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Full Length Research Paper

Factors that discriminate best between students identified as motivated or not-motivated to achieve academically

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This study examined a host of variables the literature or focus groups showed to influence student motivation to achieve academically. Secondary school teachers in Doha, Qatar were asked to identify the five most and five least motivated students in their classrooms. They also were asked to estimate the degree of involvement the parents had in the school, and the level of affluence of their families. Only students who were found to be independently ranked (Kendall Coefficient of Concordance) by more than two teachers within the respective category with statistical significance were included in the sample. This procedure yielded a sample of 63 motivated and 64 not-motivated students. The subjects in the sample were administered instruments to measure their locus of control, self-esteem, school milieu, goal performance and mastery, and cultural activities and items found in the home. Discriminate analysis, One-Way ANOVAs, and Chi Square analyses were performed on the data indicated that only family affluence, parental involvement in the school, the number of culturally enriching items found in the home, and school milieu were able to discriminate between the two groups. The results were discussed in terms of their relevance to future research and ramifications for educators in affluent societies.

Key words: Motivation, Academic Achievement, Parental Involvement, Affluence, School Milieu, Cultural Enrichment.

INTRODUCTION

According to Bandura's socio cognitive theory (1986) student motivation is neither an innate concept nor a trait of personality, but rather a construct that is built out of individual learning activities and experiences, and that varies from one situation or context to another. Educational motivation has been studied extensively by psychologists, educators, and other social scientists. Many theories have been advanced to explain how goals, interacting with external and internal factors, influence motivation to achieve. Attribution theory, self perception theory (self- esteem), and goal setting and mastery theory are considered amongst the leading theories within this realm.

Attribution theory explains the psychosocial reasons for the behavior of individuals in social interactions. Furthermore, it explains whether individuals attribute their success or failure to causes within themselves or to events outside of their control. In terms of explaining achievement, Individuals with an internally-oriented locus of control attribute their achievement to their ability or effort. Those who have an externally-oriented locus of control attribute their achievement to factors beyond their personal control (Rotter, 1966; Levenson, 1973; Benham,

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1995; Skinner et al., 1990; Weiner, 1984). During the last century, and as a result of research on attribution theory, several instruments were developed to measure locus of control, most popular among them is the Rotter Scale (1966); Levenson, 1973). Many of these instruments were Arabized and used in different studies throughout the Arab World (Sakran, 1995, 1996).

Research findings both in the West and the Arab World on the relationship between locus of control and achievement motivation have been inconclusive (Zhicheng and Stephen, 1999). On the one hand, some researchers found internal attribution for students to be positively correlated with achievement; that is, students who think they are personally responsible for their success have been found to spend more time on homework, try longer to solve problems, and get higher grades than students who believe things are beyond their personal control (McCoach and Siegle, 2001; McLean, 1997; Benham, 1995; Zimmerman, 1990, Qutami, 2003; Alshakhsi and Alsartawi, 1999; Alshinnawi, 1997). Other researchers, on the other hand, failed to establish such finding, especially among freshman students (Howerton et al., 1993; Alassar et al., 1983). Zhicheng and Stephen (1999) concluded in their study that; "Being academically motivated, preferring internal attributions for academic outcomes, and having confidence in one's ability to do well in college do not directly result in good academic performance...(p. 14).

One plausible explanation for this dissonance in locus of control research and its effect on educational motivation is that most of the previous research has used unidimensional measures of locus of control, neglected the role of the environment, and was not based on a theoretical model of personality and action as indicated by Anderson, et al. (2005). Recent trends in assessing locus of control tend to focus on integrated multidimensional instruments (Le Casillas et al., 2005).

