Leadership Skills of Students in Alternative Education and Mainstream Schools in India[*]

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Abstract

This study documents the student leadership skills in selected alternative education and mainstream schools in India and explores the implications for enhancing school curriculum in India to better address the changing needs of public education in the context of a global economy. This exploratory study offers a comparative analysis of leadership skills in India in both mainstream and alternative education schools. The study was done using the Leadership Skills Inventory (LSI) developed by Karnes and Chauvin (1985). The alternative school students consistently scored higher in all dimensions. The differences were statistically significant on combined leadership dimensions and two of the nine individual dimensions.

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1 Sumario en espanol

Este estudio documenta las habilidades de liderazgo de estudiante en escuelas alternativas seleccionada de educación y corriente principal en India y explora las implicaciones para aumentar programa de estudio en India para dirigir mejor las necesidades cambiantes de la educación pública en el contexto de una economía

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global. Este estudio exploratorio ofrece un análisis relativo de habilidades de liderazgo en India en ambas escuelas convencionales y alternativas de la educación. El estudio fue hecho utilizar que las Habilidades de Liderazgo Inventarían (LSI) desarrollado por Karnes y Chauvin (1985). Los estudiantes alternativos de la escuela rayaron coherentemente más alto en todas las dimensiones. Las diferencias fueron estadísticamente significativas en dimensiones combinadas de liderazgo y dos de las nueve dimensiones individuales.

NOTE: Esta es una traducción por computadora de la página web original. Se suminista como información general y no debe considerarse completa ni exacta.

2 Introduction

This study assessed the leadership skills in high school students from three alternative schools and three mainstream schools in India. Mainstream schools are those that employ rote learning by emphasizing knowledge with a defined curriculum. In most cases, minimum regard is paid to individual student abilities. The three mainstream schools used in this study were private schools and have incorporated some curricula to develop creativity in students. A few alternative education models have already been started in India in an attempt to inculcate in students the best of international-standard academic skills while still offering an education solidly grounded in traditional Indian values. These schools are created to provide an education for life, while also encouraging a strong sense of identity based on traditional values. Such a solid educational foundation is crucial to have in these rapidly changing times. The leadership skills were evaluated by collecting and analyzing data gathered from a parent demographic survey and a student leadership skill survey. The study employed quantitative analytical methods to determine the differences between the two types of schools in promoting the kind of cognitive and problem solving skills that enhance students' leadership abilities. An agenda for the future involves expanding the scope and size of this study to determine whether its findings can be generalized to a larger context.

Most of the voluminous literature on leadership focuses on adults. The LSI is one of the few instruments which is oriented to school-age children.

The authors (Karnes & Chauvin, 1985) state that their selection of the nine dimensions of leadership skills for this instrument is based on a thorough review of the literature; however, LSI is not identified with any theory of leadership (T. Oakland, Falkenberg, C. Oakland, 1996). Karnes and Chauvin (1986) state that, "He (Stogdill, 1970) offered strong evidence, based on factor analysis, to support the theory that different leadership skills and traits are required in different situations but that certain qualities seem to characterize almost all leaders" (p. 22). This appears to justify the lack of any identified leadership theory in the approach taken by Karnes and Chauvin (1985). Their approach to studying leadership appears to be particularly appropriate in the context of a global economy, in which cultural differences play a major role.

3 Research Importance and Relevance

India was in the forefront of global technology revolution and was able to secure a bigger piece of outsourcing from West. The report on India's competitiveness and preparedness for scientific technology (Anitha, 2006) cite several factors for Indian science not being competitive. In that report, Sundar Sarukkai (NIAS, Bangalore) and T. Jayaram (MatScience, Chennai) describe bureaucracy and lack of transparency as leading to younger faculty mistrust and ad-hoc decision making. Several countries have stepped up to utilize the West's technology and manufacturing outsourcing business. As a result, India's dominance in outsourcing is being threatened.

The results of this study contribute to leadership research in several ways. To date, based on a survey of the literature, there appears to be no measurement of leadership skills in students from alternative and mainstream schools in India. This study addresses that topic. Another unique feature is that it describes high-school students from alternative schools and mainstream schools in terms of a *multidimensional* concept of leadership. This study is a timely contribution to the leadership literature because of India's dominant role in the world economy due to its technological capability.

4 Background

Schools in India provide an avenue for multi-lingual education and emphasize math and science in their curriculum (Cheney, Ruzzi, & Muralidharan, 2005). The authors add that, per the University Grants Commission, the vast majority of colleges emphasize Arts and Science along with Commerce. Kumar (1996) and Mohan (1995) have addressed the effects of global culture on Indian society. Globalization produces pressure to create a few common languages at the expense of regional languages (Mohan, 1995). Changes in lifestyle, habits, religious practices, consumption, and language have occurred at all levels, local as well as national (Singh, 2000). The current illiteracy rate in India is over 42% (Marginson & McBurnie, 2003). India recognizes that to compete in the global economy, it needs to improve educational opportunities for the majority of Indians.

India is also learning that it is crucial to institute fundamental changes in curriculum to keep pace with rapid changes in the global workplace if it is to build upon or even maintain its technological edge.

Globalization has far-reaching and unprecedented effects in countries such as India that may have populations separated not only by great geographical distances, but also by varied cultures. India has moved towards a market economy and this has led to a technology revolution. India adopted a radically different approach to mainstream education in order to compete successfully in the market economy. Indian education has overemphasized mathematics and science so as to groom students to become highly competitive players in the 21st century global economy, fueled by the information technology boom. Indian education currently emphasizes academics without encouraging a more holistic education, involving mental, emotional, and physical realms (Chakrabarti & Tiwari, 2006). In addressing the challenges for the Indian educational system, Nag, Perry, and Seda (2007) state that there are not enough young people with skills to meet the demands generated by new jobs. Interpersonal and other "soft" skills are integral components of effective leadership and important to study; many young technology professionals in India are said to be lacking in these basic skills (Singh, 2008).

