Educating Women Students in the Academy to Confront Gender Discrimination and Contribute to Equity Afterward
Marcia Mentkowski and Glen Rogers

Marcia Mentkowski, Professor of Psychology, Senior Scholar for Educational Research and Director Emerita, Educational Research and Evaluation, Alverno College
Glen Rogers, Director, Educational Research and Evaluation, Alverno College

Abstract
We argue that (1) faculty and other academic professionals who educate undergraduate women in capabilities such as effective communication, teamwork, and leadership that are integrated with the disciplines (e.g., biology, history, fine arts) and professions (e.g., education, nursing, management) indirectly assist their students to confront gender discrimination and contribute to equity, and that (2) the educational effect transfers afterward to alumnae performance in the professional workplace. Longitudinal data were collected over ten years from students in a college for women. Prior findings from this study are re-interpreted in relation to gender equity. Five years after college (based on externally-derived models for coding performance interview events and questionnaires), a majority of women alumnae demonstrated at least one of four ability factors that challenge gender discrimination: Collaborative Organizational Thinking and Action, Balanced Self Assessment and Acting from Values, Development of Others and Perspective-Taking, and Analytical Thinking and Action.

Career-level indicators validated Collaborative Organizational Thinking and Action for advancement, salary, and degree of autonomy in a traditionally female (nursing) and a traditionally male (management) profession. Analysis of forty-six performance interview events found thirteen events where alumnae dealt with system failures while interacting with males. Alumnae in nursing and management constructed their performance or lack of it as due to overt or structural gender discrimination in only two of these thirteen performance interview events. The authors suggest that alumnae in this study were effective in both traditionally female and traditionally male professional settings. Gender discrimination probably occurred in the workplace of the time, but women alumnae were effective in confronting it and were effective in their careers. Because they had developed both independent and collaborative abilities in college, they contributed to more collaborative and thus more equitable workplaces, and contributed to the effectiveness of their organizations. The authors conclude with recommendations for higher education curriculum and policy.

Introduction
The Oxford Round Table, "Women in the Academy," brought together scholars from a wide range of universities and colleges. Several scholars had studied how their individual institutions had fared in working to bring about changes in culture and practice so that women faculty
members experienced fairer treatment than they had earlier in their institutions' history. With these findings as backdrop, our question concerns a related institutional responsibility: educating students to confront gender discrimination and contribute to equity during and after college. We acknowledge that educating students—women and men—for this learning outcome is often assumed when students are educated in colleges and universities that make social justice a priority for all students on campus. But the question remains: How might institutions better meet their responsibilities?

We answer the question about institutional responsibility by setting forth evidence that the College where we studied this issue does educate students, however indirectly, to confront gender discrimination and contribute to equity while students are still in school. Further, we examined whether alumnae were prepared adequately to confront overt and structural discrimination in the professional workplace afterward.

In our case, the academy is a private undergraduate college for women: Alverno College in Milwaukee, Wisconsin, founded in 1887. In 1973, Alverno implemented an integrated liberal arts and professions curriculum that is ability-based. Students are required to demonstrate eight abilities in order to graduate. Abilities include communication, analysis, problem-solving, valuing in decision making, effective citizenship, developing a global perspective, and aesthetic engagement (Alverno College Faculty, 1976/2005). One hallmark of the curriculum is that students learn the abilities in the contexts of their courses across general education, the disciplines, and the professions, rather than in separate courses. A second is that students are expected to demonstrate their developing knowledge and abilities through performance assessment or student assessment-as-learning (Alverno College Faculty 1979/1994). Assessment is a process that includes observation, interpretation, and judgment of performance by faculty members and students in relation to criteria. Faculty members provide feedback to students for individual development and plan with them for further learning. A third hallmark is that faculty and other academic professionals educate for maturity, leadership, and service. Thus, students are expected to show integrative and applied learning that enables them to adapt and transfer it to new contexts after college in work, family, and civic life.

The question of whether colleges adequately prepare undergraduates for countering gender discrimination or may be moot for students in highly selective institutions who were raised by college-educated parents or other families where college was expected directly after high school. However, seventy-three percent of Alverno's nearly twenty-four hundred undergraduate students are the first generation in their families to attend college. Thirty-five percent are students from various ethnic minority groups (the highest percent of any college in Wisconsin). They often enroll from local urban high schools. Ninety-eight percent of full-time, degree-seeking, undergraduate students received some form of financial aid in fall 2009. While students have a range of majors and they complete general education in the liberal arts, they generally come to college primarily to prepare for professions in teaching, nursing, management, or professional communications: thus the College recently added graduate programs in these areas for women and men.
One issue for this college currently is whether and how faculty and academic professionals both in the classroom and outside it, and their undergraduate students both in the classroom and outside it, confront all kinds of discrimination, including (but not only) related to gender. Jaye Jang Van Kirk (2005, 200) argues that gender is a fundamental societal division but that it operates along with class, race, ethnicity, and culture. Thus, each woman entering college carries her own history, made up of multiple factors that influence how she experiences her education. Van Kirk asks: "Given that, how should educators accommodate the diverse populations of colleges and universities so as to provide the most comprehensive and meaningful educational experience?"

