A Study on Academic Achievement of Elementary School Students in East Siang District of Arunachal Pradesh

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Abstract

Elementary stage of education plays a crucial role in the development of the educational scenario of nation. The entire future of the child is dependent on the basic education he got at elementary level. It is at this stage that the child starts going to a formal institution. The education, which he receives there, provides the foundation of his physical, mental, emotional, intellectual and social development. If the child is well look after at the elementary stage, the secondary and higher secondary education automatically gets good starts. The strength and progress of a country rest on the educational foundations of her people. Rightly organized elementary education is the very first front and the most important one, from which our educationists should, launched the attack in order to solve the obstinate educational problem of the country. The present study deals with the academic achievement of elementary school students of East Siang district in relation to independent variables based on gender. In study a sample of 516 elementary school students from 15 schools were selected through simple random sampling technique adopted under the purview of the descriptive survey method. The data were collected from schools records which were analyzed through the descriptive and inferential statistical measures. The study revealed the students poor academic achievements in different subjects in the selected district of Arunachal Pradesh. The findings also revealed the very low academic achievement of both male and female students in mathematics subject respectively.

Key Words: Academic Achievement, Elementary School Students, NCF (2005), t-test.

Introduction: Elementary education is the largest single enterprise all over the world. A large numbers of teachers, the biggest number of pupils, a numbers of supervisors and administrators are involved in this programmed. As such, some from the point of view of magnitude, from the stand point of psychological preparedness, from the preponderance of sociological influences in view of the economic necessities, and the philosophical background and in view of scientific enlightenment and humanism, the role of elementary education is extremely significant and crucial.

In formal system of education mostly cognitive development of the child is regarded as one of the major indicator of quality education. The evaluation/examination plays major role in the assessment of the learner’s understanding level of the different subjects taught in the classroom by a teacher. The four familiar areas of school curriculum, i.e. language, mathematics, science, and social sciences are being taught in the elementary level of education. The learners at this stage are more or less dependent on the pedagogy of the teacher to understand the significant of the different subjects taught at this stage. In present era where the parents are more conscious about their child’s education, they are more concern about the quality of education their children are getting in which
academic achievement plays as an indicator of the same. Since elementary stage of education is the stepping stone for higher level of education it needs sincere efforts from concern authority, teachers, parents and student itself to making it more productive. There are many variables which effect the academic achievement of the learner but if efforts are made whole heartedly by the teachers, parents and the student it can be improve up to much extent.

The major recommendation of the NCF (2005) on the Curriculum Areas at School Stages and Assessment:

1. **Languages:**
   - Taking note of the fact that language skills-speech and listening, reading and writing-cut across school subjects and disciplines. Their foundational role in children’s construction of knowledge right from elementary classes through senior secondary classes needs to be recognized.
   - Making renewed effort to implement the three-language formula, emphasizing recognition of children’s mother tongue(s) as the best medium of instruction. These include tribal languages.
   - Keeping in view that success in learning English is possible only if it builds on sound language pedagogy in the mother tongue.
   - Seeing multilingual character of Indian society as a resource for enrichment of school life.

2. **Mathematics:**
   - Considering mathematization (ability to think logically, formulate and handle abstraction) rather than ‘knowledge’ of mathematics (formal and mechanical procedures) as the main goal of teaching mathematics.
   - Enhance the child’s ability to think and reason, to visualize and handle abstractions, to formulate and solve problems. Access to quality mathematics education in the right of every child.

3. **Science:**
   - Making content, process and language of science teaching commensurate with learner’s age-range and cognitive reach.
   - Engaging the learner in acquiring methods and process that will nurture their curiosity and creativity, particularly in relation to the environment.
   - Placing science teaching in the wider contexts of children’s environment to equip them with requisite knowledge and skills to enter the world of work.
   - Permeating of environmental concerns through the entire school curriculum.

4. **Social science:**
   - Equipping children with moral and mental energy so as to provide them the ability to think independently and reflect critically on social issues.
   - Promoting inter disciplinary approaches, to key national concerns such as gender justice, human rights and sensitivity to marginalized groups and minorities.
   - Recasting civics as political science, and recognizing the history as a shaping influence on the child’s conception of the past and civic identity.
**Review of Related Studies:** The importance of elementary education has increased several times due to its foundation role in the future development of child’s education. The quality of higher education is totally dependent on the criteria set in elementary stage of education. The present study deals with the academic achievement of learners at elementary stage of education. Already many studies have been conducted in context of academic achievement of learners by researchers like Beaton (1996), Kapoor, Lhungdim, and Acharya (2002), Taloh (2009), Mishra (2002), Benipal and Singh (2014), Collier (1992), Sirin (2005), Liem and Connel (2004) etc. with several variables. But on the other hand when we look at the current status of elementary education in Arunachal Pradesh, it seems to be a study area which needs in-depth and early attention from researchers. Therefore the investigator has taken this study area.

