

# Professional Development

## Introduction

The committee proposes that there be three basic parts to the plan for evaluating the effectiveness of Professional Development Programs. These include:

### Client Issues:

This section of the rubric deals with determining the clients' needs, interests, and current knowledge level and addressing those issues through the development of a comprehensive and cohesive professional development program. Clients may include administrators, parents, teacher educators, community members, school boards, school councils, school teams or departments, and/or state department of education staff.

### Planning:

The planning section ensures that there is congruency between client perceived needs, interests, and current knowledge level and Science as Inquiry understandings as delivered through the professional development program.

### Implementation by the Facilitator:

This section deals with an evaluation of the implementation by the facilitator.

In the area of client issues and needs, it is most important to gain an understanding of the perceived needs and perspectives of the clients. This involves learning about what the client knows, what the client wants to know, and what the client hopes to learn. Further, it should include what "misconceptions" the client might reveal about Science as Inquiry.

Bringing congruency between the clients' perceived needs, interests, and current knowledge level and the structure and implementation of the professional development program for Science as Inquiry is the real foundation for effectiveness. For example, how well does the client reflect a sound foundational understanding of Science as Inquiry in "what is known and what it is hoped to be learned." In addition, how well can the workshop be structured and implemented to address the discrepancies between what is known and what needs to be known about Science as Inquiry.

The implementation by facilitator issues deal with how well the facilitator implemented the program as designed and modeled Science as Inquiry throughout the session.

<b>A1. Client Needs</b>				
<b>Descriptor</b>	<b>Variations</b>			
	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
A1a. A needs assessment is conducted to determine the client's short- and long-term goals and priorities.	A needs assessment is not conducted to determine the client's short- and long-term goals and priorities.	A needs assessment is conducted but it is not sufficiently comprehensive to identify the client's short- and long-term goals and priorities.	A needs assessment is conducted to identify the client's short- and long-term goals and priorities	A comprehensive needs assessment is conducted to identify the client's short- and long-term goals and priorities.
A1b. The professional development program aligns with the client's short- and long-goals and priorities within the context of the educational system.	The professional development program does not align with the client's short-term goals, long-term goals, or priorities. The professional development activities are inappropriate and inadequate to meet the needs of the clients.	The professional development program partially aligns with the client's short-term goals, long-term goals, and/or priorities. Few professional development activities are appropriate and adequate to meet the needs of the clients.	The professional development program aligns with most of the client's short-term goals, long-term goals, and priorities. Most professional development activities are appropriate and adequate to meet the needs of the clients.	The professional development program strongly aligns with all the client's short-term goals, long-term goals, and priorities. All professional development activities are appropriate and more than adequate to meet the needs of the clients.

<b>B1. Planning</b>				
<b>Descriptor</b>	<b>Variations</b>			
	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
B1a. The professional development program is planned collaboratively among representatives from all stakeholder groups.	There is little to no input solicited from stakeholder groups. Any input provided to the professional development team is not used to develop the professional development program.	The professional development program is planned with limited input from stakeholder groups. Some of the input provided to the professional development team is considered and used to develop the professional development program.	There is a systematic plan to solicit feedback from representatives of stakeholder groups and the plan is implemented faithfully. Most input is considered and used to develop the professional development program. Input may be limited in scope.	Representatives from all stakeholder groups provide input into all facets of the program, including <ul style="list-style-type: none"> <li>• development of plan</li> <li>• review of data</li> <li>• delivery</li> <li>• implementation</li> <li>• follow up</li> </ul> and all input is used to develop the program.
B1b. The professional development program has a clear purpose, direction, and implementation strategies which support and model teaching and learning of science as inquiry, which meets participants' needs.	The professional development program lacks focus, purpose, and direction.	The professional development program has a limited focus, purpose, and direction that begins to support and model teaching and learning of science as inquiry and begins to meet the needs of participants.	The purpose, focus, and direction of the professional development program support and model teaching and learning of science as inquiry and meet most of the participants' needs.	The professional development program has a clear purpose, direction, and action plan to support and model teaching and learning of science as inquiry, which meets participants' needs.
B1c. The professional development program can be implemented within the parameters of the existing environment and resources available (e.g., needs and nature of students' backgrounds; the backgrounds, needs, and teaching responsibilities of	The program cannot be implemented within the parameters of the existing environment and resources available.	The program can be implemented at a minimally level within the parameters of the existing environment and resources available.	Most components of the program can be implemented within the parameters of the existing environment and resources available.	The program can be fully implemented within the parameters of the existing environment and resources available.

teachers; the resources available and degree of community support; the organization, expectations, and current demands of the schools and districts).				
B1d. The professional development program includes opportunities to practice new skills and receive feedback to participants in an appropriate and timely manner.	A component to provide opportunities for practice and feedback to participants is not included.	A component to provide opportunities for practice and feedback to participants is included but the process is not timely or appropriate.	A component to provide opportunities for practice and feedback to participants is included and is modestly effective.	The professional development program includes opportunities for practice and feedback to participants in an appropriate way and timely manner.
B1e. The professional development program facilitates educators' working collaboratively across grade levels and content areas when appropriate, such as when analyzing student work.	The program does not provide opportunities for educators to work collaboratively across grade levels or content areas when appropriate.	The program provides minimal opportunities for educators to work collaboratively across grade levels or content areas when appropriate.	The program provides some opportunities for educators to work collaboratively across grade levels and content areas when appropriate.	The program provides numerous opportunities for educators to work collaboratively across grade levels and content areas when appropriate.
B1f. The professional development program includes job-embedded and follow-up activities in the classroom (e.g., action research, study groups, collegial support networks, mentoring, coaching, modeling, demonstration, feedback, reflection, peer review, etc.).	The professional development program does not contain a job-embedded component. Professional development occurs within a structure of isolated events.	The professional development program includes a job-embedded component but mostly is delivered through traditional methods such as one-day workshops. Follow-up opportunities in or out of the classroom are occasionally provided.	The professional development program includes a job-embedded structure with some time allocated to follow-up activities in or out of the classroom.	The professional development program emphasizes a sustained, job-embedded structure that includes extensive follow-up activities in the classroom.
B1g. The professional development program includes an assessment and	Periodic evaluations are not part of the professional development	Evaluations are not conducted on a regular basis. Periodic evaluations	Evaluations are conducted on a regular basis. Evaluations often lead to	Evaluations are conducted on a regular basis and the information gathered is

