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This chapter describes a project in which teams of faculty, administrators, and staff from fourteen colleges and universities engaged in organizational learning for the purposes of identifying and improving inequitable educational outcomes for African American and Latino students.

Promoting Organizational Learning in Higher Education to Achieve Equity in Educational Outcomes

Georgia L. Bauman

Colleges and universities have been highlighted as an example of a type of organization that does not engage in organizational learning effectively (Dill, 1999; Garvin, 1993). While learning is the central work of these institutions, they are believed to lack the attributes needed for organizational learning. According to David Garvin (1993), for an entity to be a learning organization, it must acquire new ideas that lead to improvements in the way it does business. Garvin contends that “many universities fail to qualify [because] . . . these organizations have been effective at creating or acquiring new knowledge but notably less successful in applying that knowledge to their own activities” (p. 80). For example, colleges and universities have made considerable investments in technology and training to develop their capacity to collect all kinds of information about students, ranging from their incoming SAT scores through every course they take to their graduating grade point averages (GPAs). In addition, higher education now finds itself in an “age of accountability” (Alexander, 2000; Gumport and Sporn, 1999; Ohmann, 1999; Radner, 1996; Sewall, 1996) in which institutions are required to provide innumerable data to outside agencies. Despite this, very little organizational learning is culled from these data. The Knight Higher Educational Collaborative (2000) asserts, “Today, universities and colleges expend more time, effort, and money than ever before in gathering data. . . . For all that, higher education institutions still have not learned to organize and use data effectively for internal decisions or public accountability” (p. 5).

I engaged in a qualitative study of the Diversity Scorecard project for which the primary goal was to promote organizational learning among faculty, staff, and administrators about inequities in educational outcomes for African American and Latino students on their campuses. The project posited the problem of inequitable educational outcomes for African American and Latino students in higher education as a problem in institutional performance—one that might be remedied through organizational learning. Often, low achievement among minority students as reflected in retention and graduation rates is attributed to their precollege characteristics, preparation, attitudes, and behaviors that are indicative of their commitment to educational goals, their perceptions of family expectations, their academic and social integration, and the academic and cultural capital they possess. (See, for example, Braxton, 2000; Kraemer, 1997; Jun and Tierney, 1999; Rendón and Valadez, 1993; Tinto, 1993.) In this approach, the responsibility for learning is placed primarily on the student. This project took a different approach. Rather than focusing on the deficits that prevent African American and Latino students from succeeding in higher education, the project proposed that institutional actors (faculty, staff, administrators) become responsible for the learning needed to improve educational outcomes for these students.

In the Diversity Scorecard project, teams of faculty, staff, and administrators at fourteen colleges and universities engaged in the examination of evidence—factual, existing institutional data—that revealed actual conditions about the state of equity in educational outcomes for African Americans and Latinos. The teams sought to answer questions such as, “Do African American and Latino students graduate in all majors equitably or are they concentrated in particular fields? Do they graduate with GPAs as high as students in other groups, rendering them competitive for admission to graduate school? Are African American and Latino students overrepresented among students who require remedial coursework and underrepresented among those who are members of the honors program and other elite academic programs?” by examining institutional data as a group.

Stemming from the notion that organizational learning can play an important role in improving institutional performance, the premise of this project was that the examination of institutional data disaggregated by race and ethnicity can be an effective means of revealing inequities in educational outcomes. My interest focused on whether the analysis of such data could prompt college and university actors to recognize the inequities in educational outcomes on their campuses. Could the consideration of simple but specific indicators of educational outcomes, such as choice of majors, GPA, and completion of remedial and developmental courses, raise awareness about the stratification of achievement along ethnic and racial lines?

I sought to answer these questions by observing and documenting the learning, which I define as being the development of new recognition of the problem, that took place in the fourteen teams at fourteen higher

education institutions in southern California. Although the organizational learning literature is rich in concepts about how learning happens and what serves as evidence of an organization's having learned, there is a dearth of empirical studies of how organizational learning happens. For the most part, organizational learning theory is not based on observations of behavior within organizations, and its conceptions are exceedingly broad, encompassing nearly all aspects of organizational change. Thus, the method used in this research overcame two problems in the study of organizational learning: (1) the lack of empirical documentation of how learning happens in a group and (2) the tendency to discuss organizational learning at an abstract level rather than in relation to a particular problem. I observed in real time the learning that took place in the team meetings and documented it in field notes as it was happening.

