Organizational Culture and Some Proposed Variables as Predictors of Organizational Change at the Hashemite University in Jordan

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ABSTRACT

Two main purposes guided the current study. The first purpose was to investigate the influence of organizational culture of the Hashemite University and some proposed demographic variables on implementing an organizational change initiative as perceived by faculty members. The second purpose was concerned with the risk of implementation failure of the initiated organizational change. Main results of the study indicated that demographic variables explained 14 percent of the organizational change, whereas organizational culture explained 12 percent of the organizational change. Furthermore, faculty members determined moderate risk-caution in implementing the initiated change.

KEYWORDS: Culture; Change; Organizational Culture; Organizational Change; Values; Assumptions; Beliefs; Behaviors; Norms; Higher Education; Institutions of Higher Education; Cultural Change.

1. INTRODUCTION

The world around us is changing at a dramatic ever-accelerating pace. It has never experienced a prior time where so much has changed so fast with such implications for the entire world (Conner, 1992). The knowledge, globalization, communications and technology explosion, as never before, are almost uncontrollable and drive change in every sector of society (Lick, 2002; Szamosi and Duxbury, 2002). “The rapidity of today’s change and its growing complexity are salient features that any modern-organization must deal with” (Lick and Kaufman, 2001: 24).

Institutions of higher education are no exception. They are in the midst of accelerating and some times turbulent change. New modes of communication are profoundly affecting the work of faculty members. These modes are reshaping the process of teaching and learning, redefining the role and authority of faculty members in organizing and overseeing the curriculum and altering the bases for evaluating students and faculty performance (American Association of University Professors, 1999). Thus, for colleges and universities to be fully effective in tomorrow’s world, they must learn how to create new cultures that best suit their needs and desires (Lick and Kaufman, 2001). As Senge et al. (2000:20) clarified, “If there aren’t fundamental shifts in how people think and interact, as well as in how to explore new ideas, then all the [transforms] reorganizing, fads and strategies in the world won’t add up too much”. Consequently, for successful change to take place, institutions of higher education must alter some of its culture building blocks - beliefs, assumptions and behaviors - and develop beliefs, assumptions and behaviors that are consistent with the new resolutions, a cultural shift (Lick and Kaufman, 2001).

However, change in higher education seems to be slow and difficult (Barzun, 1993). Siegfried, Getz and Anderson (1995), who surveyed more than 200 institutions found that innovations in industry tend to be adopted twice as fast as those in higher education. Likewise, Lick and Kaufman (2001) reported that institutions of higher education have strong and rigid cultures that vigorously protect the status quo. These cultures are among the strongest and most rigid in society, far more so than those in industry, business and
government. Institutions of higher education and their people have chosen consciously or by default to resist or ignore the realities and impact of change (Lick, 2002).

Therefore, change expert Daryl Conner (1992) argued that whenever a discrepancy exists between the current culture and the objectives of an institution change effort, all else being equal, the culture always wins. So, when facing an institutional culture that may hinder a desired change effort, the institutions have three options. They are to modify the change effort to be more in line with the existing culture; modify assumptions, beliefs and/or behaviors of the current culture to be more supportive of the change efforts, or prepare for the change effort to fail. As a conclusion, for an effective cultural change to take place, people in institutions of higher education must understand more about college and university cultures and how to modify them appropriately.

The Research Problem and Questions
The main purpose of the current study was to investigate the effect of organizational culture of the Hashemite University in Jordan and some proposed demographic variables on implementing organizational change initiative (e-learning program) as perceived by faculty members. The second purpose was to measure the risk of implementation failure of the initiated organizational change (e-learning program). In more details, the investigation attempted to answer the following research questions towards meeting the above stated purposes.

1. What is the risk of implementation failure of an initiated organizational change program (e-learning) in the Hashemite University?
2. What is the relationship between the following demographic variables and the organizational change initiative (e-learning program) in the Hashemite University: (a) the gender of the faculty members, (b) the academic rank of the faculty members, (c) the country of graduation of the faculty members, (d) the ability of the faculty members to use a computer, (e) the type of college of the faculty members and (f) the number of years teaching of the faculty members?
3. What is the relationship between the organizational culture of the Hashemite University and the organizational change initiative (e-learning program)?
4. Are there significant differences among faculty members of the Hashemite University in perceiving the organizational change initiative (e-learning program) that are attributed to the following demographic variables: (a) the gender of the faculty members, (b) the academic rank of the faculty members, (c) the country of graduation of the faculty members, (d) the ability of the faculty members to use a computer and (e) the type of college of the faculty members?

