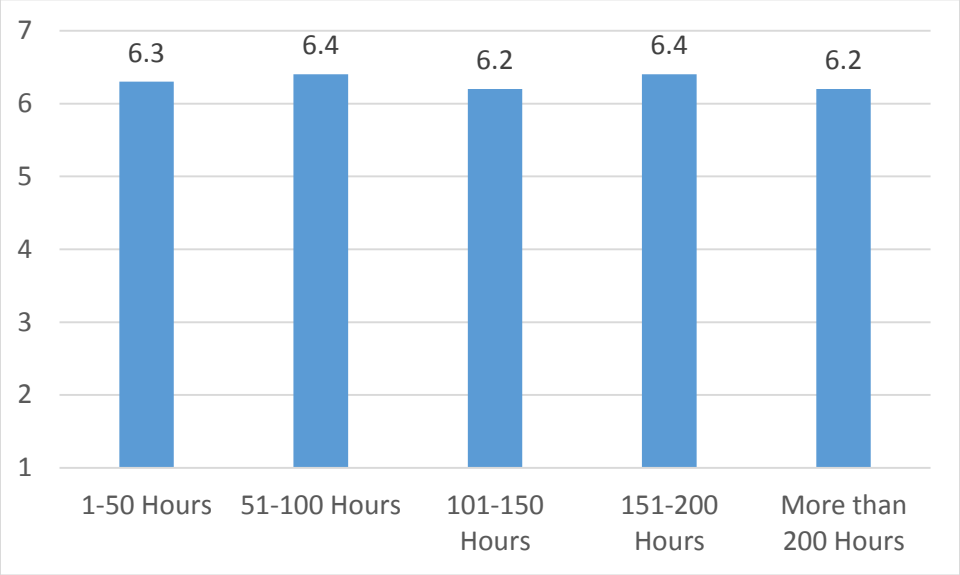


Figure 13: Secondary Instructional Support Scores by Total Hours of PD

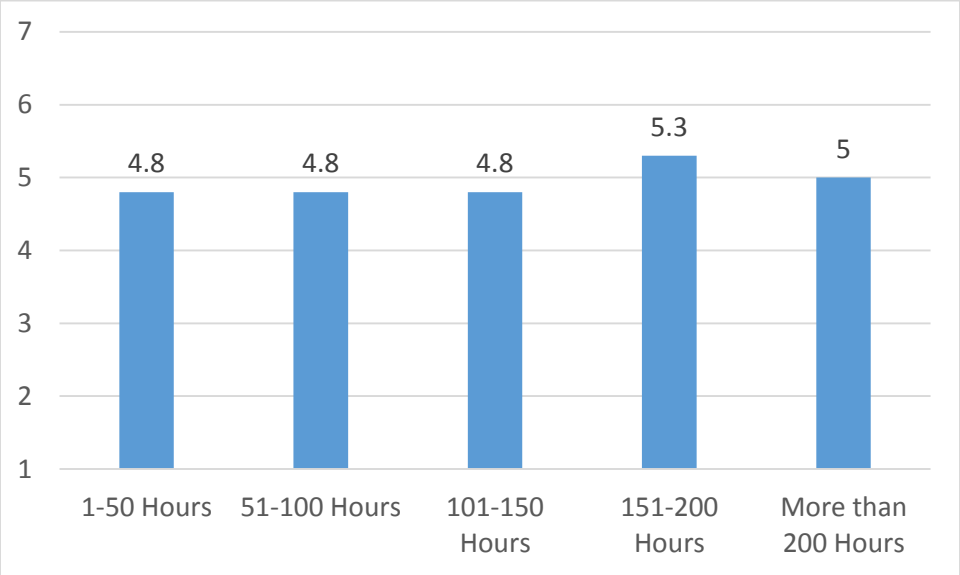


Figure 14: Secondary Student Engagement Scores by Total Hours of PD

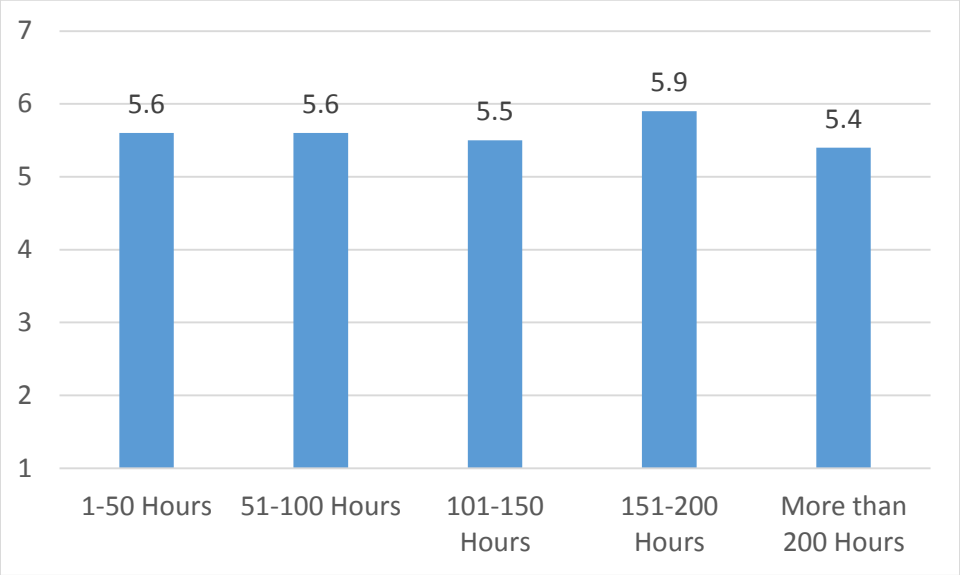


Table 5 shows the relationship between CLASS domain scores and the total number of PD hours. Small positive correlations were found to be statistically significant for **Emotional Support** and **Instructional Support** at both the lower and upper elementary levels, indicating that hours of professional development has a positive impact on observation scores. Using the R^2 statistic to indicate explained variance, this means that professional development hours explain:

- 3.61% of the variation in lower elementary Emotional Support scores
- 1.61% of the variation in lower elementary Instructional Support scores
- 3.72% of the variation in upper elementary Emotional Support scores
- 5.62% of the variation in upper elementary Instructional Support scores

Table 5: Correlation between CLASS Scores and Total Number of Professional Development Hours

CLASS Levels	CLASS Domain	Sample Size n=	Correlation *r=*	R^2	Significance level *p=*
Lower Elementary	Emotional Support	435	.19	3.61%	.00***
	Classroom Organization	435	.059	0.35%	.11
	Instructional Support	435	.127	1.61%	.004**
Upper Elementary	Emotional Support	121	.193	3.72%	.03*
	Classroom Organization	121	-.005	0.00%	.958
	Instructional Support	121	.237	5.62%	.009**
	Student Engagement	121	.009	0.01%	.926
Secondary	Emotional Support	291	.087	0.76%	.14
	Classroom Organization	291	-.060	0.36%	.308
	Instructional Support	291	.086	0.74%	.141
	Student Engagement	291	-.03	0.09%	.613

*p<.05, **p<.01, ***p<.001

Professional Development Observations

As part of the Professional Development evaluation, an observation instrument was developed to assess the degree to which best practices were incorporated into professional development sessions and trainings. This report outlines the process used to develop and administer the observation tool, and summarizes the findings.

The Professional Development Observation Tool was developed by the Professional Development Office in conjunction with the Office of Planning and Evaluation. It was based on a professional development observation tool developed by the University of Nebraska-Lincoln[1] as well as the document *8 Essential Questions*[2]. The tool contained 24 items that assessed the presence of professional development best practices. Of those 24 items, 14 items asked observers to further assign a rating of effectiveness using the following criteria:

- Ineffective- The instruction and practices inadequately addresses the participants' learning needs and/or the learning outcomes.
- Developing/Needs Improvement- Inconsistent use of instructional strategies and practices that meet individual learning needs and/or the learning outcomes.
- Effective- Participants are engaged in learning through use of a variety of strategies and practices to meet individual learning needs and the learning outcomes.
- Highly Effective- In addition to meeting the standard, the participants are engaged in higher order thinking and/or enhanced performance skills that at address the learning outcomes.

In addition, observers assigned professional development sessions and trainings an overall rating at the conclusion of their observation.

In March of 2015, the Offices of Professional Development and Planning and Evaluation trained retired teachers and central office instructional staff to use the observation tool during a six-hour training session in which they watched video-taped professional development sessions and used the tool to rate the various items being examined. Training participants engaged in discussion around what they observed, and they discussed their individual results together. Finally, the participants watched a video-taped session and used the tool independently.

Observers were paired for their initial observation to provide them with an opportunity to conduct a complete observation and engage in discussion regarding their scores with a fellow observer. Approximately four months into the observation time frame, observers were asked to attend a recalibration meeting to discuss their observation experience and score additional training videos to ensure observer reliability. Observations took place from March through November of 2015.

[1] www.ceen.unomaha.edu/TEKBOTS/SPIRIT2/Assessments/

[2] blogs.edweek.org/edweek/learning_forwards_pd_watch/2013/10/choosing_your_next_professional_learning_experience_7_essential_questions.html

Table 1 reflects the 24 items observers assessed throughout their observations of professional development sessions and trainings.

Table 1: Professional Observation Tool

	Y/N	Ineffective	Developing/ Needs Improvement	Effective	Highly Effective	Comments (Optional)
Opening						
1. Professional Development/Session Objective 2. If Y, specify objective:						
3. Learning outcomes are identified						
4. Agenda provided						
5. Assessment of participants' prior knowledge and skill						
6. Connection made between workshop activities and learning outcomes; relevance made to their position/work						
7. Connection to theory provided						
8. Norms/expectations for behavior, engagement; establish how to handle off-topic questions/issues						
COLLABORATION and LEARNING						
9. Demonstration of skills to be learned (this is what it looks like in practice)						
10. Small group work a. Purpose identified for small group work b. Utilization of varied numbers in groups partners, trios, etc. c. learning shared						
11. Whole group activities d. purpose identified e. learning shared						
12. Opportunity for participants to share experiences and insights						
13. Opportunity for participant questions with answers provided						
14. Opportunity for participants to interact with facilitator						
15. Opportunity for participants to interact with each other						

	Y/N	Ineffective	Developing/ Needs Improvement	Effective	Highly Effective	Comments (Optional)
16. Opportunity for participants to practice learned strategies and skills						
17. Accommodations made for participants' experience, preparedness, and/or learning styles b. Use of pre-assessment c. Options for if participants do not actively participate d. Various modes of instructions utilized; e.g., proximity, room arrangement, etc.						
18. Productivity- effective use of time						
REFLECTION and CLOSING						
19. Opportunity for participants to reflect on their learning **throughout** the session.						
20. Opportunity for participants to reflect on their learning at the **end of the session**.						
21. Participants demonstrate understanding of learning outcomes a. If yes, identify strategy to assess:						
22. Opportunity for participants to create an action plan for implementing/using today's learning outcomes. a. next steps/action planning b. discussion boards c. google hangouts d. communities of practice						
23. Facilitator **gathered participant input** via technology YES NO ❑ clickers ❑ survey via google ❑ survey via phone response system other:_____						
24. Participants used an **application to show their learning/create a product** YES NO ❑ google ❑ padlet other_____						

Table 2 reflects the overall rating levels used by observers at the conclusion of each professional development observation.

Table 2: Professional Development Observation Tool- Overall Rating Scale

Level 1: Ineffective Professional Development There is little or no evidence of participant thinking or engagement with important ideas of the session. Session is highly unlikely to enhance the capacity of participants to provide high quality instruction or to be effective leaders in the district(s). Professional development appears to be either (select one below): • Passive "Learning"-Session is pedantic and uninspiring. Participants are passive recipients of information; material is presented in a way that is inaccessible to or inappropriate for many of the participants. • Activities for Activity's Sake- Participants are involved in hands-on activities or other individual or group work, but it appears to be activity for activity's sake. Session lacks a clear sense of purpose and/or a clear link to the conceptual development of participants.
Level 2: Beginning Stages of Effective Professional Session contains some elements of effective practice in professional development, but there are weaknesses in the design, content, and/or implementation of the session. For example, the content is presented in a way that would reinforce misconceptions, participant's expertise is not well utilized; or the pace is clearly too rapid for meaningful participant engagement. Overall, the session is somewhat limited in its likelihood to enhance the capacity of most participants to provide high quality instruction or to be effective leaders in the district(s).
Level 3: Accomplished, Effective Professional Development Facilitation is skillful and participants are engaged in purposeful work (e.g., investigations, discussions, presentations, reading) designed to deepen their understanding of important concepts; enhance their pedagogical skills and knowledge; increase their ability to use the designated instructional materials; or to enhance their leadership skills. The facilitator(s) implement the professional development session well and participants' contributions are valued, but adaptation of content or format in response to participants' needs and interests may be somewhat limited. The session is likely to enhance the capacity of participants to provide high quality instruction or to be effective leaders in the district.
Level 4: Exemplary Professional Development Facilitation is skillful, and participants are highly engaged in purposeful work (e.g., investigations, discussions, presentations, reading) designed to deepen their understanding of important concepts; enhance their pedagogical skills and knowledge; increase their ability to use the designated instructional materials; or to enhance their leadership skills. The session is artfully implemented, with flexibility and responsiveness to participant needs/interests. The session is highly likely to enhance the capacity of participants to provide high quality instruction or to be effective leaders in the district(s).