I found that organizational learning was promoted among the groups when three conditions existed: the presence of new ideas, the cultivation of doubt in existing knowledge and practices, and the development and transfer of knowledge among institutional actors. These three conditions are consistent with the organizational learning literature. Five of the fourteen groups were found to be high learning groups, which means they reflected the practices described in the organizational learning literature such as examining mental models. Data provided the key to promoting group learning by (1) generating new ideas among team members and (2) prompting team members to question common knowledge about educational outcomes at their institution. The interaction as teams were examining the data was also important for what I came to call group learning. There was a clear contrast between teams that examined institutional data as a group and those that relied on one person's knowledge rather than exploring the data together.

Presence of New Ideas

Acquiring new knowledge and ideas is the first step toward learning (Garvin, 1993; Huber, 1991). Although new ideas are essential for learning, they do not guarantee that learning will follow. New ideas can be acquired from one's own experience, the experiences and best practices of other individuals or organizations, and experimentation (Garvin, 1993; Huber, 1991; Levitt and March, 1988).

Examining existing institutional data in novel ways and asking new questions about routine data can also provide new ideas and information. Garvin (1993) believes that colleges and universities do not apply the research skills used for other purposes to institutional self-study and improvement. We feel this is true to the extent that institutional actors do not typically ask questions about institutional data comparable to those they might ask for research projects in other areas. The Knight Higher Education Collaborative (2000), which is composed of educational leaders and researchers, asserts that institutional data can provide the answers to questions such as these: "Who starts but does

not finish, and why? What is being learned, and for what purpose?" (p. 8). Delving into institutional data has the potential to provide new ideas and knowledge about institutional effectiveness and performance.

When teams examined data as a group, new ideas occurred to them. Some team members had examined many of these data individually before they became involved in the Diversity Scorecard project. However, they had not looked at them disaggregated by ethnic and racial categories. Like a bifocal lens, these categories provided fresh perspectives on old data. This was evidenced in two ways. First, increased awareness of inequities in student outcomes prompted many team members to ask new questions about their causes and consequences. Second, the high learning groups tended to mine the data more deeply and engage in a second-order level of inquiry.

The high learning groups learned a great deal more about the inequities in educational outcomes for African American and Latino students on their campuses. For example, when studying data related to retention, one team discovered that white and Asian American students tended to leave the institution in good academic standing, while African American and Latino students tended to do so while on academic probation:

The rates were disaggregated into 4 . . . categories: (1) those who persisted in good standing, (2) those who persisted but were on academic probation, (3) those who did not persist who were in good standing, and (4) those who did not persist who had been on probation. What [the participant] was surprised by and pointed out was that there was a significant number who left who were in good standing, even among transfer students, and they tended to be White or Asian American.

Another team made a similar finding:

[The member] said he learned many things from the data, but one thing that stood out was what he learned about students who had transferred to this institution from a community college. He said he never realized how many transfer students leave after one year and how that differs widely by ethnicity.

Before examining the data disaggregated by race and ethnicity, many team members had a somewhat simplified notion of who left the institution and who was retained; moreover, they were unaware of marked differences according to race and ethnicity.

Over the course of the first year of the project, several participants commented that this approach to data examination was new to them and had led them to new discoveries. For example, a participant commented that he had "never thought about gateway courses—ever." (A gateway course acts as a prerequisite for particular majors or programs or a generally required course for graduation, and a student's success or failure in such a course might limit his or her options or the ability to graduate. For

example, calculus is a prerequisite for engineering. A student who does not pass calculus cannot declare engineering as his or her major.) Another participant compared the method to her previous experiences: “This is the first time that I’m aware of that anyone is looking at this problem by ethnicity and to this level of detail. [People at our institution] tend to use global, crude measures. With this project we can look at the subtleties of the data.”