Significance of the Study
The institutions of higher education have durable culture that vigorously resistant to major change and protect the status quo. It requires the investment of a great deal of time, research and resources before it can be modified. The combined effect of a quantum leap in organizational change and the inability of management to understand and orchestrate the cultural infrastructure to support the change may generate problems of crisis proportions in many higher educational institutions (Conner, 1992).

Furthermore, organization's cultural traits must be consistent with what is necessary for driving new decisions or those decisions may not be successfully implemented. To effectively align an organization's culture with a decision to change often requires developing assumptions, beliefs, values and/or behaviors that are consistent with a new resolution a cultural shift. However, no cultural shift can materialize without some modification of the assumptions, beliefs, values or behaviors (Conner, 1992; Murphy and Lick, 2001). One important strength of this study, is that it has the potential implications for the managers and consultants on the need to effectively align organizational culture with the intended organizational change.

Certainly, the timing of this study is only one of several reasons that are significant and important. Currently, there are both internally and externally increasing pressure being placed upon colleges and universities in Jordan to enact change. Thus, the importance of increasing our understanding of the process of cultural change in higher education setting seems to have a particular merit at this time.

Theoretical Framework and Literature Review
There is every reason to believe, that as a result of the dramatic change outside our comfortable campus, the nature of higher education experience is changing dramatically (Lick, 2002). Consequently, discussions
regarding the need for higher education institutions to respond quickly in order to change, to alter some of its culture building blocks - beliefs, assumptions and behaviors, have become a popular idea in the literature of organizational change throughout the past two decades (Lick and Kaufman, 2001).

Organizational Culture

Organizational culture has been defined as "the pattern of beliefs, values, practices and artifacts that show its members whom they are and how they do things" (Bolman and Deal, 1991: 250). It is "the values, myths, heroes and symbols that have come to mean a great deal to the people who work in a particular organization" (Lomas, 1999: 31). It can also be considered as a "social glue that helps hold the organization together by providing appropriate standards for what employees should say and do" (Robbins, 1996: 687). According to Conner (1992), three characteristics are crucial for understanding culture. First, culture is composed of beliefs, behaviors and assumptions which serve as a guide to what are considered appropriate or inappropriate actions to engage in for individuals and groups. Second, culture is shared. It provides cohesiveness among people throughout an organization. Third, culture is developed over time. It is the product of beliefs, behaviors and assumptions that have in the past contributed to success.

From the perspective of higher education, institutions of higher education have cultures that have evolved over generations and provide stability and powerful protection to the status quo (Lick, 2002). The culture of higher education institutions is not always visible to the outsider and even to many within it, but it is always there and always very powerful. The power of higher education culture is manifest in at least three distinct areas of an institution’s functioning: (a) the way the institution of higher education conducts its day-to-day business, (b) its response to specific proposals for change, and (c) its influence on the nature and type of organizational learning (Leithwood and Aitken, 1995). Higher education culture is the social and normative glue that holds together the educational and educationally related aspects of an institution and creates the central features, structures and approaches that characterize it (Murphy and Lick, 2001). Its "patterns of belief or shared meaning, fragmented or integrated, and supported by various operating norms and rituals can exert a decisive influence on the overall ability of the organization to deal with the challenges that it faces" (Morgan, 1997: 129). Finally, culture of institutions of higher education is a powerful force that is always present, setting and then differentially rewarding given values and establishing ground rules for what faculties assume to be important and true and for how they think and behave (Lick, 2002).

Building Blocks of the Organizational Culture

From a change perspective, organizational culture reflects the interrelationship of shared values, beliefs, norms, assumptions and behaviors that are acquired over time by members of an institution (Conner, 1992). Therefore, organizational culture is widely understood as an instrument to be used by management to shape and control in some way the values, beliefs, norms, assumptions and behaviors of faculty members, and thus the institution, to reach specified goals. In other words, to change the culture of an institution for its enhancement, we must change one or more of the values, beliefs, norms, assumptions or behaviors of its members (Murphy and Lick, 2001).

Values

Values are "the deep-seated, pervasive standards that influence every aspect of our lives: our moral judgments, our responses to others, our commitments to personal and organizational goals" (Kouzes and Posner, 1995: 212). They are largely unexamined preferences for means and resources and rarely relate to ends, consequences and pay-off (Lick and Kaufman, 2001: 29). Values provide the emotional energy or motivation to enact organizational actions patterns (Locatelli and West, 1996). According to Milton Rokeach (as cited in Kouzes and Posner, 1995) values are organized into two sets: means and ends. The term values is used to refer to here-and-now beliefs about how things should be accomplished, whereas the term vision is used to refer to the future of and to the long-term 'ends values' the institution aspires to attain.