Achievement goal theory, the purposes and reasons for a person to pursue in achievement situations, has emerged as a dominant framework for studying achievement motivation (McCombs and Marzano, 1990; Pintrich and De Groot, 1990). An increasing body of research is supporting the idea that both self perception of competence and self regulation direct motivation towards the attainment of an academic goal (Schunk, 1995; Pintrich, Smith et al., 1993; Zimmerman, 1989). According to this theory, effective self regulation depends on holding an optimal sense of self efficacy (perceived competence) for learning, and on making attribution (perceived causes of outcomes) that enhances self efficacy and motivation towards achieving certain goals (Tuckman,1999). Similar to the case of research on attribution theory, other research has failed to provide conclusive links between mastery of goals and academic performance. While some studies found mastery goals to be positively linked to academic achievement (Shih, 2005; Wolters, 2004), others failed to establish this link (Barron and Harackiewicz, 2001; Pintrich, 2000; Zhicheng and Stephen, 1999).

Closely related to attribution and goal achievement theory is self-worth theory, which states that, in certain situations, students stand to gain by not trying and deliberately withholding effort. If poor performance is a threat to a person's sense of self-esteem, lack of effort is likely to occur most often after an experience of failure. Failure threatens self-estimates of ability and creates uncertainty regarding the individual's ability to perform well on a subsequent basis. If the following performance turns out to be poor, then doubts concerning ability are confirmed (Thompson et al., 1995).

The literature on school effectiveness attempted to determine the relationship between positive school milieu and student motivation to achievement. Several studies were generated in the US following the "A Nation at Risk" (1983) report to identify the characteristics of the effective school, and the positive environment which motivates students to achieve. Despite the differences noted in the variables that differentiate between effective and ineffective school milieus, these variables can be broadly grouped into five broad categories: Personal and professional characteristics of the teacher, school culture and values, social environment, pedagogical methods, and student services.

Interest in the relationship between school milieu and the motivation to achieve amongst students has increased recently (Gregoire and Algina, 2000). Much of this research attempted to examine the relationship between lack of student motivation and school drop out as an indication of low achievement motivation (Dohn, 1991; Mansi and Awni, 1986; Anderman and Midgley, 1999). Some studies showed that negative school environment may hinder or support children's development and achievement motivation (Esposito, 1999; Mouton and Hawkins, 1996). The most salient school milieu variables that were found to influence motivation are sense of belonging, feelings of safety, teacher aspiration and autonomy support; and the creation of a culture that supports rewarding effort and achievement (Goodenow, 1993; Joe, 1971; Carpenter and Hayden, 1985; Wong et al., 2002; Dowson and Cunneen, 1998). The Colorado High School Survey (1999) which studied 8,663 high school seniors found that high school seniors are motivated by classroom instruction which includes opportunities to apply active hands-on lessons, problem solving techniques, and knowledgeable and enthusiastic teachers with a sense of humor (Colorado Senior High School Survey, 1999).

The socio-economic status of the student also was found to be related to motivation to achieve. Studies conducted on Middle Eastern populations found a significant positive relationship between poverty and unemployment, and lack of achievement motivation (Al-Tall et al., 1999; Kakavoulis, 1999). Similar findings were obtained in the West by Davidson and Schniedewind

(2005), Nguyen (2006), and Cassidy (2000). Other studies concluded that economic status does not affect the motivation to achieve (Alturairi, 1988; Kakavoulis, 1998; Ford, 1993). The literature is deficient, however, on the relationship between socioeconomic affluence and motivation to achieve, especially within societies that are opulent, have a sense of entitlement, and experiencing booming economies.

The role and characteristics of parents has been shown to be a contributing factor to student motivation. Factors such as parental attachment and autonomy, support (Wong et al., 2002), parental involvement in their children's schools (Maya, 2001; Bell, 2005; Paulson, 1996), and the educational and cultural level of the parents (Carpenter and Hayden, 1985; Hossler and Stage, 1992) were found to be related to student achievement. In summary, there seems to be consensus that a positive relationship exists between good parenting practices (as defined in the literature) and student achievement.