Another participant observed, “We have a chance to look at where we are. We can make arguments supported with the numbers. Maybe we could even ask some new questions.”

To create new ideas from existing institutional data on one’s own campus as the Diversity Scorecard teams did, one might consider examining data that are traditionally reported externally, such as to accrediting bodies and to fulfill state and federal reporting requirements, in novel ways. Examine these data by racial/ethnic categories, gender, those who receive Pell grants versus those who do not, and other characteristics that may reveal differences in achievement and educational outcomes. Ask new questions of the data. For example, on an annual basis, the institution’s graduation rates are reported. A new question that may generate new ideas would be, “What are the GPAs of our graduating class disaggregated by race and ethnicity? Do African American students graduate with GPAs comparable to other groups?”

Promoting Doubt in Existing Knowledge and Practices

Weick (1979) developed a model of how groups (or organizations) reduce the multiple meanings their members hold about a phenomenon to a shared, common understanding that can serve as the basis for group action in the future. He did not call this learning; he called it the “organizing” process. Weick theorized that something in the environment triggers this process, which is dependent on communication and interaction among group members. When some event or piece of information catches the group’s attention, its members engage in cycles of communication, restricted by rules and norms embedded in the culture of the group or the organization within which they operate. Eventually they reach some sort of common understanding, which is then stored in some manner for future use. For example, the faculty of a particular college may believe that they serve all members of their diverse student population equitably. That common understanding has been “stored” in the culture of the college.

Like other organizational theorists (Argyris and Schön, 1978; March, 1991), Weick (1979) suggests that organizations learn when these stored understandings and information are called into question. When organizational actors doubt what they have traditionally believed to be true, an opportunity for learning arises. Organizations should treat the “past as a pest” (p. 221) and question such retained information as routines, norms, rules, and other elements of the organization’s culture and operations,

which are often considered sacrosanct and immutable. Unfortunately, “the thick layering of routines in most organizations, coupled with the fact that departures from routine increase vulnerability, mean that discrediting is rare” (p. 225).

Textual analysis indicated that members of the high learning groups were more open than those of other teams in terms of questioning and challenging common knowledge about their institution, its students, and the practices they engaged in. This resulted from their giving priority to what the data revealed rather than to other sources of information, such as experience-based or anecdotal knowledge. Teams that were not in the high learning category tended to use other sources of information to rationalize what the data revealed. For example, in one case, the data showed that Latino students transferred to four-year institutions at lower rates than white students did, and when they did transfer, they tended to go to the lower-tier state university nearby rather than the more elite institution farther away. This was the explanation given:

In our discussion of access to four-year institutions, [the participant] stated that there might be a number of reasons that more of their students transfer to [the local public institution] rather than [to the more elite university system]. [The participant] explained that location might be one of them. Possibly because the [lower-tier institution] is closer to [their geographical area] than [the more elite institution], students might want to transfer to some place closer to home.

[Another team member] explained that this may be a bigger issue for Latino students because of pressure from family to remain close to home.

When the low numbers of Latino students transferring to the more elite university were attributed to family pressure, the statement went unchallenged by other members of the team. By allowing supposition to take precedence over what the data might indicate, the team lost an opportunity to learn from the data or to question their own knowledge and practices.

In contrast, the high learning groups treated their own knowledge as hypotheses to be proved or disproved by the data. One participant commented, “This project is training me to think critically. I now look at some of the mythologies and ask about supportive data.” As the teams examined data, commonly held assumptions or myths were challenged, and in some instances their understandings of the “way things are” were disproved:

In brainstorming goals [participant A] said that overall the university has a high retention rate for Latinas but a dismal retention rate for African-American women. “African-American women are the most at-risk at [our institution]. I want to know why there is this unexpected difference.”

[The institutional research member] disagreed, referring to the data, “Actually African-American males are doing worse.” [Participant A] was surprised and remarked, “Then I’ve been hearing incorrect information.”