With profound changes occurring in India as a result of globalization, an opportunity exists to explore whether Indian mainstream schools can learn from alternative schools in India. Educational reform might help students become more qualified to assume leadership positions in the global economy. There are several alternative schools; Mirambika, in New Delhi, is one such school. The school's philosophy is to allow children to grow at their own, inwardly-motivated pace (Mehrotra, 1998). The alternative schools selected in this study are based on the philosopher J. Krishnamurti's principles, which focus on providing a holistic education to students. The holistic education is stated as follows:

4.1

It aims to call forth from young people an intrinsic reverence for life and passionate love of learning. This is done, not through an academic 'curriculum' that condenses the world into instructional packages, but through direct engagement with the environment. Holistic education does not simply instruct young people about what is true and what is false, but enables the learner to inquire. (Venugopal, 2009, p. 71)

The principles of the Krishnamurti schools emphasize the exploration of not only the world of knowledge and the world, but also students' own thinking and behavior (Krishnamoorthy Foundation India, 2008). The Sloka School in Hyderabad (Sloka, 2010) is based on the principles of the German philosopher Rudolph Steiner. Steiner's philosophy is that up to age seven, the child mimics everything in the environment. During the second seven years, the child develops vivid imagination and readiness for formal learning. During the third seven year phase, the child searches for truth, discrimination, and judgment (Waldorf Education, 2011).

With globalization and changing world dynamics, the need exists to continuously enhance the school curriculum to help students. Developing the cognitive ability and problem-solving skills to survive economically and politically in this world has become a matter of urgency. India, as one of the most successful players in the global economy, particularly in the technological sphere, may have some important lessons about education that are worth understanding.

Several literatures focused on measuring leadership in adult settings such as industries or educational teaching institutions (Alban-Metcalfe & Alimo-Metcalfe, 2000; Arnold, Arad, Rhoades, & Drasgow, 2000;

Borman & Brush, 1993; Manz & Sims, Jr., 1991). Few studies focus on leadership skills in high school students. Nurturing leadership skills in youths supports their effectiveness in the public, private, and religious sector (T. Oakland, Frankenberg, & C. Oakland, 1996). The LSI was designed for school students to determine their strength in leadership skills (Edmunds, 1998). The LSI was administered to 452 students, who were tested on the following nine dimensions of leadership: written communication skills, speech communication skills, character-building skills, decision-making skills, group dynamic skills, problem-solving skills, personal-development skills, and planning skills. Karnes, Meriweather, and D'Llio (1987) conducted a test to determine whether having leadership training improved the leadership effectiveness of the students. The authors stated that the Leadership Studies Program enabled the mean LSI scores to increase. Edmunds and Yewchuk (1996) examined the relationship among certain leadership indicators such as skills, behavior, and rankings. Edmunds (1998) examined the content, concurrent, and construct validity of the LSI and concluded that they were all supported. Finch, Cowley, and Meehan (2004) conducted a study to test one of the research questions on the academic achievement, attitudes, and behaviors of youths participating in educational or social programs. The findings indicated that academics and self-esteem were the program's main strengths, and that it helped students in setting future goals. Friedman, Friedman, and Van Dyke (1984) examined the use of multiple nominations to determine whether leadership potential and performance can be predicted. They concluded that multiple nomination sources are appropriate to identify gifted student leaders. French and Stright (1991) suggest that those children who show leadership qualities often display task-facilitative behavior, an association that seems to increase as children become older. In their view, behaviors associated with achieving group goals through organizing and facilitating indicates leadership attainment. Chan (2003) examined leadership skills training for Chinese secondary students in Hong Kong to determine the leadership characteristics of students and their ability for broad thinking. He compared a group of students who went through the Creative Leadership Training Program (CLTP) against those who did not and determined that even though the difference was not very significant, the participants in CLTP program did gain confidence. This was demonstrated by their improved communication and problem solving skills. Zacharatos, Barling, and Kelloway (2000) conducted test on high school students to see whether their transformational behaviors reflected their parent behaviors. Their study was based on using the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1995) to determine how the students perceived parental transformational leadership. Their study found that adolescents display transformational leadership behaviors, obtained from their interaction with their parents, when interacting with their peers.

5 Study Methods, Techniques, and Data Sources

The research question is stated as follows: Are there differences in the leadership skills scores of the students from alternative schools and mainstream schools?

5.1

Hypothesis: There are significant differences in leadership skills between alternative and mainstream high school students with alternative schools performing better.

The general aim of this study describes students from three alternative schools and three mainstream schools in India in terms of their leadership skills. The study measured student leadership skills and presented background information on the educational system and philosophy of each school. The specific aims of this study are:

Aim 1. To describe three mainstream schools and three alternative schools selected for this study in India and from each school, collect selected demographic data on the high school-age students' families; i.e., parent education level, household income, parent occupation, housing status, and total household members.

Aim 2. To measure the leadership scores of students from three mainstream schools and from three alternative schools and determine whether these students differ in terms of leadership skills. This aim was addressed by the following questions:

(a) Are high school students from alternative schools different from their counterparts in mainstream schools in terms of leadership as measured by Karnes and Chauvin (1985) LSI?

(b) How do the students compare on each of the nine dimensions or subcategories of leadership (Karnes & Chauvin (1985), i.e., (1) fundamentals of leadership; (2) written communication skills, (3) speech communication skills, (4) character-building skills, (5) decision-making skills, (6) group dynamics skills, (7) problem-solving skills, (8) personal development skills, and (9) planning skills?

These research questions are exploratory. Predictions are restricted to those areas for which information, mostly in the form of anecdotal evidence, is available. Data collection at three mainstream and three alternative schools in India took the form of a questionnaire on leadership skills (Karnes & Chauvin, 1985) which was distributed to the selected students who satisfied the eligibility criteria.

Based upon the recommendations of local educational experts, six schools in a similar social environment were chosen for the study. Three schools were representative of mainstream schools and three schools were representative of alternative schools. English was the language used for instruction. The schools, representing urban settings, were selected from large cities of similar populations. The selected students were from middle-class families. Only those students who had invested considerable time in their respective school systems (a minimum of 5 years) were included in the study. About 25 respondents were selected from each of the six schools, using convenience sampling with the following controls: The respondents in both schools were students between the ages of 14 and 18 and in grades 11 and 12, needed a good command of the English language to comprehend the questions and instructions, and were from similar socioeconomic backgrounds.

