AN INVESTIGATION INTO ACADEMIC ASPIRATION OF HIGH SCHOOL STUDENTS

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Abstract

Academic aspiration has been a prominent topic within education for many years. Academic aspirations are related to long term academic outcomes, such as academic achievement (graduation from high school, college enrollment and completion) (Redd, Brooks & McGarvey, 2001). The primary purpose of this study was to investigate the academic aspiration (especially in science) of high school students. Then, to investigate whether there would be significant differences between gender, school and district on Grade 10 students' academic aspiration were next interest. Descriptive survey research method and quantitative data analysis were used in this study. As a research instruments, Student Science Aspirations Questionnaire (SSAQ) developed by Dewitt et al., (2010) was applied. Student Science Aspirations Questionnaire (SSAQ) consisted of seven subscales with 34 items of 5-point Likert scale. The internal consistency coefficient (Cronbach's Alpha) of academic aspiration was 0.906. A total of 820 Grade 10 students from four Government Schools and eight Privat+e Schools in four districts of Yangon Region participated in this study. The data collection was completed in the second week of January, 2016. In the analysis of data, descriptive statistics, independent sample t-test, Post Hoc test and one-way ANOVA were used in this study. The result of this study revealed that significant differences existed in the students' academic aspiration by gender. But, significant differences in academic aspiration were not found to be by school and district.

Keywords: Aspiration, Academic aspiration, Academic achievement, Science achievement

Introduction

Aspiration is a strong desire to achieve something. While putting in education sense, students' academic aspiration is important support for their development in education. The hope for future achievements makes immediate problems endurable. Students' aspirations are associated with both behavioral choices that facilitate academic success and academic attainment. Students' aspirations not only reflect academic success and students' skills but also create conditions that promote academic excellence and skills acquisition.

Student's aspirations strongly encourage their academic activities. A student with strong aspirations to attend university is likely to work harder at his school work and so achieve higher grades. Similarly, students who aspire to complete a university degree are more likely to put together effort in their studies and be confident that they can master material at school. As a result, they become more academically proficient. Academic achievement is very much related with academic aspiration. Academic achievement is very much related with academic aspiration.

In recent years, academic achievement has become the core of life. At the time of admission to job, to scholarship, to future studies, good academic results are the only recommendations. In the field of academic achievement, academic aspiration is quite important. Students' achievement depends on their aspiration. Therefore, academic aspiration plays an important role for students' development in education. With global scientific and technological growth occurring rapidly, new generations, students, should achieve in science.

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Science is one of the best vehicles for educating the child by helping him to sharpen his sense of curiosity, critical thinking and the use of scientific methods for identifying and solving students' scientific literacy. For these reasons, researcher decided to study the students' academic aspiration especially in science. Moreover, adolescence period is the transition stage that is clearly a time in which realistic goal setting in relation to achievement becomes increasingly important. Therefore, researcher studies the academic aspirations of high school students who are adolescents.

Purpose of the Study

The main purpose of this study is to study the academic aspiration of high school students.

Definitions of Key Terms

Aspiration. Aspiration refers to what students would like, hope or want to happen in the future for their education (Kulakarni, 2010).

Academic aspiration. academic aspiration can be defined as a strong desire to achieve academically (Kulakarni, 2010).

Academic achievement. Academic achievement is performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college and university (Steinmayr, 2014).

Science aspiration. Science aspiration refers to desire to pursue science further in schooling and as a potential career path (Dewitt et al., 2013).

Review of Related Literature

Aspiration as goal striving behavior is essential feature of modern competitive world. In the formation of one's aspiration what plays most important part is his level of aspiration. According to J.D. Frame, level of aspiration is the level of future performances in a familiar task which an individual, knowing his past performances in the task, explicitly undertakes to reach (as cited in Suslu, 2014). Aspirations are regarded as indicators of students' plans for future attainment. To be well-adjusted person, everyone must have relevant aspirations in life. People have different aspirations. Gender effect has a relevant role in determining one's aspiration level. Girls report higher aspirations for education than otherwise similar boys. Aspirations of boys are more sensitive to the home learning environment than those of girls. However, girls display more stable aspiration than boys (Taylor & Rampino, 2013). Aspiration depends on several factors on such as parents' aspiration, education, socioeconomic status and peer (Suslu, 2014).