We reasoned that if we could re-examine how alumnae from an earlier time confronted gender discrimination and contributed to equity in the workplace, and identify some of the learning strategies that worked for them, Alverno faculty members would have continued confidence in using similar learning opportunities for today's students, even as they make adjustments for current students' individual differences, personal histories, and how their current cultures affect them. Both earlier and current students share a common characteristic: a majority was the first generation in their family to attend college. However, the earlier longitudinal cohorts entered college as first-generation students during what Kathleen Hulbert and Diane Schuster (1993) refer to as the era of liberation.

The study we conducted for the Oxford Round Table began as we considered a broad finding from our earlier studies: Direct and indirect learning in the Alverno College curriculum and culture transfers after college to alumnae performance in work, family, and civic roles. Given Alverno performance theory underlying assessment of abilities (Alverno College Faculty 1979/1994) and previous data and analyses, we examined our question about confronting gender discrimination with students and alumnae who had contributed to a longitudinal study from 1976 to 1988. We had followed alumnae five years after college. In the follow-up study, researchers added a performance interview (the Behavioral Event Interview), a kind of critical incident technique that provided data on events selected by the interviewee, and an interviewer's open-ended prompts and probing questions. These included: What led up to the situation? Who was involved? What did you actually do? What were you thinking and feeling at the time? What was the result?

We selected data from this larger study to examine the following hypothesis: Women and men faculty and academic professionals at Alverno College educate undergraduate women alumnae indirectly during college to confront overt and structural gender discrimination after college. In the longitudinal study, we did not directly measure women's experience with any kind of gender discrimination after college. However, Alverno faculty and other academics are aware they existed and remain concerned about their alumnae, given the continued inequity of salaries.

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1 Two complete classes of undergraduates were followed longitudinally over ten years during and after college. We used multiple measures from three theoretical frameworks: cognitive developmental theory, social construction theory, and performance theory. Participants completed a battery of externally-designed measures and questionnaires three times during college. A random sample of the group was also interviewed for their perspectives four times, and all of the measures and the interview were again completed five years after graduation.
between women and men today. And so we ask, what evidence is there that educators at our college provided alumnae with resources that enabled them to confront and deal effectively with gender discrimination in the workplace? We already knew from statistical causal analyses and qualitative analyses that the curriculum was generally effective for students during college and alumnae in post-college settings. For example, causal modeling indicated a direct path from students’ reports of breadth of preparation in the curriculum to the participative leadership abilities they demonstrated in the workplace five years later (Mentkowski and Associates 2000). To test the current hypothesis, we conducted a post-hoc, secondary analysis of forty-six performance events collected from five-year alumnae in 1988, using the Behavioral Event Interview.

In this paper, we do not generalize from our findings to any other college curricula or cultures, except perhaps to Alverno's current curriculum, because we are well aware of the diversity in institutions of higher education that often stymies such comparisons. Nevertheless, Alverno faculty had used particular learning strategies when the study participants were in college that are currently recognized in the higher education literature as fostering learning in today's students (Banta and Associates 2002; Bransford, Brown, and Cocking 2000). These include abilities or learning outcomes, performance assessment, self assessment, and feedback, four approaches that undergraduates in the study linked to three learning outcomes: taking responsibility for learning, making relationships among abilities and learning outcomes and their uses, and using different ways of learning.²

Given that we did not directly measure either overt or structural gender discrimination in the five-year alumnae follow-up study, why expect five-year alumnae to experience it? First, we considered the timing of the longitudinal study—it was conducted from 1976 through 1988. Second, most alumnae worked in Milwaukee, which was generally known as a working-class city. Metropolitan government and private sector businesses had a conservative reputation, confirmed to a degree by studies educational researchers at the College had conducted locally. Professional women nurses and managers participated in these studies from 1980 to 1982 and they were not Alverno graduates.

There appeared to be a chilly climate for both professions at that time. Even in nurse management, few if any women were in upper hospital administrative positions locally in 1988, and nurse managers in other roles were reporting to male supervisors. For nurses, members of a female-dominated profession, researchers were able to more easily create a sample from the top health-care settings in the metropolitan area (DeBack and Mentkowski 1986). In contrast, researchers could find only 101 women managers and executives in fifty-three organizations in the private sector who met independent criteria for managers (Mentkowski 1988; Mentkowski, 2000). The sample of the longitudinal study was largely Caucasian; only seven percent were minority women. Half were students direct from high school; half were returning adults. Most had come from the Milwaukee metropolitan area. During the open-ended, in-depth, and confidential interviews conducted each year toward the end of the college year, these mostly first-generation students related examples of families unable to support them either financially or in dealing with common college issues and problems. Some students were actively discouraged from attending college, usually by their fathers. Some students commented on their mothers as role models, who actively promoted their getting a college degree.

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O'Brien, McEachern, and Fowler 1983). Of course, nurses were also clamoring for more respect and responsibility in relation to physicians; few advancement opportunities existed for them also.