The clear distinction between mainstream and alternative schools can be expressed simply in terms of the approach taken in providing education. Mainstream schools focus on cramming students with information so that they can obtain high scores in the matriculation examinations. The main emphasis is on achievement of high scores, and this is compounded by the tremendous pressure exerted on the schools by parents. The alternative schools selected in this study are based on the philosopher J. Krishnamurti's principles, which focus on providing a holistic education to students. The idea behind this concept is that individuals need to understand how their acts might affect other people and learn how to care for others. Concern for their fellow human beings is the fundamental concept in the alternative education espoused by these alternative schools.

Most of the mainstream schools emphasize rote learning; however, the three mainstream schools used in the study were private schools and incorporated some creative aspects into their curriculum. These three schools are funded by private sponsors, and they collect tuition. These schools are also ahead of the typical public mainstream schools in terms of resource availability and their abilities to build facilities to broaden students' background. Rote learning still predominates as it is believed critical for performing well in board exams. This is important to emphasize. Alternative schools encourage students to explore nature with respect for all forms of life. In keeping with this principle, these alternative schools are set up in wilderness areas so that students are immersed in nature. A clear distinction between mainstream and alternative schools can be found in their vision statements. One mainstream school's stated aim is to achieve academic excellence by trying to nurture the creativity in each student. In contrast, an alternative school's mission statement is to provide education to students that would enable them to explore nature and the world of feeling. The selected schools have slightly over 360 students each. The mainstream schools have a teacher-student ratio of 1:40 whereas the alternative schools' ratios tend to be less than 1:30.

In summary, mainstream schools, i.e., Schools 1, 2, and 3, opened in 1997, 1987, and 1969, respectively. Alternative schools, i.e., Schools 4, 5, and 6, opened in 1931, 1978, and 1990, respectively. In terms of size, mainstream schools had more students than the alternative schools and a higher student-teacher ratio: Schools 1 to 3 had 632, 1,890, and 2,450 students, respectively; corresponding student-teacher ratios were 30:1, 45:1, and 45:1. In contrast, alternative School 4 had 372 students; School 5 had 352 students; and School 6 had 500 students, with student-teacher ratios of 7:1, 15:1, and 25:1, respectively.

Mainstream and alternative schools differ in their philosophy of learning and teaching methods. At mainstream schools, lesson plans are created on a weekly basis, and reviewed and approved by the principal. At alternative schools, the lesson plans are created at the beginning of the year and tend to emphasize

practical applications that are useful in one's daily life. In terms of learning, at mainstream schools, student progress is monitored and evaluated at all grades by means of examinations and tests. In contrast, students at alternative schools are not required to undergo formal examinations or testing until the eighth grade. Examinations are introduced starting only at the ninth grade. Competition at alternative schools is generally not encouraged. However, to prepare their students for the realities of higher education in India and elsewhere, at grades 11 and 12 alternative schools emphasize preparation for board examinations where their students will be competing with students from mainstream schools for coveted university admissions.

There is more open communication between teachers and students in alternative schools than in the mainstream schools. Mainstream schools are generally organized more hierarchically, where the principal makes most of the decisions with input from teachers, whereas at alternative schools, parents and teachers participate in the decision-making.

In terms of school philosophy, the mainstream schools and alternative schools are similar in terms of making the school child-centered. The difference lies in the amount of time and effort expended by the school staff; children in alternative schools receive a great deal more individualized attention than those in mainstream schools.

Although both types of schools provide field trips and other activities, these are limited at mainstream schools due to the time that students must spend on examination preparation right from the early grades. Both mainstream and alternative schools have excellent library facilities, and encourage participation in sports. Yoga, which was earlier associated with alternative schools, is now offered at some mainstream schools also.

6 Data Analysis

Data were collected from high schools students using the LSI developed by Karnes and Chauvin (1985). This section addresses Aim 2, which was to determine whether there were significant differences in leadership scores between the two types of schools and to describe the findings from the data analysis.

As part of the first step, the index values were calculated for each of the leadership dimensions. There were 125 questions on the leadership survey, measured using a Likert scale from 0 to 3. The raw data were converted to index values by dividing the respondent value by the total score for that leadership dimension for each student. For example, if there are 12 questions on a leadership dimension, the maximumscore that any one student could have scored is 36. If the student's aggregate score for that dimension is 27, then the leadership index is 27/36 * 100 = 75. Creating the index allows testing of the association between these indices and the key demographic variables identified earlier. Table 1 presents the results of the descriptive measures of the combined leadership scores on all the dimensions by the school type.

Combined Leadership Descriptive Measures

School Type	N	Mean	Std.Dev.	Std.Error	Min	Max	Range	Variance	Median
Mainstream	74	70.27	11.96	1.390	42	95	68	143.04	69.47
Alternative	84	73.76	9.58	1.045	46	95	60	91.79	74.93

Table 1

7 Findings

The hypothesis posited that there are significant differences in leadership skills between alternative and mainstream high school students with alternative schools performing better.

Salkind (2008) describes the steps for selecting the appropriate test static. Using those guidelines, the t test was found to be appropriate as it deals with two groups (mainstream and alternative) and independent sample sizes. The results from the t test are shown in Table 2. The t test examined differences in the combined

leadership mean scores between mainstream and alternative schools. The mean score for alternative schools (73.76) was higher than the mainstream schools by about 3.5 points. Contrary to the null hypothesis, this analysis showed there was a significant difference between the mainstream schools ($M = 70.27$, $SD = 11.96$) and alternative schools ($M = 73.76$, $SD = 9.58$), (t (139.62) = -.2.01, $p = 0.047$, s.) on the combined leadership score. The negative value indicates that the mean overall leadership score for the alternative schools was higher than the mean leadership score for the mainstream schools.

Mainstream vs. Alternative Mean Scores - Combined Leadership Dimension

School Type	Sample Size	Mean Scores	Standard Deviation
Mainstream	74	70.27	11.96
Alternative	84	73.76	9.58

Table 2

Note. s = significant (p < .05).

