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Strategies for Building an Inclusive Community within a STEM Internship Program

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Abstract

ISEE Professional Development Program Teaching Teams, Akamai interns, and Akamai staff all participate in a multi-day Preparation for Research Experiences and Projects (PREP) course at the start of the annual Akamai Internship Program. One of the goals for the PREP course is to establish an inclusive, collaborative community amongst the varied participants. Integrated with the inquiry activities taught by Teaching Teams are several Akamai-designed and facilitated activities whose purpose is to build community as well as an understanding of and sensitivity towards an inclusive work environment. These activities include an opening icebreaker, a career pathways discussion, workplace integration role-plays, a workplace inclusion discussion, and a closing celebration dinner. This paper highlights specific connections between the Institute for Scientist and Engineer Educators' Equity & Inclusion strand and the collaborative activities that engage Teaching Teams, interns, and staff during the Akamai PREP course.

Keywords: community, diversity, equity, inclusion, internships, course design, workplace culture

1. Introduction

Learning, in many aspects, is a social activity (National Research Council, 2000). Effective learning takes place in community-centered environments that have norms that include an ethic of individuals contributing their strengths to the community as opposed to competition among individuals (Suina & Smolken, 1994, as cited in NRC, 2000, p. 146).

The Institute for Scientist and Engineer Educators fosters many types of community-centered environments. Of interest here are (a) the Professional Development Program (PDP), and (b) the Akamai Internship Program or simply "Akamai." While the PDP aims to build the education-related knowledge and skill of persons reasonably well-established in STEM (e.g., graduate students seeking advanced STEM degrees), Akamai focuses on nurturing undergraduates in STEM fields (Akamai interns) such that they experience success in STEM workplaces.

Within the PDP, participants form Teaching Teams that apply their knowledge to the design of inquiry activities and then implement these activities in a variety of teaching venues. One such venue is Akamai's pre-internship Preparation for Research Experiences and Projects (PREP) course. The joining of PDP Teaching Teams with Akamai staff and interns during the PREP course offers a fruitful intersection of two STEM communities that work to the benefit of all participants.

In this paper we report on how key conceptual elements of the PDP — specifically a focus on equity and inclusion — apply to community-building sessions within the Akamai PREP course. Prior to discussing the sessions, we next provide background information on both the conceptual context (i.e., the PDP's Equity & Inclusion strand) and the practical context (namely, the Akamai PREP course).

2. Conceptual Context: Equity and Inclusion

A major emphasis of the PDP was the Equity & Inclusion (E&I) strand. The overall objective of this strand was for participants to use E&I research to design an approach for supporting equitable and inclusive learning. The context for their design was the inquiry lab activity that they developed and taught as the PDP practical experience. However, though the design task constrains PDP participants to apply what they learn about E&I, the PDP is intended to be a foundation for applying what participants learn more generally. That is, the E&I research articles, along with their practical implications, can be applied to mentoring and a wide array of active learning contexts.

In later years, a foundational understanding within the E&I strand was provided by Shore et al.'s (2011) definition of inclusion:

> "Degree to which a person perceives that they are an esteemed member of the group through experiencing treatment that satisfies their needs for belongingness and uniqueness."

The PDP framed research on E&I around four areas (Seagroves et al., 2022):

- Multiple ways to productively participate
- Learners' goals, interests, and values
- Beliefs and biases about learning, achievement, and teaching
- Developing an identity as a person in STEM

The focus area, "Learners, goals, interests, and values," is particularly relevant in considering how to satisfy needs for interns' sense of belongingness and uniqueness. This focus area is shaped by research that indicates that inclusivity is supported by leveraging learners' goals, interests, values, and sources of motivation. Several of the activities and strategies described in this paper include ways for

interns and PDP instructors to learn about each other's unique backgrounds.