Alumnae Abilities for Addressing Gender Discrimination

To test the current hypothesis, we built on some broad findings from the five-year follow-up study across all Alverno alumnae, not only nurses and managers. Generally, alumnae performance illustrated respect for male and female persons. They demonstrated perspective-taking; understanding different points of view on issues and problems. Effective performance was distinguished by engaging everyone in problem solving and taking responsibility for professional outcomes (Mentkowski and Rogers 1993; Mentkowski and Associates 2000). These prior findings encouraged us to pursue the hypothesis that an Alverno education did indirectly assist women to counter overt and structural gender discrimination should they experience it. To illustrate from our current analysis, here is an example of one alumna in management who refers to overt gender discrimination and also proactively addresses inequitable opportunities for women. When serving on a board of directors of an organization, the alumna notes that the list of appointments to the campaign committees and chairs do not include women.³

[The Board members] can't understand why a woman of my potential, as they have said to me, is not in private management. So they don't know how to take me. [I have learned that] more often than not for women, just asking a question without some rhetorical nature about a part of it will lead [males] to inaction. So I find that without expressing an action statement, for women in particular, we are patted on the head and somebody says "good question" and then they move on. This Board particularly, because they are not used to dealing with women on any kind of peer level. Because they are all CEOs they have that habit terribly bad— ingrained beyond belief.

So I raised my hand and said, "Excuse me, could someone explain to me why there are no women on these three committees and there are no women chairing them? And when will you take action to change this, at this board meeting or will it be the next?" (Of course that indicated that I had some desire to be on one of these committees, but I knew that there was that kind of risk-taking when you raise your hand.) They said they would review it and get back to me at the next meeting and they did. They actually passed out a new alignment of the committees. I came to both meetings; it made them not forget. But I did not chair a committee.

In our view, this example shows her dealing effectively with the situation. The results noted earlier from student perceptions of their learning outcomes showed an underlying theme of independence and initiative that students said they had developed as a result of faculty practices such as developing the abilities, using performance assessment with self assessment, and feedback. An alternative explanation is that this College for women had taught their students to

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³ All events have been edited for clarity and confidentiality.
exhibit stereotypical male characteristics, given the likely overt and structural gender discrimination at the time, in order to prepare them for life after college in the 1980s. This may have occurred. However, there is also strong evidence that this did not predominate in alumnae learning outcomes, which were also inferred from perspectives they expressed in their open-ended, in-depth, and confidential interviews.

One outcome, internalized small group processes, was an embedded aspect of the curriculum that students were required to demonstrate—integrated with the disciplines—by graduation. Without prompting, alumnae attributed their ability to facilitate task-oriented group processes to collaborative learning in the curriculum. We felt confident in concluding that learners had achieved independent learning as well as collaborative learning. Further, five years after college, alumnae attributed several learning outcomes such as self-expression, exploration, risk-taking, and an internalized value of collaboration to the College cultural milieu. Again, an internalized value of collaboration is often seen as a stereotypical female quality. However, alumnae attributed these outcomes equally to a college environment geared toward individual excellence with high expectations, and also to its collaborative orientation.

Given that these are alumnae perceptions, it is useful to examine them in relation to other sources of evidence that might support their claims for what they had learned from their college coursework, internships, and other informal learning experiences. To respond to this issue, we turn to evidence for the quality and characteristics of their performance in the workplace as five-year alumnae.

We define performance in ways that are both sophisticated and aspirational to study professional performance: "Multidimensional performance entails the whole dynamic nexus of the individual's intentions, thoughts, feelings, and construals in a dynamic line of action and his or her entanglement in an evolving situation and its broader context. Such a context may be within or across work, family, civic, or other settings" (Rogers, Mentkowski, and Reisetter Hart 2006, 498). For the five-year alumnae study, we again used the Behavioral Event Interview approach to measure and judge performance, the same instrument that was used in the nursing and management studies of women who were not Alverno graduates.

To code the performance interviews, Mentkowski and Associates (2000) synthesized an integrated codebook with multiple standpoints. These included: a local community perspective made up of findings from Alverno studies in the metro area of women managers and nurses who were not Alverno graduates; an external work perspective made up of abilities synthesized by researchers outside the college from over 750 competence studies in organizations, and a firm that studied abilities in fifty Fortune 500 companies; and the Alverno perspective with abilities and criteria faculty members fostered in the curriculum. The entire sample consisted of 844 events from 211 alumnae. These events were systematically coded by researchers.

Factor analysis of forty-two coded abilities yielded four ability factors (Collaborative Organizational Thinking and Action, Balanced Self Assessment and Acting with Values, Developing Others and Perspective Taking, and Analytic Thinking and Action). Each ability factor was derived from coded alumna performance where coding for any particular ability
required that (1) the alumna's judgment guided discretionary action and (2) the situation was contextually complicated enough to call for more than routine action. The four ability factors each were made up of multiple abilities (Mentkowski and Associates 2000). Each involved thinking and interpersonal abilities and ongoing learning. Each ability factor also reflected a liberal arts contribution to professional performance.4 In their workplace performance, just as the women who were not Alverno graduates had in our 1980 to 1982 studies, the Alverno alumnae in 1988 demonstrated abilities that mapped onto cultural stereotypes for both female and male qualities.

Consider Collaborative Organizational Thinking and Action, which we focus on in the current study. This factor seemed to capture a set of abilities that were associated with participative leadership. On the one hand, it included strong independent conceptualization and action abilities. On the other it also included collaborative leadership abilities, where alumnae took responsibility for being collectively effective within the context of the interdependencies of an organization.