Research makes clear that shared values make a difference to organizational and personal vitality and that values form the bedrock of an organizational culture. Furthermore, findings from research clearly reveal that "when there's congruence between individual values and organizational values, there's significant payoff for leaders and their organizations. Shared values make a significant difference in work attitudes and performance" (Kouzes and Posner, 1995: 213). Values statements in institutions of higher education, for instance, relate to
such things as the consequences of decisions on students and others in our institution are always considered before decisions are made final (Leithwood and Aitken, 1995).

Beliefs
Beliefs are the set of integrated values and expectations that faculty members hold to be true about themselves, others, their profession and work, and the institution. They provide a basis for what faculty members in the institution hold to be right or wrong, good or bad, or relevant or irrelevant about their institution and its operation (Lick, 2002; Locatelli and West, 1996; Murphy and Lick, 2001). Belief statements, whether in oral or written form, can entail both intended and unintended messages regarding what faculty members plan or think they should do (Conner, 1992). Belief statements in institutions of higher education, for instance, relate to such things as vital role played by the personal interaction of the faculty members and students, value of grading system and the need for continuous professional development (Murphy and Lick, 2001).

Norms
Norms are unwritten rules that express the shared beliefs of most faculty members about what behaviors are appropriate in order to be a member in good standing. In other words, norms are rules of behavior which have been accepted as legitimate by faculty members. Those faculty members typically exert pressures on a new faculty member to conform to faculty members' norms that are more pervasive than the new faculty member is likely to comprehend. These pressures are often felt as an obligation to behave in certain ways which is often manifested in positive forms (Owens, 2001; Snyder, 1997). For example, an institution expects high levels of performance from all faculty members or relationships among faculty members are characterized by mutual respect.

Assumptions
The concept of basic assumptions is a relatively new concept that has only recently received attention in the literature. However, according to Locatelli and West (1996) some organization theorists are now defining organizational culture as its basic assumptions. Lomas (1999) stated that basic assumptions are those amongst members of an institution of higher education that are taken for granted and are preconscious. They relate to issues such as human nature and the nature of human relationships. Assumptions are unconscious and unquestioned perceptions concerning what is important and how faculty members and processes function within the institution (Lick, 2002). Change expert Daryl Conner (1992: 165) explained this well, when faculty members develop patterns of belief and behavior that are successful, they depend on those patterns when similar circumstances arise. "If such situations occur repeatedly, these patterns eventually become routine and are applied with less conscious thought. When this occurs, we refer to the patterns as unconscious assumptions". For example, faculty members hold the unconscious assumptions that the lecturing to students provides a good form of learning, whereas educational research indicates that it is one of the least effective strategies for student learning (Lick and Kaufman, 2001).

Behaviors
Behaviors are the ways faculty members actually conduct themselves on a daily basis. They are perceptible actions that are based on values and expectations and are ideally aims at carrying out the institutions' mission. Whereas beliefs often reflect intentions that are difficult to discern, behaviors are observable and can be verified in a more objective manner. Behaviors of faculty members, for example, might include such things as how they teach, resolve conflict and involve in decision making (Conner, 1992; Lick and Kaufman, 2001; Murphy and Lick, 2001).

Organizational Change
The legacy of classical, human relations and contingency approaches, all of which have contributed to the accumulation of knowledge about implementing change, has been to regard organizational change as something of an aberration or a departure from the more usual static position of organizations (Owens, 2001; Addahan, 1992). Organizational change could be defined as "an empirical observation in an organizational entity of variations in shape, quality or state over time, after the deliberate introduction of new ways of thinking, acting and operating" (Del Val and Fuentes, 2003: 148).

Historically, change in education was viewed largely as a process of natural diffusion. New ideas and practices arose in some fashion and spread in some unplanned way from institution to institution (Owens, 2001). Cizek (1998: 374) said this best: "educational innovation is famous for its cycle of enthusiasm, widespread dissemination, disappointment and eventual decline, the classic 'pendulum'". In Argyris' (1994: 4) words: "Most of the programs began with a big fanfare and, like old
soldiers, they faded away”. Therefore, the continuing cycles/waves of changes have been confusing and frustrating for practitioners of educational institutions. They realize since the historical record is so clear, that within a year or two a new direction will be announced (Hall and Hord, 2001). The result was that institutions generally changed very slowly (Owens, 2001).