The focus area, "Developing an identity as a person in STEM," is also a way to frame some of the PREP course activities. This focus area summarizes the ways that people negotiate their identities in the context of STEM environments, which have their own cultural norms and values. The PREP course includes activities that strive to make more explicit the cultural norms of internship sites, and model ways that interns can continue to learn about cultural norms after the PREP course.

In summary, the PDP E&I strand can be used to reflect on community-building activities within the Akamai PREP course, as well as more generally in other courses. Two important ways that the Akamai staff do this is by including activities that:

- Create space and a safe environment for everyone at PREP to share aspects of themselves, and **celebrate each person's uniqueness**
- Make the **cultural norms** of internship workplace sites more **explicit**, and make the learning of cultural norms a valued process and outcome for interns

To better understand our discussion of specific activities, we next provide further details on the context in which those activities occur, namely the Akamai PREP course.

3. Practical Context: The Akamai PREP Course

The Institute for Scientist and Engineer Educators runs a program called the Akamai Internship Program, which is designed to support undergraduate STEM majors from Hawai‘i. The overarching goal of the program is to retain these undergraduates who are interested in STEM careers in STEM professions, particularly at a high-tech or academic partner within the state to help build Hawai‘i's local workforce. The program focuses on including students from underrepresented and under-served groups of the islands and draws in students from just after their first year of college when attrition from STEM is particularly high to a year after graduation. The Akamai interns are from a range of STEM disciplines in both 2- and 4-year institutions.

Another goal of the Akamai PREP course is to establish an inclusive community that will help interns be successful throughout their internship. Like in the PDP, community is both a strategy and an outcome. That is, PREP course instructors (PDP Teaching Teams and Akamai staff who have all participated in the PDP) employ a range of strategies to build community, and the outcome is a community of interns and instructors that work together and support each other for the remainder of Akamai and beyond.

The Akamai program runs for eight weeks every summer, beginning with the week-long PREP course. During this course, a for-credit course called the Communication Course focused on coaching technical writing and presentation skills begins and continues throughout the internship, culminating in final symposia in which each intern gives a technical talk summarizing their summer projects. The internships are all undertaken at an observatory, technical facility or company, or with science faculty at one of the University of Hawai‘i campuses or University of California Observatories, and the program has a long history of success (Barnes et al., 2018).

The week-long PREP course has recently taken place at the University of Hawai‘i at Hilo on Hawai‘i Island and includes a range of activities. Particularly important components of the PREP course are two to three science and engineering inquiry activities, designed and taught by a combination of PDP Teaching Teams and Akamai staff. In addition to these activities, there are supporting sessions through which interns are able to reflect on and gain additional practice in the science and engineering STEM practice foci of the inquiry activities that are relevant to many, if not all, of their internship projects (see Shaw et al., 2022). PREP also includes workshops on writing technical abstracts, a career

pathway networking session, and other professional and community building sessions that are the focus of this paper and described in subsequent sections.

The diverse Akamai PREP course community includes interns, Akamai staff and instructors, PDP Teaching Teams, and professional guests, many of whom are mentors of internship projects. The Akamai staff and instructors continue to work closely with the interns throughout the entire summer on integrating into their workplaces and coach them on scientific and technical communication including elevator talks, project abstracts and presentations. Akamai instructors also continue to aid Akamai alumni to further develop their careers after their internships. The PDP Teaching Teams are each composed of 3-4 graduate students, postdoctoral researchers, and early-career scientists or engineers who design and then teach an inquiry activity with foundational STEM content and practice goals. The Akamai PREP course is the classroom laboratory in which they pilot their activity designs. The PREP course and its variety of community members provide the opportunity to establish a wonderfully inclusive and collaborative community that persists beyond PREP and the summer internships.

4. PREP Course Sessions: From Meet & Greet to Strut Your Stuff

The Akamai PREP course includes a variety of sessions and activities that are designed to meet the above-stated goals of creating a safe environment in which PREP participants (both instructors and interns) share aspects of themselves and celebrate each person's uniqueness, along with making the cultural norms of internship sites more explicit. In this section we describe five such PREP course components - the opening icebreaker, a career pathways session, the integrating into the workplace session, a workplace inclusion discussion, and the closing celebration dinner.