To determine the magnitude of how significant the difference is between the two groups, the effect size formula was used to compute the strength between the two leadership mean scores. The effect size indicates how much similarity exists between the two groups. The calculated effect size was .32, which was in the medium category in terms of significance, as defined by Cohen (1988). Based on this effect size, using Cohen's table, the groups overlap about 23% which means they have that much in common.

8 Individual Leadership Dimensions

The results for all the other dimensions are presented in Table 3. Except for character-building and decision-making skills, there were no significant differences between the mainstream schools and alternative schools. For character building and decision-making there was a significant difference with the alternative schools showing higher scores than mainstream schools.

Mainstream Schools vs. Alternative Schools: Mean Comparisons of Individual Leadership Dimensions

Leadership Dimensions	Mainstream (N = 74)	Alternative (N = 84)	
	Mean (SD)	Mean (SD)	t Value
Fundamentals of Leadership	68.37 (16.222)	71.56 (13.990)	-1.316, $p = .19$ ns
Written Communications	65.80 (15.186)	69.54 (15.828)	-1.515, $p = .13$ ns
Speech Communications	64.93 (17.002)	67.29 (16.309)	-0.888, $p = .376$ ns
Character Building	78.11 (11.182)	81.79 (9.139)	-2.246, $p = .03$ s
Decision Making	66.08 (14.808)	72.82 (13.783)	-2.947, $p = .004$ s
Group Dynamics	70.55 (13.757)	72.60 (11.386)	-1.009, $p = .315$ ns
Problem Solving Skills	72.22 (15.578)	72.29 (16.756)	-0.026, $p = .980$ ns
Personal Skills	73.83 (12.273)	78.19 (10.030)	-2.426, $p = .17$ ns
Planning Skills	68.02 (15.507)	72.08 (13.136)	-1.765, $p = .080$ ns

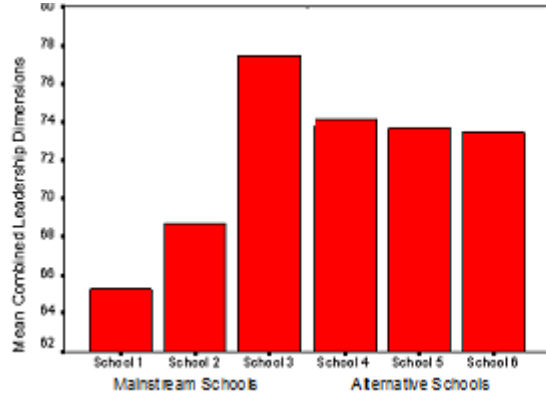**Table 3**

Note. *ns* = not significant (p>.05); s = significant (p<.05)

9 Intra-School Type Comparisons

Comparisons between individual schools within each school type were also made. Two schools at a time were paired to determine whether there was any significant difference in the mean of combined leadership scores. Analysis of Variance (ANOVA) was used to test for significant difference between the mean leadership scores of individual schools within each school type. Figure 1 compares the means of each school. The results are shown in Tables 4, 5, and 6.

Figure 1. **Mainstream vs. Alternative—Mean Leadership Scores**

Differences between School 1 and School 2: Mean Leadership Scores

School	N	Mean Score	S.D.	t Value
1	27	65.26	11.47	
				-1.033, p = .307ns.
2	23	68.65	11.62	

Table 4

Note. *ns* = not significant (p>.05)

Differences between School 2 and School 3: Mean Leadership Scores

School	N	Mean Scores	S. D.	t Value
2	23	68.65	11.62	
				-2.834, p = .007s.
3	24	77.44	9.50	

Table 5

Note. *s* = significant (p<.05)

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[2]http://cnx.org/content/m38506/latest/figure1.png/image

Differences between School 1 and School 3: Mean Leadership Scores

School	N	Mean Scores	S. D.	t Value
1	27	65.26	11.47	
				-4.145, p = .000s.
3	24	77.44	9.50	

Table 6

Note. s = significant (p<.05)

In examining the mean leadership scores of Schools 1 and 2 (N = 27 and 23, respectively), the School 2 mean (68.65) was higher than the School 1 mean (65.26). This difference was not statistically significant. However, the differences between School 2 (N = 27, Mean = 68.85) and School 3 (N = 24, Mean = 77.44) were statistically significant. The same was true of School 1 (N = 27, Mean = 65.26) and School 3 (N = 24, Mean = 77.44).

For alternative schools, comparisons were made by pairing School 4 (N = 27, Mean = 74.18), School 5 (N = 28, mean = 73.67), and School 6 (N = 29, mean 73.45). The results indicated none of the school pairings showed any statistically significant differences in mean scores.

In essence, the examples of students from alternative schools were found to have consistently better leadership skills on all dimensions than the students in mainstream schools. The differences in the overall scores of the combined nine dimensions of leadership skills, including two individual dimensions, were statistically significant. The researcher expected the alternative schools to produce students with greater leadership potential because of the unique nature of their curriculum. The small sample size, limited number of schools sampled, and the use of only a middle class population to do the study does not allow the results to be generalized. However, this study has been successful in laying the groundwork for a larger study to address these issues.

10 Analysis by Gender

The ANOVA was used to examine the effect of school type and gender on student combined leadership scores on all dimensions. For school type, the mean scores were 70.27 for mainstream and 73.76 for alternative. For gender, the mean scores ranged from 70.04 for mainstream to 73.24 for alternative. The scores differed by 3 points. There were interesting patterns in the gender by school type interaction as Figure 2 shows.