In the case of higher education, there is every reason to believe that as a result of the dramatic change outside our comfortable campus, the nature of higher education experience is changing dramatically (Lick, 2002). Excessive change represents reality in today's colleges and universities. Institutions of higher educations are constantly filled with changing projects. Most of these changing projects are well received, make sense and have some value but are not imperatives that significantly improve the institution, its operation and those it serves. This is a serious problem for the faculty and staff, operational groups and the institutions itself. Faculties and institutions may become dysfunctional, performing at lower than optimal productivity and quality levels (Lick and Kaufman, 2001). Therefore, and to be truly successful, the institutions of higher education must identify and make critical, difficult and painful decisions regarding change initiatives. Decisions that allow the institution to eliminate unnecessary change efforts and devote the bulk of its time, talent and resources to imperative changes, those that will have significant impact and best meet the institution's mission and goals (Murphy and Lick, 2001). In other words, we can somehow stop the pendulum in higher education by focusing educational change efforts on programs that are effective than on those that are merely new and sound good (Cizek, 1999).

Cultural Change in Higher Education

There can be little doubt that organizational change continues to be one of the major tasks facing organizations as we enter the new millennium. Organizations are under tremendous pressure to pursue organizational change in order to survive in an environment of increasing change and turbulence (Weber and Weber, 2001). Although change has always been an ever-present part of organizational life, the pace of change and its complexity are greater than ever before (Burnes and James, 1995). As evidence, the results of a study conducted by the American Management Association revealed that 84 percent of US companies were in the process of at least one major change initiative, while 46 percent stated that they had three or more change initiatives in progress (Weber and Weber, 2001).

One caution is in order, however. In the connection to be made between organizational culture and organizational change, there are compelling theoretical, qualitative and descriptive studies that advocate organizational culture as the key to resist or receipt organizational change (Conner, 1992; Abraham, Crawford and Fisher 1999; Lakomski, 2001; Lick and Kaufman, 2001; Lick, 2002). According to Lakomski (2001), "at root, it is the organization's culture which causes resistance and which needs changing". Major change or innovation can anticipate resistance, especially if proposed change alters values, beliefs and norms related to the existing culture (Trader-Leigh, 2002). A survey cited in Carr, Hard and Trahant (1996), found that only 10 percent of corporations that attempted to change management styles were successful in institutionalizing the new styles. Also, a research conducted by Smith (2002) indicated that only 19 percent of the culture change efforts were rated among the top quartile of successful organizational change efforts.

In the case of higher education, there are a number of complications in operationalizing the organizational change and organizational culture relationship. I shall not try to summarize here the debate on organizational change and organizational culture (cultural change) in higher education. However, some of the major complications in the exchange relationship do bear mention. First, managing cultural change in higher education is more complex than managing cultural change within business. Faculties, in contrast to workers in most other occupations, are their own managers and have considerable ability to frustrate, resist, alter or stop changes they do not like or feel threatened by (Fisher and Koch, 1996). In the words of Dearlove (1997: 57), "[G]ood academics cannot be told what to do. They defy control. The kind of creativity required by academics cannot be commanded by an academic master, still less delivered to by a management order".

Another aspect of the complication in managing cultural change in higher education is based on a phenomenon known in social psychology as "belief perseverance".

Belief perseverance indicates no more than basic schemas are in conflict, or are too far apart to connect with the change, and it is the basic schemas of how
faculties] view the change that needs to be tackled. Bringing about successful change can be tackled at the meso level of activity rather than at the individual or the wider cultural level of activity (Grant, 2003: 81).

Furthermore, the cultural change process in each institution of higher education is unique in each situation, due to the differences in the nature of the institution, the work culture and values, leadership style and behavior and attitude of faculty members. Finally, managing the human part of an institution of higher education is perceived as a major challenge in handling cultural change process in the institution as it involves values, beliefs, assumptions, behaviors and preferences of faculty members toward a particular cultural change activity (Abdul Rashid, Sambasivan and Abdul Rahman, 2004).

2. METHODOLOGY

Organizational Context
The research took place in the Hashemite University, the fifth state university in Jordan. Teaching began at the Hashemite University, in the academic year 1995/1996. Lately an E-Learning Office has been established at the campus of the university to provide training programs for faculty members on how to develop online courses. It is expected that by the end of the academic year 2004-2005, most of faculty members in different colleges will be somehow involved in a kind of online instruction.

Research Design
This quantitative investigation employed the survey method as its research design. The nature of this study including the availability of funds and time constrain supported the survey/questionnaire method as most appropriate. A variety of statistical techniques were utilized in this research. A multiple regression model, one-way analysis of variance, t-test and means were used as the main statistical techniques.