We acknowledge that during the mid to late 1980s, many businesses were responding to the need to develop leaner and more effective organizations that brought more personnel at various levels of the organization into creative groups (e.g., quality circles in manufacturing). Developing collaborative abilities may have been a focus of the times. Some might argue that the influx of women entering the workplace distinctively assisted organizations to develop the collaborative thrust that some leaders were already envisioning. Even so, in the 1980s, Milwaukee public and private organizations were just beginning to come to terms with both overt and structural gender inequity. Thus conditions were not wholly favorable for women's leadership. Nonetheless, we argue that alumnae who had specifically learned collaborative team-based approaches in the College's curriculum may have been particularly effective at developing collaborative leadership in their organizations. We found clear examples where alumnae intentionally and proactively participated in teaching their more experienced colleagues how to perform in less hierarchical environments. The Balanced Self Assessment and Acting from Values factor reflected how these women spontaneously made more differentiated and nuanced interpretations of their abilities, and so, were not prone to unduly blame themselves when failures occurred. Alumnae attributions to the college's curriculum also suggested they learned not to globalize their self assessment (Rogers and Mentkowski 2004).

These women also frequently demonstrated Developing Others and Perspective-Taking in their organizations, much as more effective men do in business and management (see Boyatzis 1982). These abilities have tended to be undervalued in the workplace. For alumnae in our study, however, this set of interpersonal and intellectual abilities was associated with career level and position autonomy, though not with salary (Mentkowski and Associates 2000). In contrast, the ability factor that we called Analytic Thinking and Action mapped onto stereotypical male qualities. The value of the contributing expertise it represented was often reflected in salary

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4 Faculty judgments of performances supported the findings (Rogers and Mentkowski, 2004).
compensation, perhaps even more so in male-dominated organizations with mostly hierarchical structures. However, alumnae demonstrated this set of contributor skills, including specialized knowledge, independent analyses, and persuasive communications, without any apparent self-conscious sense of it being gendered. They instead appeared to perform this skill set as a generally recognized contribution of value to the organization.

With these findings as context, we take up a comparison between nursing, a traditionally female-dominated profession, and management, a traditionally male-dominated profession. In Table 1 we review demonstration of Collaborative Organizational Thinking and Action abilities in relation to the alumna's career-level achieved and professional field. Career level was coded from position title in paid employment and it distinguished between professional and advanced professional positions that were equated across fields. Business and Management alumnae at the professional career level (entry managers) demonstrated Collaborative Organizational Thinking and Action abilities more often than Nursing alumnae who were also at a professional career level (entry nurses). However, advanced professionals in the two fields were not different in how often they demonstrated Collaborative Organizational Thinking and Action abilities. This interaction between professional field and career level was statistically significant.

**Table 1.** Profession by career-level means and standard deviations for the Collaborative Organizational Thinking and Action ability factor

<table>
<thead>
<tr>
<th>Career Level</th>
<th>Profession</th>
<th>Business and Management</th>
<th>Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td></td>
<td>8.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Advanced</td>
<td>Professional</td>
<td>10.3</td>
<td>11.1</td>
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*Source: Data from Mentkowski and Associates 2000.*

One interpretation for this finding is that in the more gendered field of nursing, entry-level positions were more restricted in autonomy. However, two findings suggested that differences between direct care and management roles might have been a determining factor (Mentkowski and Associates 2000). First, examination of the specific abilities from the factor suggested that entry into the business and management field may have distinctly required managerial abilities. Compared to entry-level managers, nurses in direct-care positions demonstrated participative leadership abilities less often, but equally demonstrated abilities such as ego strength and diagnostic pattern recognition, as well as concern with achievement. Second, autonomy of the incumbent in the position was also coded, and controlling for differences in autonomy did not eliminate the statistically significant interaction. Thus, the lower frequency of staff nurses demonstrating the Collaborative Thinking and Action abilities might have been based on direct-care position requirements rather than the effects of overt or structural gender discrimination. We concluded that these field differences showed that business and management
professionals at entry had responsibilities for facilitating production through others, in contrast to staff nurses at entry who were responsible for direct patient care.

Conversely, advanced professionals across these two differently gendered fields were similar in demonstrating participative leadership abilities. Apparently, these alumnae had embraced a style of leadership that they used to contribute effectively across fields. We note that alumnae in business and management, which in 1986 to 1988 was clearly a male-dominated profession, were equally effective as were those in a female-dominated profession, nurse management. Our case for the effectiveness of their participative leadership is well grounded. Collaborative Organizational Thinking and Action was well correlated with salary level \( r = .41 \), achieved level in the organization \( r = .29 \), and position autonomy \( r = .39 \).

Perhaps these women did not experience gender discrimination that kept them from being effective contributors and leaders in particular events, but there are other kinds of gender inequities that are structural. For example, such concerns had come up in a study conducted about five years earlier, which focused on female managers who were not Alverno graduates, but were from the same local community. The interviewer of these management professionals mentioned privately to the first author that once the performance interview was completed, many of the managers began to discuss their sad feelings of having had to choose between career and family. They also commented that there was no room in their organization for women with families. Perhaps their observations are additional evidence that the women managers in this earlier study had experienced structural gender discrimination. Although we cannot make a direct comparison with the rate that the Alverno alumnae similarly experienced this kind of structural gender discrimination, the example of the alumna in management who served as the board member illustrates how their abilities may more generally have positioned them to engage the contemporary debate on equity issues in organizations.