Parents' expectations for their children's academic attainment have strong influence on students' plans and aspiration for post-secondary education. Hossler and Stage (1992) found a strong positive relationship between parents' expectations and students' aspirations. In addition, families with high educational aspirations for their children provide more out-of-school learning opportunities for them. Wilson found that the education of parents is known to have a strong independent effect upon students' aspiration (as cited in Khin Thuza Saw, 1991). Parents who have high level of education more involve in their students' school works to achieve. Swell and Shah (1968) found that high levels of parents' educational achievement influence high levels of academic aspiration and achievement of children (as cited in Suslu, 2014).

Socioeconomic status has an important role on academic aspiration and achievement of students. Family resources are important factors to overcome structural barriers for educational attainment (White & Glick, 2009). Parents from higher socioeconomic status more involve in their child's education. As a result, the strength of parental involvement enables the children to achieve education success at school. Parents from low socioeconomic status are more focused on providing for their children's basic needs than helping with homework or being involved in their children's school (Rockwell, 2011). They cannot encourage their children to set high aspirations for future and get achievement. Therefore, socioeconomic status is closely tied to aspirations and achievement (Barry, 2006).

Students' aspirations appear to be influenced not only by parents but also by peer. It has been suggested that students maintain their strong motivation to continue their education through their peers. The relative importance of peer approval increases as the individual grows into adolescent. Friendship becomes more stable at adolescence and the high school students have strong desire for peer group acceptance. Naturally, adolescents are used to discussing their ideas with friends and accept the advice of their friends. After sharing their deep-rooted feelings and ideas with their peers, students can understand each other more and can really help each other. Most of the students' aspirations are related to their friends' aspirations (as cited in Khin Thuza Saw, 1991).

There is the effect of academic aspiration on postsecondary choice (Kulkarni, 2010). In 1987, sociologist Dan Hossler developed three-step model which comprises three stages: predisposition, search and choice. The predisposition to attend or not to attend a postsecondary institution determines a number of factors and is maintained throughout an individual's life as his reference point. Students with higher levels of academic aspiration have higher reference points. Because these individuals start out with a high goal of educational attainment, they will perceive any attainment below this reference point as a loss. Conversely, an individual with low reference point would see the same attainment as a gain. So, students who have high aspiration will get high achievement (as cited in Kulkarni, 2010).

Previous Research Review

Khattab (2015) showed that students with high aspirations have higher school achievement than those with low aspirations. Singh (1984) found that rural students received marks than urban students and there was positively correlation between level of aspiration and achievement. Klimusova et al., (2013) showed that there was significant relationship between academic aspiration and school achievement.

Method

Sampling

By using random sampling technique, 410 Grade 10 students from four Public Schools and 410 Grade 10 students from eight Private Schools were chosen. So, total sample is 820 Grade 10 students in this study. Detailed lists of participants were presented in the following Table 1.

Table 1. Numbers of Participants from Selected Schools

No.	Districts	Schools		Male	Female	Total
1	East	Public School	School (1)	62	47	109
2		Private School	School (2)	12	24	36
3			School (3)	27	22	49
4	West	Public School	School (4)	46	45	91
5		Private School	School (5)	16	38	54
6			School (6)	37	26	63
7	South	Public School	School (7)	55	46	101
8		Private School	School (8)	15	20	35
9			School (9)	36	18	54
10	North	Public School	School (10)	33	76	109
11		Private School	School (11)	43	45	88
12			School (12)	17	14	31
Total				**399**	**421**	**820**

Research Method

In this study, descriptive survey, research method and quantitative data analysis were applied.

Research Instrumentation

In order to identify academic aspiration of participants, Student Science Aspirations Questionnaire (SSAQ) developed by Dewitt et al., (2010) was used. SSAQ comprised seven subscales: Aspiration in Science, Interest in Science Outside School, Experience in School Science, Parental Involvement, Parents' attitudes in Science, Peer Orientation and Future Plan. A total of 34 items were involved in the Student Science Aspirations Questionnaire (SSAQ). Students were asked to respond on five-point Likert scale. The items were adapted to Myanmar version. After preparing the items for each category, experts' review was conducted for face validity and content validity by 14 experts who have special knowledge and close relationship with the field of Educational Psychology at Yangon University of Education. Then, pilot study was done with a sample of 60 Grade 10 students (30 males and 30 females) from B.E.H.S (2) Behan on December 3, 2015 in order to determine the relevancy, appropriateness and clarity of the items included in the survey questionnaires. After the pilot study, the reliability analysis of the instrument was done by calculating the internal consistency coefficient. The internal consistency (Cronbach's alpha) of academic aspiration was 0.906. Thus, the computation of Cronbach's alpha showed that Student Science Aspirations Questionnaire (SSAQ) can be used as the reliable and valid research instrument for this study.