As can be seen from the literature, there exists a host of factors and variables that have been found to influence a student's motivation to achieve. The overwhelming majority of these studies, however, treated these variables from a unidimensional rather than a multidimensional perspective. Furthermore, little or no focus has been expended on studying the relationship between affluence, entitlement, and student motivation to achieve. Educators in Qatar, an economically booming and affluent country, have voiced serious concerns regarding the lack of motivation among Qatari students. The purpose of the present research was two fold. First, it attempted to fill the gaps found in our review of the literature by investigating the relationship between student motivation to achieve and a host of variables within a multidimensional perspective. Second, it injects the element of being affluent and living in a booming economy in the investigation of student motivation to achieve. Specifically, we wanted to examine what is the relative weight these variables contribute individually and collectively to discriminate between students who are motivated to achieve and students who are not motivated to achieve. Consequently, this study attempted to determine what combination of school milieu, socioeconomic condition, parental involvement in the school, locus of control, mastery and performance goals, self-esteem, and parental educational attainment best separates students who are motivated to achieve from those who are not motivated to achieve at the .05 significance level.

METHODOLOGY

Sample

A list of all secondary schools in the capital, Doha, was obtained from the Ministry of Education. Schools that served primarily expatriate, non-Qatari children were excluded in order to control for cultural and ethnic factors. All 16 schools falling within this category were approached by one of the two research assistants, and requested that the teachers of the previous 11th grade students (12th graders when the data were gathered) independently rank the five most and five least academically motivated students in their school. Furthermore, they also were requested to rank the socioeconomic and parental involvement of each student in his/her school on a three-point (1 = below average, 2 = average, 3 = above average) scale. Each student who was ranked by less than three teachers was excluded from further consideration. Kendall Coefficients of Concordance "W" (Siegel, 1956) were then conducted on the rankings to determine the degree of concordance amongst the teachers (N = 3 - 5) in each school regarding their rankings of the five most and five least motivated 12th grade students in their school. Cases in which the values of "s" (sum of squares of the observed deviations from the mean of "*Rj*") associated with the values of "W" achieved statistical significance ($p < .05$) were then identified and constituted the sample for this study. This scheme resulted in 63 (M = 39, F = 24) motivated and 64 (M = 42, F = 22) non-motivated students.

Instruments administered

The following instruments were administered to the selected student sample:

Arabized version of the Coopersmith self-esteem inventory

This 25-item measures the degree of self-worth and image an individual has of him/herself (Musa and Dassouki, 1981). It was Arabized and normed on an Arab population, and was found to be appropriate for use on such populations (Baker, 1993). The reliability and validity data obtained for the Arabized version was found to be similar to those obtained for the original instrument.

Rotter internal-external control scale (Arabized version)

This 23 paired-items instrument measures the degree to which an individual attributes his/her actions as a result of external factors (e.g., fate, luck) or personal attributes (e.g., ability, personality). The instrument was translated into Arabic and tested by faculty members in the Psychology Department at Fayoum University in Egypt. Its reliability was measured using the test-retest (r = .619) and split-half (r = .619) methods, and its face and construct validities were determined by seven experts in the field who scrutinized the appropriateness of its items conceptually and linguistically. Data provided by its translators (administration manual) show the instrument to enjoy a high level of face, construct, and concurrent (r = .786) validity.

Mastery and performance goal orientation scale (Arabized version)

This nine-item measurement was Arabized and normed on an Arab population by Zayed (2003) who based it on Stipek and Gralinski's (1996) children's beliefs regarding school performance and the motive to achieve. Furthermore, it ascertains the extent to which the child's motivation to master and perform in a subject area is intrinsically or extrinsically driven. It consists of a nine-item Likert-type scale (for example, I do my work because I like to discover new ways of doing things) that measures the student's beliefs regarding his mastery and performance in school. Research conducted by the translator (Zayed, 2002) show the instrument to be both reliable and valid in its Arabic form.