We now consider whether these women experienced overt and structural gender discrimination and how they confronted it. To examine our hypothesis, the first author re-analyzed forty-six events from the larger alumna sample that had already been coded both for abilities and a range of effectiveness for another study (Rogers and Mentkowski 2004). The events occurred across settings drawn from paid employment, family, and volunteer performances. These events were loosely categorized for particular kinds of tasks or problems the alumna was attempting to resolve. Across all task categories there were forty-six events. We determined that alumnae might construct each of the tasks as evoking gender discrimination, provided that males were present. Thus, the first author read each of these events for three criteria: whether a male(s) was mentioned in the event, whether the alumna described her interaction with a male(s), and whether the alumna articulated that she perceived gender discrimination by a male(s) in the situation. Events included both a male(s) in the situation and female-male interactions in the situation as follows: System Failures (13 of 13 events), Values Conflict (1 of 4 events), Interpersonal Conflict or Personal Need and Values Conflict (3 of 8 events), Developing Others (4 of 7 events), Personal Development Issues (2 of 7 events), and Special Cases (4 of 7 events).
In twenty-seven of the forty-six events, or fifty-eight percent, women not only referred to a male(s), but they also described interacting with a male(s). All the events categorized as system failures involved males, probably because system failures usually involve most personnel in an organization. System failures were also identified when an alumna noted that a process essential to organizational effectiveness was causing excessive stresses either for personnel or for organizational structures, or both. We reasoned that should such overt and structural gender discrimination exist, we would likely find it where women were dealing with system failures. However, these women alumnae of the ability-based curriculum constructed gender discrimination in only two of the events dealing with system failures (fifteen percent). The first event is noted above. In the second event, we inferred that the alumna constructed the situation as overt gender discrimination when a male manager actively contradicted her efforts to meet industry standards that were in place to avoid contamination for individuals undergoing surgery.

I've tried to explain to these fellows that if you want to get into surgical pack make-up you have to understand that these items are going to be used in a surgical setting. I said, "You have to take on the hat of being a person that works in a hospital environment. And this is one of our big marketing tools." We finally got everyone understanding that. I did a lot of inservicing with them on site. But there were people that completely ignored anything that I had set up. At one time, this fellow that was the boss decided that this was just a lot of nonsense. What did I know about it, after all this is a textile plant. I said, "This might be a textile plant, but you are doing surgical linen and you're doing surgical pack make-up. That changes the whole situation. That's why I was hired to make sure we are implementing good quality control and are doing the follow-up." He chose to ignore it. Now this is the man I reported to, the general manager. He thought it was a big joke. He just ignored me and kind of walked away. He can go in any other part in his plant, why is this special? And you try and explain to him over and over again, and he just laughs at you and says, "It's just a bunch of bunk." (But you get the same thing with surgeons too in operating rooms. Every now and then you run across one who doesn't believe that you have to have all this sterile technique and will do everything he can to make your life miserable by breaking all the rules to get everybody excited.)

When the general manager started walking through there, things deteriorated. I would come there unannounced at times, and there would be people wandering about the room that had no business being in there. I said, "You can't come in here." And then when I'd be standing there telling them this, [the general manager] would also appear on the scene, walk in the back door, and just walk all over and go over to see what people are doing. And sometimes you almost say he did it deliberately just to kind of get you going. You try and explain to him that this is not setting a good example. And it's like "Hey look, if you don't like it, you don't have to stick around." For instance, the fellow from maintenance—one day I saw him cleaning the floors in the middle of the day, and I just went up for grabs and I called the lead gal over and I said, "What is going on here?" She said, "This is the only time of day he can do it." I said, "For goodness sakes, he can't come
while you people are working and start dust mopping." So I went and talked to people about it and they said, "This is the best time for him." I said, "But you don't understand. This is creating dust. For one thing, you shouldn't have a dust mop in there. It should only be a wet mop," and pointed out all the hazards of this. Well, it took a lot of prodding and going up there. And this maintenance guy is just doing what he's told. A couple times I said, "why don't you come back at another time?" But then you put him in the middle. He's getting his directions from somebody else; it's not fair to him.

I talked to the plant manager, the man who is in charge of everybody. Regardless of whether he agreed or disagreed with me, if I saw there was something wrong, I still made my feelings known. (In response they always do a little tap dance—"We'll check into it; we'll see." I said "Fine. Something has got to be done because this is not appropriate.") I finally won out on that aspect. Eventually we got it down to the fact that maintenance never cleaned floors while [the surgical packers] were working. When a new manager came, I'd go through the whole explanation of the why and wherefore again. And if these people had some background or at least respected my judgment they would say, "Alright, then what do we have to do to accomplish this?"

All of these system failures took time and effort to resolve. Why did only a small minority (fifteen percent) of these alumnae construct their performance, or lack of it, as constrained by overt and/or structural gender discrimination five years after college? In the perspectives interviews, these women more often than not had demonstrated a strong feminist orientation during college. If they experienced gender discrimination, it seems these women would have noted it in a particular event—not necessarily by referring to the glass ceiling or the mommy track—but by raising it as an explanation in the context of describing a performance or lack of it. They were asked to describe the context for each event and what they were thinking and feeling at the time, so if they perceived discrimination, we think it would have come forward as part of their detailed account of how they were construing the event. Alumnae were not constructing gender discrimination in events, to extrapolate from this sample, in eight-five percent of events that required solutions to system failures across an organization.