Data Analysis and Findings

Students' Academic Aspiration from all Selected Schools

To investigate the students' academic aspiration, descriptive and inferential statistics were carried out.

Table 2. Descriptive Statistics for Students' Academic Aspiration

Subscales of Academic Aspiration	*N*	Minimum	Maximum	Mean	Mean %	*SD*
Aspiration in Science	820	20	100	30.58	76.44	14.843
Interest in Science Outside School	820	20	100	10.87	72.48	16.723
Experience in School Science	820	20	100	12.34	82.24	13.936
Parental Involvement	820	24	100	22.24	88.96	10.883
Parents' attitudes in Science	820	20	100	11.43	76.23	16.862
Peer Orientation	820	20	100	11.53	76.89	14.759
Future Plan	820	31	100	34.03	75.62	8.798
Total Academic Aspiration	820	31	100	133.03	78.25	9.405

Since the numbers of items included in each subscale of academic aspiration were not the same, the mean scores were transferred to the corresponding mean percentages. According to the results, the mean percentage (88.96%) for parental involvement among the subscales of total academic aspiration was the highest. The mean percentage (82.24%) for experience in school science was the second highest. But the mean percentage (72.48%) of interest in science outside school was the lowest. So, it could be said that parents of selected students from Yangon Region were interested and provided supports in the education of their children. They expected their children to be outstanding students. Students learned science and had experience with science subjects well in schools. But, they were less interested in science outside the school. They have less time of studying science outside the school by reading science magazine, journals and by studying in internet websites.

Comparison of Students' Academic Aspiration by Gender

To find out the differences in the academic aspiration with regard to gender, descriptive statistics and *t*- test were applied. The results were mentioned in Table 3.

Table 3. Descriptive Statistics and Results of Independent Sample *t*- test for Students' Academic Aspiration by Gender

Subscales of Academic Aspiration	Gender	*N*	Mean	*SD*	*t*	*p*
Aspiration in Science	Male	397	29.86	16.347	-3.322**	.001
	Female	423	31.24	13.079		
Interest in Science Outside School	Male	397	10.84	17.559	- .339	.735
	Female	423	10.90	15.918		

Subscales of Academic Aspiration	Gender	*N*	Mean	*SD*	*t*	*p*
Experience in School Science	Male	397	12.11	14.928	-3.047**	.002
	Female	423	12.55	12.788		
Parental Involvement	Male	397	21.59	12.382	-6.784***	.000
	Female	423	22.85	8.574		
Parents' attitudes in Science	Male	397	11.15	17.944	-3.107**	.002
	Female	423	11.70	15.594		
Peer Orientation	Male	397	11.05	15.831	-6.161***	.000
	Female	423	11.99	12.985		
Future Plan	Male	397	33.12	9.906	-6.468***	.000
	Female	423	34.88	7.120		
Total Academic Aspiration	Male	397	129.71	10.367	-5.799***	.000
	Female	423	136.12	7.995		

Note. $^{**}p < .01$, $^{***}p < .001$

According to the results, the mean scores of selected female students were higher in total academic aspiration and all subscales of academic aspiration except in the subscale, interest in science outside the school, than those of selected male students. But the mean score in the subscale, interest in science outside the school, was the same. The result of *t*- test showed that there were significant differences in total academic aspiration and all subscales of academic aspiration except in the subscale, interest in science outside the school. It could be concluded that selected Grade 10 female students had more aspirations in science and experiences and learned science well in schools than male students. Moreover, parents of female students more eagerly involved in the education of their children than parents of male students. Female have more closer peer relationship and clear goal for their future than male peer group.