Figure 2. **Mainstream vs. Alternative—Mean Leadership Scores by Student Gender**
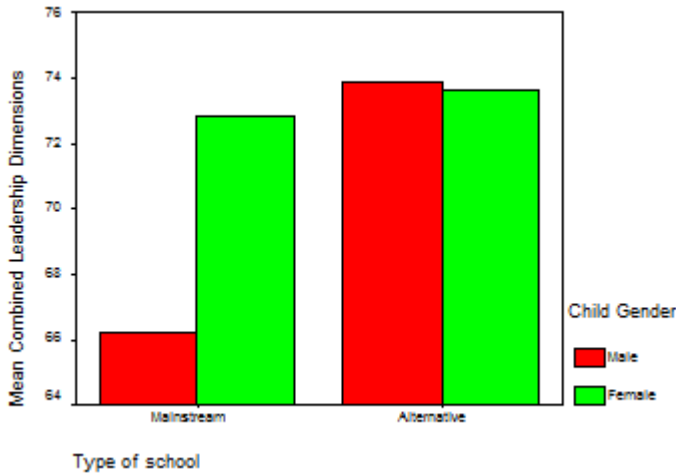
There were large differences (by six points) between males and females in mainstream schools (66.23 to 72.87). At alternative schools, there were practically no differences (73.62 to 73.76). These differences were not statistically significant, although the interaction was the closest at $p = .066$.

## 11 Parent Socioeconomic Status Variables

Although data were collected on several demographic variables from the parents, the analysis was narrowed down to five key variables: Parent income level, number of household members, parent housing status, parent education level, and parent primary occupation.

12 Parent Household Income

The parent income level was grouped into three categories (lower middle class, middle class, and upper middle class). The lower middle class had an income from Rs. 59,000 to Rs. 90,000, the middle class from Rs. 90,000 to Rs. 120,000, and upper middle class from Rs. 120,000 to Rs. 150,000. Figure 3 shows the distribution of the parent income level.

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[3] http://cnx.org/content/m38506/latest/figure2.png/image

Figure 3. Frequency Count by Parent Income Level.
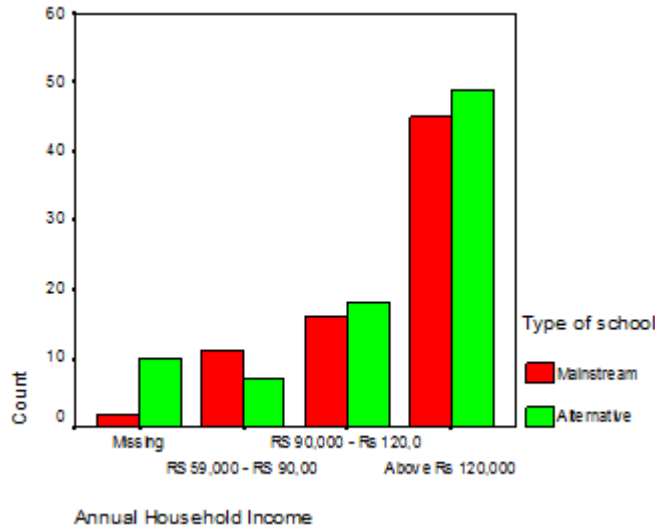
Note. "Missing" on the figures indicates that there was no response during data collection.

Based on the sample sizes, 62 % and 66 % of parents belong to upper middle class in mainstream and alternative schools, respectively, indicating that the samples are similar between the two school types in terms of income.

The ANOVA test was performed to see whether there was any significance difference on the leadership scores between the income levels. In this case the testing was done for differences between scores of the two different groups, the type of the school the students attend and their parent income level. Since the students were not tested more than once and there was more than one group and more than one independent variable, the appropriate test statistic to use is ANOVA (Salkind, 2008). This analysis addresses the question about whether the income level of parents has a bearing on the student leadership score. Figure 4 shows the results of the leadership scores by the school type and income level.

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[4]http://cnx.org/content/m38506/latest/figure3.png/image

Figure 4. **Leadership Scores by Parent Income Level for the Two School Types**
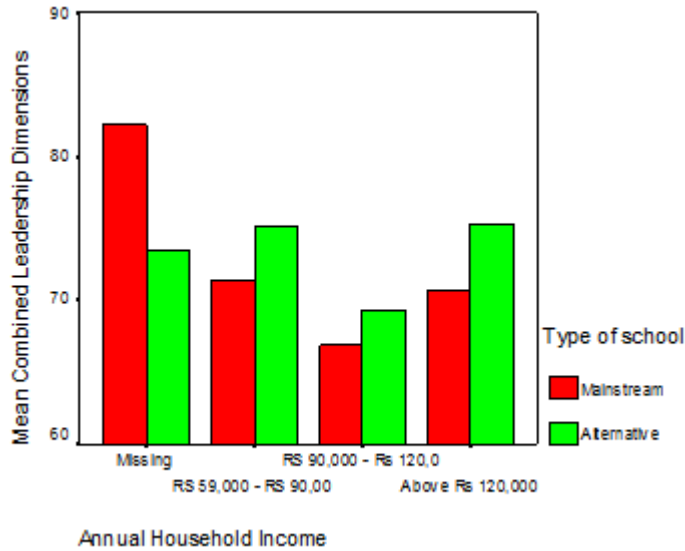
The test statistic shows that parent income level has no effect on the leadership scores ($F_{(2,140)} = .146$, $p = .068$). Because the effect ($p = .068$) is much closer to the significance level of .05, future tests with larger samples may yield a different conclusion. It is interesting that in all three income categories, there were more alternative school students who scored higher on leadership than mainstream students, as shown in Figure 4.

13 Household Members

The number of members in a household was categorized into three groups (below three, three to five, and above five). Figure 5 illustrates the frequency by the number of household members in the two school types. Based on the sample sizes, 73 % of parents have 3 to 5 members in their household in both school types indicating that the samples are fairly even between the two schools in the household members' category.