4.1 Opening Icebreaker

Akamai staff and PDP Teaching Teams — hereon referred to as PREP course "instructors" — along with a given year's cohort of Akamai interns, all meet each other for the first time the morning of the first full day of the PREP course. As part of the "Introductions" session and to help start the community-building process, an Akamai staff member leads all three groups in a "Human Scavenger Hunt." This 40-minute activity includes the four components listed and described below. Note that times shown in parentheses may vary depending on the total number of participants.

- Orientation (5 min)
- Round I. Team Interviews (10 min)
- Round II. Random Interviews (10 min)
- Whole Group Sharing (10 min)
- Closure (5 min)

Orientation

An Akamai staff member introduces the activity — explicitly stating its community-building purpose — describes the note cards participants will use during the scavenger hunt, and explains the sequence of interactions (team interviews, random interviews, whole group sharing).

Round I. Team Interviews

Pre-assigned teams (one Akamai staff or PDP Teaching Team member with a small group of interns) interview their own members.

Instructor note cards ask them to "Find an intern who…" meets a variety of characteristics such as place of birth, internship location, and college major/field of study.

Intern note cards ask them to gather "Fun Facts" about the instructor such as favorite things, interests or hobbies, and something unique.

Weather permitting, this round may take place outdoors or indoors.

Round II. Random Interviews

Individual participants are now given the opportunity to interview other participants as they please. Instructors seek information from interns not in their pre-assigned team and vice versa. Participants are encouraged to gather as much information from as many different people as possible. Weather permitting, this round may take place outdoors or indoors.

Whole Group Sharing

All participants gather together indoors to share the results of the interviews. An Akamai staff member facilitates this interaction as follows.

Intern Information. An Akamai staff member goes down the list of characteristics on the Instructor note card, inviting interns who fit a certain category to self-identify (e.g., stand or raise hand), noting patterns, anomalies, etc. For example, a typical cohort of Akamai interns contains a majority of students who were born on Oʻahu, and few, if any, interns born who were on Kauaʻi.

Instructor Information. An Akamai staff member has pre-positioned pieces of chart paper around the meeting room (one piece of paper per instructor). The staff member asks for intern volunteers to go to the chart paper and record the information during the sharing. Sharing proceeds with the staff member asking participants to provide the fun/unique facts for a given instructor while an intern records the information on the chart paper.

Closure

Participants are congratulated on the success of the hunt and encouraged to continue learning about each other. This ongoing learning may include writing additional fun/unique facts on the instructor posters throughout the PREP course. Interns are reminded that this information will prove valuable for the "Mucho Mahalo" portion of the Celebration Dinner described further on in this paper.

4.2 Career Pathways

The Career Pathways session is an opportunity for the interns to ask the STEM professional guests questions about their paths and get advice on their own future careers. Akamai alumni, other local technical and science-career individuals are invited as guests with experiences and careers that would be of interest to the Akamai interns. PDP Teaching Teams and Akamai staff participate as well.

Prior to the session, Akamai staff run a short discussion with the interns to brainstorm questions for the guests. This discussion prepares the interns for the networking sessions and arms them with effective and pointed questions. Question categories the interns consider include:

- Exploring different types of jobs, and whether it is of interest to them
- Learning about educational paths to different jobs
- Learning about what it is like to work for a particular organization
- Learning about what employers look for from job applications
- Learning about majors, types of degrees, etc.
- Learning about graduate school, graduate programs
- Making the most of your Akamai internship

This session is broken down into four main components, described in more detail below:

- Introduction (15 min)
- Breakout Sessions (1 hour, 4x15 min)
- Closing Thoughts (15 min)
- Personal Career Development Plan writing (15 min)

Introduction

In this session an Akamai staff member introduces some of the different career pathways that previous Akamai interns have chosen. Examples include graduate school and jobs within the science and engineering fields in Hawaiʻi. Next, guests give brief

introductions about who they are, where they work, and how they got there (their educational track, for example) in order to seed thoughts on whom the interns should visit and what specific questions they should ask.