Results of the observations are displayed on the following pages.

Table 3: Number of countywide and school-based professional development sessions

PD Session Type	Number of Observations	Percent of Observations
Countywide	105	87%
School-based	16	13%

Table 4: Duration of professional development sessions

Duration Categories	Number of Observations	Percent of Observations
0 - 2 hours	52	43%
2hr 1 min - 4 hours	45	37%
4 hours 1 min - 6 hours	12	10%
6 hours 1 min - 8 hours	12	10%

Table 5: Grade level(s) of professional development sessions

Grade level categories	Number of Observations	Percent of Observations
Elementary only	45	37%
Elementary and Middle School	11	9%
Middle School only	7	6%
Middle School and High School	10	8%
High School	6	5%
All levels	42	35%

Table 6: Intended audience of professional development sessions

Audience	Number of Observations	Percent of Observations
Teachers	91	75%
Administrators	13	11%
Assistants	4	3%
Central Office staff	5	4%
School staff	7	6%
Counselors	1	1%

Table 7: Type of Presenter

PD Session Type	Number of Observations	Percent of Observations
APS Staff	90	74%
Non-APS Staff	20	17%
Present type unknown	11	9%

Figure 1: Percent of observations that **included** the following strategies/practices during the opening (n=116-120)

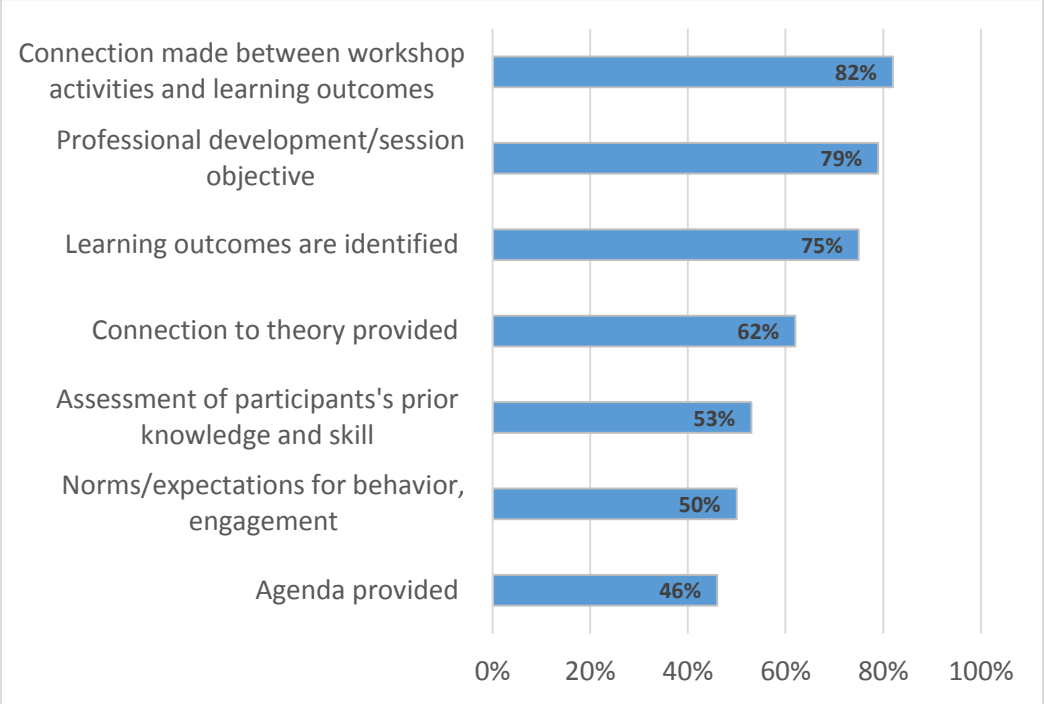


Figure 2: Percent of observations that **included** the following strategies/practices during the opening, by **type of offering**

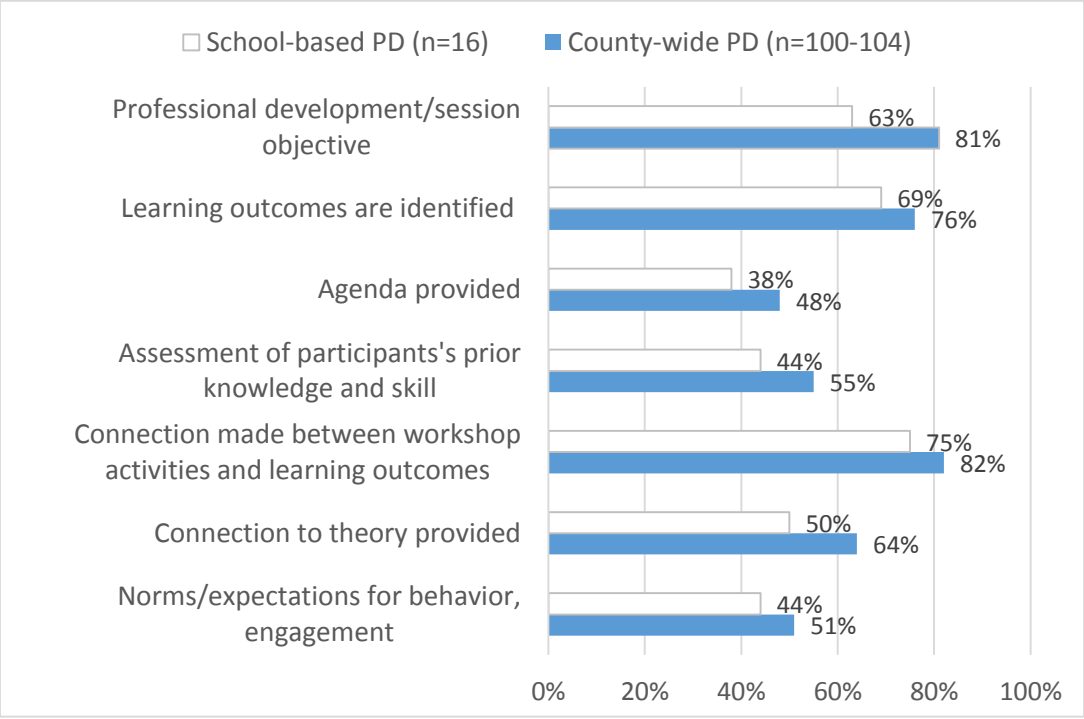


Figure 3: Percent of observations that **included** the following strategies/practices during the opening, by **duration of session/training**

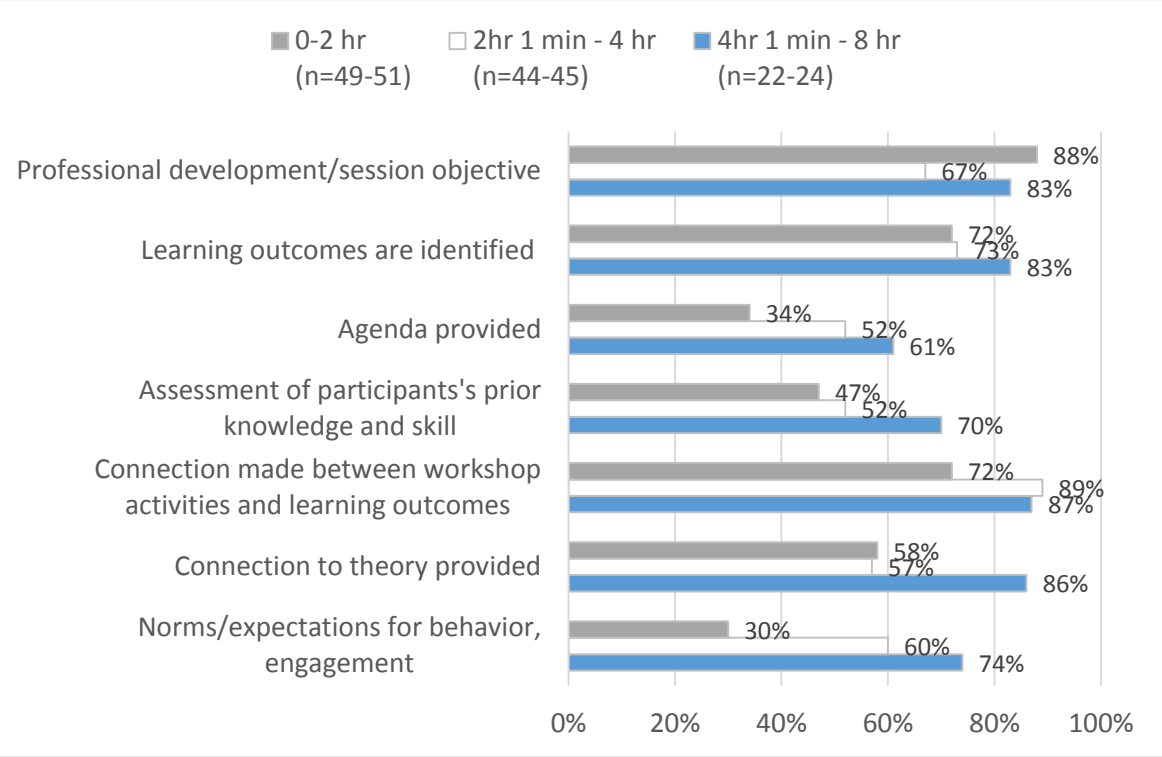


Figure 4: Percent of observations that **included** the following strategies/practices during the opening, by **type of intended audience**

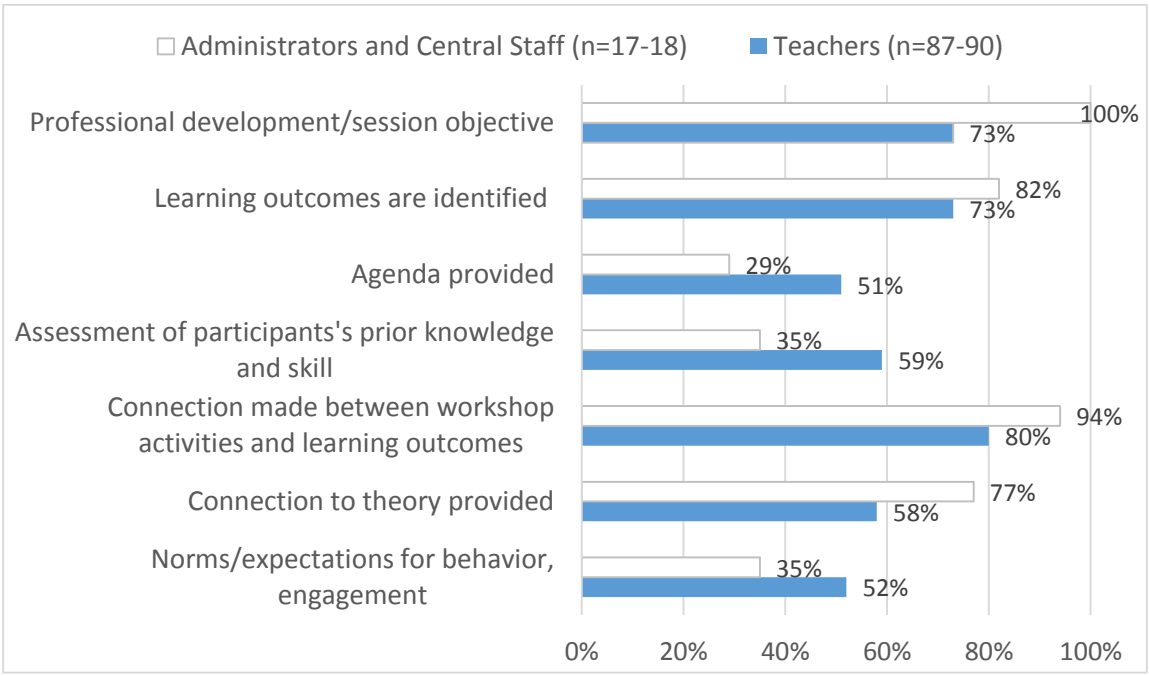


Figure 5: Percent of observations that **included** the following strategies/practices during the opening, by **type of presenter**

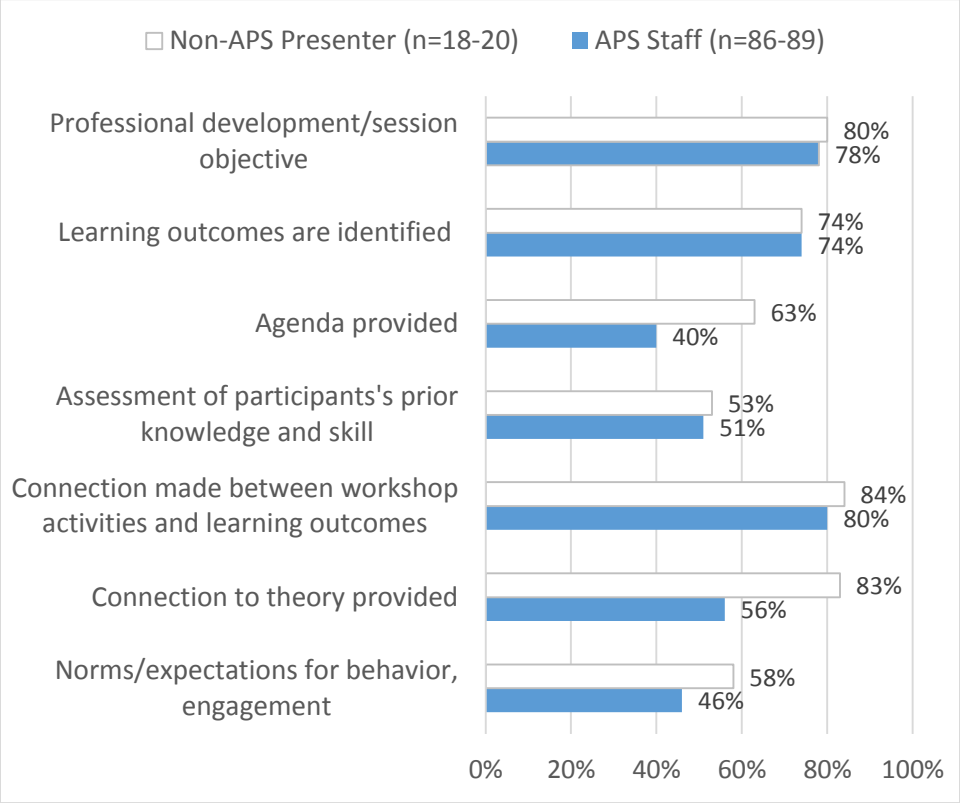


Figure 6: Percent of observations that **included** the following aspects of collaboration and learning (n=120-121)

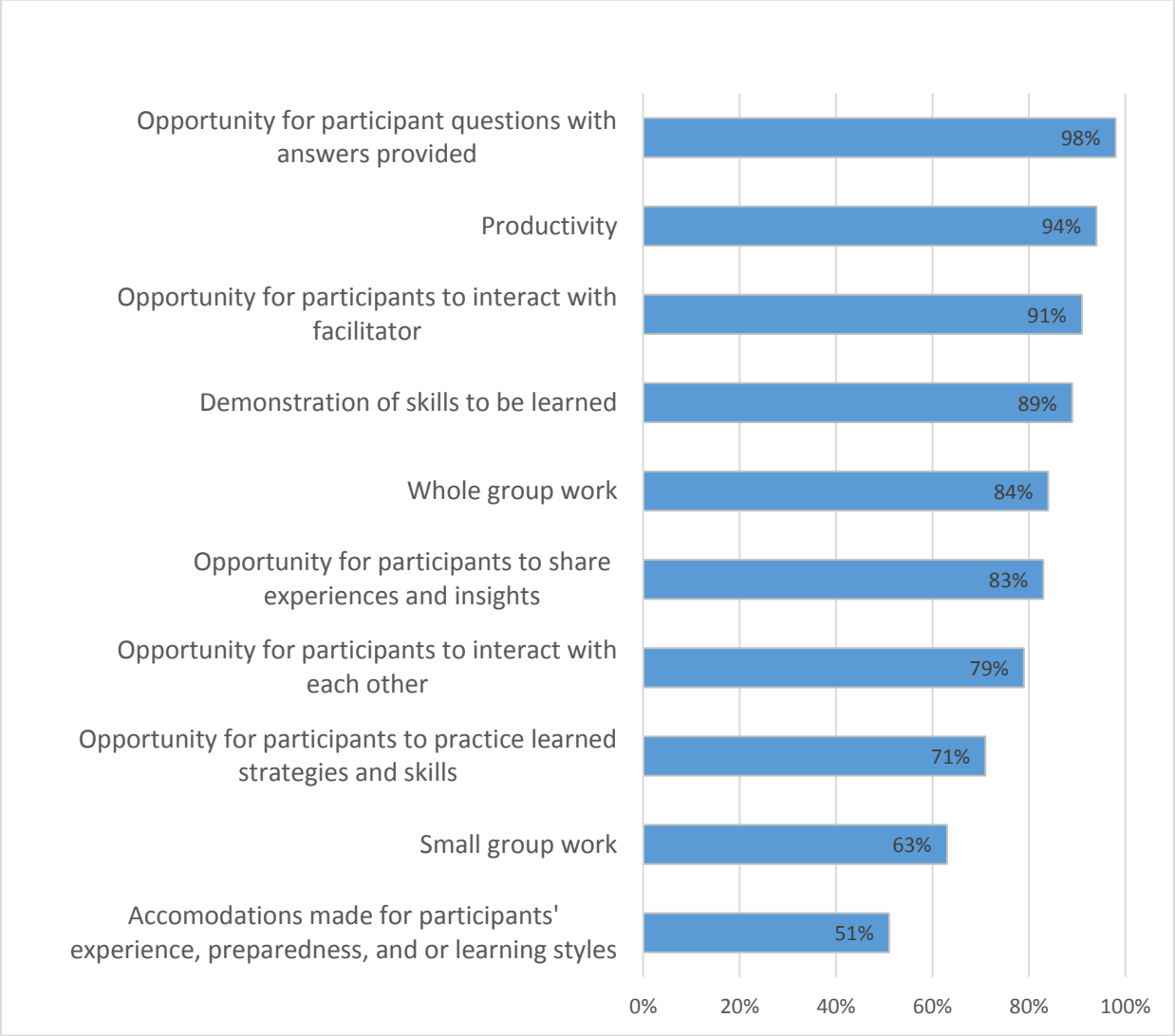


Figure 7: Percent of observations that **included** the following aspects of collaboration and learning, by **type of offering**

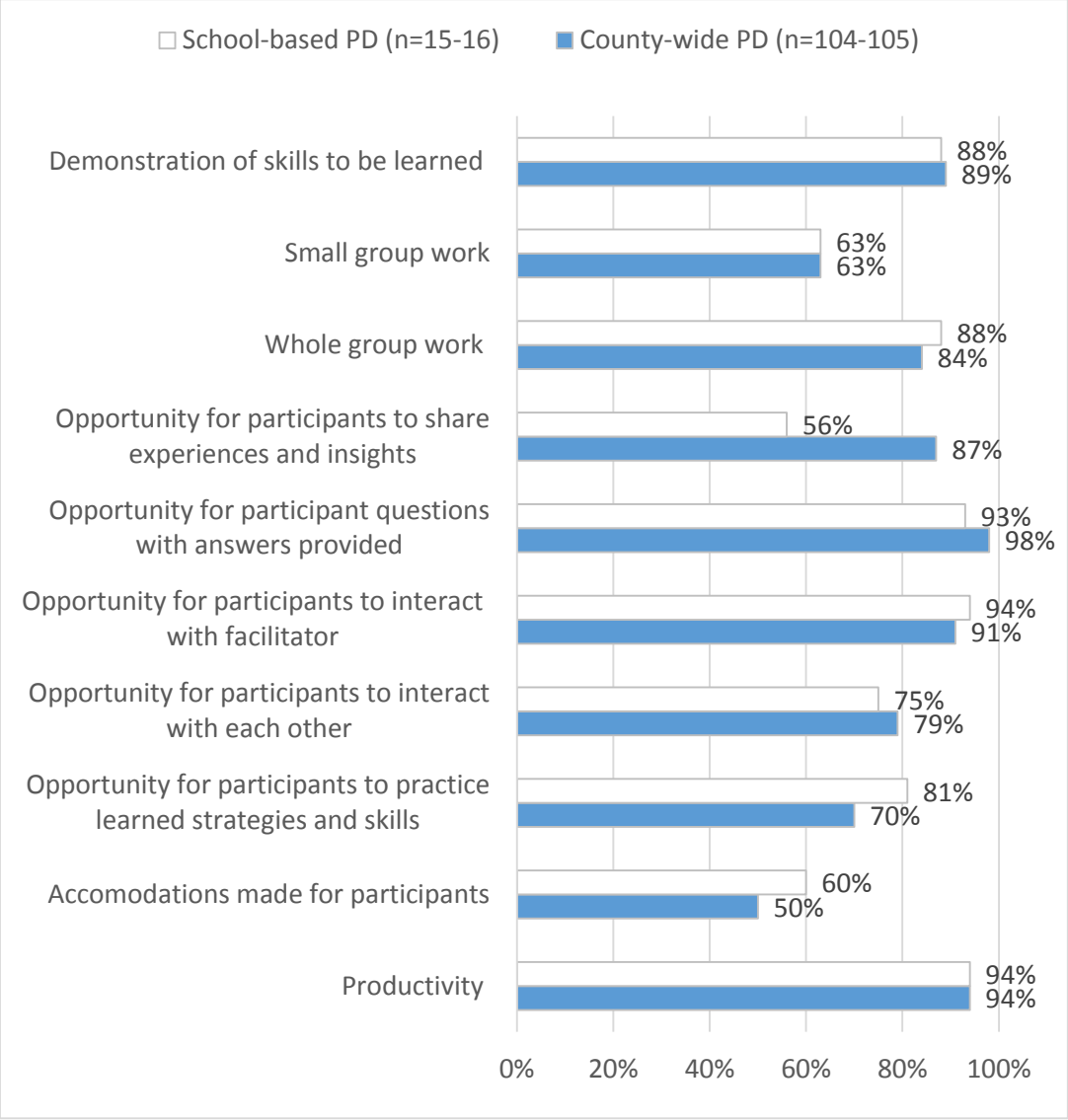


Figure 8: Percent of observations that **included** the following aspects of collaboration and learning, by **duration of session/training**

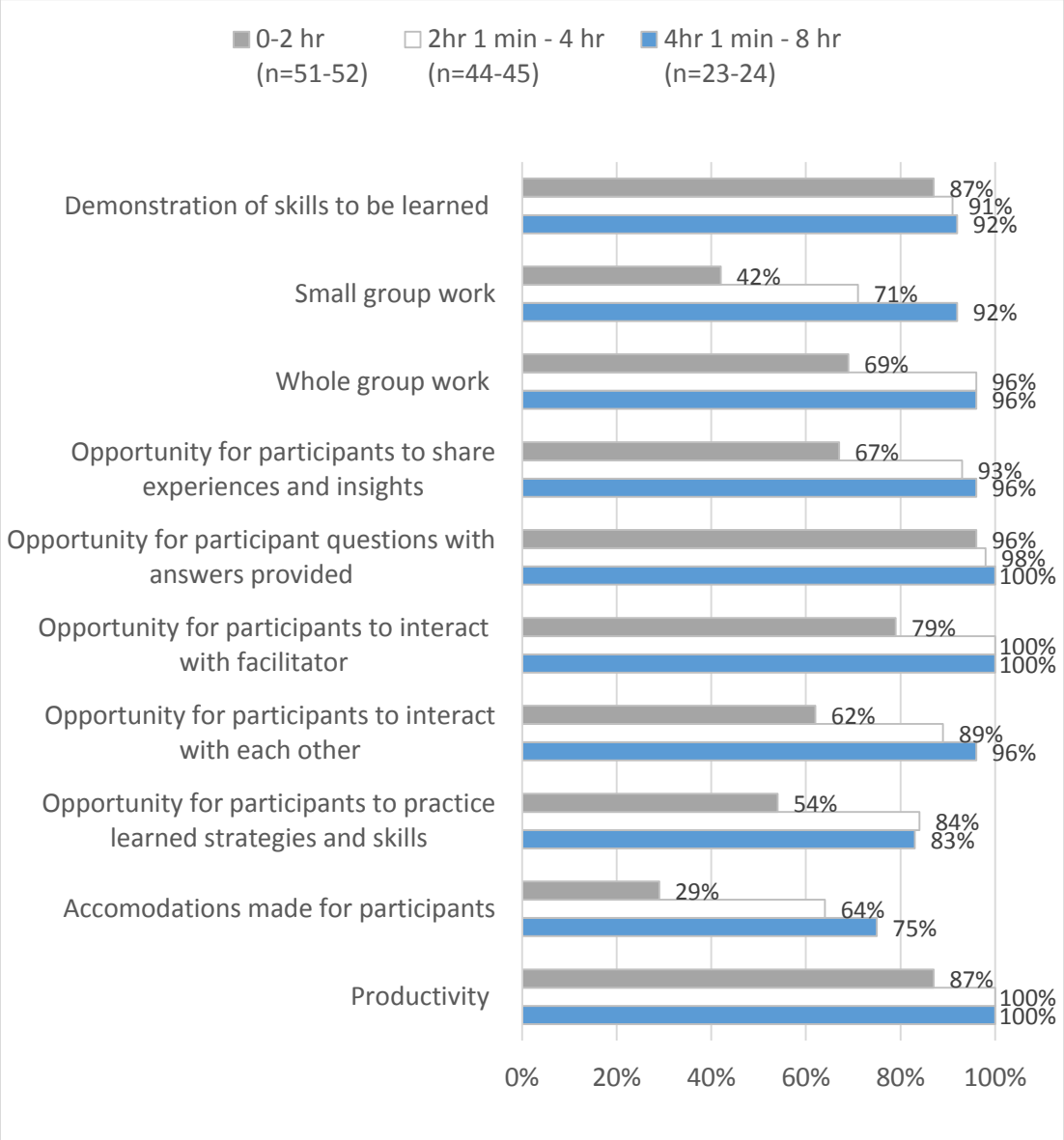


Figure 9: Percent of observations that **included** the following aspects of collaboration and learning, by **type of intended audience**

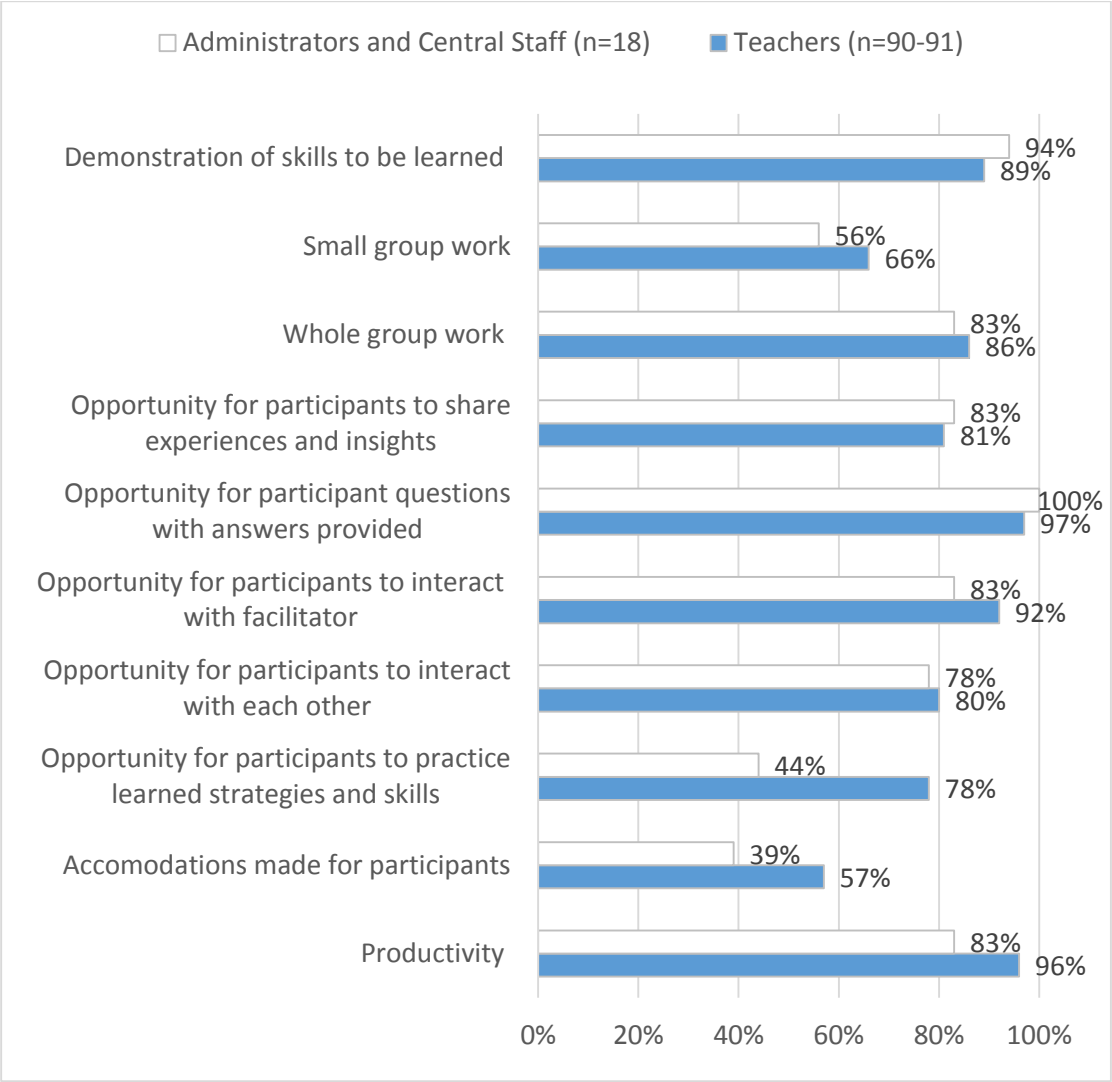
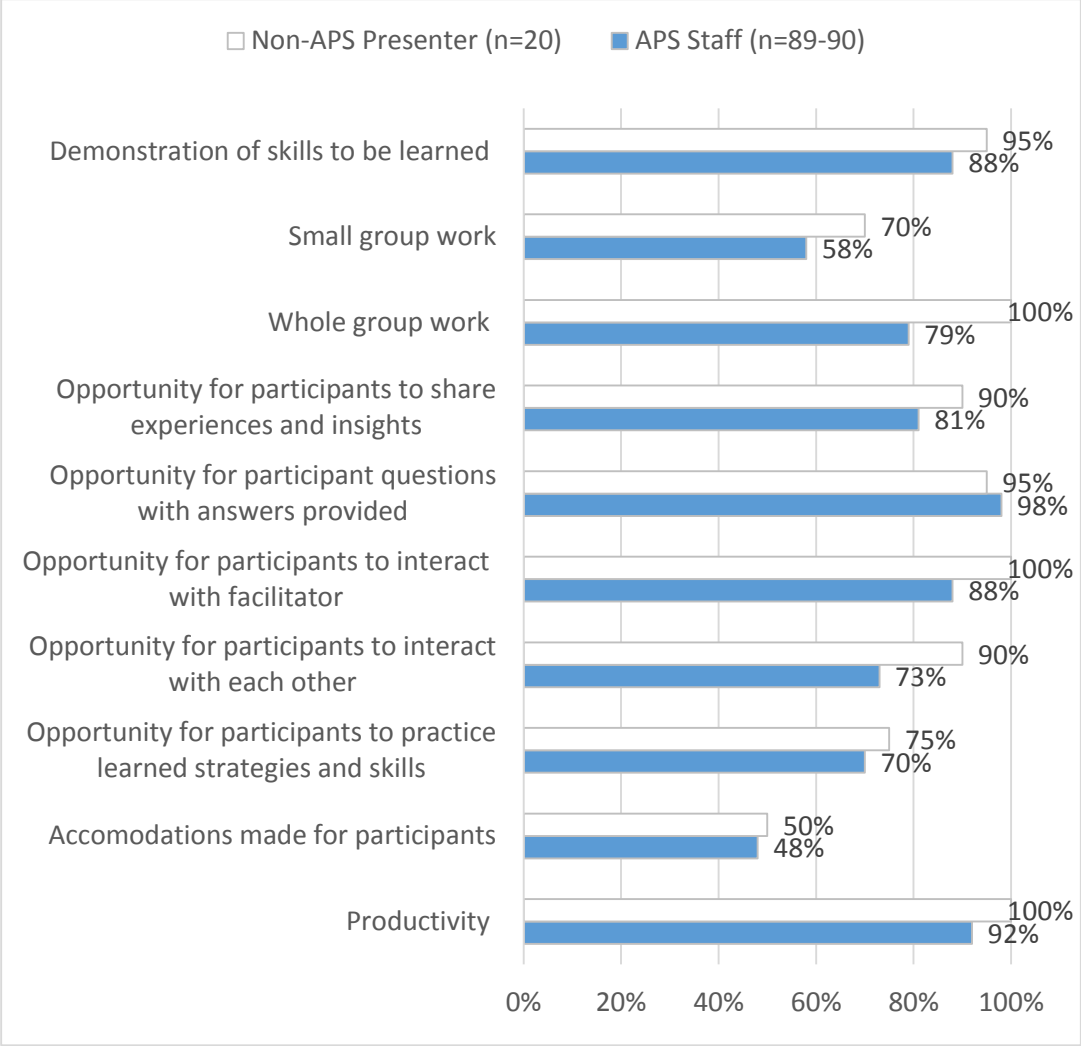


Figure 10: Percent of observations that **included** the following aspects of collaboration and learning, by **type of presenter**



Figures 11 through 15 show the level of effectiveness for identified aspects of collaboration and learning. Observers rated effectiveness only if they had already indicated that "yes" it was a present element in the session. Figures 12 through 15 show the percent of observations that were rated as highly effective or effective.

Figure 11: Level of effectiveness for identified aspects of collaboration and learning

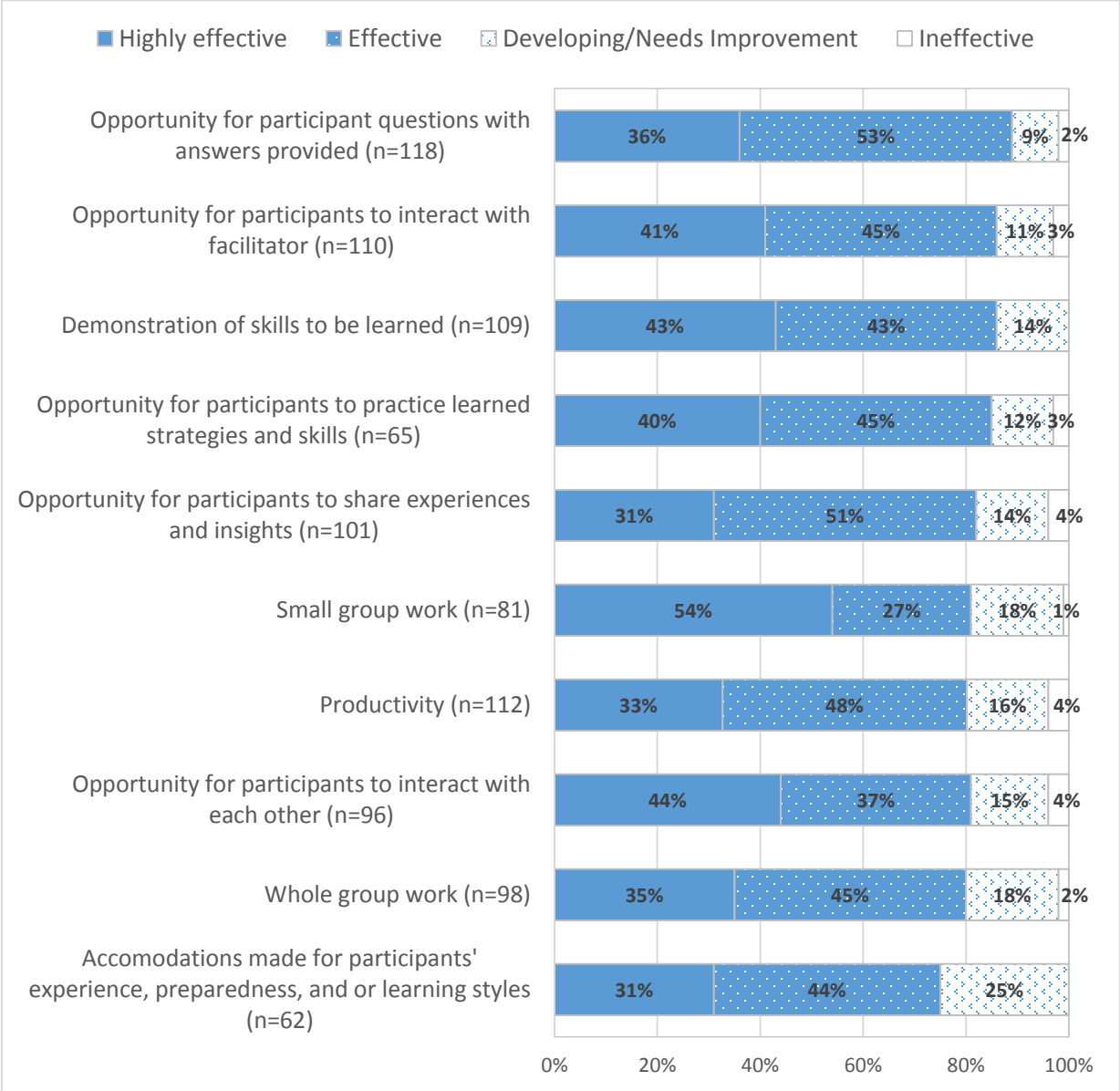


Figure 12: Percent of observations rated **highly effective or effective** for identified aspects of collaboration and learning, **by type of offering**