Sample and Data Collection
Participants of this study were faculty members of all colleges and institutions at the Hashemite University in Jordan. Of 160 faculty members who taught during summer semester 2003/2004, 110 agreed to participate in the study by voluntarily completing and returning usable surveys making the response rate 69%. The data-collection method was a self-administered paper-based questionnaire. Data gained from the returned questionnaires indicated that the majority of the faculty members who responded were males (74.5%), while females were only (25.5%). A comparison of the group of respondents revealed that 45.5% of the faculties teach in social colleges, while 54.5% of the faculties teach in scientific colleges. Faculty members in this study ranged in total experience from 1 to 35 years with a mean teaching experience of 8.36 (SD= 7.78). Further, 32.7% of the respondents graduated from American universities, 33.6% graduated from European and Australian universities and 33.6% graduated from Arab universities. Fifty one of the respondents (46.4 %) indicated that they were professionals in using a computer, 46 respondents (41.8%) clarified that they were good, and only 13 respondents (11.8%) assessed themselves as beginners. Additional demographic information indicated that 9.1% were full professors, 10.9% were associate professors, and 80% were assistant professors. Table 1 represents the descriptive statistics for the faculty members who participated in the study.

3. INSTRUMENTATION

The survey instrument used in this study compromised three sections: (1) Predicting the Impact of Change (PIC) questionnaire for Organizational Development Resources (ODR, 1991), (2) Organizational Culture Questionnaire, and (3) Demographic Information Questionnaire.

Predicting the Impact of Change Questionnaire.
A (PIC) questionnaire (ODR, 1991) is an international diagnostic tool may be used by managers to measure the potentially debilitating effect of a specific change on an individual or group (ODR, 1991). Predicting the Impact of Change questionnaire (PIC) has 14 items. Participants respond on a rating scale, ranging from (1) indicating a low impact and (10) indicating a high impact.

Predicting the Impact of Change questionnaire was translated from English into Arabic language. A standard three-step protocol reported by Blaschko and Burlingame (2002) was used when translating the questionnaire. First, the instrument was translated from English into Arabic language by a professional scholar who is fluent in both English and Arabic languages. Second, the instrument was translated back from Arabic into English language by a second scholar who is also competent in both languages. In the final step, a third professional scholar, fluent in both English and Arabic languages compared and evaluated the original English and translated back
copies in order to verify the accuracy and validity of translation.

In order to assure the psychometric properties of the translated questionnaires, internal consistency measures of reliability were computed for the instrument (PIC) by calculating Cronbach's alpha coefficient. As a result, the internal consistency rating for the 14 item scale was high, with a coefficient alpha of 0.92.

**Organizational Culture Questionnaire.**

Organizational Culture Questionnaire was developed by the present researcher based on Leithwood and Aitken's (1995) District Culture questionnaire. Eight specialists in education reviewed the developed questionnaire and two of them asked for some modifications. The final copy of the questionnaire took these modifications in consideration. The developed questionnaire comprises 25 items and each item has a five-point Likert rating scale ranging from strongly disagree (1) to strongly agree (5). Organizational Culture Questionnaire describes organizational culture in term of five dimensions: norms, beliefs, values, assumptions and behaviors. As shown in Table (2), computed coefficient alphas for each subscale were judged to be acceptable based on Nunnally and Bernstein's (1994) criterion of alpha being greater than 0.70.

**Demographic Information Questionnaire.**

Demographic Information Questionnaire was developed by the researcher to yield descriptive information concerning each participant. Questions regarding gender, type of college, academic rank, ability in using a computer and experience in teaching were included in the demographic information questionnaire.

### 4. RESULTS AND DISCUSSION

All responses from the respondents on Organizational Culture Questionnaire, Predicting the Impact of Change (PIC) questionnaire, and Demographic Information Questionnaire were coded, entered in a computer and analyzed using software package SPSS (version 12). An examination of out of range values and missing data clarified that no out of range values were entered and that for each variable, the number of missing data was small. Specifically, none of the variables has missing data exceeded 2% of the total sample size. Further, examinations of these cases showed that the missing values were distributed in a random pattern throughout the sample. Thus, it was concluded that the limited number of missing data would not represent a problem in terms of interpreting the results of this study. Therefore, it was decided to replace variables with missing data with means value of that variable for the entire sample; "the obvious strength of this strategy is that there is no loss of sample size and statistical power" (Tate, 1998: 47). With respect to assumptions associated with conducting a multiple regression model, examining of these assumptions suggested no serious violations.