School milieu questionnaire

This 15-item scale was constructed by the authors to determine the students' perception of their schools culture, curriculum, instruction used, and relationships with their teachers. The items were based on readings from the literature and focus groups conducted by the authors to ascertain the variables to be included in such an instrument. Its items consist of three "clusters" designed to measure the following aspects of school milieu on a five-point Liekert-type scale (strongly agree, agree, agree to some extent, disagree, strongly disagree): (a) seven items to measure how the teachers interact with the students in the school such as "I feel my teachers encourage me to study"; (b) five items related to the curriculum ("The required subjects in the school are interesting"); and (c) three items depicting the general atmosphere in the school ("An atmosphere of congeniality permeates our school"). It should be noted here that the terms "agree" and "agree to some extent" have differential linguistic meaning in Arabic than in English. The questionnaire was pilot tested on a sample (N = 30) of students enrolled in a pre-university course at Qatar University, and its test-retest reliability (r = .73) was found to be adequate.

Cultural materials in the home

The students were asked to include which of the following items were available in their homes: (a) daily newspapers, (b) cultural magazines, (c) cultural books other than those used in school, and (d) documentary and cultural audio-visual items such as DVDs.

Cultural activities engaged in by the family

In order to measure the degree of culturally enriching activities the student's family is engaged in, a five-item questionnaire was constructed by the authors to serve this purpose. The items were based primarily on the literature and the focus groups that were conducted. Students were requested to state how they spend their free time and vacations by responding to the following choices on a four-point scale (frequently, sometimes, few times, never):
Attending exhibitions of art, music, and theatre.
Taking cultural trips such visiting museums.
Visiting artistic (e.g., photography, paintings) exhibitions.
Attending cultural lectures and symposia.
Participating in cultural events such as the writer's club and forum

Educational attainment of parents

Finally, the respondents were asked to state each parent's educational attainment level: (a) less than 6^{th} grade, (b) 6^{th} – 9^{th} grade, (c) secondary school, (d) undergraduate university level, and (e) graduate level.

Procedure

Conducting focus groups

In order to determine the parameters and the crucial questions to be included in the study, the researchers conducted two focus group sessions (N = 6 - 8 persons) with local Qatari educators to probe their perceptions regarding what characteristics distinguish between motivated and not motivated students in Qatari society. Specifically, the question posed to the focus groups was: "In your opinion as an experienced educator, what variables influence motivation to achieve in Qatari children?". It was made clear to the groups that the research targets the motivation to achieve academically irrespective of the child's level of achievement; i.e., the desire and urge to achieve. The two focus groups were conducted independently by two of the researchers within the same week, and the sessions were tape-recorded. The researchers then transcribed the recorded tapes independently of each other and identified the main themes that emerge. The percentage of agreement (88%) was then calculated to determine the degree of concordance between the two observations. Two themes emerged from the focus groups that were not identified in the literature: (a) the degree of parental involvement in the school, and (b) the affluence of the family.

Administration of the instruments

Three (one male, two female) research assistants were trained on how to administer the instruments. Prior arrangements were made with the schools to allow the research assistants to access the identified students who were not aware to which group they were assigned. The instruments were then administered to both groups of students during the month of November (following month of Ramadan and prior to the opening of the Asian games) in order to avoid extraneous (fatigue, hunger, interruptions) variables from influencing the outcome of the research. Furthermore, the assistants piloted the instruments on a small group of students to determine if the instruments and instructions were clear to the students. Although the research assistants were not able to access all the identified students in some schools on the same day for reasons of absenteeism, all the data were collected within a three-week period. The instruments were administered during the recess period of the school day, and the research assistants did not commence administering the instruments until they were made clear to the students. The sequence of administering the instruments to the students was counterbalanced to control for fatigue, habituation, or spillover effect. An assistant, other than the research assistants, scored and coded the data into the following categories: (1) group membership, (2) affluence of family, (3) level of parental involvement in the school, (4) mother 's educational attainment, (5) father's educational attainment, (6) culturally enriching items found on the home, (7) school milieu, (8) mastery and performance goal orientation score, (9) self esteem score, and (10) locus of control score.