A brief explanation of the breakout session is presented, as it is broken into four 15-minute rotations during which time the interns can visit multiple clusters of professional guests, depending on their interests, though interns are free to come and go as they please throughout the entire session. Participants are informed that following the conclusion of the networking rotations, guests can offer their final advice to the entire group, and interns will be given time to reflect on their visits and write notes for themselves.

Breakout Sessions

The number of professional guests determines the number of breakout groups. Typically, breakout groups join two guests with one Akamai staff member to help facilitate. Another staff member acts as a timekeeper and notifies the groups when each 15-minute rotation ends. The staff facilitators clarify their role for the group at the beginning of the conversation; for example, they make it clear they will ensure there is a balance of time among the professionals, and that the interns will have their questions fielded.

Closing Thoughts

After the final breakout session, the entire group comes together. The lead of this session will ask guests and instructors if there is anything that came up in their discussions that they would like to share with the whole group. Examples of this are:

- Themes that came up a few times
- Questions or advice that they had not thought about before
- Important considerations worth emphasizing
- Advice that they did not get a chance to share

Personal Career Development Plan Writing

Interns use time at the end of this session to add notes to their online "Personal Career Development Plan" on:

- What priorities they have for their future
- Information about the path they would like to take
- Specific ideas for best taking advantage of the internship opportunity

This session is valuable for a variety of reasons. Interns get to hear how alumni from the Akamai program and other local mentors found their ways to their current positions and gain invaluable advice on how to best take advantage of their internships. The interns also expand their professional network, often meeting people they will soon see at the internship sites, either their own or that of their fellow interns. Many of the community connections created in this session persist into the internship and beyond.

4.3 Integrating into the Workplace

After the PREP course, interns will spend the next seven weeks at an observatory or company working under the guidance of one or more mentors to complete a project. This is not just an opportunity to do a real-world project and gain technical skills, it is also an opportunity for interns to experience being part of the workplace. For almost all interns this will be their first experience in the workplace, and a work culture that is likely unfamiliar to them. The "Integrating into the Workplace" session is designed to help interns successfully navigate their entry into the workplace culture and work effectively with their mentor. The product of this session is an online "Internship Integration Plan" that includes intern-generated notes on strategies that they will use to communicate effectively with their mentor, and their personal goals for being a productive and inclusive team member.

The session includes the following components, which are described in more detail below:

- Introduction (15 min)
- Scenario Small Group Discussions (35 min)
- Preparation for Scenario Skit (10 min)
- Scenario Skits (20 min total, 3-4 min each)
- Write Internship Integration Plan (10 min)

Introduction

The introduction can be just a brief overview of the session, outlining what will happen, and emphasizing the importance of learning about the culture of the organizations hosting interns and communicating effectively with mentors. The introduction often includes a mentor from one of the internship sites, who gives their perspectives and adds credibility to this session. The guest mentor provides some comments, and then joins a discussion and contributes as appropriate. Prior guests have brought up topics such as generational differences in how mentors and interns are used to communicating, since mentors are often decades older than the interns.