#### Table (1)

**Division of Faculty Members by Gender, Type of College, Academic Rank, Ability to Use Computer and Experience in Teaching.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number and Percentage of Total (114)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>82 males (74.5%), 28 females (25.5%)</td>
</tr>
<tr>
<td>Type of college</td>
<td>60 scientific faculties (54.5%), 50 social faculties (45.5%)</td>
</tr>
<tr>
<td>Academic Rank</td>
<td>10 full prof. (9.1%), 12 associate prof. (10.9%), 88 assistant prof. (80%)</td>
</tr>
<tr>
<td>Computer Ability</td>
<td>13 beginners (11.8%), 46 good (41.8%), 51 professionals (46.4%)</td>
</tr>
<tr>
<td>Country of Graduation</td>
<td>36 America (32.7%), 37 Europe and Australia (33.6%), 37 Arab universities (33.6%)</td>
</tr>
<tr>
<td>Experience</td>
<td>Range 1-35, Mean= 8.36, SD=7.78</td>
</tr>
</tbody>
</table>
Research question 1 addressed the risk of implementation failure of an organizational change initiative (e-learning) in the Hashemite University. According to ODR (1991: 10), "the impact factor reflects the risk of implementation failure of a project. As can be seen below [Table 3] the higher the factor, the greater the risk of implementation failure".

Impact factor regarding implementation organizational change initiative (e-learning) in the Hashemite University was computed by totaled responses to all items in the scale, the total divided by 14 and the result multiplied by 10. The impact factor as determined by the faculty members of the Hashemite University was 62.5 out of 100. As can be observed in Table 3, the determined impact factor indicated a moderate risk-caution. To interpret this result, ODR (1991: 10), clarifies that:

An impact factor in this range is high enough that it should be considered a significant issue in predicting the success or failure of the change implementation. The ability to adopt the change will be a pivotal element in the project's outcome and, therefore, requires a special attention and resources in the planning and execution of the implementation steps.

To further elaborate on the overall strength of the relationship between the organizational change and demographic variables, the unique effect of each demographic variable was computed, controlling for the other demographic variables. Hierarchical entry of the independent variables technique was used. The goal of using this technique was to extract the variance of the variable included first, and to continue building up the regression solution by adding portions of variances of other demographic variables, uncorrelated with the demographic variables already included. The results of this analysis are presented in Table 5. The country of graduation was the only significant predictor of the organizational change, and was significant (p<.01).

Similarly, research question 3 concerned the overall strength of the relationship between the dimensions of an organizational culture combined and the organizational change. The regression results (see Table 6) revealed that these dimensions combined significantly predicted stated variables was 0.14, indicating a significant overall strength at the .05 level (p< 0.014). Further, the overall strength of the relationship ($R^2 =0.141$), reflecting a relatively positive, low, but significant overall strength of the relationship at the 0.05 between organizational change and gender, academic rank, country of graduation, type of college, ability to use a computer and experiences of faculty members. The $R^2$ also indicated that about 14 % of the variability of organizational change was explained by the stated demographic variables (see Table 4).

### Table 2

<table>
<thead>
<tr>
<th>Factor</th>
<th>Alpha</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norms</td>
<td>0.84</td>
<td>7</td>
</tr>
<tr>
<td>Beliefs</td>
<td>0.81</td>
<td>5</td>
</tr>
<tr>
<td>Values</td>
<td>0.72</td>
<td>4</td>
</tr>
<tr>
<td>Assumptions</td>
<td>0.78</td>
<td>5</td>
</tr>
<tr>
<td>Behaviors</td>
<td>0.71</td>
<td>4</td>
</tr>
</tbody>
</table>

### Table 3

<table>
<thead>
<tr>
<th>Level of Risk</th>
<th>Low Risk: Opportunity</th>
<th>Caution</th>
<th>High Risk: Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10-34</td>
<td>35-65</td>
<td>66-100</td>
</tr>
</tbody>
</table>


Regarding research question 2, a multiple regression model was used to compute the overall strength of the relationship, $R^2$, between the organizational change (dependent variable) and all demographic variables (independent variables) combined. As can be observed in Table 4, the overall strength of the relationship between the
organizational change (p< .05). They accounted 12% of the variance of the organizational change. This result reflected a relatively positive, low and significant overall strength of relationship between organizational culture and organizational change (p< .015).

Hierarchical entry of the independent variables was also conducted using the dimensions of an organizational culture: norms, beliefs, values, assumptions and behaviors. The results presented in Table 7 indicated that assumption was the most predictor of an organizational change (p<.01) and accounted for .062 of the variance in the organizational change. Value (ΔR² = 0.025), belief (ΔR² = 0.024), norm (ΔR² = 0.008) and behavior (ΔR² = 0.006) were found to be not significant (p<.05).

This result is consistent with change literature which has suggested that culture is a predictor of an organizational change (Abdul Rashid, 2004; Macri, Tagliaventi and Bertolotti, 2002; McRoy and Gibbs, 2003; Pool, 2000, Weber and Weber, 2001). Although the effect of assumption, one of the components of organizational culture, explained less than 10 percent of variance in the organizational change, it is significant. This result supports the importance of developing new assumptions that are consistent with the new resolution, e-learning change program.