Statistical analyses of indicators of career achievement reported in the larger study provide further context for understanding the relatively minimal overt and structural gender discrimination in how alumnae construed events. Rather than soft skills being devalued in a gendered way, these skills led to effective performance. They were correlated with (1) achieved salary five years after college and (2) the level of discretion alumnae had in their positions. But this is not the whole story. Although Collaborative Organizational Thinking and Action was well associated with career level, statistical modeling did not confirm an expected casual path with career advancement. While this finding may be evidence of imprecise measurement of career advancement in the five-year period after college, it is also consistent with a chilly climate for these women in the late 1980s.

Our strongest and central argument is that development of these women's abilities enabled them to overcome that most immediate form of overt gender discrimination by males,
namely, the discounting of a woman's voice and the assumption that she is less capable. Rather than complaining about not being heard or being discounted, these women made sure that they were heard by being extraordinarily persuasive and capable. Here we illustrate events where nursing and management alumnae address system-level failures. We begin with the case of an alumna who is a new manager. As she engages in team building, she faces some skepticism about her capabilities and perhaps the whole idea of the kind of collaborative leadership she offers.

I said, "We will be a team. It may have different players occasionally, but decisions will be made because everyone participates, and there will be general support." And you get greeted by a, "Sure, sure lady" sort of look.

Then a potential layoff had been on everyone's tongue but nobody asks their boss because they fear they won't be told. In our meeting I said, "If you look at all these facts they would lead you to the conclusion that there must be some expense cutting. And if you look at where insurance company expenses are, they are related to people. I can't tell you that there will be a layoff on such and such a date or there will be 'X' number of people cut but I can tell you that [a layoff] is likely. And if you are busy and productively occupied then you needn't worry about it." My people heard from me that there was likely going to be a layoff and they went rushing out of a weekly staff meeting saying, "Our boss actually said this." Apparently it was revolutionary to get right out in front of your people and say that.

They know now to come to me and say, "Is this rumor true?" and we talk about the rumor of the week in weekly staff meetings. In the last two or three months, that individual [with the 'look'] and several others have come and said: "You've earned it. You were right. We are becoming a team. You've kept your word. You've involved us in decisions. We always hear things first. You're communicating with us. I was disappointed that it didn't happen immediately and I thought that meant you were going to fail. I don't understand how you're patient enough to wait for it to play out but now I finally see it playing out."

Here, we see a woman earning the respect of both her female and male colleagues through the quality of her performance. As a skeptical male voice is transformed, the case briefly illuminates what the Collaborative Thinking and Action abilities look like and how they can contribute to overturning gender-based bias. In particular, we see a woman professional consciously embracing participative leadership and assisting her colleagues to do the same. This transformative act of creating an organizational environment where people listen to what others have to say opens up possibilities for hearing those who have been silent or unheard. Participative leadership helps create an organization where ingrained male perceptions about female capabilities, whether conscious or not, can be overturned by new experience. In this event, we also see why these alumnae needed the self-confidence that they said they learned from the College's ability-based curriculum.

Here is another example that illustrates an alumna both proactively thinking at the level of the system and gathering the perspectives of others. This event was not categorized as one
where she perceived gender discrimination. Yet as director of nursing, she develops a staffing proposal that helps to mitigate the effects of a hospital merger on cutbacks in nurses’ hours. Note that rather than being dissuaded by another manager, she takes on the perspectives of all of the individuals involved, women and men alike.

Now prior to writing up the proposal, I had talked with our manager of human resources. He was very much in favor of my just emulating the proposals that are already in other community hospitals without any further modification. On the other hand, I don’t think he’s been in the situation where he was facing working every weekend. I just considered I would rather do something different. I also talked with the nurse managers and the assistant directors and tried to glean their response to any kind of a weekend proposal. I didn’t want a situation in which I would have any of the management personnel feeling badly about the proposal. Everyone I spoke to would prefer a proposal where our existing staff would be able to participate. I just sat down and wrote up the proposal. I had to make sure that the vice presidents who are not involved directly with nursing, who admit to not having a great deal of background in certain aspects of hospital management, would appreciate that right now there is a wee tad of a nursing shortage out there. Yet financial considerations are very important for them. I included a mechanism by which we can have control over the expenditures. I tried to anticipate any negative ramifications, for example, payroll administration might be ticklish. I made it clear that if necessary, we could take care of payroll manually [if our computer could not handle this comfortably].

We have left out many of the analytical details of her particular staffing proposal and how it addressed multiple issues, in order to focus again on Collaborative Thinking and Action, which has transformative potential for the workplace. As these women took on leadership, they could shape the direction of that transformation toward higher values for equity that can be shared. This director of nursing clarifies why she chose not to emulate other proposals. She helps illustrate our case for how the ability-based learning curriculum supported these women in addressing issues of equity in the context of their roles. She reflects:

I have problems even conceptualizing what it would be like for a nurse who is a regular staff member earning perhaps $13-an-hour to be working side-by-side with someone who has perhaps less experience, who works fewer hours, and yet is earning $20-an-hour. I would find a great deal of equity and [other] problems with that.