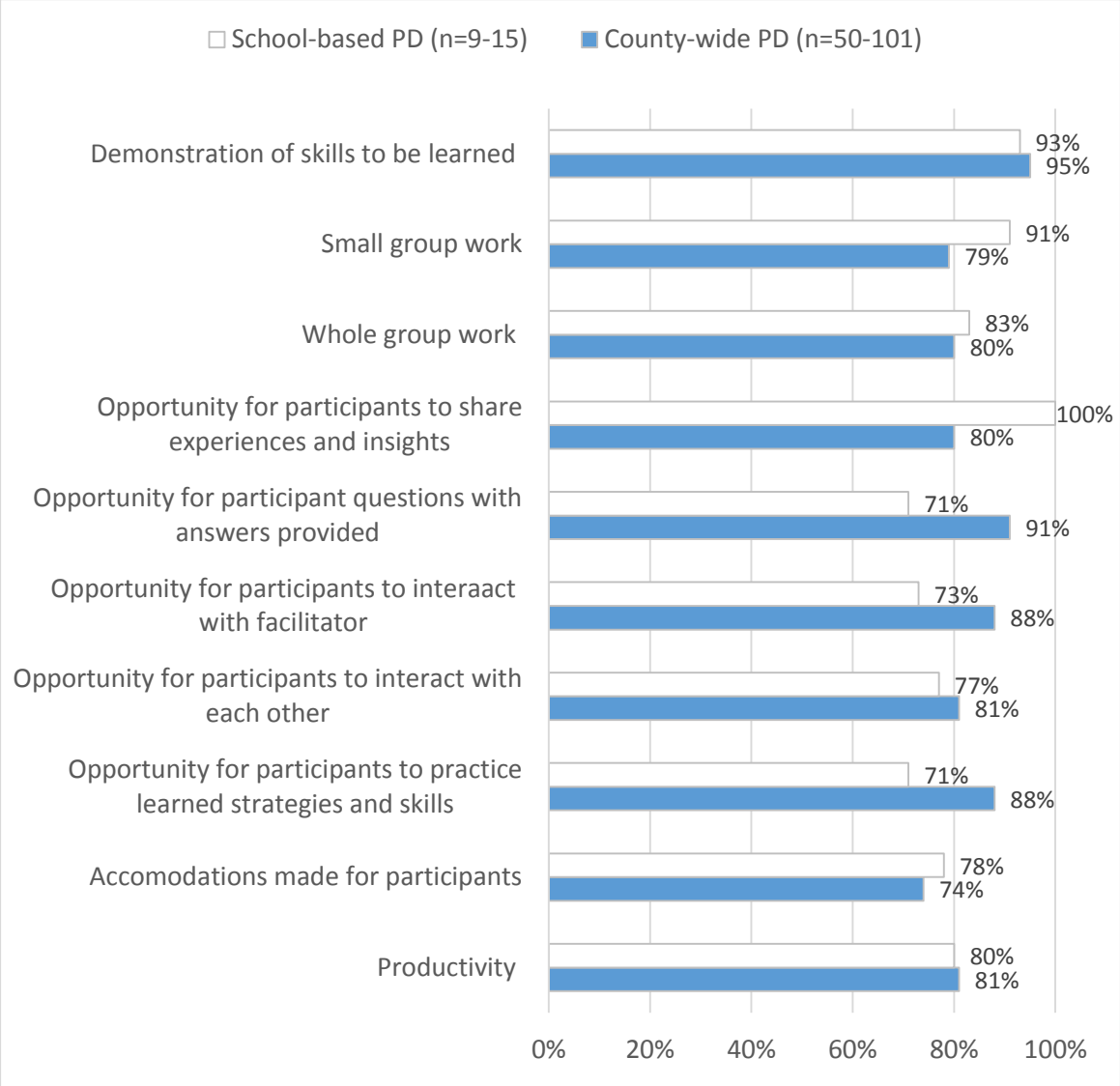


Figure 13: Percent of observations rated **highly effective or effective** for identified aspects of collaboration and learning, **by duration of session/training**

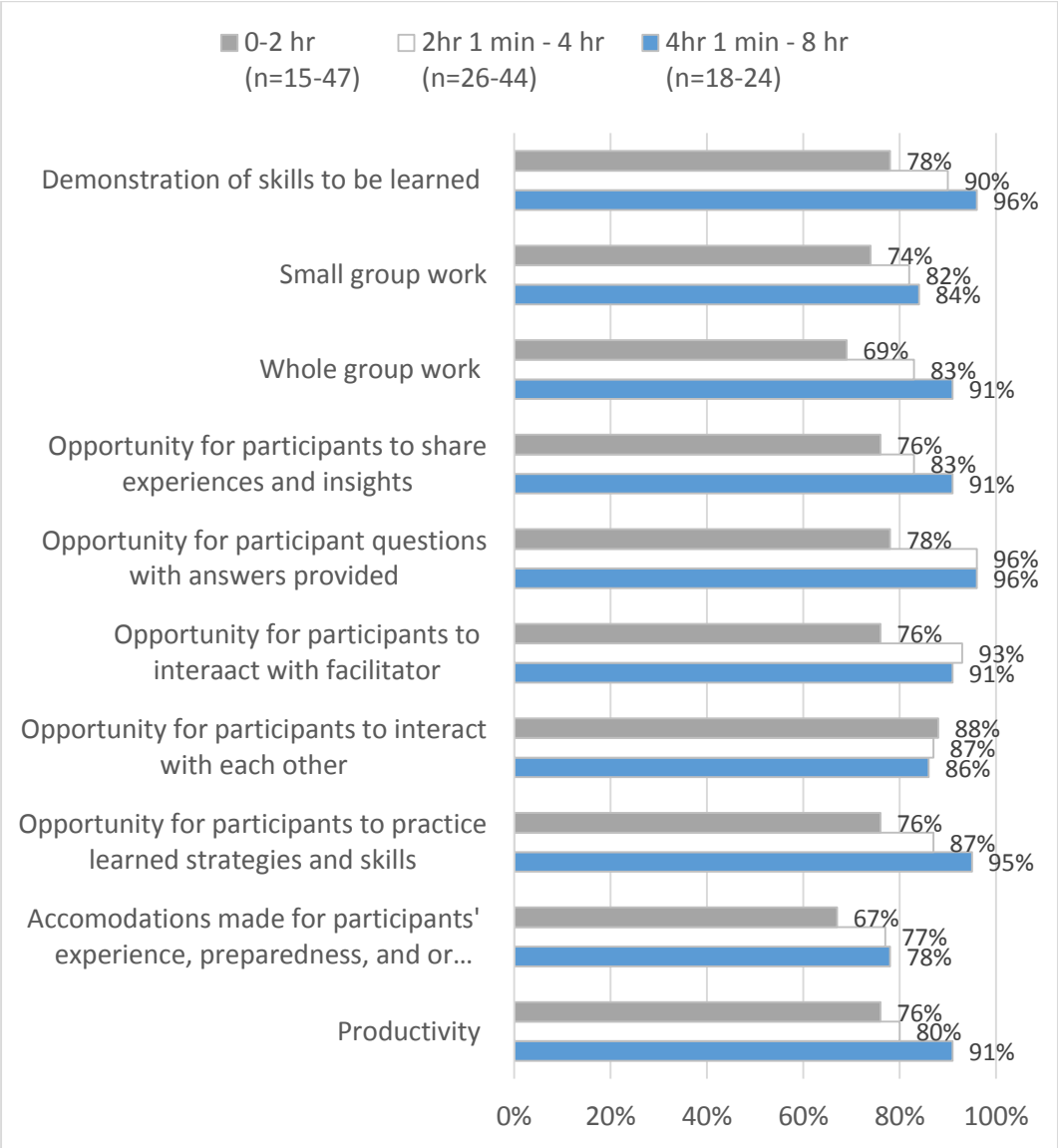


Figure 14: Percent of observations rated **highly effective or effective** for identified aspects of collaboration and learning, **by type of intended audience**

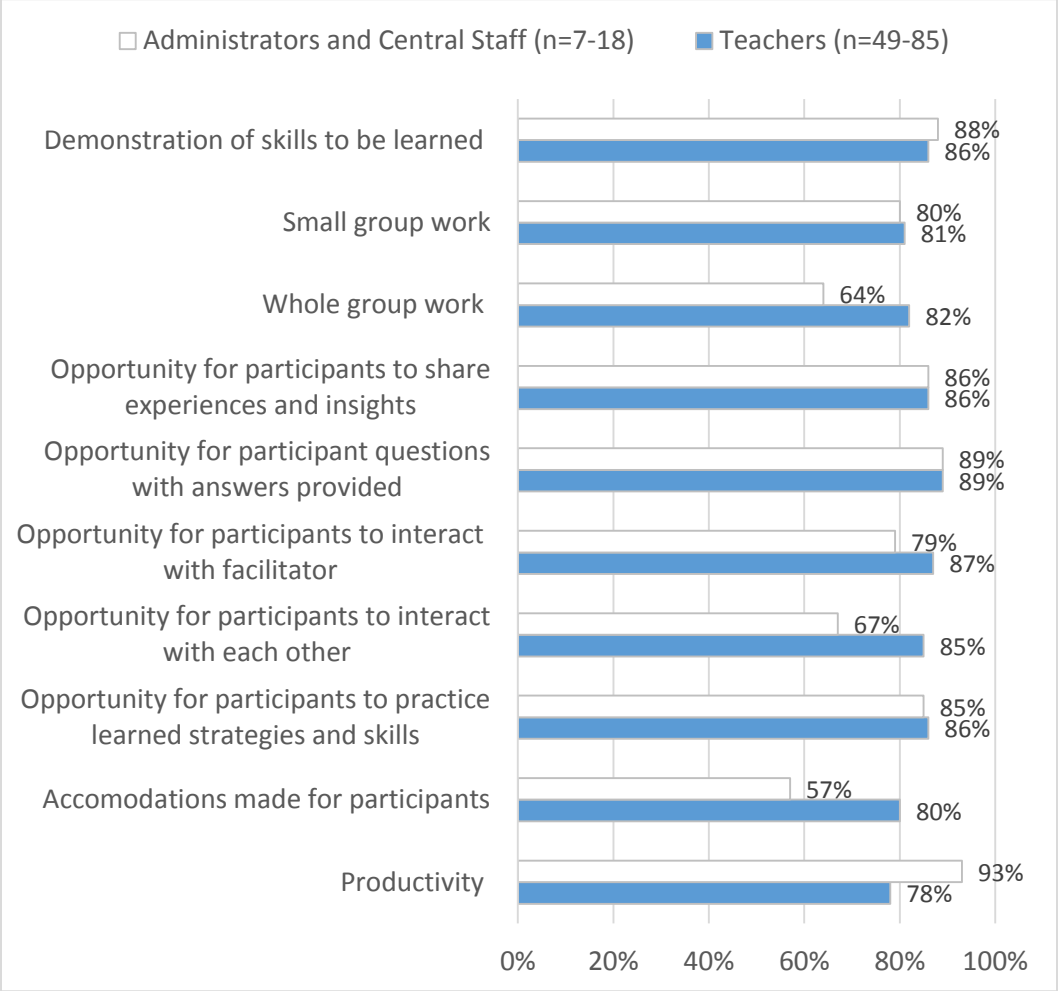


Figure 15: Percent of observations rated **highly effective or effective** for identified aspects of collaboration and learning, **by type of presenter**