Statistical analyses performed

The coded scores were subjected to descriptive (means and standard deviations) analysis, multivariate analysis (discriminate analysis; method = rao), and non-parametric statistics (Chi Square and Kendall Coefficient of Concordance: W) using the SPSS (Version 13) software package.

RESULTS

The means and standard deviations of the ten variables included in the discriminant analysis are depicted in Table 1. Only four variables (affluence of family, level of parental involvement in the school, the number of cultural materials found in the home, and school milieu) were found to have significant power to discriminate collectively between the students who were identified as motivated and those identified as not motivated as could be shown in Table 2. Changes in the value of Rao's V clearly show that parental involvement in their child's

Table 1. Group means and standard deviations.

Variable	Motivated		Not Motivated		Total	
	M	S.D.	M	S.D.	M	S.D.
Affluence of family	1.50	0.489	1.74	0.60	1.61	0.54
Parental involvement	2.00	0.58	2.54	0.48	2.26	0.57
Mother's education	3.26	1.38	2.93	1.47	3.1	1.42
Father's education	3.61	1.42	3.33	1.43	3.48	1.33
Cultural materials in home	3.10	1.09	2.67	1.23	2.90	1.19
Mastery and performance goals	37.60	4.46	36.94	4.91	37.30	4.83
Locus of control	8.5	3.28	9.76	2.61	9.10	3.03
Self-esteem	12.15	4.46	11.74	3.44	11.96	4.00
School milieu	54.67	8.45	52.20	10.98	53.51	9.76
Cultural activities	10.36	2.86	9.85	3.01	10.12	2.93

Table 2. Results of discriminant analysis.

Variable	Rao's V	d.f.	Change in Rao's V	Sig.
Parental involvement	24.974	1	24.974	.000
Family affluence	35.280	2	10.306	.001
Cultural materials in home	41.992	3	6.711	.010
School milieu	46.674	4	4.682	.030

school was the most significant factor in discriminating between motivated and not-motivated students, followed respectively by the affluence level of the family, the number of cultural materials found in the home, and the milieu of the school. Given that the first three variables are nominal data that were treated as interval ones in the discriminant analysis, Chi Squares were conducted on their cross-tabulation tables to determine their sources of variance. The fourth variable (school milieu), composed of items related to teacher interaction, curriculum, and general atmosphere of the school, was subjected to three separate One-Way Anova's to determine which of the three clusters of items differentiated between students who are motivated and those who are not motivated.

The Chi Square results showed, for example, that slightly more than three fourths (77.8%) of the parents of the students identified as motivated were judged as minimally involved in the school. In contrast, less than one-fifth (19.5%) of the parents of students identified as motivated were judged to be involved in the school beyond the average level. By the same token, (80.5%) of the parents of students identified as not motivated were judged to be involved in the school at an "above average" level (X^2 2 d.f. = 23.675, p, .000).

The cross tabulation results for affluence of the family and motivation revealed that 90.9% of the not motivated students came from families whose affluence level was above average. In comparison, the percentage of motivated students coming from families whose affluence level was judged to be below average fell to 57.7%, while the percentages for the motivated and not motivated students who come from families of average affluence were equal (X^2 2 d.f. = 8.587, p, .014).

Similar results were obtained for the cross-tabulations regarding the number of cultural enriching materials found in the home. Of the 24 students who came from homes that possessed one culturally enriching item (daily papers), only eight (33.3%) were classified as motivated compared with 16 (66.7%) who were classified as not-motivated. Not-motivated students far outnumbered motivated ones (64.0:36.0%) when the number of culturally enriching items in the home was two. The picture becomes more ominous when the number of culturally enriching items in the home increases to three where the motivated students far outnumbered (73.7%) the not motivated (26.3%) ones (X^2 3 d.f. = 9.511, p, .023).

The separate One-Way Anova's conducted on the three clusters constituting school milieu showed that teacher interaction (F, d.f. 1 = 3.101, p, .08) and school atmosphere (F 1d.f. = 3.690, p, .057) approached statistical significance. The curriculum used, however, was not found to be of significant value in differentiating between motivated and not motivated student.

