Difference Makers Special Session: These are the People in Your Neighborhood: Help and Hindrance in Making Sustainable Change

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Abstract—This Special Session will engage engineering and computing education professionals in role play and an interactive discussion to explore their assumptions about their colleagues' response to change initiatives and how to react to those responses. Acting skill is not necessary for role playing; everyone can participate. It builds on the successful work done in developing the Change Champions resources and collaborative inquiry results of engineering education research CAREER network project. Every member of the FIE community, regardless of their institution or job title, is a potential change agent for improving CSET education and needs opportunities to continue building their skill sets. As a special session, we can offer a portion of the needed change management training in an interactive, hands-on manner within the safe environment of FIE. In addition, the nature of this special session allows participants to try a variety of interactions to determine their comfort level with different pathways.

Keywords—difference makers, change management, change champions

I. PROJECT OVERVIEW

Creating innovations in computer science, engineering, and technology (CSET) education involves a variety of changes. Some changes are at the administration system level, including processes to record and accredit CSET learning, curricular descriptions that impact financial aid and the use of G.I. bill benefits, and tuition models [1]. Other changes involve the perceptions of individuals throughout the institution, as well as other stakeholders, regarding who belongs in CSET education and careers, what CSET educational outcomes should be, and what types of pedagogical and assessment mechanisms are appropriate [2]. While the scale of the proposed innovation impacts the amplitude of change and the number of faculty, staff, student, and other individuals likely to have a voice, all educational innovations require change management in order to be sustainable.

Building on the successful workshop/special session and paper series in previous FIE conferences [e.g., 3, 4], this special session considers responses both to prospective

members of your team of change champions and those who may hinder the success of your innovation. Sample personas and situations are derived from our previous research on the origin stories of CSET education innovations, some of which have successfully sustained their gains over time and some which were closed by the barriers described in this special session. Participants will interact in role plays [5] to explore possible pathways through real-life interactions and co-create responses [6] that are more likely to lead to help than hindrance.

II. GOALS OF SPECIAL SESSION

The goals of this session are to engage participants in a role play scenario to test assumptions and responses when interacting with others who are not part of the core team working to make a particular change.

After participating in this special session, individuals will:
- Help education change agents visualize people in their organizations who are likely to be involved in the process of education innovation and discern who might be helpful or be a barrier in making their innovations sustainable;

- Practice responses to likely situations with these individuals; and

- Provide a safe and encouraging environment for participants to practice their new skills.

III. INTERACTION AND THOUGHT-PROVOKING NATURE

This special session will use role plays to help participants see the breadth of individuals in their organizations who are likely to be involved in the process of educational innovation and determine strategies more likely to be successful with different people [7]. Each participant will receive both general information about the scenario to be role played and information specific to the motivations and desires of their character. Some of the character-specific information is included in the scene setting description provided to other characters, some is secret and known only to the individual character. After experiencing the role play and discussing lessons learned, the role play groups will determine specific changes they want to try as they re-act the role play. This process is designed to allow participants to try different

approaches to change management with their colleagues in a safe, encouraging environment.

IV. DESCRIPTION OF SPECIAL SESSION

A. Agenda

Participants will engage with two scenarios based on real change management situations in computer science and engineering education, as reflected in the detailed session plan in Table I. Participants are given initial information about the scenario and their character. After preparation in small groups, participants will act out the role play. Following group discussion of the different role play paths and end points, each group will have the opportunity to re-play their scenario and see how different choices impact the level of support for the scenario's potential change.

TABLE I.   DETAILED SESSION PLAN

Time (minutes)	Session Activity
0-5	Welcome and opening context
5-10	Introduction of the characters and scenario one
10-20	Role play preparation, grouped by character
20-30	Role play in cross-character groups
30-40	Discussion of results and possible changes to the way the scenario played out
40-45	Role play redux with changes suggested in discussion
45-50	Introduction of characters and scenario two
50-60	Role play in cross-character groups
60-70	Discussion of results and possible changes to the way the scenario played out
70-75	Role play redux with changes suggested in discussion
75-80	Closing remarks and questions

B. Expected Outcomes and Future Work

The outcomes of this special session will reflect the specific goals. The participants will increase their skill in making change happen in their departments, institutions, and professional communities, thus increasing their ability to achieve the goals we share for improving CSET education. The facilitators will use the results of this special session to continue building evidence-based interventions that support CSET education change agents.

This results of this special session will be included in both future academic papers making research-based recommendations to change agents and in implementation guides for CSET change agents looking to make improvements at all levels of scale. The implementation guides will also include other tools developed through our research and tested in prior FIE workshops and special sessions.

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