Doubts were also raised about particular areas within the college or university, as well as the institution's overall performance in serving African American and Latino students. When one team examined data showing that students who pass the remedial course sequence do not go on to succeed in the college-level courses, a participant questioned the curriculum on which the remedial sequence is based:

[The participant] went on to say that a large percent of part time faculty teach the remedial courses. They all use the same workbook and common curriculum approach. "Why do they not prepare the students for the transition to college level courses?" She said maybe the "cookbook" they're using is not the right one.

After another team discussed data reflecting student outcomes, a participant expressed doubt about the value that attending the institution adds to the students while they are at the institution and whether they prepare the students for postgraduate life.

Yes, we are very diverse, but what does that mean to us as an institution? I want to be able to say, "Yes, we have these diverse students and we're the best at what we do [educating and graduating students]." But, I wonder what value do we add to the students while they are here? What are they prepared to do when they leave?

The high learning groups were prepared to doubt and question their own knowledge and practices and accept what the data revealed, even if that disproved the assumptions under which they had been operating. This approach to the data promoted group learning.

Although it is difficult to pinpoint what led to some teams' willingness to question and doubt what they thought to be true, there seemed to be a team orientation that facilitated the cultivation of such doubt. These teams did not view their engagement in the project as a task to be finished and crossed off their collective to-do list. They approached the project as a process or a journey with no clear end. Their primary goal was to learn about the inequities in educational outcomes that existed on their campuses; it was not to complete the Diversity Scorecard and the report to the president. This learning orientation may have made it easier to give each other the time and space to reflect on what the data revealed; there was no rush to find an answer, and it was acceptable, if not desirable, to continually bring up challenging and uncomfortable questions. In the groups in which doubt was not cultivated, it was more problematic and more likely to be perceived as negative when someone brought up a question or concern that may add complexity to the problem under study as well as work load to the team.

To cultivate doubt on one's own campus is a difficult task. Perhaps the easiest way to accomplish this is to bring in an outsider, as was done in this project. The outsider should be unfamiliar with and unattached to

the campus culture and norms. An outsider can act in a manner different from those situated inside the culture and ask the seemingly ignorant questions as well as those questions that may not be safe for an insider to ask without negative consequences. When bringing in an outside consultant is not possible, we must force ourselves to take an outsider's view of our own institutions in order to question the norms and beliefs that are part of the institutional fabric. One method to accomplish this is to create teams of individuals who have very disparate roles on campus—people from academic affairs, student affairs, faculty from varied disciplines, students, and others—such that on any given topic, someone in the group could function as the outsider. Bensimon and Neumann (1993) discuss “real” versus “illusory” teams, and one of the most important distinctions of real teams is that they fulfill a cognitive function which “enlarges the intelligence span of individual team members” (p. 41); in other words, many heads are better than one. This intelligence span is expanded by valuing the multiple perspectives that individual team members may have on a given issue or problem. Bensimon and Neumann write, “Reconsidering a problem through multiple lenses might make the problem look more complex and might make a person feel that the problem is becoming less and less manageable. However, as a problem unfolds in its largeness . . . previously hidden facets may suggest solutions not seen when it was defined in simpler terms” (p. 42).

Also, over time, the campus leadership and community at large could try to make the practice of cultivating doubt and questioning the campus mythologies and asking for evidence part of the institutional culture. These practices could become accepted and respected in departments, on committees, and among other working groups.

Development and Transfer of Knowledge Among Institutional Actors

Information, or data, and knowledge play important roles in organizational learning. According to Daft and Huber (1987), organizational learning occurs along two dimensions: the systems-structural dimension, which focuses on the acquisition and distribution of information, and the interpretive dimension, which involves the interpretation of that information. Interpretation and understanding of information by institutional actors are associated with knowledge. Daft and Huber observe that “organizations undertake both types of activity” (p. 10) and that both activities contribute to organizational learning.

Davenport and Prusak (1998) define data as “a set of discrete, objective facts about events” (p. 2). Kock (1999) refers to data as “carriers” of information and knowledge. Brown and Duguid (2000) regard data and information as being distinct and different from knowledge because they are independent of people, existing in a self-contained state in documents or

databases. Consequently, having documents or databases does not imply understanding or knowledge; they are repositories of unprocessed facts, available for interpretation.