The results above are clearly reflected in Table 3 which depicts the discriminant function coefficients for the variables included in the analysis. Parental involvement was the strongest discriminant function (.700) followed by

Table 3. Discriminant function coefficients.

Variable	Function
Parental involvement	.907
Family affluence	.505
Cultural materials in home	.364
School milieu	.321

affluence of the family (.308) and the number of culturally enriching materials found in the home (-.250) respectively. The analysis conducted was found to be capable of predicting group membership with 75.4% as shown in Table 4. A subsequent discriminant analysis was performed on the data which included only family affluence level, parental involvement, and the number of culturally enriching materials found in the home. Group membership prediction fell only by a mere two percentage points.

DISCUSSION

This study attempted to determine what variables, singularly or in combination, are able to discriminate between students who are identified as motivated or not-motivated. The results of the study indicated that family affluence, parental involvement in the child's school, the number of culturally enriching materials found in the home, and the general atmosphere of the school played significant roles in discriminating between students who are motivated to achieve academically and those who do not possess such motivation. Although this study included other variables such as locus of control, parental educational attainment level, mastery of goals, and self-esteem within the analysis, none was found to be a significant contributor to the discrimination. Such a finding is not surprising given the equivocal results found in the literature regarding the relationship between motivation to achieve and locus of control (Anderson, et al., 2005; Zhicheng and Stephens, 1999), mastery goal theory (Pintrich, 2000; Shih, 2005), and self esteem (Zhicheng and Stephens, 1999). Furthermore, many of the studies on locus of control and self-esteem were based on larger samples than the one used in this study. Failure to achieve significance on these variables could have been the result of such differences. The profiles generated by the study for motivated and not-motivated students, however, deserves explanation. This discussion will attempt to provide plausible interpretations for each profile.

The results of this study indicated that students who were identified as not-motivated came from affluent families, attended schools whose general atmosphere promoted rewarding and healthy interaction with the teachers, lived in homes that provided culturally enriching materials, and had parents who are involved minimally in the school. While these findings are statistically significant, extreme prudence should be exercised in terms of over generalization for more than one reason. The variables found to be significant were measured in broad and global terms. For example, family affluence and parental involvement were assessed by having the teachers estimate their level on a three-point scale. Although statistical and design measures were taken to ensure that the values obtained could be relied on, one cannot delineate the exact parameters constituting these variables.

The degree of parental involvement in the school was found to be the most significant ($p = .000$) and contributing (.907) factor to the discriminant function. It may appear odd that students who were identified as motivated had the least involved parents. Alhur's (1998) comprehensive study of the Qatari elite's perception of their educational system clearly indicates that Qatari parents are not sufficiently involved in following up and supporting their children's education. This phenomenon also may be a function of cultural perception. Arab society (including Qatari society) generally do not find good reason to be involved in the school if their children are not experiencing difficulty academically or behaviorally. It is a social perception that parents who visit their child's school may be construed as being summoned by the school because their child is either failing or has committed a serious infraction. Furthermore, the concept of parental involvement through voluntary work or the PTA has not taken root in this region. Qatar is diligently trying to remedy this perception. As the country moves towards privatization of education in the form of opening independent schools, it has stipulated that each independent school it licenses must form a PTA. To what extent this measure will lead to meaningful parental involvement in the schools remains to be seen.