Comparison of Students' Academic Aspiration by School

In this study, the sample students were selected from Government Schools and Private Schools. So, the differences in academic aspiration with regard to school were calculated. The results were mentioned in Table 4.

Table 4. Descriptive Statistics and Results of Independent Sample *t*- test for Students' Academic Aspiration by School

Subscales of Academic Aspiration	Schools	*N*	Mean	*SD*	*t*	*p*
Aspiration in Science	Government	410	31.02	14.065	2.122*	.034
	Private	410	30.14	15.522		
Interest in Science Outside School	Government	410	10.74	16.545	-1.519	.129
	Private	410	11.01	16.873		

Subscales of Academic Aspiration	Schools	*N*	Mean	*SD*	*t*	*p*
Experience in School Science	Government	410	12.31	13.648	- .317	.751
	Private	410	12.36	14.233		
Parental Involvement	Government	410	22.06	10.724	-1.928*	.054
	Private	410	22.42	11.005		
Parents' attitudes in Science	Government	410	11.35	16.407	- .966	.334
	Private	410	11.52	17.307		
Peer Orientation	Government	410	11.62	13.776	1.136	.256
	Private	410	11.45	15.676		
Future Plan	Government	410	33.64	8.908	-2.790**	.005
	Private	410	34.41	8.614		
Total Academic Aspiration	Government	410	132.74	9.299	- .504	.614
	Private	410	133.30	9.518		

Note. *$p < .05$, **$p < .01$

The result showed that mean scores of selected Grade 10 students from Private Schools were higher in interest in science outside the school, parental involvement, parents' attitudes in science, future plan and total academic aspiration than that of selected Grade 10 students from Government Schools. But, mean scores of students from Government Schools were higher in aspiration in science and peer orientation than that of students from Private Schools. The mean score in experience in school science was the same. From the result of *t*- test, there were significant differences in aspiration in science, parental involvement at 0.05 level and in future plan at 0.01 level. It could be said that selected Grade 10 students from Private Schools had more future plan with regard to science than selected Grade 10 students from Government Schools. Parents who place their children in Private Schools eagerly involved in school activities and education of their children. But, students from Government Schools more closer peer relationship and they had more aspiration in science than students from Private Schools.

Comparison of Students' Academic Aspiration by District

Since participants were selected from four districts in Yangon, differences in academic aspiration of Grade 10 students among districts were analyzed. For this purpose, the descriptive statistics and one-way ANOVA were conducted (See in table 5).

Table 5. Descriptive Statistics and ANOVA Results for Students' Academic Aspiration by District

Subscales of Academic Aspiration	Districts	Students	Mean	*SD*	*F*	*p*
Aspiration in Science	East	194	30.80	13.245	1.260	.287
	West	208	29.88	17.218		
	South	190	30.82	13.730		
	North	228	30.82	14.655		
Interest in Science Outside School	East	194	10.83	17.231	.046	.987
	West	208	10.85	17.972		

Subscales of Academic Aspiration	Districts	Students	Mean	*SD*	*F*	*p*
	South	190	10.92	16.464		
	North	228	10.89	15.368		
Experience in School Science	East	194	12.20	14.659	1.006	.389
	West	208	12.22	14.205		
	South	190	12.40	13.294		
	North	228	12.50	13.573		
Parental Involvement	East	194	21.94	11.775	4.084**	.007
	West	208	22.05	11.731		
	South	190	22.12	10.496		
	North	228	22.76	9.270		
Parents' attitudes in Science	East	194	11.30	17.662	1.989	.114
	West	208	11.32	17.007		
	South	190	11.28	16.970		
	North	228	11.78	15.800		
Peer Orientation	East	194	11.46	14.009	2.855*	.036
	West	208	11.20	15.819		
	South	190	11.67	13.802		
	North	228	11.79	14.969		
Future Plan	East	194	33.58	8.902	3.004*	.030
	West	208	33.76	9.448		
	South	190	34.04	9.027		
	North	228	34.65	7.721		
Total Academic Aspiration	East	194	132.12	8.994	2.430	.064
	West	208	131.29	10.565		
	South	190	133.23	9.209		
	North	228	135.18	8.666		

Note. *$p < .05$, **$p < .01$

According to ANOVA results, there were significant differences in parental involvement at 0.001level and in peer orientation and future plan at 0.05 level. There were no significant differences in other subscales and total academic aspiration.