**Objectives of the study:**

1. To study the academic achievement of Male and Female learners in English subject at elementary stage of education in East Siang district of Arunachal Pradesh.
2. To study the academic achievement of Male and Female learners in Hindi subject at elementary stage of education East Siang district of Arunachal Pradesh.
3. To study the academic achievement of Male and Female learners in Mathematics subject at elementary stage of education East Siang district of Arunachal Pradesh.
4. To study the academic achievement of Male and Female learners in Science subject at elementary stage of education East Siang district of Arunachal Pradesh.
5. To study the academic achievement of Male and Female learners in Social Science subject at elementary stage of education East Siang district of Arunachal Pradesh.

**Hypotheses of the study:**

- **H01:** There is no significant difference between the academic achievement of Male and Female learners in English subject at elementary stage of education.
- **H02:** There is no significant difference between the academic achievement of Male and Female learners in Hindi subject at elementary stage of education.
- **H03:** There is no significant difference between the academic achievement of Male and Female learners in Mathematics subject at elementary stage of education.
- **H04:** There is no significant difference between the academic achievement of Male and Female learners in Science subject at elementary stage of education.
- **H05:** There is no significant difference between the academic achievement of Male and Female learners in Social Science subject at elementary stage of education.

**Methodology:**

**Sample:** A sample of 516 elementary school students from 15 schools were selected through simple random sampling technique adopted under the purview of the descriptive survey method. The students were divided into two groups on the basis of their gender variation.

**Tools Used:** In this study, the investigator did not used any tool for the collection of data rather collected the academic achievement scores of the elementary school students in all five subjects English, Hindi, Mathematics, Science, and Social Science separately for boys and girls in the final year examination 2010-2011 from the respective 15 elementary schools of East Siang district of Arunachal Pradesh.

**Statistical Techniques Used:** In the present study, the descriptive statistical techniques - mean, SD, and the Inferential Statistics-t-test were used for the analysis of data.
Delimitations of the Study:
1. The present study was delimited to the East Siang district of Arunachal Pradesh.
2. In the present study, sample was comprised of 516 students.
3. It was delimited to elementary school students.
4. It was delimited to the independent variable- genders.

Results and Findings:

Table–1
Summary of Academic Achievement Mean scores, standard deviations, and ‘t’ value of Male and Female learners in English subject

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE_D</th>
<th>‘t’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>286</td>
<td>41.95</td>
<td>13.23</td>
<td>1.29</td>
<td>0.86</td>
</tr>
<tr>
<td>Female</td>
<td>230</td>
<td>40.84</td>
<td>12.48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation: The Table– 1 Indicates that the academic achievement mean score of Male learners (41.95) is marginally higher than the academic achievement mean score of Female learners (40.84), in English subject and the computed t-value (0.86) was found lesser than the criterion value (1.96) at 0.05 level of confidence for 514 df. Therefore, the formulated hypothesis: “There is no significant difference between the academic achievement of Male and Female learners in English subject at elementary stage of education.” gets retained. This indicates that the academic achievement of male and female learners do not differ in English subject though there is some difference in their mean score. It also shows that the academic achievement of learner in English is not at satisfactory level and may be term as poor in the East Siang district of Arunachal Pradesh.

Table–2
Summary of Academic Achievement Mean scores, standard deviations, and ‘t’ value of 8th grade Male and Female learners in Hindi subject

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE_D</th>
<th>‘t’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>286</td>
<td>40.4</td>
<td>12.89</td>
<td>1.08</td>
<td>0.25</td>
</tr>
<tr>
<td>Female</td>
<td>230</td>
<td>40.67</td>
<td>11.64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation: The Table -2 Indicates that the academic achievement mean score of Female learners (40.67 out of total 100 marks) is marginally higher than the academic achievement mean score of Male learners (40.4 out of total 100 marks), in Hindi subject and the computed t-value (0.25) was found lesser than the criterion value (1.96) at 0.05 level of confidence for 514 df. Therefore, the formulated hypothesis: “There is no significant difference between the academic achievement of Male and Female learners in Hindi subject at elementary stage of education” gets retained. This indicates that the academic achievement of male and female learners do not differ in Hindi subject though there is slight difference in their mean score.