Family affluence was found to be the second most contributing factor to the separation between motivated and not motivated students. Although affluence was measured by having teachers "estimate" the degree of affluence of each family, the global conclusion regarding affluence and motivation in this study could be justified. The ratings were included in the analysis only when the level of concordance between two or more teachers was found to be statistically significant. The significant estimation, however, does not examine other parameters of affluence that may have played a mediating role in the results. By the same token, one can consider the ratings of the teachers to be reasonably accurate because of the size (approximately 170,000) and social structure of Qatari society. Qataris are very aware of their lineage, extended families, and clans. It is not difficult for a Qatari to determine to which level (below, average, above) of affluence a given family belongs, especially if it lives within close proximity as is the case in this study. The magnitude of the findings is also compelling. Nine out of

Table 4. Predicted group membership*

Actual group membership	Predicted group membership		Total
	Motivated	Not-motivated	
Motivated	45 (71.4%)	18 (28.6%)	63
Not Motivated	13 (20.6%)	50 (79.4%)	63

* 75.4 % of actual grouped cases were classified correctly.

ten students who come from families of "above average" affluence were identified as not motivated. These results seem to corroborate Alhur's (1998) findings that the economic boom Qatar is experiencing may have led to feelings of entitlement among the population, and reduced the motivation to achieve academically amongst the new generation. Affluence, however, has many facets, especially how it is interpreted by the individual and his/her family. The focus groups identified clearly that affluence plays a role in the degree of motivation to achieve. However, the focus groups did not delineate the relationship between family affluence and its perception by the students. It is generally known in the Arab world that economically deprived families perceive education as the main salvation from their dire predicament. Hence, children in such families are highly motivated to achieve academically. By the same token, affluent families urge their children to achieve academically to maintain family prestige among other things. The unique status of Qatari society may have led to the differential finding. Qatar is undergoing rapid economic and social transformation. Furthermore, the economic boom it is experiencing and the distribution of its wealth has led to feelings of entitlement among its population. To what extent the combination of these two forces (or other forces) led to results variant from those found in other regions of the Arab world must be answered by other researchers.

The instrument measuring school milieu was composed of three clusters of items: general school atmosphere, teacher interaction with students, and curriculum. Although the discriminant analysis showed that this variable to be significant (p, .03), it was unable to determine which cluster(s) attributed to the significance. Post separate One-Way Anova's on the clusters showed that items related to general school atmosphere and teacher interaction approached significance, whereas the curriculum did not play a crucial role. Motivated students perceived their teachers to be more positive in their interaction with them than students who are not-motivated. Furthermore, motivated students felt that the general atmosphere of their school is more positive, relaxing, and loving than their peers who are not-motivated. It seems that social interaction and atmosphere are more crucial than type of school or curriculum followed in promoting the motivation to achieve academically.

This study also appears to indicate that motivation to achieve is linked to the level of cultural enrichment found in the home. Chi square analysis, however, showed that its adverse influence on student motivation is greatest in the case of deprivation than in enrichment. While only eight motivated students came from homes that subscribed to one culturally enriching item in the home, twice as many not-motivated students fell within this category. A similar pattern was observed when the number of culturally enriching items in the home increased to two. In contrast, the difference between motivated and non-motivated students coming from homes that subscribed to four (N = 32, 26 respectively) culturally enriching items, however, was reduced significantly. This result seems to suggest that the absence rather than the presence of cultural enrichment that has a dire effect on student motivation.

Two main conclusions can be drawn from this study. The first is that student motivation is a complex, multivariate phenomenon that cannot be ascertained accurately even with the most sophisticated statistical tools and research designs. However, one may be able to differentiate between motivated and not-motivated students simply by assessing the affluence level of their families, the degree their parents are involved in the school, the number of culturally enriching items found in the home, and the school milieu characterizing their school. The analysis was able to predict group membership accurately in nearly three-fourths of the cases based on these four global parameters. The second, student motivation (at least for the Qatari case) seems to be bound by social-cultural-economic factors. Neither type of school attended, gender, or curriculum was found to discriminate between motivated and not-motivated students. Personality constructs such as locus of control and self-esteem also did not contribute significantly in this study to the differentiation between motivated and not-motivated students. Perhaps school systems in the Gulf region and similar regions need to take heed of these findings. Educational reform without corresponding social-cultural-economic reform may not bring about the desired (motivation to achieve) change. The results of this study strike an ominous note; such conditions may have counter productive effects.

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