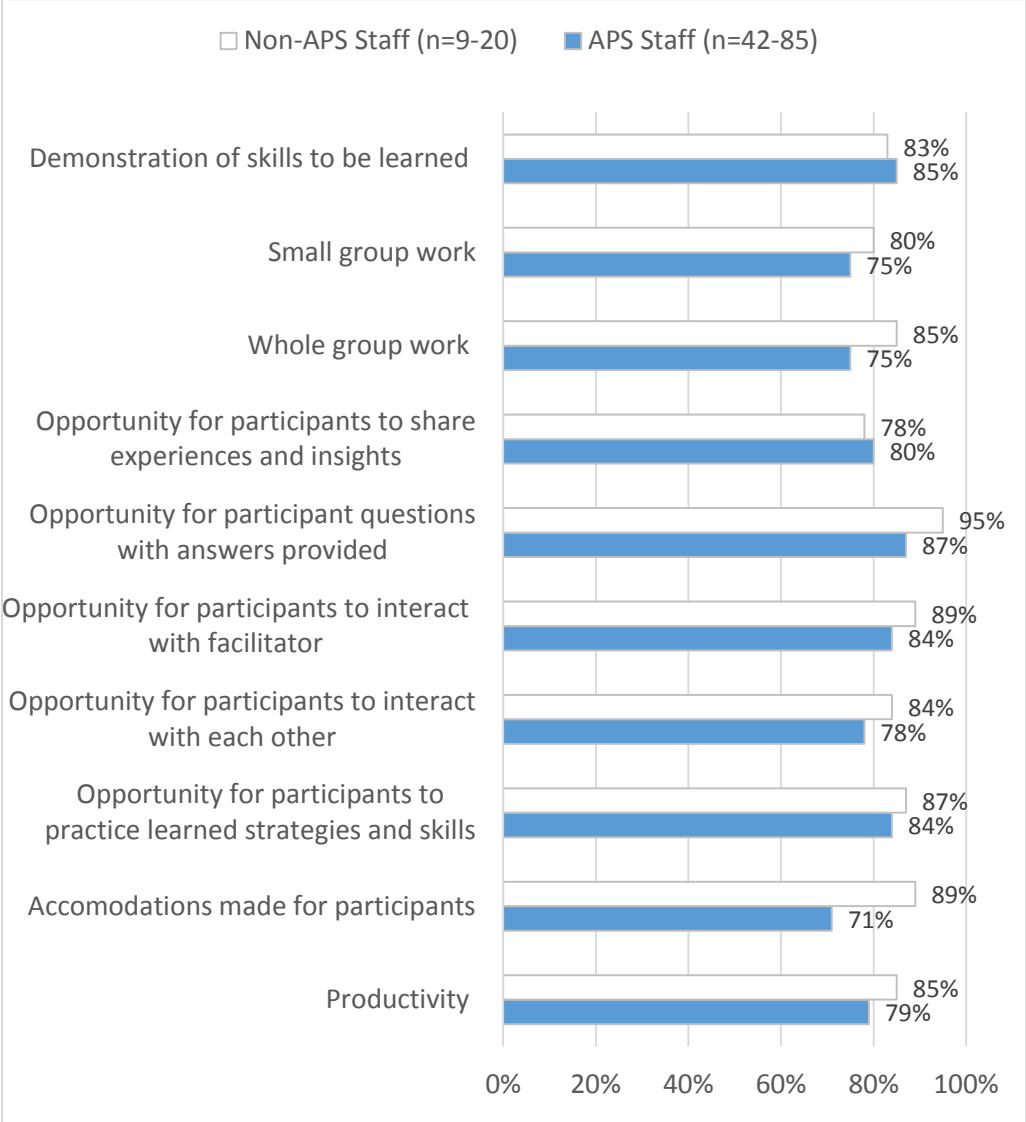


Figure 16: Percent of observations that **included** the following opportunities for reflection and closing (n=119-121)

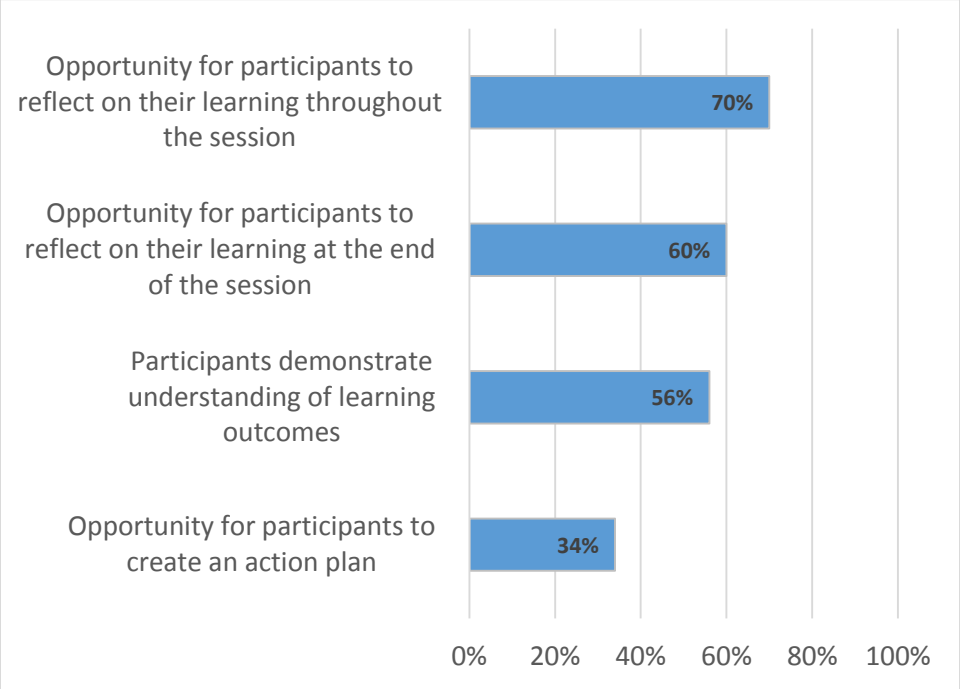


Figure 17: Percent of observations that **included** the following opportunities for reflection and closing, by **type of offering**

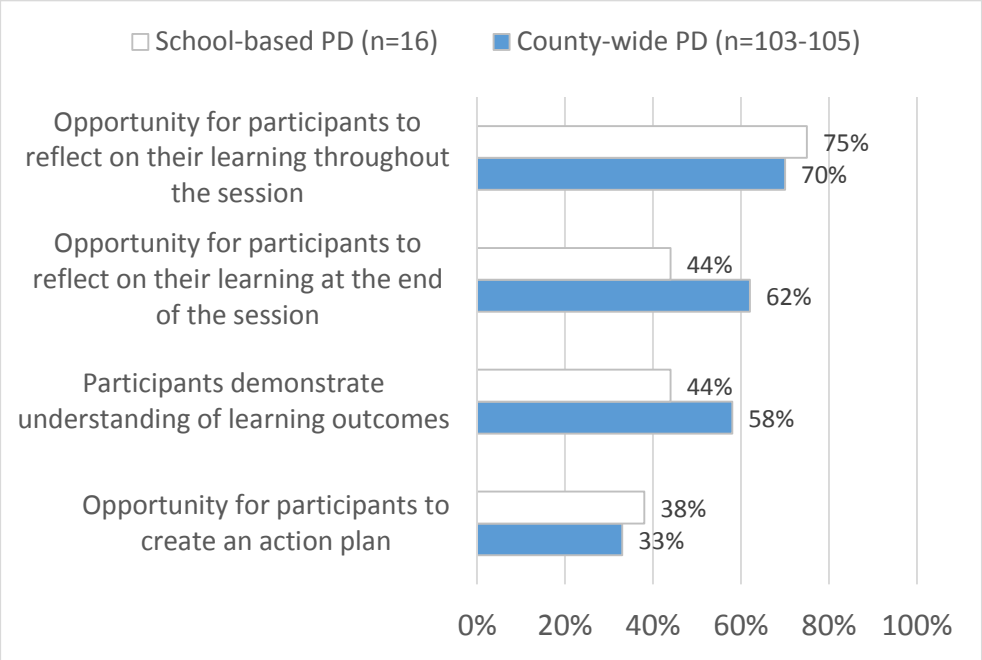


Figure 18: Percent of observations that **included** the following opportunities for reflection and closing, by **duration of session/training**

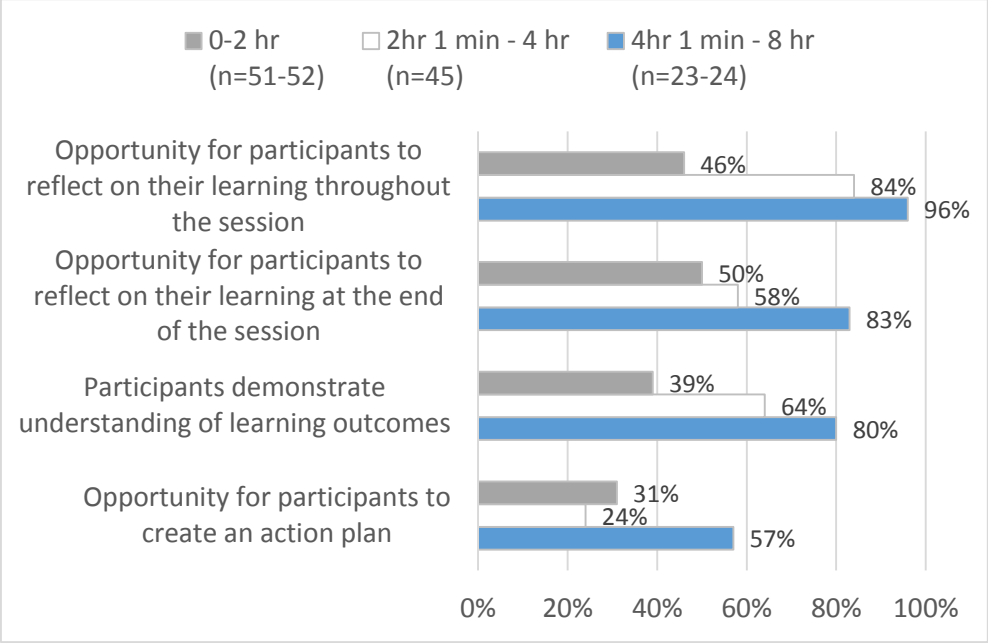


Figure 19: Percent of observations that **included** the following opportunities for reflection and closing, by **type of intended audience**

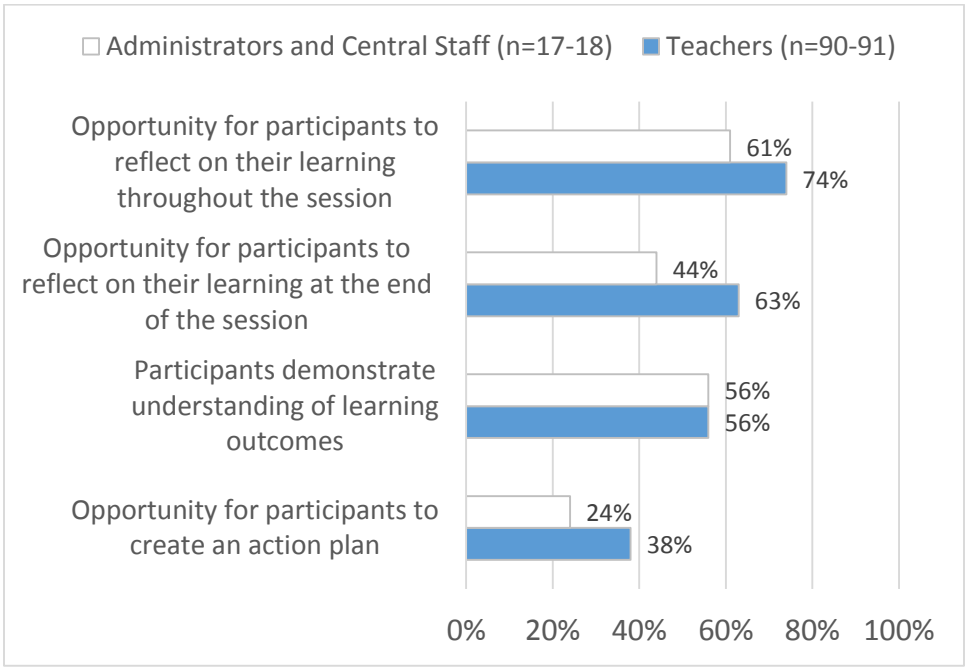
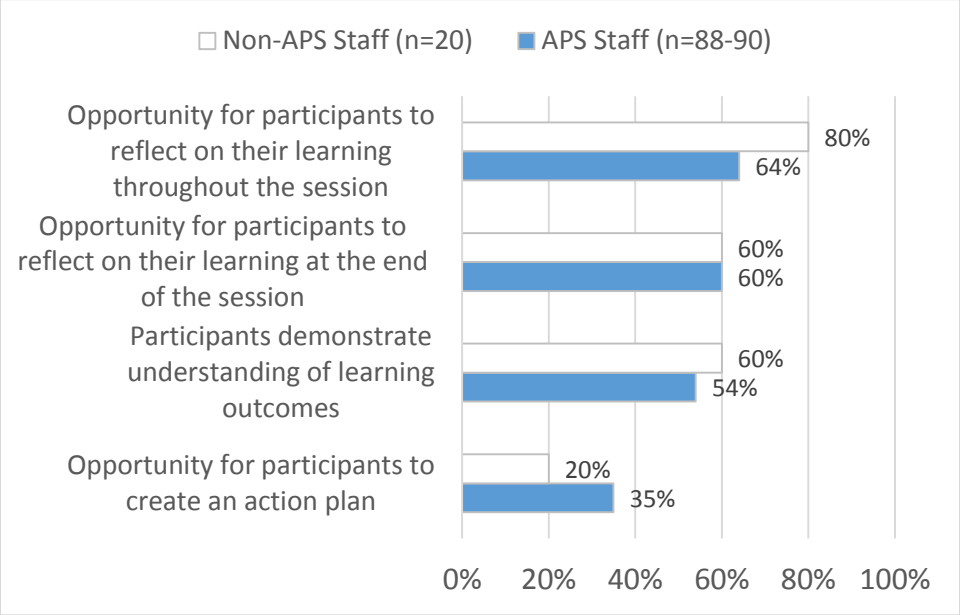


Figure 20: Percent of observations that **included** the following opportunities for reflection and closing, by **type of presenter**



Figures 21 through 25 show the level of effectiveness for identified aspects of reflection and closing. Observers rated effectiveness only if they had already indicated that "yes" it was a present element in the session. Figures 22 through 15 show the percent of observations that were rated as highly effective or effective.