modification component in which the status of the current program periodically is evaluated and adjusted to meet the changing needs of participants.	program.	may be conducted but they do not lead to changes in the program nor is the information gathered used effectively.	changes in the program. Most information gathered is used effectively to meet the changing needs of participants.	used to guide changes made to the professional development program to meet the changing needs of participants.
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<b>C1. Implementation by Facilitator</b>				
<b>Descriptor</b>	<b>Variations</b>			
	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
C1a. The facilitator models aspects of science as inquiry, including asking questions and collecting and analyzing data.	The facilitator does not model aspects of science as inquiry.	The facilitator does not consistently model aspects of science as inquiry or the program models the process incorrectly.	The facilitator models some aspect of science as inquiry with few errors.	The program consistently and accurately models most aspects of science as inquiry.
C1b. The facilitator models aspects of science as inquiry, including habits of mind associated with science: skepticism, openness, curiosity, and honesty.	The facilitator does not model aspects of science as inquiry.	The facilitator does not consistently model aspects of science as inquiry or the program models the process incorrectly.	The facilitator models some aspect of science as inquiry with few errors.	The program consistently and accurately models most aspects of science as inquiry.
C1c. The facilitator models aspects of science as inquiry, including how scientific questions are developed, why investigations are conducted, what tools are used, how mathematics is essential, how to use evidence, and how to collaborate and communicate in designing and conducting	The facilitator does not model aspects of science as inquiry.	The facilitator does not consistently model aspects of science as inquiry or the program models the process incorrectly.	The facilitator models some aspect of science as inquiry with few errors.	The program consistently and accurately models most aspects of science as inquiry.

investigations.				
C1d. The facilitator models assessment, evaluation, and reflection processes in which prior knowledge is compared to what is learned during professional development activities in terms of the entire group and individuals.	The facilitator does not model assessment, evaluation, and reflection processes or the only evaluation that is included assesses participant satisfaction.	The facilitator does not model effective assessment, evaluation, and reflection processes. For example, participant learning is assessed through a short-answer format (e.g., multiple choice, Lickert scale)	The facilitator often models effective assessment, evaluation, and reflection processes.	The facilitator consistently models effective assessment, evaluation, and reflection processes.
C1e. The facilitator monitors and adjusts the format and content of the professional development activities to reflect participants' needs, interests, and knowledge regarding science as inquiry.	The facilitator does not make adjustments in professional development activities to meet participants' needs regarding science as inquiry.	The facilitator adjusts few activities to meet participants' needs regarding science as inquiry.	The facilitator adjusts most activities to meet participants' needs regarding science as inquiry.	The facilitator is flexible and appropriately adjusts all activities to meet participants' needs regarding science as inquiry.
C1f. The facilitator uses resources appropriately. Resources are adequate to meet the stated purposes of the professional development program and help improve the skills and knowledge of the participants.	The facilitator does not use resources appropriately to meet the needs of the participants. The resources used do not help improve knowledge or skills. Adequate resources are not provided.	The facilitator uses some resources appropriately to meet the needs of the participants. However, additional resources are required but not provided. The resources used rarely help improve participants' knowledge or skills.	The facilitator uses most resources appropriately to meet the needs of the participants. Rarely are additional resources required and not provided. The resources used usually help improve participants' knowledge or skills.	The facilitator uses all resources appropriately to meet the needs of the participants. Additional resources are provided when necessary. The resources used always help improve participants' knowledge or skills.
C1g. The facilitator provides adequate opportunities for teachers to develop professional skills and knowledge necessary to do inquiry.	The facilitator does not provide adequate opportunities for teachers to develop professional skills and knowledge.	The facilitator provides limited opportunities for teachers to develop professional skills and knowledge.	The facilitator provides adequate opportunities for most teachers to develop professional skills and knowledge.	The facilitator provides adequate opportunities for all teachers to develop professional skills and knowledge.
C1h. The facilitator incorporates appropriate and	The facilitator does not incorporate appropriate and	The facilitator infrequently incorporates appropriate	The facilitator incorporates appropriate and accurate	The facilitator always incorporates appropriate

accurate content as outlined in local, state, and national curriculum standards.	accurate content as outlined in local, state, and national curriculum standards.	and accurate content as outlined in local, state, and national curriculum standards.	content as outlined in local, state, and national curriculum standards.	and accurate content as outlined in local, state, and national curriculum standards.
C1i. The facilitator uses this rubric as an exit tool to evaluate the quality of professional development program.	The facilitator did not use any instrument to evaluate the quality of the professional development program.	The facilitator used an instrument only to evaluate client satisfaction with the professional development program.	The facilitator used this instrument to evaluate portions of the professional development program.	The facilitator uses this tool as an exit tool to assess quality of all portions of professional development program.