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[5]http://cnx.org/content/m38506/latest/figure4.png/image

Figure 5. **Frequency Count of Household Members for the Two School Types**
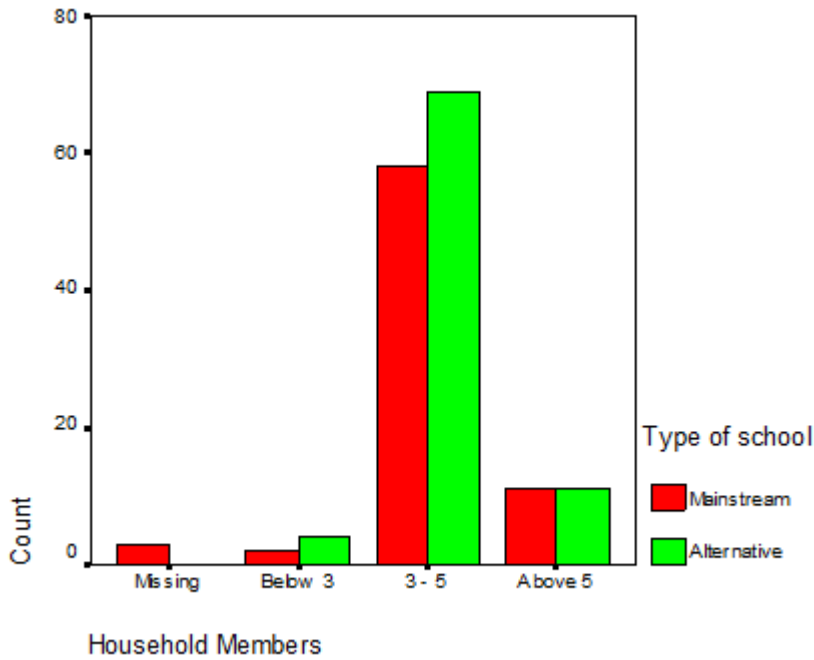
[6]

ANOVA was used as a test statistic to help determine whether the number of people in the household has a bearing on student leadership scores. The results of the leadership scores by school type on the household members are presented in Figure 6.

The conclusion reached from the test statistic is that the number of household members does not have an effect on the leadership scores of the students ($F_{(2,149)} = 1.965$, $p = .144$). The difference between the two school types in terms of their mean leadership scores when controlled for number of household members is not statistically significant. This suggests that the number of household members has no bearing on the performance of the students in these samples. The results show that mean leadership scores were higher for alternative school students when the household numbers are fewer than three; however, that was not the case for the mainstream schools. Alternative schools showed higher scores for the first category (below 3); however, no definite conclusions can be drawn from the current sample size for this metric.

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[6]http://cnx.org/content/m38506/latest/figure5.png/image

Figure 6. Leadership Scores by Household Members in the Two School Types
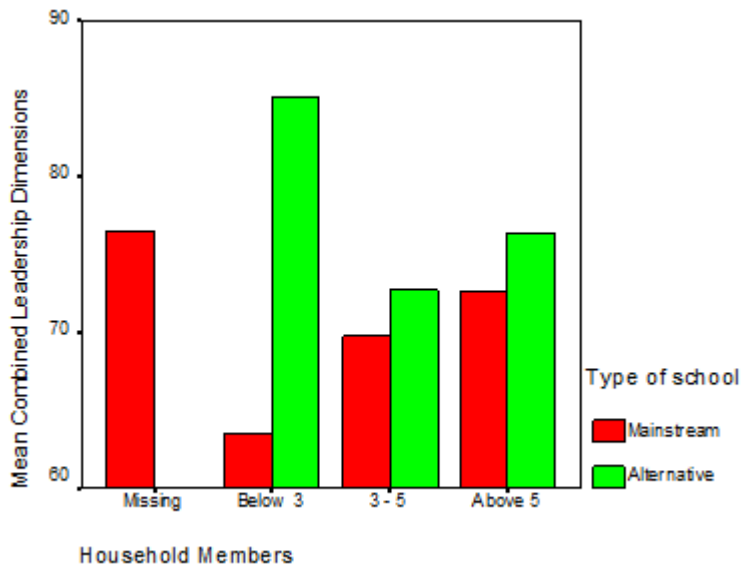
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14 Housing Status

The next socioeconomic variable tested related to whether the parents own their own home and whether this had any bearing on their child's leadership score.

Again, the housing status was grouped into three categories, owning a home, renting a home, and other. Figure 7 illustrates the frequency for the housing status by the two school types. Based on the sample sizes, close to 60 % of parents for the mainstream and 70 % of parents for alternative schools own their homes.

Figure 7. Frequency Count of Housing Status by School Type

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[7]http://cnx.org/content/m38506/latest/figure6.png/image
[8]http://cnx.org/content/m38506/latest/figure7.png/image
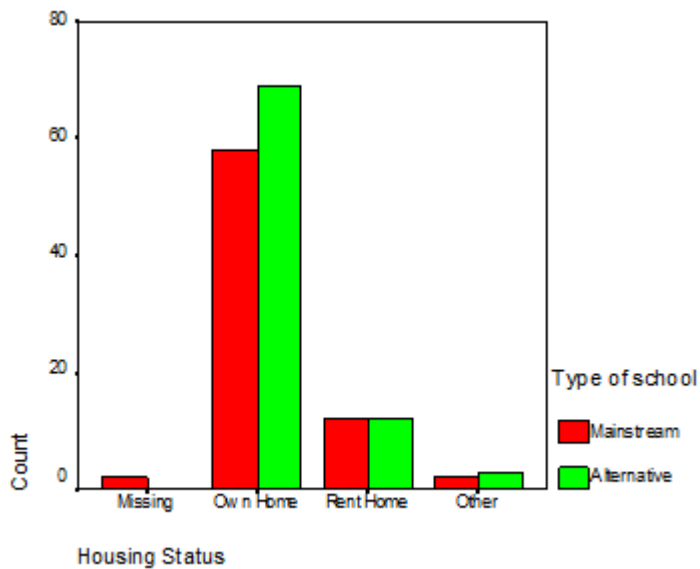
Figure 8 illustrates the student leadership scores for the housing status by the two school types. The conclusion reached from the test statistic is that owning their home or not had no effect on the leadership scores ($F_{(2,150)} = .074$, $p = .929$) differences. The difference between the two school types, in terms of their mean leadership scores, is not statistically significant. This suggests that in this sample the housing status of the parents does not seem to affect the leadership scores of the students. The results show that mean leadership scores were higher for students in alternative schools than those in mainstream schools when the parents own their home. Because the percentage of those renting a home is much smaller, this metric value must be viewed cautiously.