To obtain more detailed information of which district had significant differences, post hoc test was conducted by Turkey's multiple comparison procedure. (See in table 6).

Table 6. Results of Post-Hoc Analysis for Academic Aspiration by District

Subscales of Academic Aspiration	(I)Districts	(J) Districts	Mean Difference (I-J)	*p*
Parental Involvement	North	East	3.279*	.011
		West	2.841*	.032
Peer Orientation	West	North	-3.888*	.030
Future Plan	North	East	2.361*	.030

Note. *$p < .05$

From the results, Parental Involvement of students from North District was higher than those of students from East and West Districts. Peer Orientation of students from North District is higher than those of students from West District. Future Plan of students from North District was higher than those of students from East District.

Conclusion

Aspiration refers to what students would like, hope or want to happen in the future for their education (Kulkarni, 2010). To be well-adjusted person, everyone must have relevant aspirations in life. Adolescence period is the transition stage that is clearly a time in which realistic goal setting in relation to achievement becomes increasingly important. A student who has strong aspiration is likely to work harder at schoolwork and achieve higher grades. Educational researchers have traditionally treated academic aspiration as an endogenous variable that is composed of several other underlying variables. These variables include many factors relating to the parents such as parents' aspirations for their children, parents' education and socioeconomic level. Family and peer group have the most influential power in the formation of students' aspirations. Moreover, in an increasingly globalized world, new generations, students, should develop and interest in science and technology.

The primary purpose of this study was to investigate the academic aspiration of high school students from Yangon Region. As a research instrument, Student Science Aspirations Questionnaire (SSAQ) developed by Dewitt et al., (2010) was applied. The instrument consists of seven subscales such as Aspiration in Science, Interest in Science Outside School, Experience in School Science, Parental Involvement, Parents' attitudes in Science, Peer Orientation and Future Plan with 34 items of 5-point Likert scale. A total of 820 Grade 10 students from four Government Schools and eight Private Schools in four districts of Yangon Region participated in this study.

According to results, significant gender difference was found in subscales and total academic aspiration. Female students set higher academic aspiration in science and learn science well in schools than male students. Parents of female students more provide supports, encouragements and they had more positive attitudes towards science than parents of male students. Female peer group's interest and giving training and information about science subjects with each other were higher than male peer group. Female students set clear plan for their future.

According to significant school difference, students from Government Schools have higher peer orientation and they had stronger aspiration in science than students from Private Schools. Students from Private Schools had clear future goal with regard to science than selected Grade 10 students from Government Schools. Most of the parents of children from Private Schools had high socioeconomic status. Thus, they can concentrate and eagerly involve in schools activities and education of their children.

In comparing districts, parents from North District more interested, concentrated and involved in the education of their children. They give more supports their children to achieve than parents from West and East Districts. Moreover, students from North District have more closely peer relationship and share academic information each other than students from West District. They have strong and clear plan for their future than students from East district.

Hossler and Stage (1992) found that parents' expectations for their children's academic attainment have strong influence on students' plans and aspiration. Parents can help their children plan ahead. So, parents need to place high expectations on their children with regard to their

education. Parents' care and attention influence the formation of children's aspirations. Work, play and other activities should be harmoniously balanced at home. If parents have positive attitudes and encourage their children to perform science well, students may have positive attitudes in science and improve academic aspiration. So, parents need to have positive attitudes in science. Aspirations of friends have a strong impact on the formations of educational, academic, occupational and life aspirations of adolescence. So, in adolescence, parents must care the children not to do mistake in making friends. Similarly, teachers must see that activity of the class is tailored in accordance with the aspiration level of the students.

Limitations

Although the results provide the objectives of the study, there were some limitations in this study. Results of this study were limited to Grade 10 students in Yangon Region. Therefore, the results may not be generalized other grades. Although this research was based on aspiration for science subjects, it should be conducted aspiration for other subjects. Demographic variables such as father's education, mother's education and annual income of family were asked. But completed responses were not obtained. So, these variables had not considered in this study. This study based only on self-reported data. Therefore, subscales involved in academic aspiration such as parental involvement, parents' attitudes in science, peer orientation were based on students' self-reported data. If researcher interviewed the parents as follow up study, these data may be more accurate.

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