Knowledge is “broader, deeper, and richer than data or information” (Davenport and Prusak, 1998, p. 5). Contained within the mind, it results from an amalgamation of experiences, personal values, personal characteristics, and interactions with others. We use knowledge to interpret, evaluate, and incorporate new experiences and interactions. Because it is dependent on knowers, the exchange and creation of knowledge take place within and between humans. The field of knowledge management is concerned with managing, transferring, and maximizing the knowledge held in organizational actors’ minds for improvement of the organization as a whole. To find out what actors know, organizations set up structures to promote social interaction for the purposes of sharing and creating knowledge. Those who study organizations consider this transfer of knowledge to be an essential ingredient of organizational learning (Daft and Huber, 1987; Garvin, 1993; Huber, 1991; Levitt and March, 1988).

A structure that promotes the creation and transfer of knowledge among organizational members is commonly called a group. Alternatively, such a body may be referred to as a team, committee, task force, or council. Cutscher-Gershenfeld and others (1998) define team-based work systems as “complex amalgams of tangible practices and intangible elements such as interpersonal interactions” that promote “the creation of knowledge within the firm” (p. 59). This emphasis on teams and teamwork in business has been described as “parallel to the emphasis on cooperative learning in schools, colleges, and continuing education . . . through which students work together to maximize their own and each other’s learning” (Sormunen-Jones, Chalupa, and Charles, 2000, p. 154). To a great extent, higher education operates through small working groups called committees that are responsible for making the most critical decisions within their respective institutions. Every college or university has its curriculum committees within departments, promotion and tenure committees, planning and enrollment management committees, and any number of ad hoc committees. It seems logical to assume that these committees are the working groups most likely to benefit from their institutions’ numerous stores of information. In view of the abundance of available data, two key questions come to mind: Can committees turn these data into knowledge? If so, will this knowledge provide the committee members with a different or better understanding of the issues they must address? This framework was tested by observing and recording the group learning—the development of new recognitions of inequity in educational outcomes—of the committees involved in this project.

The high learning groups spent the majority of their meeting time throughout the year examining data as a team. Usually the institutional research member would bring copies of several data tables for everyone. He or she would explain what the data represented; then there would be several

minutes for the team members to review the data for themselves. This was followed by two hours of discussion about what the data revealed, what the areas of inequity were, what this might mean for the institution, and other topics. In teams that were not considered high learning groups, one of two scenarios occurred. In some instances, the team would use the data only to confirm what they already believed to be true. They would consult data to make sure that this information backed up their claims. In other cases, the team would ask the institutional research member to review the data outside the meetings and provide them with a report. Because there was no ongoing discussion, exchange of questions, or brainstorming, this approach limited what could be learned from the data.

Data often confirmed what members of the high learning groups suspected: that greater numbers of African American students fail mathematics courses, for example. However, by examining and discussing the data, it seemed that the information was transformed into knowledge. This is demonstrated in the following observation recorded in the field notes.

While none of the data really seemed to surprise anyone present, the team members seemed to really process the ideas and problems that the data revealed and internalized this “proof” of what they already knew/suspected to be the case. What may have been “hunches” or assumptions became knowledge based upon data. . . . The data/information also generated a lot of discussion among the group, such that the data served as a foundation or building block for more knowledge and ideas. For example, in looking at the gateway courses, the observer asked whether there were math prerequisites for economics. They all discovered/learned that there are no prerequisites for economics, although perhaps there should be given the high failure rates in the course.

I considered the high learning groups to be “communities of practice” (Wenger, 1998) that are participating in situated learning (Lave and Wenger, 1991). Communities of practice are typically small groups within larger organizations that are drawn together by “expertise and passion” (Wenger and Snyder, 2000, p. 139) in a particular area and meet on a regular basis over an extended period of time. For the purposes of this project, a particularly valuable form of learning came from having a team within an institution engage in an inquiry about the state of equity on their own campus (Lave and Wenger, 1991). If this project conformed to the typical academic research model, the research team would have presented groups at the participating institutions with findings about equity based on the results of surveys, interviews, or analyses of demographic trends. Such an approach would have been more efficient, faster, and less costly, but the results would soon have been forgotten. In the context of this project, situated learning means that faculty and staff from the participating institutions are themselves engaged in the inquiry; they are not the subjects of someone else’s

study or passive recipients of the findings of others (Lave and Wenger, 1991). A community of practice provides the situation and establishes the conditions for effective learning, which can bring about important changes in the beliefs, values, and actions of individuals.