Scenario Small Group Discussions

After the introduction, interns are broken into smaller groups of 5–6 to discuss scenarios that can come up at internship sites, and productive strategies for preventing or handling them. Each group is led by a facilitator, who begins by setting the context for the discussions and establishing norms for an inclusive discussion. Discussion norms are drawn from the PDP and include:

- Would like to hear from everyone
- Listen, build on and ask questions on the comments of others
- Self-monitor contributions so time is shared equitably
- Show respect for others' ideas and perspectives

The discussion facilitator identifies a scenario, which the group quickly reads and then discusses for 5–10 minutes. The facilitator uses their own judgment to move along to new scenarios, based on how productive the discussion is, and may move through 3 or 4 scenarios. Examples of scenarios and prompts include:

- The intern is facing challenges and has questions but is having a hard time getting help and support from a busy mentor. The mentor's busy schedule often cuts their scheduled 1-hour meetings down to 10 minutes! Or else the mentor goes out of town for days at a time…
  - What are ways that you can prevent this situation from becoming a problem?
  - How do you deal with the situation if it happens?
- You are assigned an internship project that you aren't really interested in…
  - What are ways that you can prevent this situation from becoming a problem?
- After just three weeks, the intern thinks that he has his project all figured out and nearly completed. He even starts going home an hour or two early, since he feels that there is very little left to do on his project…
  - What should you be doing differently as an intern?

The facilitator takes an active role in infusing ideas into the discussion and making sure that key points are hit. It is productive to get ideas from the interns about how to handle challenging situations, but it is equally important to keep in mind that the facilitator has a great deal of experience. The interns will want to hear from facilitators, because they are considered experts in this context, so they will likely be unsatisfied if the facilitator is a passive discussant and does not bring forward strategies. Facilitators are provided with a bulleted set of strategies that they can scan as they are facilitating and bring into the discussion. The bulleted list can help facilitators bring in new ideas, or re-direct the trajectory of the

discussion if needed. The success of these discussions depends on good facilitation, and PDP discussion facilitation strategies are a key part of this.

Preparation for Scenario Skit

Toward the end of the discussion time, one scenario is decided upon to be the basis of a skit which will be performed in front of the whole group. Sometimes the decision of which skit has been left to the discussion group. However, to avoid the possibility of two or more groups picking the same scenario, discussion facilitators typically predetermine which skit their group will perform.

The interns are given 10 minutes to quickly create a 3-minute skit. Guidelines for the skit include:

- A narrator to set the stage (and possibly add other asides)
- Two or more actors (1 mentee; 1-2 mentors)
- Each group member shares at least one other strategy that did not necessarily come out in the skit

Discussion facilitators help the group get started. It is often good to get volunteers for actors and the narrator first. It can be surprising who volunteers to act, so facilitators should be careful to avoid making suggestions based on behavior in other aspects of the PREP course. Facilitators can make suggestions to help the skit convey key points, or maybe even more nuanced aspects of the discussion. Other suggestions can include that the skit has both an "unproductive" and "productive" way to handle things, performed in sequence.

Akamai staff have noticed that by this time in the intensive PREP course, the community that has been created among the interns is on full display during this session. This part of the session is fun and boisterous because the skits are often quite satirical, and the interns really enjoy the process of putting the skits together. They need to be pushed to do it in 10 minutes, but it is better to rush it a bit. It is perfectly acceptable (perhaps even preferable) if the skits are a little rough.

Scenario Skits

The session leader serves as emcee, while each discussion group performs a 3–4-minute skit. The skits are usually very funny, with interns acting out in very exaggerated form characters such as a very busy mentor or an intern uninterested in their project. It is a great way to wrap up the week, when interns are tired, and their guards are let down a little. It would likely not be as productive or fun to have this session too early in the PREP course.

The emcee moves the skits along and may add their own comments. For example, some emcees help by asking the audience immediately after the skit, "what was going on there?" to make sure that the audience got it. Or adding a few strategies if they did not seem to come out to the audience.

Write Internship Integration Plans

In the last component of this session, interns reflect on what they took away from the session. Their online "Internship Integration Plan" provides a quiet space for them to respond in writing to the following prompts:

- What do you want to talk to your mentor about early on in your internship?
- What do you plan to ask your mentor about?
- What strategies are you planning to use that you discussed today to preemptively address a scenario you want to avoid?

