

# Educational Change Initiatives: Misalignments Between Changemakers and Their Institutions

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**Abstract**—This Work-in-Progress Research paper presents preliminary findings from a larger study on how and why individuals engage in educational change initiatives within institutional and multi-institutional settings. In this paper, we quantitatively explore the learning beliefs, professional identities, and educational values of individuals involved in change efforts, and we examine how these beliefs, identities, and values align or misalign with those of their colleagues or institutions. Our pilot data reveal significant differences between participants' self-evaluation and institutional evaluation of beliefs, identities, and values around education. For example, educators rate their own conceptions of learning as more student-centered, and their educational goals as broader, than what they perceive among colleagues at their institution. Within faculty groups from the same school, we see examples of both strong alignment and strong misalignment in educational beliefs, values, and identities. While our investigation is ongoing, we believe this research has the potential to help changemakers develop greater awareness of their own points-of-view, and to more effectively converse with potential collaborators about specific areas of alignment and misalignment that could affect change processes and outcomes.

**Keywords**—educational change, innovation, learning beliefs, educational values, professional identity

## I. INTRODUCTION

Educators leading change efforts often discover that their success depends on engaging with the larger context in which they exist. Launching a program with new learning goals, pedagogical approaches, or physical setups can require substantial structural changes to successfully implement, or substantial coordination and alignment of a faculty team. Even course-level changes can require working with existing institutional dynamics, structures, policies, and processes. Part of a larger study aimed at understanding how and why educators engage in collaborative educational change initiatives, this investigation examines the interfaces among the beliefs and values of educators, the goals and actions of change efforts, and the institutional contexts in which educational change takes place.

## II. BACKGROUND

Research shows that a number of personal and institutional factors influence how educators conceptualize and enact educational change efforts and, once enacted, the degree to which change efforts are successful in a particular institutional context. Change necessarily brings new ideas and values in

direct contact with existing cultural artifacts, norms, beliefs, mental models, biases, and assumptions. As such, educational change may spark exciting synergies or disruptive tensions, depending on how the proposed change aligns to individual or group-level beliefs and values, and how the organizational culture and leadership nurtures or thwarts the change process.

Educational change efforts often focus on the “what” or “how” of change – tangible manifestations that people can readily see and feel, e.g., *new maker spaces, better prepared students, stronger industry connections, more project-based courses*. Some organizational change theorists argue, however, that the success of change initiatives relies on more deeply embedded personal factors such as individuals’ beliefs, values, and underlying assumptions, as well as cultural factors such as institutional support of experimentation, collaboration, and open communication [1], [2]. In educational contexts, we suggest that several variables are critically important to consider in change initiatives: (a) individuals’ beliefs about learners and learning; (b) individuals’ professional identity associations; (c) individuals’ educational values and goals; and (d) institutional supportiveness of change, as perceived by individuals. We also suggest that significant misalignments within collaborating groups, or between individuals and institutions, can impede the change effort. This project aims at measuring these variables, and exploring the assertions that successful collaborative change relies on alignment of individual and institutional beliefs, identities, and values, as well as perceived organizational support for change.

Our study makes use of existing research from several domains. To examine individuals’ perspectives on the purposes of education, we draw on work that illustrates historical and current paradigms or models for the “educated person” and the overarching goals of educational systems [3], [4], [5], [6], [7], [8], as well as more recent and domain-specific calls for educational reform [9], [10], [11], [12]. We leverage recent work on professional identity development, particularly in technical fields, to explore how educators associate with or emphasize particular skills or outcomes [13], [14], [15], [16], [17], [18], [19], [20]. To characterize educators’ beliefs about learners and learning, we make use of conceptions of learning frameworks from both secondary and higher education [21], [22]. Education research illustrates the ways in which instructors’ conceptualizations of learning shape their choice of pedagogies and design of educational experiences, affect learning quality and outcomes, and influence their acceptance or rejection of learning innovations [23], [24], [25], [26], [27].