Figure 8. **Leadership Scores by Parent Housing Status in the Two School Types**
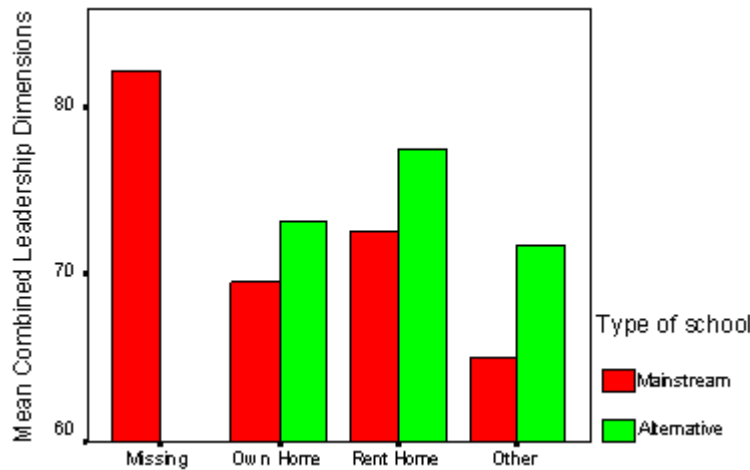
15 Parent Education Level

The next socioeconomic variable tested related to parents' educational attainment. Parent education level was grouped into five categories (Below High School, High School, Junior College, Bachelor's, and Graduate). Figure 9 shows the frequency distribution of parent educational level for the two school types.

Figure 9. **Distribution of Parent Education Level by School Type**
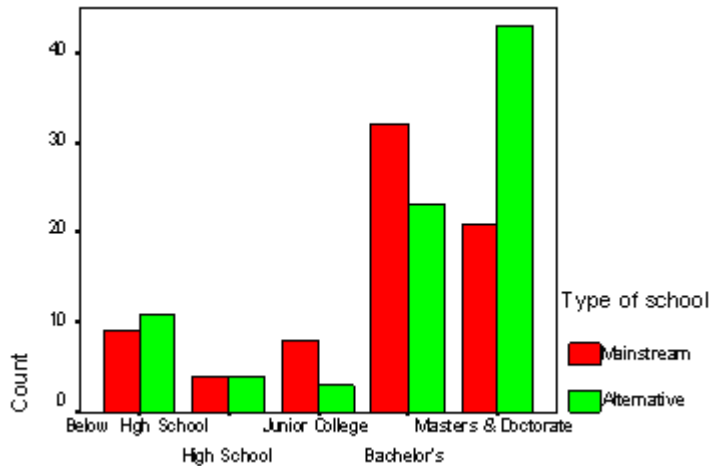
For mainstream schools, 43 % of the parents had a bachelors degree and 28 % had master's and higher.

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[9]http://cnx.org/content/m38506/latest/figure8.png/image
[10]http://cnx.org/content/m38506/latest/figure9.png/image

For alternative schools, the percentages were 27 and 52 %, respectively. From the frequency count, the parents of students in Alternative schools have a relatively higher level of education.

The results indicated no significant difference in leadership scores between the two schools when controlled for by parent education status. In other words, the parent education level did not influence the leadership skill scores ($F_{(4,148)}$ = .918, p = .455). The students of alternative schools showed higher mean scores for both schools in this category. The fact that the parents of alternative schools had a higher level of education might indicate that more of those parents had greater motivation to pursue graduate studies. Figure 10 shows the leadership scores for this category.

Figure 10. **Leadership Scores by Parent Primary Education in the Two School Types**
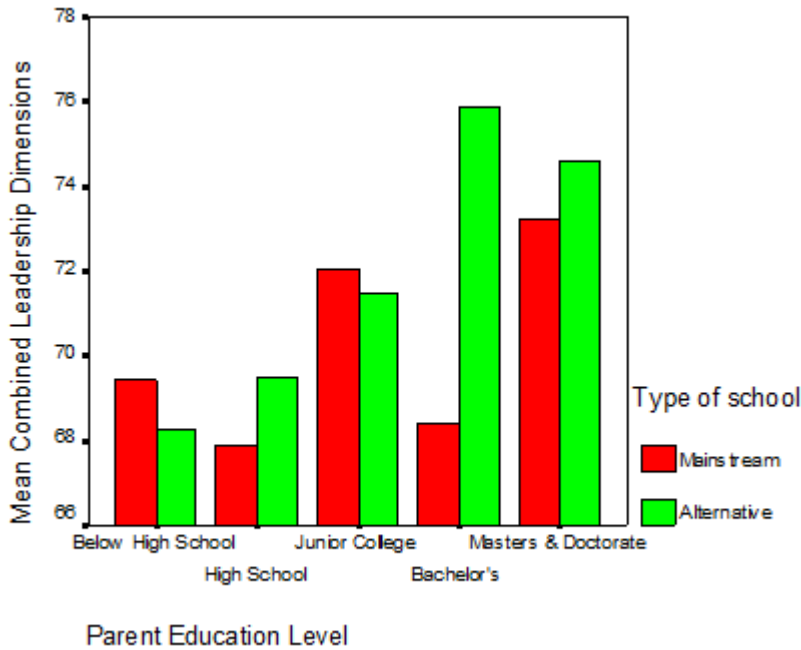
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16 Parent Primary Occupation

The final variable in the parents' socioeconomic category is the parent primary occupation. This variable was classified into eleven categories and their frequency count is shown in Figure 11. No particular occupation stood out; the frequency count was spread out over the various categories. In the mainstream schools, the medical occupation was the least represented, and the highest was the small business owners. On the other hand, in the alternative schools, the business and management positions came out at the top with small business ownership and engineering a close second.