Research question 4 asks about differences among faculty members of the Hashemite University in perceiving the organizational change program (e-learning). The following demographic variables: the gender, the academic rank, the country of graduation, the ability to use a computer and the type of college were investigated. T-tests for independent samples were used to examine both the gender variable and the type of college variable regarding the organizational change. As shown in Table 8 and Table 9, there were no significant differences among faculty members in perceiving organizational change that are attributed to their gender or type of college (α< .05).

<table>
<thead>
<tr>
<th>Variables</th>
<th>β</th>
<th>t</th>
<th>R</th>
<th>R²</th>
<th>ΔR²</th>
<th>ΔF</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.184</td>
<td>1.949</td>
<td>184</td>
<td>0.034</td>
<td>0.034</td>
<td>3.76</td>
<td>0.055</td>
</tr>
<tr>
<td>Academic Rank</td>
<td>-0.008</td>
<td>-0.062</td>
<td>0.228</td>
<td>0.052</td>
<td>0.018</td>
<td>2.05</td>
<td>0.155</td>
</tr>
<tr>
<td>Country of Graduation</td>
<td>0.281</td>
<td>2.950</td>
<td>0.351</td>
<td>0.123</td>
<td>0.071</td>
<td>8.617*</td>
<td>0.004</td>
</tr>
<tr>
<td>Type of College</td>
<td>0.077</td>
<td>0.787</td>
<td>0.359</td>
<td>0.129</td>
<td>0.006</td>
<td>0.693</td>
<td>0.407</td>
</tr>
<tr>
<td>Ability to Use Computer</td>
<td>0.028</td>
<td>0.258</td>
<td>0.362</td>
<td>0.131</td>
<td>0.002</td>
<td>0.220</td>
<td>0.640</td>
</tr>
<tr>
<td>Experience in Teaching</td>
<td>-0.151</td>
<td>-1.119</td>
<td>0.376</td>
<td>0.141</td>
<td>0.010</td>
<td>1.253</td>
<td>0.260</td>
</tr>
</tbody>
</table>

The ΔR² result is the increase in R² due to adding each demographic variable last, given the other demographic variables.

** Significant at the 0.01 level.

<table>
<thead>
<tr>
<th>R</th>
<th>R²</th>
<th>Std. Error of the Estimate</th>
<th>F Change</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.353*</td>
<td>0.124</td>
<td>15.53</td>
<td>2.95*</td>
<td>0.015</td>
</tr>
</tbody>
</table>

*Significant at the p< .05 level.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>β</th>
<th>t</th>
<th>R</th>
<th>R²</th>
<th>ΔR²</th>
<th>ΔF</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm</td>
<td>0.034</td>
<td>0.357</td>
<td>0.090</td>
<td>0.008</td>
<td>0.008</td>
<td>0.873</td>
<td>0.352</td>
</tr>
<tr>
<td>Belief</td>
<td>-0.268</td>
<td>-2.659</td>
<td>0.180</td>
<td>0.032</td>
<td>0.024</td>
<td>2.681</td>
<td>0.105</td>
</tr>
<tr>
<td>Value</td>
<td>0.047</td>
<td>0.458</td>
<td>0.239</td>
<td>0.057</td>
<td>0.025</td>
<td>2.803</td>
<td>0.097</td>
</tr>
<tr>
<td>Assumption</td>
<td>0.296</td>
<td>2.684</td>
<td>0.345</td>
<td>0.119</td>
<td>0.062</td>
<td>7.353**</td>
<td>0.008</td>
</tr>
<tr>
<td>Behavior</td>
<td>0.076</td>
<td>0.814</td>
<td>0.353</td>
<td>0.124</td>
<td>0.006</td>
<td>0.662</td>
<td>0.418</td>
</tr>
</tbody>
</table>

The ΔR² result is the increase in R² due to adding each demographic variable last, given the other demographic variables.

** Significant at the 0.01 level.
On the other hand, one way analysis of variance was utilized to examine the differences among faculty members in perceiving organizational change in relating to their academic rank (Table 10), the ability to use a computer (Table 11), and the country of graduation (Table 12). Table 12 illustrates that the country of graduation variable was the only significant variable ($p = 0.017$).

Using Scheffe comparison test revealed that the difference was between faculty members who graduated from Arab universities and faculty members who graduated from American universities (see Table 13). This result can be justified with the assumption that most faculty members who graduated from American universities are more familiar with this type of learning during their learning abroad compared with their colleagues who graduated from Arabic universities.