Figure 21: Level of effectiveness for identified aspects of reflection and closing

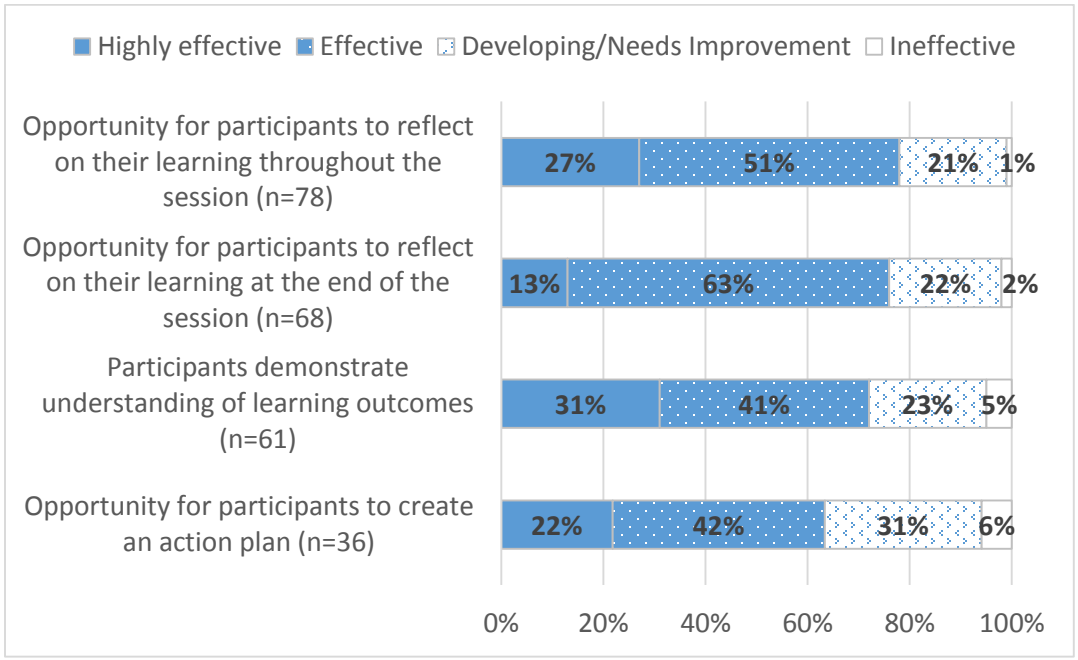


Figure 22: Percent of observations rated **highly effective or effective** for identified aspects of reflection and closing, **by type of offering**

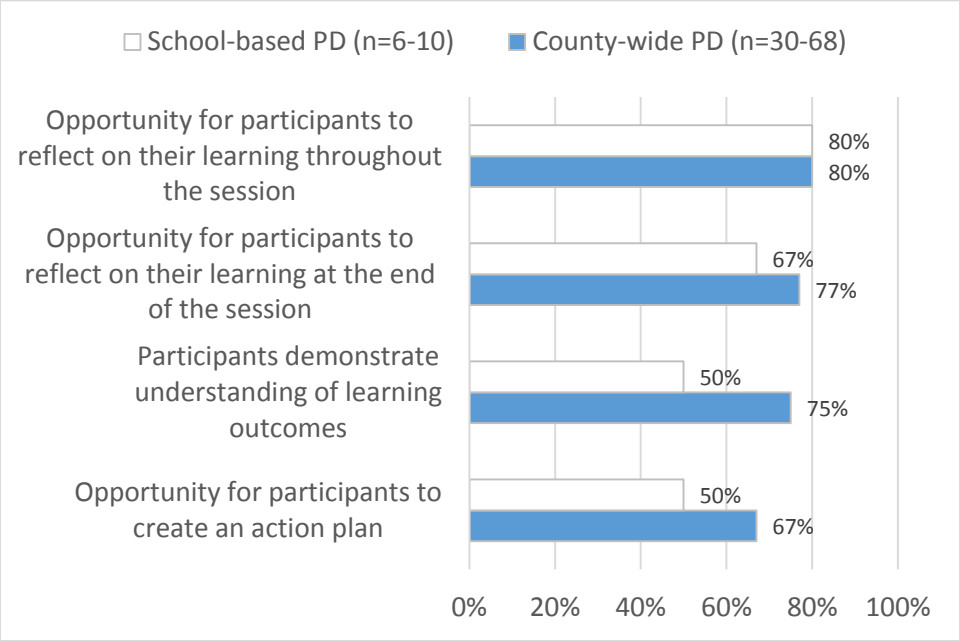


Figure 23: Percent of observations rated **highly effective or effective** for identified aspects of reflection and closing, **by duration of session/training**

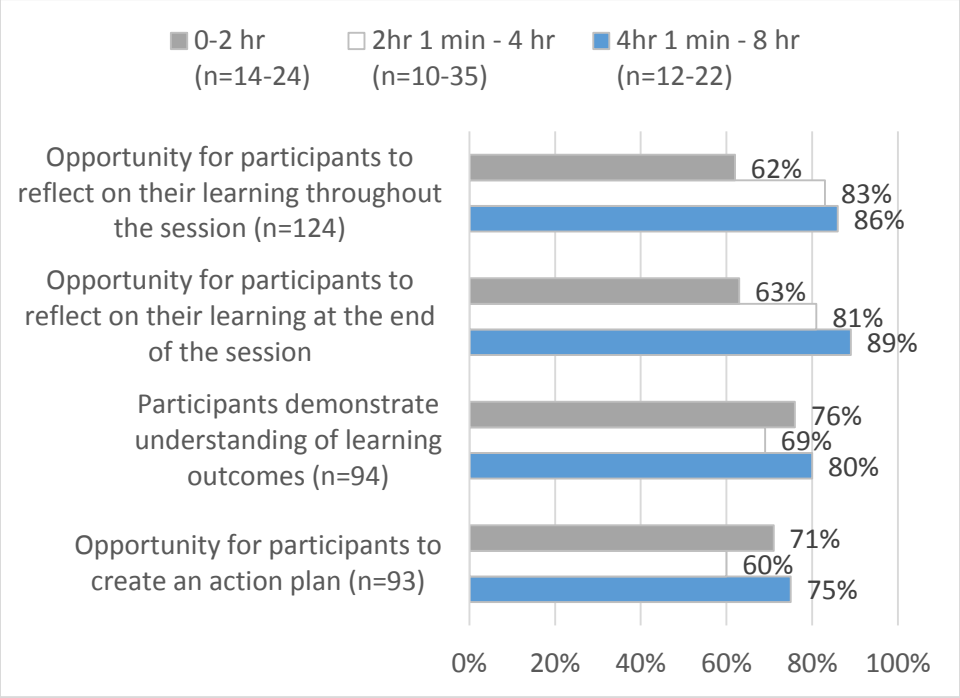
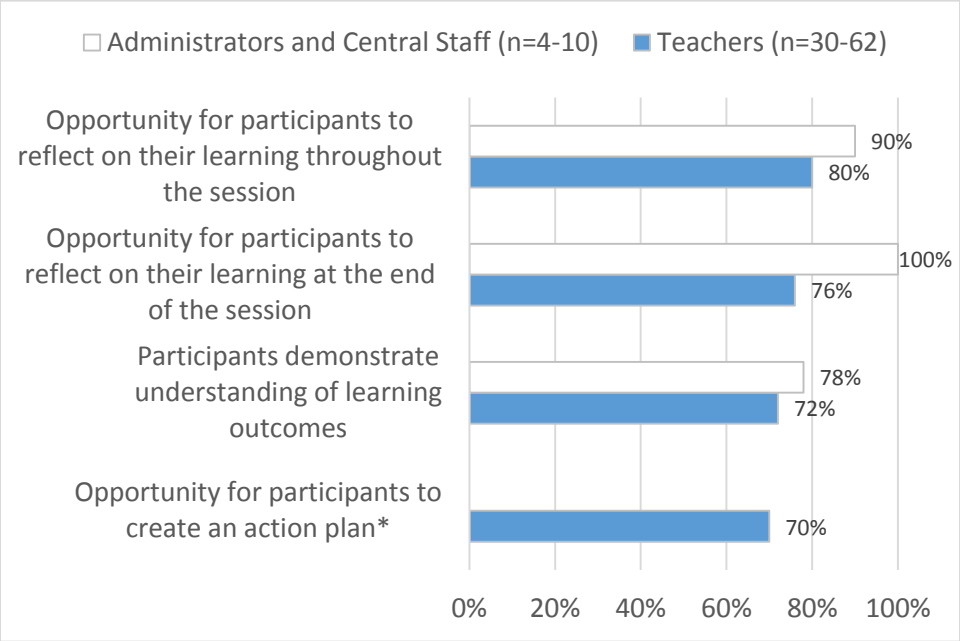
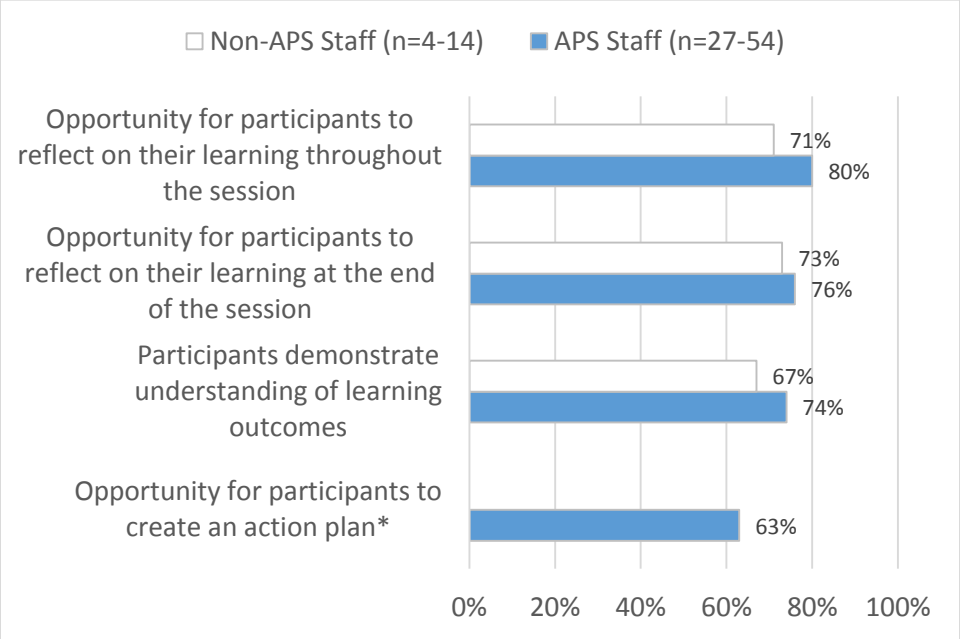


Figure 24: Percent of observations rated **highly effective or effective** for identified aspects of reflection and closing, **by type of intended audience**



*Sample size fewer than 5, not reported

Figure 25: Percent of observations rated **highly effective or effective** for identified aspects of reflection and closing, **by type of presenter**



*Sample size fewer than 5, not reported

Figure 26: Percent of observations that utilized technology for participant input or to demonstrate learning (n=94-119)