Our study is also informed by work that examines the intersections of organizational culture and educational innovation. We make use of Schein’s (2010) analysis of unhealthy and healthy organizational cultures, and his examination of the ways cultural assumptions, behavioral norms, and structures influence change [11]. Within the educational reform context, we draw on Fullan’s key factors for educational change [2], [28]; Tierney’s (1988) framework for understanding cultures in higher education [29]; Waks’ (2007) framework for fundamental educational change [30]; Rogers’ (1995) diffusion of innovation theory [31]; and studies that examine the interactions between educational innovation and educational cultures at institutional or broader levels [32], [33], [34], [35]. Of particular concern are the ways educators perceive their organizational culture’s readiness for change, [35], [36], [37]. We recognize that the cultures, policies, and structures present at the departmental, school, and institutional levels can have powerful impacts on the exploration and implementation of new educational ideas and approaches.

### III. METHODS

Part of a larger research-to-practice initiative aimed at understanding collaborative educational change processes, this paper uses quantitative characterizations to illustrate how educators perceive their own and their institution’s beliefs, identities, and values in education. Participants in this study are faculty, administrators, and staff at educational institutions who express interest in, actively engage in, or support educational change and curriculum revision efforts. The present dataset includes responses from 90 educators engaged in change initiatives at 54 institutions across 17 countries. The participant group includes 56 (62%) men and 34 (38%) women.

Participants completed four questionnaires, each with a different focus. Educators’ beliefs about teaching and learning were assessed using the Learning Inventory, an instrument designed to measure teachers’ conceptions of learning in five areas: (1) external versus internal regulation, (2) reproductive versus constructive knowledge, (3) individual versus social learning, (4) fixed versus dynamic ability, and (5) intolerance versus tolerance of uncertainty [22]. Each item of the Learning Inventory consists of two opposite statements about the same topic, a more process-oriented statement and a more traditional statement; and respondents select the statement they more strongly endorse. Educators’ professional identity associations were measured using an instrument described by Cech (2015), which asks respondents to rate the importance of different skills to a profession or career, e.g., problem-solving prowess, technological leadership, management/communication, and social consciousness [14]. Educators’ views on the purposes of education were characterized using a questionnaire constructed from the educational purpose and goals frameworks presented in Cohen (2010) [8] and Delors et al. (1996) [6]. For each survey, we asked participants to respond from two perspectives: “for myself” and “for people at my institution.” Individuals’ perceptions of the innovation readiness of their institutional culture were measured using the Building Blocks of Innovation Survey [37].

In this paper, we graphically present quantitative findings for the Learning Inventory, professional identity, and purposes

of education surveys. Significant differences in subscale variables were determined by unpaired or paired t-test analyses, as appropriate for the statistical comparison.

### IV. PRELIMINARY FINDINGS

Analysis of the pilot data reveals significant differences in how educators evaluate their own versus their institution’s learning beliefs, identities, and values. In addition, the data illustrate that educators may be well aligned or markedly misaligned with others from their same institution. These findings are described in more detail below.

#### A. Overall Self Evaluations vs. Institutional Evaluations

Paired t-test analysis of the Learning Inventory responses illustrate that educators perceive their own learning beliefs to be significantly more process-oriented and non-traditional than the beliefs held by others at their institution (Fig. 1). Specifically, study respondents strongly endorsed beliefs about internal regulation versus external regulation, knowledge as actively constructed versus reproduced from expert to novice, and social learning versus individual learning. Study participants also felt their beliefs in dynamic versus fixed learner ability and ambiguity or uncertainty in learning were less traditional than those of their colleagues.

Responses to the professional identity trait questionnaire indicate that educators involved in change processes perceive a significant mismatch between how they value certain professional roles, and how others at their institution value those same roles (Fig. 2). For example, respondents viewed social consciousness – improving society, promoting racial understanding, community engagement, and helping others – as highly personally important; but they perceived that these traits may be less important to others at their school. In contrast, for the technological leadership identity trait (e.g., making discoveries, inventing future technologies, being a leader in my field), educators reported reasonable alignment between their own values and their institution’s values.