Although Collaborative Thinking and Action was an important and often distinctive way that these alumnae contributed to the workplace, they did not have to completely transform the organization to demonstrate their competence, as useful as that was.
Challenging Gender Stereotypes by Demonstrating Analytical Competence

The following example illustrates the Analytical Thinking and Action ability factor. It is easy to see how the woman's effective use of evidence would challenge any tacit perception that her voice was not compelling enough to deserve attention. In this case, the alumna is a health care specialist at a statewide meeting for health-care gate-keeping. She tells an anecdote to engage interest about an individual who ended up seriously ill and $300,000 in debt because he had the burden of describing his case on the phone to an authorizing HMO. She notes that after she told this anecdote:

The insurance company representative responded with "Those things happen." I said, "It is much cheaper in the long run to access someone to the health care provider than to have a lawsuit." I made the claim that the system we devised [at our HMO] is working. My evidence was that we have had no complaints in two years; we've handled almost 58,000 calls; we've not had a complaint generated that the service we provided was unsatisfactory, that people were injured because of advice we gave. We will watch the bucks [for the insurance companies] because that's what we're contracted to do, but we will admit that person, no matter when, and we will authorize treatment.

When she is challenged, she responds with a raft of factual information. Her view is well-informed and she is ready to back it up on the spot. Related key ability frameworks that are reinforced throughout the curriculum are: giving evidence for opinions, being able to communicate evidence, and doing it within the context of an evolving social interaction. It is hard to discount a voice that speaks with this kind of competence and level of understanding of the structural organization of HMOs across the state. In short, it is not just that these women have a perspective that is grounded in their values and experiences. Their perspective is also grounded in their competence, their ability to appeal to shared values, their analytical grasp of the key facts in the situation, and their understanding of well-intentioned organizational systems that can negatively affect the individuals they serve.

Conclusions

In sum, results show that across two differently gendered fields, nursing and management, advanced professionals were equally effective as performers in events coded for whether they dealt with constraints effectively. Whether or not they confronted gender stereotypes, they had the resources to perform effectively across the two fields. The notion that they didn't confront discrimination may not be the case. Yet they were able to be interpersonally and intellectually effective at countering overt and even structural discrimination in an organization. In particular, through participative leadership they facilitated the transformation of hierarchical structures within their organizations that would have otherwise tended to exclude the voices and concerns of women. If gender inequity did occur, it was not so overpowering for these women that it limited their field of action and their ability to move forward with confidence.
The more parsimonious explanation seems to be that their education assisted them to counter, intervene, and possibly prevent the negative effects of gender discrimination. We have also provided examples where alumnae took effective action to promote equity. A somewhat comparable group of women in management who were not Alverno graduates experienced limitations on their advancement such that they volunteered sometimes bitter observations about having to choose between career and family. In contrast, about six years later, in a similar metropolitan area, Alverno alumnae were proactively trying to work at structural system failures and feeling confident. While we cannot rule out changes in local organizational settings that were more accommodating to women, perspectives interviews showed strong development of self-confidence for nearly every Alverno woman in the larger study. We conclude that their curriculum and college culture assisted them to develop resources such as a strong identity as learners, professionals, and contributors. Each relied on her identity to circumvent or counter the negative effects of gender discrimination, and in some cases, to engage in promoting equity. Perhaps a new look at those interviews would provide evidence that these women were constructing their insights and professional goals as stymied by covert gender discrimination, but that issue is beyond the scope of this study.

We also acknowledge that legal remedies have countered some of the more noxious effects of structural gender discrimination in the professional workplace since these women were employed. The language of confronting gender discrimination has also changed in the meantime: now organizations more likely set goals for promoting women’s equity. Organizations also may engage professionals in conflict resolution as standard policy that offers women and minority groups more equitable ways to deal with multiple kinds of inequities in the workplace.

In sum, we offer these observations:

- Alumnae were effective in professional settings, and also in family and volunteer or civic roles in the local community.
- Gender discrimination probably occurred in the workplace, but women alumnae were effective in dealing with it. Further, most of these women were effective in their careers and contributed to more collaborative and effective workplaces.
- Success, rather than failure due to gender discrimination, was a more observable phenomenon in the performance interview events.
- Collaborative, participative leadership is essential for preparing undergraduates for today's professional fields.

**Concluding Implications for Education Policy Today**

To draw implications for current educational policy in higher education, we turn to the learning strategies that were elements of the Alverno curriculum in the 1980s, and that remain effective curricular components for developing complex abilities or learning outcomes in 2010. These include:
• Determining college-wide abilities or learning outcomes to make educational goals explicit to students;
• creating performance assessments that integrate constantly evolving disciplinary and professional knowledge and expertise, as well as constantly evolving understanding of abilities;
• developing self-assessment capability so that students can evaluate their own work with criteria grounded both by standards for progression in the curriculum and by a vision of effective performance after college in the disciplines and professions, and
• providing essential feedback that students can use to improve their performances and create learning plans.

Each of these elements was constructed by students and alumnae over a ten-year period as those that enabled integration and transfer of learning after college to work, family, and civic life. We recommend each as an essential element of a coherent curriculum, when faculty curriculum developers are conceptualizing goals for first-generation women and minority undergraduates.