4.4 Workplace Inclusion

As a companion to the previous session, an Akamai staff member engages the interns in a brief discussion of inclusion in the workplace. The session includes the following components, described in more detail below:

- Background (5 min)
- Scenario (5 min)
- Discussion (10 min)

Background

In this section the presenter sets norms for the upcoming discussion by noting that the topic of inclusion may bring feelings of discomfort which are necessary for personal growth. The expectation is that such feelings are normal and participants should acknowledge this and show respect for and provide support to others.

In addition, basic concepts are shared including Shore et al.'s (2011) definition of **inclusion** (see section 2 above) and various types of **diversity** — including race, ethnicity, language, religion, sexual orientation, experiences, etc. The point is stressed that diversity cannot thrive without inclusion by sharing the following quotation, "Diversity is being invited to the party; inclusion is being asked to dance" (Verna Myers[1]).

Scenario

Interns are then presented with a two-part scenario to consider. First, they are asked to imagine that they start their internship and notice that they are the only person on their team who is ___ (they fill in the blank with a type of diversity of their choosing). Harkening back to the definition of inclusion, they are prompted to think about if they feel like an esteemed member of the group, if they belong, and if they feel unique. Next they are asked to imagine that they notice that someone else on the team is the only person who is ___ (they again fill in the blank with a type of diversity of their choosing). They are prompted to consider how they could help this person feel like an esteemed member of the group. Throughout, interns are invited to share their thoughts in relation to the prompts, although this is not required.

Discussion

Following the scenario, interns are then asked to reflect on and share their thoughts regarding the following prompts:

- How can you advocate for inclusivity for yourself during your internship? Your career?
- How can you do the same for others?

The discussion closes with providing time for interns to record any notes they wish from the session in their online "Internship Integration Plan."

4.5 Celebration Dinner

The PREP course culminates with a special evening meal on the last day. This dinner is a time to celebrate the accomplishments of the week by engaging participants in two activities that cement and continue to contribute to building an inclusive community among Akamai interns and staff and PDP Teaching Team members. The first activity — Mucho Mahalo — is an opportunity for interns to express their appreciation to staff and instructors for supporting them through the PREP course. The second activity — Akamai's Got Talent! — is a time for any participant to engage in a variety of actions that display heretofore hidden strengths and interests.

Mucho Mahalo

From the Spanish for many and Hawaiian for thanks, "Mucho Mahalo" (many thanks) involves groups of Akamai interns making public displays of gratitude to individual staff and instructors. During the Pre-Orientation to the PREP course (typically the evening before the first day), an Akamai staff member introduces the interns to this activity, apart from other staff and instructors. After referring to the work staff and instructors put into making the PREP course a positive and productive experience for them, the staff member presents Mucho Mahalo as an opportunity for interns to return the favor. Pre-assigned groups of interns are tasked with coming up with a gift and a brief speech to be given during the Celebration Dinner. They are encouraged to get to know their assigned staff/instructor throughout the PREP course, starting with the icebreaker the

[1] https://www.goodreads.com/quotes/9751877-diversity-is-being-invited-to-the-party-inclusion-is-being

next day (see Opening Icebreaker above). Gifts are described as inexpensive tokens of appreciation that connect to the person's interests. Memorable examples include presenting a staff/instructor with a t-shirt signed by interns or a photograph of honu (Hawaiian for sea turtle) taken by an intern themself and given to someone known to be fond of honu from the Opening Icebreaker. The staff member who coordinates Mucho Mahalo offers suggestions and gives reminders to the interns throughout the PREP course.

Akamai's Got Talent!