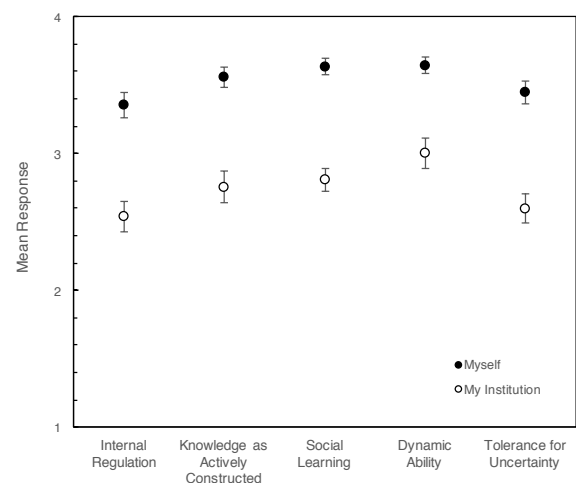


Fig. 1. Mean subscale responses on the Learning Inventory questionnaire, showing significant differences in how educators rate their own learning beliefs, compared to how they rate the beliefs of others at their institution. N=90. Error bars show 95% confidence intervals.

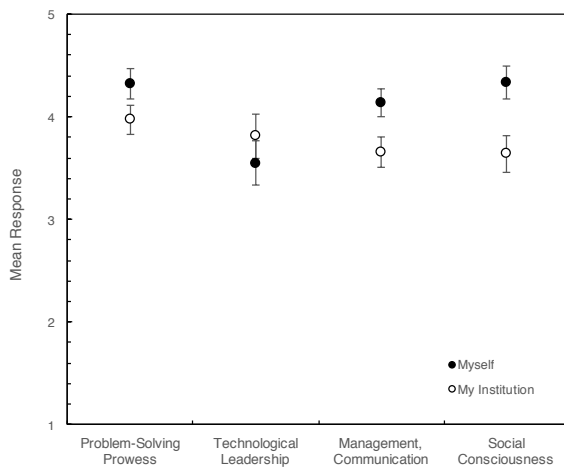


Fig. 2. Mean subscale responses on the professional identity trait measures, showing significant differences in how educators endorse certain professional roles, compared to how they perceive others at their institution endorse the professional roles. N=90. Error bars show 95% confidence intervals.

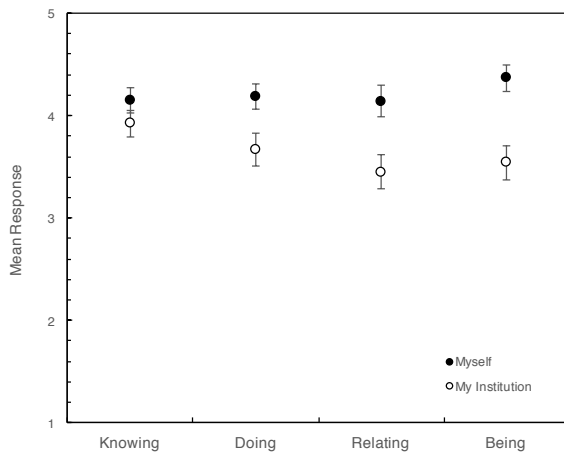


Fig. 3. Mean subscale responses for the purposes of education survey, showing significant differences in how educators endorse certain learning goals, compared to how they perceive others at their institution endorse the same goals. N=90. Error bars show 95% confidence intervals.

Differences in individuals' self- and institutional ratings are also apparent in responses to the purposes of education survey (Fig. 3). Paired samples t-tests show that while educators found good alignment with their institution in the valuing of *knowledge* goals, educators perceive their own valuing of *doing*, *relating*, and *being* goals to be significantly higher than that of their colleagues.

These differences in conceptions of learning, professional identities, and educational values may have important implications for collaborative change efforts, as they can influence how faculty frame the goals and desired impacts of their educational change effort, and directly shape how educators adopt pedagogical approaches and design on-the-ground curricular experiences.