Given these recommendations, we pause to consider current women students in higher education. These students may share higher levels of self-esteem than their earlier counterparts (Twenge and Campbell 2001). They may have already acquired self-confidence, but they may yet need to integrate their identities as learners, professionals, and contributors if they choose to demonstrate those leadership abilities that are needed to challenge many forms of inequity after college. However, self-esteem and self-confidence are not necessarily evidence of a more grounded self-efficacy and self-regulation (Bandura 1997). For many individuals, persisting in the face of resistance to actions that counter overt and structural discrimination without showing frustration and anger is often a necessary concomitant of effective performance (compare Boyatzis 1982). Students may have a sense of self-confidence, but if they do not gradually develop their capabilities and identity, their self-confidence may be too fragile and their performance insufficient to challenge many forms of discrimination encountered after college.

Educators expect students to promote equity with equanimity after college, not only to confront discrimination. Alverno faculty are currently studying ways to discern even more effective strategies for assisting their students to integrate awareness of their emotions as students confront value conflicts and engage in thinking through and weighting value frameworks in ethical decision-making (Alverno Faculty Valuing Department 2004; Alverno College Faculty 1973/2005).

The curricular elements we recommend are also reinforced in current theoretical frameworks and the research literature. In a recent book published by the National Science Foundation, several cognitive scientists identified theory and research where such learning and assessment experiences have led to transfer, that is, "the ability to extend what has been learned in one context to new contexts" (Bransford, Brown, and Cocking 2000, 51). This ability is
reinforced when learning opportunities for students stress demonstrating what they know rather than tests of memory.

We also acknowledge that the disciplines as frameworks for learning about women’s history and issues are fundamental to creating a college culture where women students can develop risk-taking, voice, and self-expression (Alverno College Research Center for Women and Girls 2010). Alverno culture is characterized by the community orientation of its Franciscan traditions and learning-centered values, and the College has supported a mission of continually creating opportunities for diverse, first-generation undergraduate women, as well as the broad range of all learners that enroll at the college.

Culture remains an essential backdrop for fully understanding how educational institutions influence women students. Paola Melchiori (2006) comments that the free university of women, founded in Milan, Italy over twenty years ago by women professors, was based on a feminist politics of knowledge that was intended to move toward a new conception of science and culture. She makes the case that the academy can be transformed. R. A. Sydie (2009) no longer uses the term, gender discrimination, but rather chronicles advances in feminism in the academy in Canada and resistance to it, and offers a synthesis of its effects on women in the broader Canadian culture.

In the United States, complex learning outcomes such as maturity, leadership, and service are an essential aspect of academic culture in the liberal arts. The Association of American Colleges and Universities initiated a policy call for Essential Learning Outcomes that include broad abilities or learning outcomes expected by faculty and employers alike. Scholars Melchiori and Sydie would concur with the emphasis on Knowledge of Human Cultures and the Physical and Natural World. The Association also drew on its members to conceptualize Intellectual and Practical Skills, Personal and Social Responsibility, and Integrative and Applied Learning as outcomes that should be developed in college and transfer beyond it (http://www.aacu.org/leap/index.cfm). Peter Ewell, an influential policy-maker in higher education, goes further. He makes a cogent argument that assessment of such ineffable learning outcomes is possible for a broad range of colleges and universities (1991). Similarly, in the United Kingdom, the Higher Education Funding Council recently supported a seven-year effort to identify assessment standards for student assessment and feedback (Assessment Standards Knowledge Exchange 2009).

Student assessment using electronic portfolios that build on learning principles which undergird performance assessment are now being implemented in several colleges and universities. Just a few years ago such portfolios were absent (Rickards et al. 2008); now they are a leading edge of innovation in practice being championed by the Association of American

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5 Institutions identified by AAC&U as using electronic portfolios are Alverno College, Bowling Green State University, City University of New York-LaGuardia Community College, College of San Mateo, George Mason University, Kapi‘olani Community College, Portland State University, Rose-Hulman Institute of Technology, San Francisco State University, Spelman College, St. Olaf College, and the University of Michigan. For rubrics, see (http://www.aacu.org/value/rubrics/index_p.cfm?CFID=20407561&CFTOKEN=65932462).
Colleges and Universities (see AAC&U website http://www.aacu.org/value/index.cfm). Of particular note, the membership has developed an assessment rubric for many of the Essential Learning Outcomes that help define a liberal education. Given the evidence from our studies, they define the professions as well.

Approaches that institutions use to meet these new expectations can serve as powerful learning experiences for all students inside and outside the classroom. Both contemporary female and male young adults believe in equity and equality in college and the workplace (Wood 2010). First-generation older and younger undergraduates who share this view may be dealing with work and family issues while they are still in school because they are already in the workplace or have families. As they enter the professions, they may experience career and family issues similar to those related by women in the 1980s (Collins 2009). While women undergraduates may still confront covert and structural gender discrimination, they need to be able to confront all kinds of inequities effectively, as do their male peers. While some fields of scholarship and the professions may claim equity, others are less able to. We believe that higher education institutions can support their faculty to develop coherent curricula that take up the proposed recommendations. Ensuring equal opportunities for all of our students is our common goal for higher education.

We conclude that expecting complex learning outcomes to last beyond college and transfer to the professional workplace afterward is not so unreasonable for undergraduates to hope for and for their faculties to strive toward. Institutional responsibility includes developing an effective curriculum and college culture that assists students to challenge all kinds of inequities during college and afterward in work, family, and civic life.

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