Based on the popular television show "America's Got Talent," Akamai's AGT highlights skills of any participant in the PREP course. This activity is also foreshadowed during the Pre-Orientation, usually by the same staff member who facilitates Mucho Mahalo. This staff member coordinates recruitment of acts for AGT throughout the days leading up the Celebration Dinner. Acts may be performed by individuals or small groups, often engage various audience "volunteers," and must conform with health and safety regulations of the chosen venue (e.g., an intern's skill with fire dancing was not permissible). Here is a sampling of past acts:

- Arm wrestling
- Charades
- Dance routines (e.g., Hula, K-Pop)
- Lip-synching
- Magic tricks
- Musical instruments (e.g., 'ukulele)

One of the many crowd-pleasing favorites was an a-Capella rendering of the chorus from the song *My Girl*:

I've got sunshine on a cloudy day.
When it's cold outside,
I've got the month of May.
I guess you'd say,
What can make me feel this way…
Akamai, Akamai, Akamai
Talkin' 'bout Akamai.
Akamai!

While showcasing intern creativity (and vocal prowess in the moment), this AGT entry also conveyed a strong sense of appreciation for and belongingness with the Akamai program.

Most recently, an intern came up with and implemented the idea of presenting each and every member of an AGT act with an electronic certificate of participation. This embellishment helped reinforce the overall inclusive, rather than competitive, nature of the event. When done, the goal is for all participants in the PREP course to leave the AGT session with positive feelings knowing they are cherished members of the Akamai 'Ohana (family).

5. Closing Comments

In this paper we reported on how PDP Equity and Inclusion ideas apply to the community-building aspects of the Akamai PREP course. More specifically, we described how a variety of sessions and activities in the PREP course meet the dual goals of

Table 1: Inclusion goals of community-building activities in the Akamai PREP course.

Activity (Day)	Celebrating Individuals' Uniqueness	Learning Workplace Cultural Norms
Opening Icebreaker (Day 1)	✓	
Career Pathways (Day 3)	✓	✓
Integrating into the Workplace (Day 4)	✓	✓
Workplace Inclusion (Day 4)	✓	✓
Celebration Dinner (Day 4)	✓	

(a) creating a space and a safe environment for everyone at PREP to share aspects of themselves, and *celebrate each person's uniqueness*, and (b) making the cultural norms of internships sites more explicit and make the *learning of cultural norms* a valued process and outcome for interns. The sessions and activities and their relation to these goals are presented in Table 1. It is our hope that these examples serve as catalysts for discussion and inspiration for designing similar activities to meet the specific needs of other programs interested in building inclusive STEM communities.

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References

Barnes, A., Ball, T., Starr, C. R., Seagroves, S., Perez, K., & Hunter, L. (2018). Successfully building a diverse telescope workforce: The design of the Akamai Internship Program in Hawai'i. *2018 American Society for Engineering Education Annual Conference & Exposition Proceedings*, 31030. https://doi.org/10.18260/1-2--31030

National Research Council. (2000). *How people learn: Brain, mind, experience, and school* (Expanded edition). The National Academies Press. https://doi.org/10.17226/9853

Seagroves, S., Palomino, R., McConnell, N. J., Metevier, A. J., Barnes, A., Quan, T. K., & Hunter, L. (2022). ISEE's equity & inclusion theme. In *ISEE professional development resources for teaching STEM*. UC Santa Cruz: Institute for Scientist & Engineer Educators. https://escholarship.org/uc/item/8cz4r718

Shaw, J., Barnes, A., & Hunter, L. (2022). Inquiries and frameworks: Synergistic support for STEM student interns. In S. Seagroves, A. Barnes, A. J. Metevier, J. Porter, & L. Hunter (Eds.), *Leaders in effective and inclusive STEM: Twenty years of the Institute for Scientist & Engineer Educators*. UC Santa Cruz: Institute for Scientist & Engineer Educators. https://escholarship.org/uc/isee_pdp20yr

Shore, L. M., Randel, A. E., Chung, B. G., Dean, M. A., Holcombe Ehrhart, K., & Singh, G. (2011). Inclusion and diversity in work groups: A review and model for future research. *Journal of Management*, *37*(4), 1262–1289. https://doi.org/10.1177/0149206310385943