### B. Within-Group Alignments and Misalignments

A closer examination of groups of educators from the same institution reveals varying levels of group agreement in educational beliefs, identities, and goals. For example, at one

school a group of four faculty expressed learning beliefs that ranged from slight endorsement of internal (learner) regulation over external (teacher) regulation and moderate endorsement of social learning, to extremely strong beliefs that learning should be collaborative and self-regulated (Fig. 4.). The professional identities of some faculty groups are highly aligned, while other groups show good alignment in their endorsement of certain traits but poor alignment in other areas (Fig. 5).

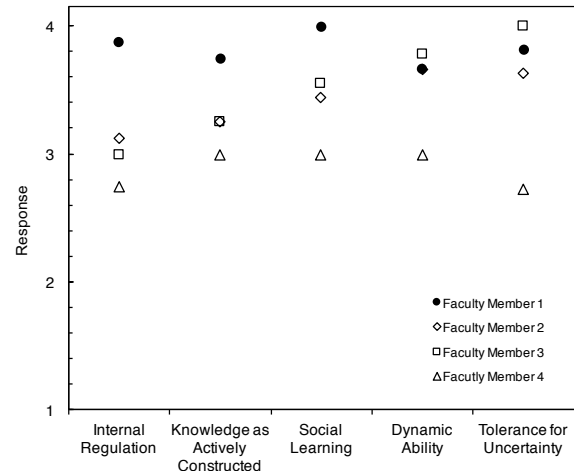


Fig. 4. Learning beliefs of four faculty members from the same institution, showing clustering of different individuals around different subscale measures. Error bars show 95% confidence intervals.

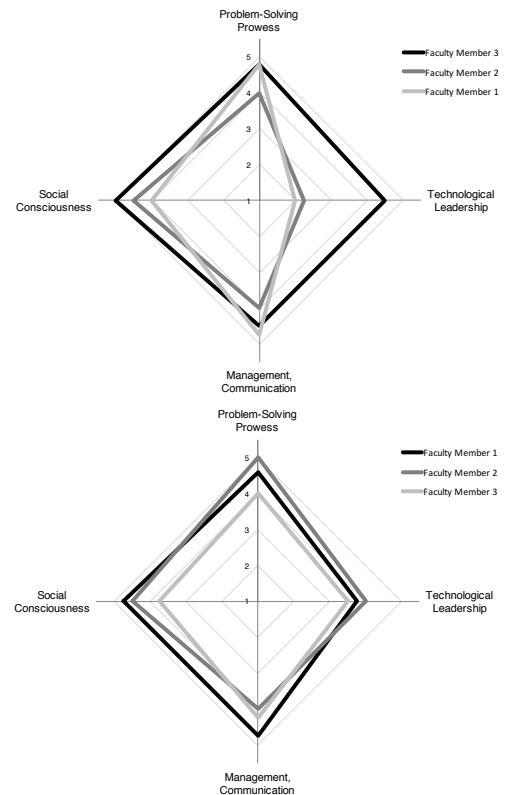


Fig. 5. Professional identities of faculty groups at two different institutions. The top graph shows good faculty alignment on three identity associations, but misalignment on the technological leadership axis. The bottom graph shows good alignment on all four professional identity traits.

### C. Individual-Institutional Alignments and Misalignments

A person-centered analysis (Figs. 6-7) reveals that some individuals engaged in educational change initiatives report strong alignment between their self-expressed professional identity and educational values, and their perceptions of the identities and values of their institutional colleagues. Other faculty involved in change efforts, however, perceive substantial misalignments between themselves and their institution. For example, Fig. 6 illustrates cases of alignment and misalignment between individuals' professional identity associations, and how they perceive the professional identities of other educators at their school. In the misalignment situation, the faculty member associates strongly with social consciousness and weakly with technological leadership, but perceives that others at the school embrace technological leadership over social consciousness.