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[11]http://cnx.org/content/m38506/latest/figure10.png/image

Figure 11. **Frequency Count by Parent Primary Occupation in the Two Schools**
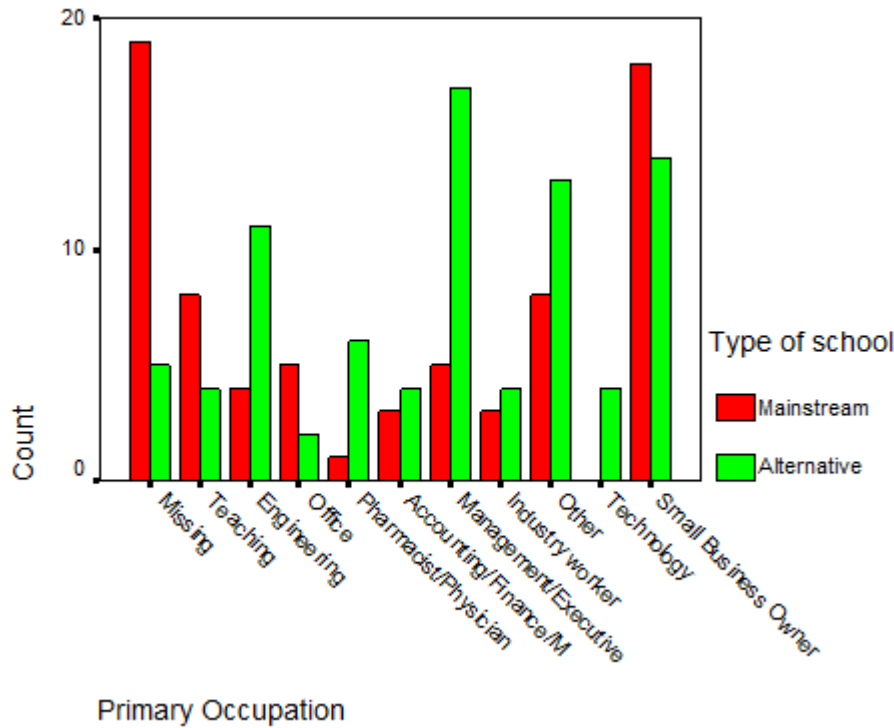

[12]

The results indicated there was an effect of the parent occupation on the student leadership scores for both schools. In other words, the leadership scores are statistically significantly different between the two schools ($F_{(8,115)} = 2.719$, $p = .009$). The results of the leadership scores are shown in Figure 12. The overall score of all the combined occupations seem to be slightly higher for mainstream (73.89) than alternative (72.85), but the difference appears to be minimal. Without further detailed study, it would be difficult to draw conclusions about which occupations were causing the significant difference.

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[12]http://cnx.org/content/m38506/latest/figure11.png/image

Figure 12. **Leadership Scores by Parent Primary Occupation in the Two Schools**
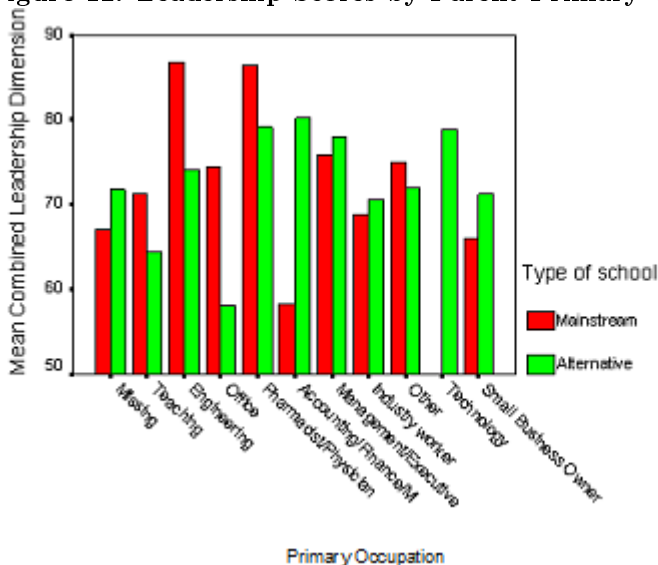
In summary, the parents' socioeconomic status did not seem to have any bearing on the results. Five variables (parent education status, household income, housing status, parent job occupation, and total household members) were used to explore whether they had any impact on the student leadership scores. The differences were not statistically significant. There could be some reasons for that. Most of the families, based on the background information collected from the parent(s), indicated a significant percentage of parents were highly educated and the income level indicated that they belong to upper middle class. Also, a significant percentage of households have three to five members. Most own their homes. Since the variation in these variables was minimal, they did not seem to have any overall impact on leadership scores.

17 Conclusion

Even though the results yield statistically significant differences in the leadership scores, caution should be exercised in drawing any firm conclusions due to several factors that could have influenced the outcome. It is possible that the favorable results in the direction of alternative schools could still be due to chance. In only 2 of the 9 individual dimensions, the results showed differences to be significantly different. Hence, caution should be exercised in interpreting the results. The preliminary findings are encouraging and can lead to a broadened study taking into consideration some of the drawbacks.

The study has provided preliminary insights into selected alternative and mainstream schools in India and how their students compare on leadership qualities. This study provided a brief overview of the alternative and holistic type of curriculum but was limited to selective schools in the sample size. There is potential to incorporate some of the aspects to the holistic education across other schools in the mainstream area in India. With globalization, Indians have to overcome difficult challenges to survive in a competitive environment, and it is necessary to provide help for students to acquire the necessary skills required to survive in the 21st century. U. S. businesses respect the Indian higher education institutions for their ability to meet the technical challenges that the businesses thrive on.

18 Future Directions

Future research can build upon the present findings in several ways. It is important to replicate this study using a larger sample of students from alternative and mainstream schools, preferably chosen by probability sampling methods in order to strengthen study findings. This study included only grade 11 and 12

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[13]http://cnx.org/content/m38506/latest/figure12.png/image

students. Longitudinal studies of students at earlier grade levels could be instituted to assess changes in leadership potential. Future research could include qualitative studies in order to supplement the findings from this quantitative study and to obtain a more complete picture of the significance of different curricula on leadership development in young students.

It would be interesting to extend this study design to include mainstream schools in which there is a mix of students from almost all strata of Indian society. Including other societies is necessary to increase cross-cultural generalizability of the leadership instrument as well as the theoretical bases of this study. The study design should remove disparities on class sizes between the two school types.

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
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[24] http://www.webcitation.org/5weWxuV7o
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