

UC Santa Cruz

Moment-to-moment teaching moves or “facilitation”

Title

Facilitation Aims and Moves Handout

Permalink

<https://escholarship.org/uc/item/4d97c6g7>

Author

Institute for Scientist and Engineer Educators

Publication Date

2022-04-25

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

INSTITUTE for SCIENTIST & ENGINEER EDUCATORS

Facilitation Aims and Moves Handout

Institute for Scientist and Engineer Educators (ISEE)

Suggested citation: Institute for Scientist and Engineer Educators. (2022). Facilitation Aims and Moves Handout. *UC Santa Cruz: ISEE Professional Development Resources for Teaching STEM (PDP)*. Retrieved from <https://escholarship.org/uc/item/4d97c6g7>

This paper was written and produced by the developers of the Professional Development Program (PDP) at the Institute for Scientist & Engineer Educators (ISEE) at University of California, Santa Cruz. The PDP was a flexible, multi-year program which trained participants to teach STEM effectively and inclusively at the post-secondary level. Participants were primarily graduate students and postdocs pursuing a broad range of science and engineering careers. Participants received training through two in-person multi-day workshops, worked on a team to collaboratively design an authentic, inclusive STEM learning experience (an “inquiry” lab), and then put their new teaching skills into practice in programs or courses, mostly at the college level. Throughout their experience, PDP participants used an array of online tools and received coaching and feedback from PDP instructors. The overall PDP experience was approximately 90 hours and was framed around three major themes: inquiry, assessment, and equity & inclusion. Leadership emerged as a fourth theme to support PDP teams, which were each led by a participant returning to the PDP for a second or third time, who gained training and a practical experience in team leadership. ISEE ran the PDP from 2001-2020, and there are more than 600 alumni.

CONTEXT FOR THIS PAPER WITHIN THE PDP

This handout was used in the PDP to provide participants with ideas for small, in-the-moment instructional moves that can be made to accomplish specific goals of an instructor. The handout was used to review vignettes and to prepare for teaching.

The PDP was a national program led by the UC Santa Cruz Institute for Scientist & Engineer Educators. The PDP was originally developed by the Center for Adaptive Optics with funding from the National Science Foundation (NSF) (PI: J. Nelson: AST#9876783), and was further developed with funding from the NSF (PI: L. Hunter: AST#0836053, DUE#0816754, DUE#1226140, AST#1347767, AST#1643390, AST#1743117) and University of California, Santa Cruz through funding to ISEE.

Facilitation Aims and Moves Handout

The tables below provide *examples* of facilitation moves (Table 1) and facilitation aims (Table 2). These are provided to help illustrate complementary concepts -- not as comprehensive lists.

Table 1. Example Facilitation Moves

Verbal Moves	Non Verbal Moves
make small suggestion/ "nudge" repeat/paraphrase learner(s) summarize ask for plan ask for drawing ask for explanation restate motivating problem or question ask for prediction ask clarifying question feign confusion ("I'm not sure what you mean") ask if hypothesis is testable ask/suggest a comparison ask for summary redirect question suggest simplifying suggest new or alternative tool/materials lay or revisit ground rules suggest learner(s) take a break	observe demonstrate listen back off/walk away wait pause feign confusion (facial expression) glance hand gesture or cursor gesture (e.g. point) highlight text reposition physical stance use body language use eye contact show enthusiasm Show mirth/laughter show enthusiasm pick up or drop off materials inspect materials/equipment

Table 2. Example Facilitation Aims

Making learners' thinking accessible	Helping learners progress toward the goals, while supporting their ownership	Enabling equitable and inclusive collaboration
notice/observe learner's thinking	affirm learner's ownership/agency	create/encourage engagement
actively make learner's emergent thinking transparent or "visible"	affirm learner's approach	manage dominant learner
make learner's thinking accessible to other learners	dodge/ resist learners' attempts to solicit directives	manage interpersonal conflict
ascertain /expose partial, alternative conceptions (a.k.a misconceptions)	push learner's thinking forward (& support ownership)	recognizing learners' unique contributions
expose competing ideas or explanations of phenomena	expose flaw in learner's thinking	Ensure all voices/perspectives are shared
promote metacognition (learners actively reflect on their own thinking)	redirect learners to take a different approach	encourage dialogue among team members / collaborators
	prevent learners from going to a "dead end"	