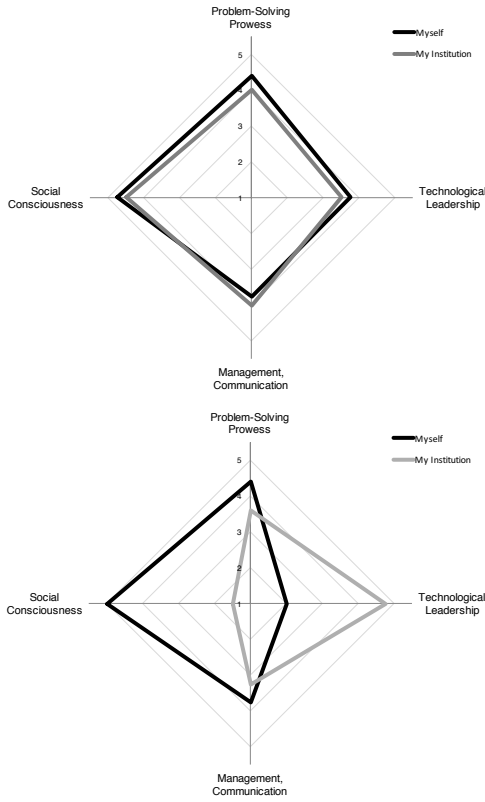


Fig. 6. Professional identities of individuals at two different institutions. The top graph shows good individual-institutional alignment on all professional identity traits, while the bottom graph shows good alignment on two identity traits and large misalignment on the other two traits.

Similar situations of individual-institutional alignment and misalignment are visible in the purposes of education results (Fig. 7). In the aligned situation, the faculty member finds that her educational values around knowing, doing, relating, and being are remarkably similar to those of her colleagues. In the misaligned case, the faculty member views relating and being goals of primary importance in education, but perceives that these goals are not valued by others at the school.

One can imagine the sense of synergy that individuals may experience when they sense strong alignment between their

own and their colleagues' identities and educational values, as well as the tension that may arise with individual-institutional misalignments.

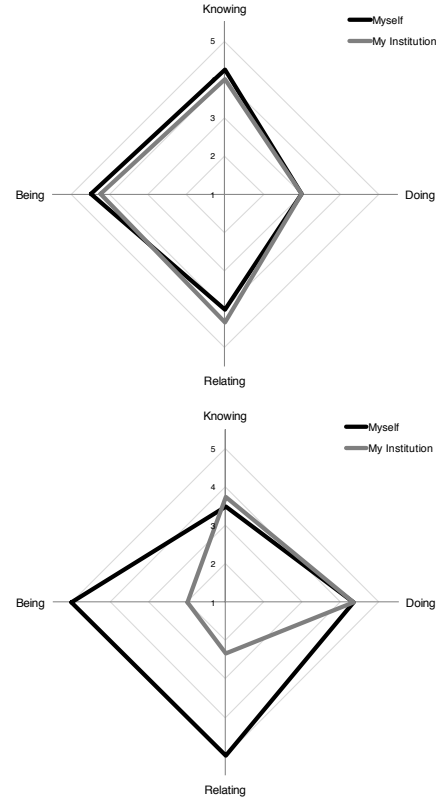


Fig. 7. Purposes of education data for individuals at two different institutions. The top graph shows good individual-institutional alignment on all educational goal areas, while the bottom graph shows good alignment on knowing and doing goals, but considerable misalignment on the relating and being goal for education.

### V. FUTURE WORK

The work presented in this paper is in progress. We are actively collecting both quantitative and qualitative survey data from faculty involved in educational change initiatives at both U.S. and international institutions. Since our primary goal in this study is to gain insight into collaborative educational change, we plan to more deeply explore the survey responses from teams of faculty collaborators within and across institutions. In addition to the formal surveying, we have initiated several design research projects to observe and record how faculty from multiple institutions collaborate on educational change initiatives at the curricular, organizational, and larger systemic levels. Of particular interest are where faculty find synergistic connections in their educational beliefs, identities, and values, and how faculty manage interpersonal and institutional misalignments.

### ACKNOWLEDGMENT

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