Finally, organizational culture and proposed demographic variables explained 12 percent and 14 percent of the variability of the organizational change, respectively. This still leaves high percentage of variance unexplained indicating that there are other factors contributing to organizational change which are not accounted by organizational culture and demographic variables.

Table 8
The Differences between Faculty Members (Males and Females) in Perceiving Organizational Change.

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Means</th>
<th>Std. Deviation</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>82</td>
<td>60.82</td>
<td>17.25</td>
<td>-1.94</td>
<td>0.055</td>
</tr>
<tr>
<td>F</td>
<td>28</td>
<td>67.62</td>
<td>11.53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9
The Differences between Faculty Members in Scientific Colleges (Sc.) and Faculty Members in Social Colleges (So.) in Each Dimension of Conductivity Scale.

<table>
<thead>
<tr>
<th>College</th>
<th>N</th>
<th>Means</th>
<th>Std. Deviation</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sc.</td>
<td>50</td>
<td>63.82</td>
<td>14.78</td>
<td>-0.99</td>
<td>0.321</td>
</tr>
<tr>
<td>So.</td>
<td>60</td>
<td>60.73</td>
<td>17.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 10
The Differences among the Three Rank Level Groups (Full, Associate or Assistance Professor) in Perceiving Organizational Change.

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>692.434</td>
<td>2</td>
<td>1.324</td>
</tr>
<tr>
<td>Within Groups</td>
<td>27973.197</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28665.631</td>
<td>109</td>
<td></td>
</tr>
</tbody>
</table>

Table 11
The Differences among the Three Ability Level Groups in Using the Computer (Beginners, Good or Professionals) in Perceiving Organizational Change.

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>361.618</td>
<td>2</td>
<td>0.684</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28304.013</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28665.631</td>
<td>109</td>
<td></td>
</tr>
</tbody>
</table>
Table 12
The Differences among the Three Level Groups of Country of Graduation (America, Europe and Australia or Arabic Universities) in Perceiving Organizational Change.

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Change Between Groups</td>
<td>2091.036</td>
<td>2</td>
<td>4.210*</td>
</tr>
<tr>
<td>Organizational Change Within Groups</td>
<td>26574.594</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28665.631</td>
<td>109</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the p < .05 level.

5. CONCLUSIONS

The research was carried out in the Hashemite University that is implementing a relatively major organizational change. Faculty members were surveyed during the change process in order to measure the risk of implementation failure of the initiated organizational change (e-learning). In response to the literature, as discussed so far, in the connection to be made between organizational culture and organizational change, the effect of perceived culture on change initiative was researched. Further, faculty members' perceptions regarding the organizational change were studied against demographic variables proposed to be important in relating to e-learning change initiative, the program under research.

Although one can argue that many organizations found change to be a real challenge, the change process in each organization is unique in each situation. Further, the current study does not allow casual links between the dependent and independent variables. However, several important conclusions can be drawn from this study.

First, computed impact factor regarding the risk of implementation failure of organizational change program (e-learning) in the Hashemite University as perceived by faculty members indicates moderate risk in implementing the initiated change. Managers and change sponsors who initiate the change, therefore, should provide a special attention to resources in the planning and execution of the implementation steps. Second, organizational culture has a significant impact on organizational change. Managers and change sponsors should be sure to modify the change effort to be more in line with the existing culture or modify norms, assumptions, beliefs and/or behaviors of the current culture to be more supportive of the change efforts. Third, demographic variables overall has a significant impact on organizational change. However, the limited variability explained by proposed demographic variables support looking for other demographic variables that might have more impact on organizational change.

Finally, there is still much to be learned about organizational culture and organizational change in higher education institutions. Hopefully, the current study opens the door for a future research regarding additional factors that may be related to the concepts under discussion, cultural change.

Table 13
Scheffe Test for the Differences among the Three Level Groups of Country of Graduation in Perceiving Organizational Change.

<table>
<thead>
<tr>
<th>Country of Graduation</th>
<th>Mean Difference</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>America</td>
<td>Europe and Australia</td>
<td>-4.24</td>
</tr>
<tr>
<td></td>
<td>Arab Universities</td>
<td>-10.62*</td>
</tr>
<tr>
<td>Europe and Australia</td>
<td>America</td>
<td>4.24</td>
</tr>
<tr>
<td></td>
<td>Arab Universities</td>
<td>-6.39</td>
</tr>
<tr>
<td>Arab Universities</td>
<td>America</td>
<td>10.62*</td>
</tr>
<tr>
<td></td>
<td>Europe and Australia</td>
<td>6.39</td>
</tr>
</tbody>
</table>

* The mean difference is significant at the .05 level.
REFERENCES