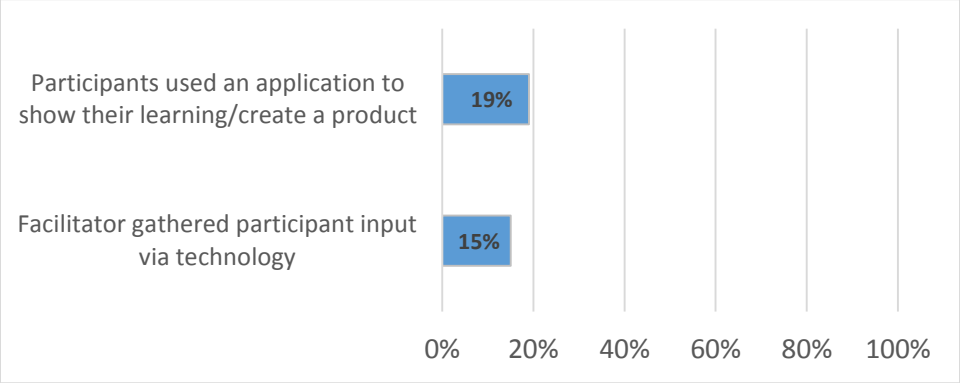


Table 8: Types of technology observed in sessions/trainings used to gather participant feedback

Type of Technology Used to Gather Participant Feedback	Number of observations
Survey using a sharing application	4
Kahoot	3
Nearpods	2
Tweets on Ipad	1
Padlet	1
Today's Meet	1
Survey using a phone response system	1
Survey using google	1

Table 9: Types of technology observed in sessions/trainings used by participants to show their learning/create a product

Type of Technology Used by participants to show their learning/create a product	Number of observations
Padlet	5
Google	4
Unspecified application on Iphone/Ipod/laptop	3
Twitter	1
Wixie	1
Kahoot	1
Today's Meet	1
Pixie	1
Nearpods	1
Mentimeter	1
Keynote	1
Photostream	1

Figure 27: Overall rating of professional development session/training (n=121)

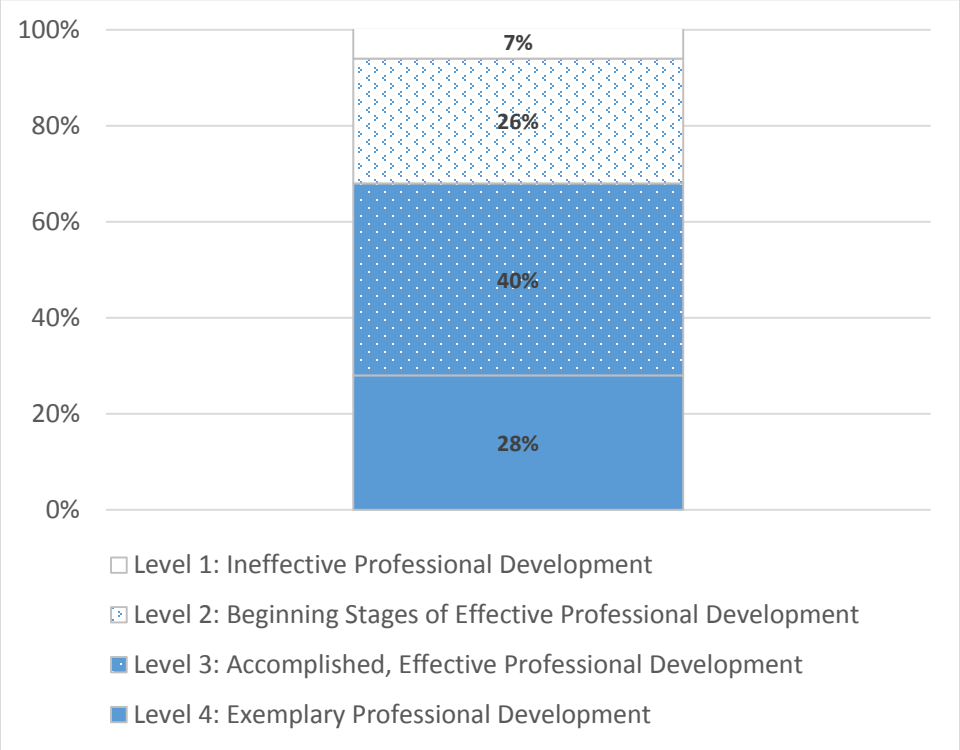


Figure 28: Overall rating of professional development session/training, by **type of offering**

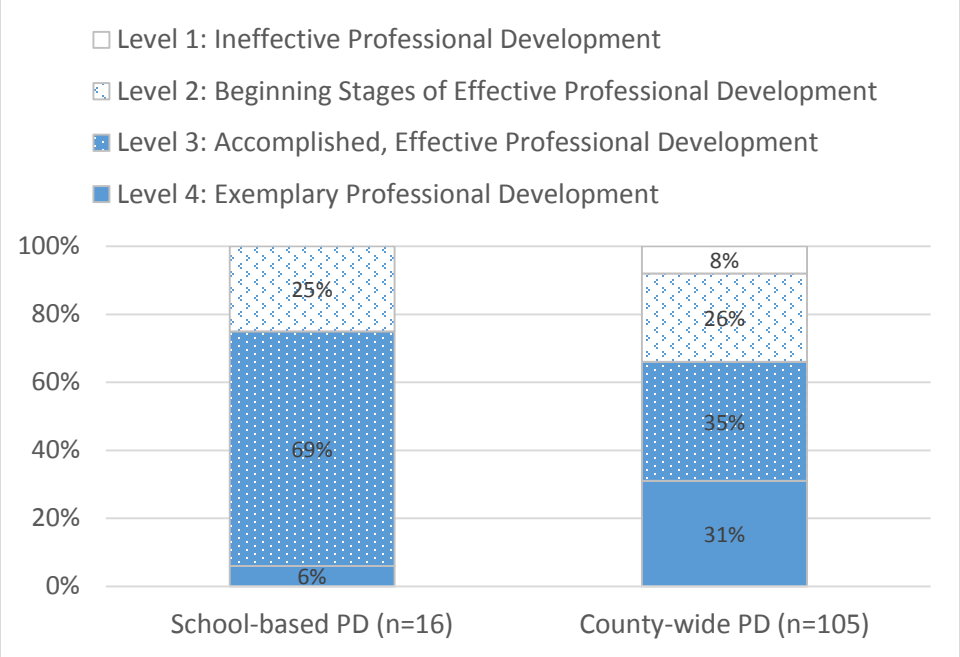


Figure 29: Overall rating of professional development session/training, by **duration of session/training**

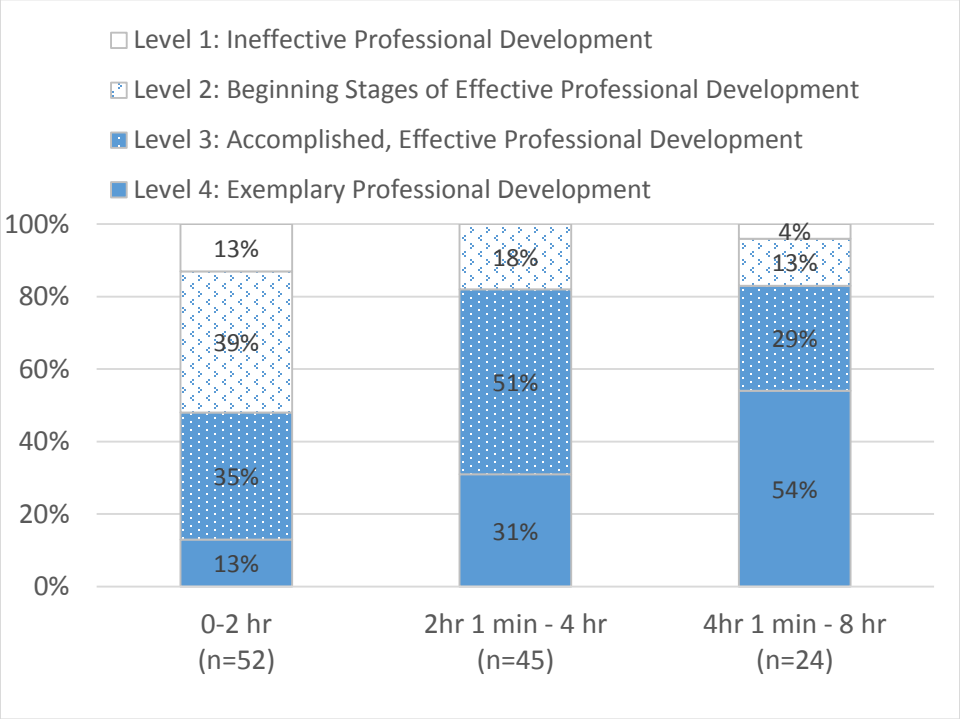


Figure 30: Overall rating of professional development session/training, by **type of intended audience**

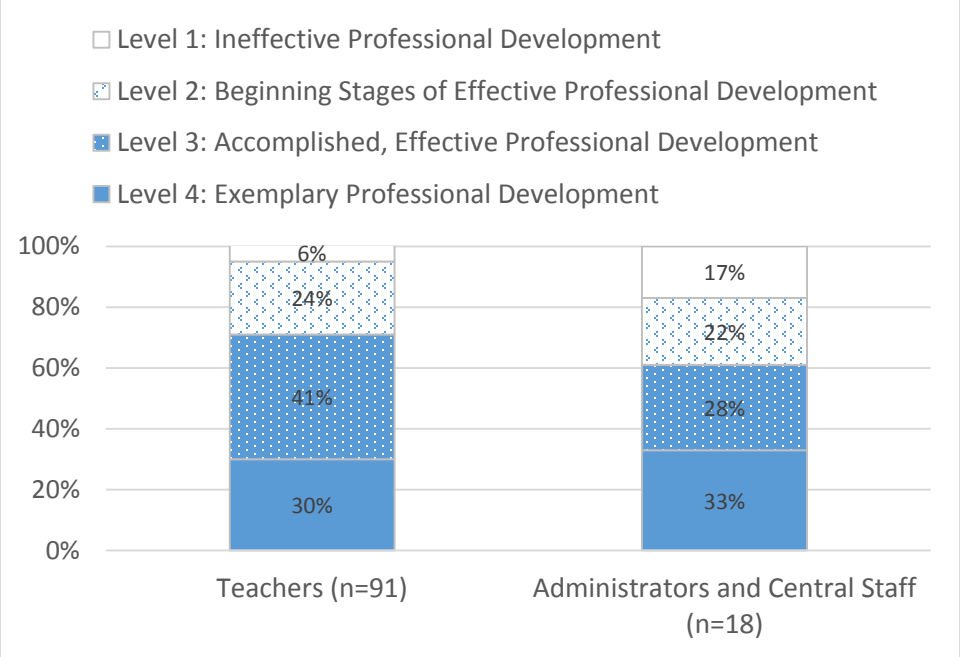
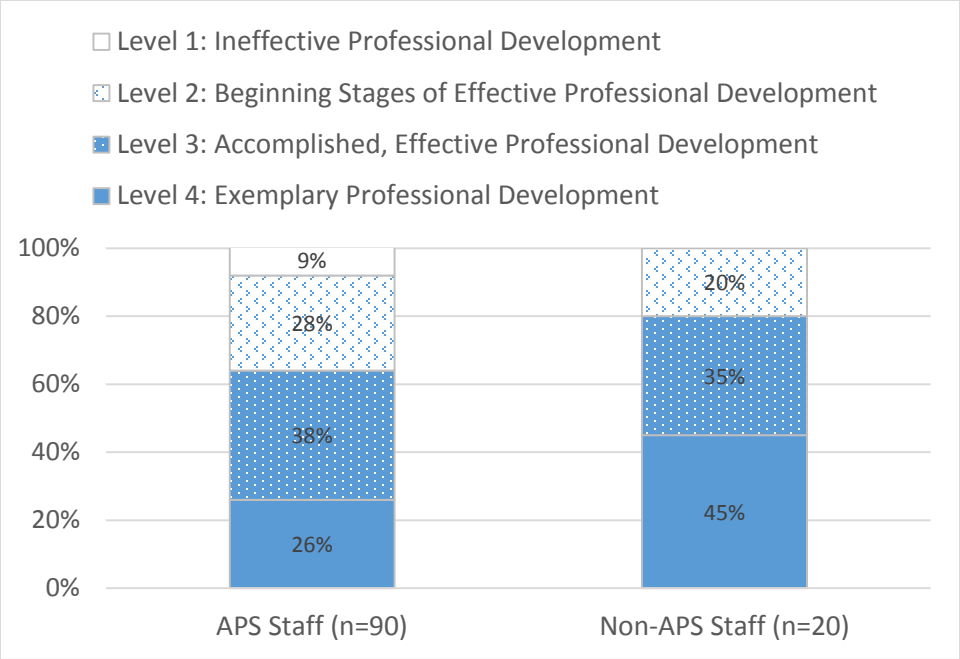


Figure 31: Overall rating of professional development session/training, by **type of presenter**


Level 1: Ineffective Professional Development
Level 2: Beginning Stages of Effective Professional Development
Level 3: Accomplished, Effective Professional Development
Level 4: Exemplary Professional Development
100%
80%
60%
40%
20%
0%
9%
28%
38%
26%
20%
35%
45%
APS Staff (n=90)
Non-APS Staff (n=20)