The opportunity for institutional change lies in the possibility that individual participants will transfer their learning to other contexts within the institution and thereby enable others to learn and to change. Several team members spoke of trying to apply what they had learned to their work at the institution—for example:

I'm trying to work out ways I can apply the knowledge I've gained here [in our team] more this semester. I share what I've learned with the Dean of Student Life. . . . I have used some of the statistics in conversations. I just had a conversation with some faculty and the BSU [Black Student Union]. I want to use some of the data in conversations with student leaders. This is not a broad-based dissemination yet, but it's useful.

Teams that did not examine and discuss the data as a group were quite limited in terms of what they could learn. They continued to rely on what others reported to them, and this was not transformed into knowledge.

Higher education institutions already have many established committees, often formed around problems (for example, in response to a campus crisis) or decisions or changes that need to be made (for example, hiring committees and restructuring committees). However, it is rare that such committees take a learning approach to their task. They do not take time to research, define, and understand the problem before trying to find the solution. Taking a learning rather than a task orientation to the problem, decision, or change that defines their charge, the group could create the time and space for discussion and learning from one another in order to create knowledge on which they can act. In the Diversity Scorecard project, the teams were essentially presidentially appointed, although in most cases, the president delegated the task of forming the team to one person. One might expect that those teams whose members were most committed to equity or the use of data to promote organizational learning would be the most effective communities of practice. This was not the case. Each of the high learning groups had individual members who were initially quite skeptical of the project, its aims, and its methods. What made these groups effective in terms of learning about inequities in educational outcomes was that they consistently acted in a manner that supported a learning approach to the problem.

Conclusion

While disagreeing with Garvin's view (1993) that higher education institutions do not engage in learning, I agree with his observation that colleges and universities do not learn as effectively as they could. Institutional actors are

capable of applying their practices as communities of researchers to studies of the institution itself. Therefore, faculty who conduct research in economics, sociology, business, the study of organizations, and many other fields can use their research methods for the assessment and improvement of their own institutions. Teams composed of such researchers ought to examine data that are relevant to the charge just as they would examine data for a funded research project. The study and improvement of our own institutions should be as rigorous as our study of other types of institutions and social structures.

Ewell (1997) concurs that data are critical to institutional learning and improvement, and he suggests that becoming what is referred to in the literature as a learning organization “involves creating institutional capacities for gathering and interpreting data at all levels” (p. 6). This implies that an organization should not only gather and store data but also engage in its analysis. Institutional research should involve more than administrative and reporting functions. At the lower levels of the organization, “concrete mechanisms for gathering data, and the incentives to use them are equally important” (p. 6).

These suggestions indicate other ways in which postsecondary institutions can increase their capacity for ongoing learning and self-study for the purposes of institutional improvement. The potential for institutional learning exists, but institutional improvement depends on the effectiveness of faculty and staff in putting this learning into action. Accountability reports and other routine reporting mechanisms may provide an excellent starting point for the exploration of problems in institutional performance. O’Neil, Bensimon, Diamond, and Moore (1999) found that when they approached an accountability initiative as an opportunity for institutional self-assessment and improvement, it had “latent benefits that contribute to organizational well-being” (p. 40). Even an accountability report can generate new ideas and call common knowledge into question, and when a group can come together to study and discuss what is revealed by such a report, information can be transformed into knowledge. In this study, the high learning groups experienced the highest levels of group learning about inequities in educational outcomes among students of different ethnic groups because of their attention to and thorough examination of data.

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GEORGIA L. BAUMAN is the director for instructional services at Santa Monica College in Los Angeles, California.