Table–3
Summary of Academic Achievement Mean scores, standard deviations, and ‘t’ value of Male and Female learners in Mathematics subject

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE_D</th>
<th>‘t’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>286</td>
<td>28</td>
<td>12.66</td>
<td>1.1</td>
<td>1.00</td>
</tr>
<tr>
<td>Female</td>
<td>230</td>
<td>26.89</td>
<td>12.28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Interpretation: The Table–3 Indicates that the academic achievement mean score of Male learners (28 out of total 100 marks) is marginally higher than the academic achievement mean score of Female learners (26.89 out of total 100 marks), in Mathematics subject and the computed t-value (1.00) was found lesser than the criterion value (1.96) at 0.05 level of confidence for 514 df. Therefore, the formulated hypothesis: “There is no significant difference between the academic achievement of Male and Female learners in Mathematics subject at elementary stage of education” gets retained. It also shows that the academic achievement performances of male and female learners in mathematics subject do not differ and it is very poor in the East Siang district of Arunachal Pradesh. It is a matter of grave concern for the educational administrator, teachers, parents and the learners itself. The drawback should be find out regarding the low achievement level in mathematics and proper measures should be taken by the concern authority to bring up the achievement score to a higher level.

Table–4
Summary of Academic Achievement Mean scores, standard deviations, and ‘t’ value Male and Female learners in Science subject

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE&lt;sub&gt;D&lt;/sub&gt;</th>
<th>‘t’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>286</td>
<td>37.71</td>
<td>15.04</td>
<td>1.34</td>
<td>2.56</td>
</tr>
<tr>
<td>Female</td>
<td>230</td>
<td>34.28</td>
<td>15.21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation: An examination into the Table–4 indicates that the academic achievement mean score of Male learners (37.71) is marginally higher than the academic achievement mean score of Female learners (34.28), in science subject and the computed t-value (2.56) was found greater than the criterion t-value (1.96) at 0.05 level of confidence for 514 df. Therefore, the formulated hypothesis: “There is no significant difference between the academic achievement of Male and Female learners in Science subject at elementary stage of education” gets rejected. It shows that the academic achievements of male and female learners do differ significantly in Science subject. The table-4 also indicates that the male learners performed better than their female counterpart in science subject.

Table–5
Summary of Academic Achievement Mean scores, standard deviations, and ‘t’ value of Male and Female learners in Social Science subject

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE&lt;sub&gt;D&lt;/sub&gt;</th>
<th>‘t’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>286</td>
<td>38.83</td>
<td>12.03</td>
<td>1.07</td>
<td>1.27</td>
</tr>
<tr>
<td>Female</td>
<td>230</td>
<td>40.19</td>
<td>12.23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation: The Table–5 Indicates that the academic achievement mean score of Female learners (40.19) is marginally higher than the academic achievement mean score of Male learners (38.83) in social science subject and the computed t-value (1.27) was found lesser than the criterion value (1.96) at 0.05 level of confidence for 514 df. The difference between their mean score is (40.19-38.83) 1.36. Therefore, the formulated hypothesis: “There is no significant difference between the academic achievement of Male and Female learners in Social Science subject at elementary stage of education” gets retained. This means that there exists no difference between the academic achievement of male and female learners in Social Science subject though there exist some difference in their mean score.
Major findings of the study:
1. There exist no significant difference in the academic performance of male and female learners in the respective subjects like English, Hindi, mathematics, and social science.
2. In most of the subjects academic performance the mean scores of boys are slightly higher than that of girls except in Hindi and Social Science.
3. The academic achievements mean scores of both boys and girl’s learners in mathematics subject were found to be very poor.
4. There exists a significant difference in the academic performance of male and female learners in science subject. The mean score of boys learners were little higher than female learners in academic performance.

Conclusion: It is thus concluded that present study revealed that the academic achievement mean score of the students at elementary stage of education in different subjects of East Siang district is not up to the satisfactory level. Research also shows that there exist no significant difference between the academic achievement of boys and girls in the subjects like English, Hindi, mathematics, and social science at elementary stage of education in East Siang district of Arunachal Pradesh. The study also revealed that the mean score of boys were found to be slight more than that of the girls in other subjects except in Social Science and Hindi. The findings shows that the performance of both male and female learners were found to be very poor in Mathematics subject which is a grave matter of concern. It need thorough investigation from the concern authority and research scholars to unearth the reason behind poor performance of learners in this particular subject. Finally, the study indicates that the more attentions need to be provides by the Government, Teacher’s, Parents, and curriculum planners for improvement of the academic achievement of the students at elementary stage of education in East Siang district of Arunachal Pradesh.

References: