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# Educational Attainment and Generational Progression in Samba District: A Sibling-Based Study

Agrima Malhotra<sup>1</sup>, Dr Arushi Malhotra<sup>2</sup>, Dr. Meeru Abrol<sup>3</sup>

<sup>1</sup>Software Engineer I, McKinsey & Co.

<sup>2</sup>Assistant Professor (Senior Scale), Manipal Academy of Higher Education, School of Design & Architecture, Manipal Academy of Higher Education Dubai Campus, UAE

<sup>3</sup>Principal, GDC Ramgarh, Samba

**Abstract--** The paper analyzes the intergenerational shifts in educational attainment within families in the Samba district, focusing on the highest education level completed by elder siblings and other siblings based on survey data. The findings demonstrate a significant and progressive upward trend in educational achievement across the younger generation, marking a clear departure from the educational patterns of parents and grandparents. While the majority of siblings, both elder and others, have successfully accessed and completed higher secondary and graduate-level studies, demonstrating considerable educational progress, the data also highlights a small persistent fraction of other siblings (5% with only primary schooling and 5% with no formal education) who face barriers to progression. Overall, the distribution of educational levels among the younger generation in Samba underscores the significant expansion and increasing accessibility of higher education, reflecting marked progress and a positive shift in educational attainment for the district.

**Keywords--** Educational Attainment, Highest Level of Education, Samba, Graduation, Intergenerational Shift, Higher Secondary Level, Postgraduate Studies, Secondary Education

## I. INTRODUCTION

**Background and Context:** Education is universally recognized as a critical determinant of socio-economic development and individual well-being. Over the past few decades, India has invested significantly in expanding educational infrastructure and promoting universal access, leading to substantial increases in literacy rates and overall educational attainment across various states and districts. This expansion is often reflected in a marked intergenerational shift, where the younger generation achieves higher educational qualifications than their parents and grandparents. This paper examines this phenomenon specifically within the **Samba district** to quantify and understand the extent of this generational progress.

**The Intergenerational Educational Gap:** Previous generations, particularly those who grew up before the widespread expansion of higher education facilities, often faced significant barriers, limiting their educational journeys to primary or secondary levels. This created a visible "educational gap" between the generations. Understanding how successfully this gap is being closed, particularly in semi-urban and rural areas like Samba, is crucial for evaluating the effectiveness of educational policies and projecting future human capital development. This study aims to provide empirical evidence of this progress by analyzing the highest education completed by siblings within the district.

**Study Objective:** The primary objective of this research is to document and analyze the highest level of educational attainment achieved by siblings in the Samba district. By comparing the educational distribution of elder siblings with that of other siblings, the study seeks to:

1. Quantify the extent to which the younger generation has accessed higher levels of education (Higher Secondary, Graduation, and Post-graduation).
2. Highlight the most common stage of education completed by the young adult population.
3. Identify any persistent gaps or barriers, particularly the proportion of siblings who have limited or no formal education.

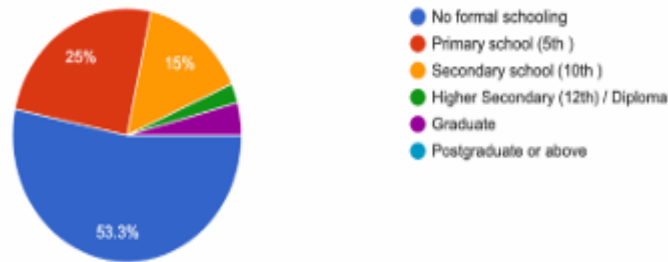
**Significance of the Study:** The findings of this study are significant as they offer concrete evidence of the educational transformation underway in Samba. This data is invaluable for policymakers, educational administrators, and development planners. It not only confirms the success of initiatives aimed at expanding access to higher education but also directs attention to the small, yet critical, fraction of the population that still requires targeted interventions to achieve universal educational progression.

## II. SAMBA'S PROGRESS IN EDUCATION

Samba district has made notable progress in the field of education over the years. The literacy rate has risen to around 82.5%, with urban areas like Samba town showing higher literacy than rural regions, and a gradual narrowing of the gender gap in education. Several initiatives have contributed to this progress, such as the declaration of over 100 schools as drug-free, the introduction of smart classrooms and model schools, and the Satya Bharti Quality Support Program, which is improving learning outcomes in 24 government schools. Efforts are also being made to strengthen skill development and entrepreneurship

through programs like the RAMP-based Entrepreneurship and Skill Development Programme, aimed at equipping youth with innovation and business skills. The district administration has set a vision to achieve 100% enrollment, expand infrastructure, and promote equitable access to education. Special focus is also given to tribal communities through scholarships, hostels, and smart classrooms to reduce disparities in learning opportunities. Overall, these combined efforts reflect Samba's steady advancement towards quality, inclusive, and skill-oriented education.

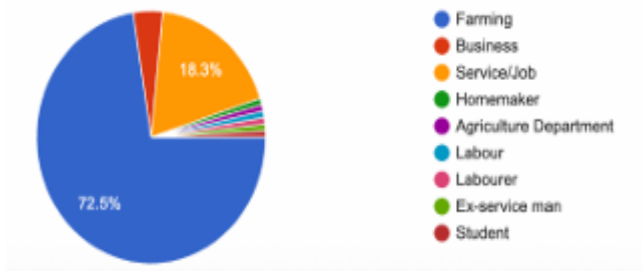
A survey was conducted in Samba district which highlighted the following:



**Fig1: Highest level of education by Grandfather**

In Samba district, the educational attainment of grandfathers reflects the limited opportunities available to earlier generations. A little over half, around 53.3 percent, reported having no formal education, showing that access to schooling was quite restricted in the past. About 25 percent had studied up to the primary level, while 15 percent had completed secondary education.

The remaining proportion had gone beyond secondary school, attaining higher levels of education (Fig 1). This distribution highlights the educational challenges faced in earlier decades, when formal schooling was not widespread and higher education was accessible only to a small section of the population.



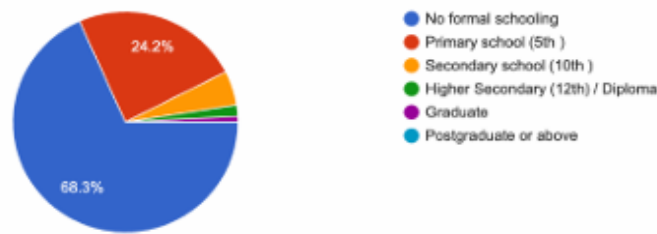
**Fig 2: Main Occupation at that time of Grandfathers**

In Samba district, the occupational distribution of grandfathers in the past shows that farming was the dominant source of livelihood, with about 72.5 percent engaged in agricultural activities. Around 18.3 percent were employed in services or jobs, reflecting a smaller but notable section that had access to formal employment.

The remaining proportion was spread across various occupations such as business, homemaking, agricultural department work, daily wage labour, and ex-servicemen (Fig 2). This pattern indicates that agriculture formed the backbone of the local economy in earlier times, while other occupational avenues were limited to a relatively small segment of the population.

In Samba district, a large majority of grandmothers, about 68.3 percent, reported having no formal education, reflecting the limited access to schooling available to earlier generations.

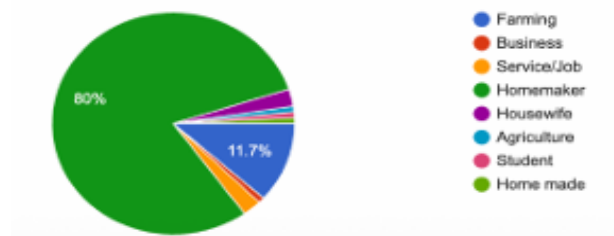
Around 24.2 percent had completed only primary education, while the remaining proportion had studied beyond the primary level (Fig 3). This distribution points to the educational challenges faced in the past, when opportunities for higher studies were scarce in the district.



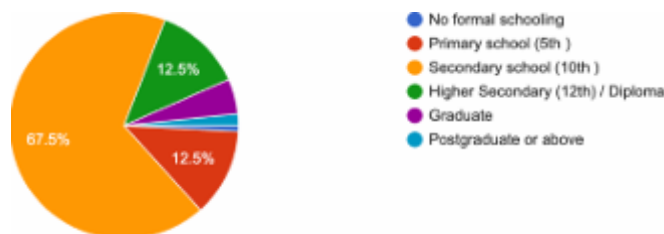
**Fig 3: Highest level of education by Grandmother**

In Samba district, the occupational profile of grandmothers reveals that nearly 80 percent were engaged primarily as homemakers, reflecting traditional family roles and household-centered responsibilities of the past. About 11.75 percent were involved in agriculture, which was a key source of livelihood in the region.

The remaining proportion was employed in other occupations such as business, government or private service, and other small-scale jobs (Fig 4). This pattern highlights the dominance of domestic and agricultural work in earlier generations, with relatively limited participation in formal employment sectors.



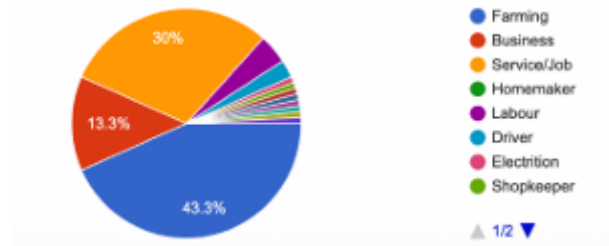
**Fig 4: Main Occupation at that time of Grand mothers**



**Fig 5: Highest level of education by Father**

In Samba district, the data on fathers' education shows that the majority, around 67.5 percent, had studied up to the secondary school level. About 12.5 percent had completed higher secondary education, while another 12.5 percent had received only primary education.

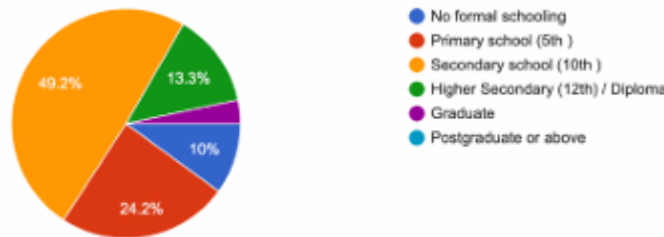
The remaining proportion was distributed across other categories, including those with no formal education as well as those who had attained graduate or postgraduate qualifications and above (Fig 5). This indicates a noticeable improvement in educational attainment compared to earlier generations, though still with considerable variation across different levels.



**Fig 6: Main Occupation of Fathers**

In Samba district, the occupational pattern of fathers reflects a gradual diversification of livelihood opportunities compared to earlier generations. Farming continued to be a major source of work, with about 43.3 percent engaged in agriculture. However, a substantial shift is evident as 30 percent were employed in services or jobs, showing an increasing move toward formal employment.

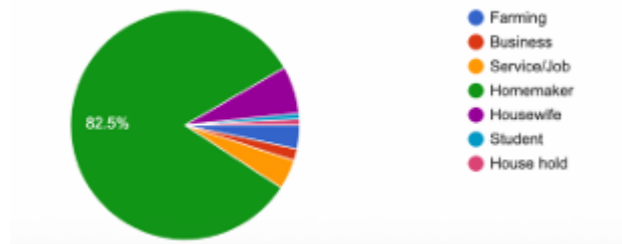
About 13.3 percent were involved in business activities, marking the rise of small-scale entrepreneurship (Fig 6). The remaining proportion was spread across other occupations such as homemaking, wage labour, driving, electrical work, and shopkeeping. This distribution highlights the transition from a predominantly agrarian base toward a more varied occupational structure in the district.



**Fig 7: Highest level of education by Mother**

In Samba district, the educational profile of mothers shows a considerable improvement compared to the earlier generation of grandparents. Around 10 percent of mothers reported having no formal education, while 24.2 percent had completed primary schooling. Nearly half, about 49.2 percent, had attained secondary education, making it the most common level of schooling among mothers.

In addition, 13.3 percent had studied up to higher secondary or diploma level, while the remaining proportion had pursued education beyond that (Fig 7). This trend reflects a gradual but significant expansion of access to schooling for women in the district, although higher education opportunities were still limited for many.

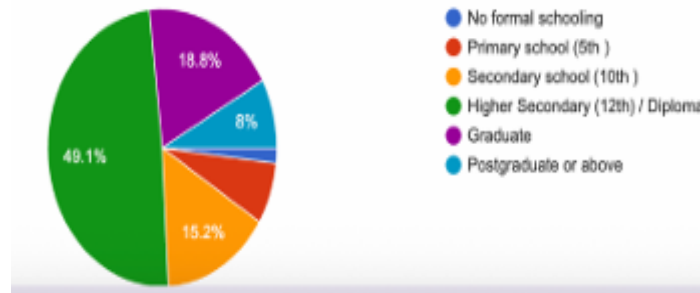


**Fig 8: Main Occupation of Mothers**

In Samba district, the occupational distribution of mothers indicates that the vast majority, about 82.5 percent, were homemakers, reflecting the traditional role of women in managing household responsibilities. A small proportion, around 2.5 percent, were engaged in farming, while 2.3 percent worked in services or jobs, and 1.3 percent were involved in business activities. The remaining were categorized as housewives or students (Fig 8).

This pattern suggests that women's participation in the formal workforce was very limited in the past, with their roles largely centered on domestic duties, though a gradual entry into farming, business, and service sectors had begun.

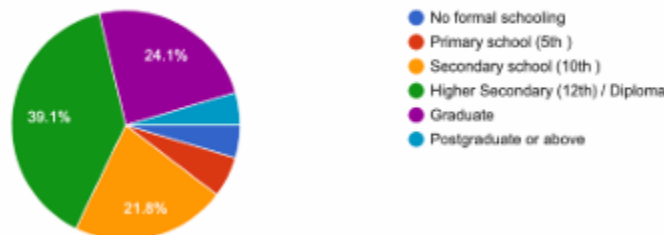
In Samba district, the number of siblings in families was generally small, usually ranging from one to three. Among these, the majority of families reported having two siblings, indicating that the typical family size in the district tends to be relatively moderate.



**Fig 9: Highest level of Education completed by Elder Sibling**

The survey conducted in Samba district shows that the highest level of education completed by elder siblings reflects a significant rise in educational attainment compared to previous generations. Nearly half, about 49.1 percent, had studied up to the higher secondary level, making it the most common stage of education. Around 18.8 percent had completed graduation, while 15.2 percent had attained secondary education.

A further 8 percent had gone on to postgraduate studies or above, while the remaining proportion had education levels below secondary school (Fig 9). This distribution highlights the considerable expansion of access to higher education among the younger generation in Samba, marking clear progress from the educational patterns of parents and grandparents.



**Fig 10: Highest level of Education completed by Other Sibling**

The survey conducted in Samba district revealed that the highest level of education completed by other siblings demonstrates a continuing upward trend in educational achievement. About 39.1 percent had studied up to the higher secondary level, while 24.1 percent had completed graduation. Around 21.8 percent had attained secondary education, and 5 percent had pursued postgraduate studies or above.

Another 5 percent had completed only primary schooling, while the remaining 5 percent had no formal education (Fig 10). This pattern suggests that, although a majority of siblings had access to higher secondary and graduate-level studies, there still remained a small fraction who could not progress beyond the primary stage or lacked formal education altogether.

### III. CONCLUSION AND FINDINGS

This comprehensive study on generational changes in educational attainment and occupational profiles in Samba district reveals a clear and profound trajectory of socioeconomic progress.

#### *Key Findings*

##### *A. Dramatic Increase in Educational Progress*

Generation	Grand fathers	Grand mothers	Fathers	Mother	Elder Siblings	Other Sibling
<b>No Formal Education (%)</b>	53.3%	68.3%	Low (Incl. in 'Other')	10.0%	Low (Included in 'Below Sec.')	5.0%
<b>Secondary Education Achieved (%)</b>	15.0%	Low	<b>67.5%</b>	<b>49.2%</b>	15.2%	21.8%
<b>Higher Secondary/ Graduate/ Postgrad. (%)</b>	Low	Low	Low	13.3% +	<b>75.9%</b> (H.Sec: 49.1%, Grad: 18.8%, P.G: 8%)	<b>68.2%</b> (H.Sec: 39.1%, Grad: 24.1%, P.G: 5%)

- *Generational Leap:* The proportion of individuals with no formal education has sharply declined from over 50% (grandparents) to a negligible percentage among siblings.
- *Parents' Achievement:* Fathers achieved a major milestone with 67.5% reaching the Secondary level. Mothers followed closely with 49.2% at the Secondary level, marking a significant advancement in female education compared to grandmothers.
- *Siblings' Dominance in Higher Education:* The current generation (siblings) has overwhelmingly shifted towards higher education. A combined majority of 75.9% of elder siblings and 68.2% of other siblings have achieved Higher Secondary, Graduation, or Postgraduate levels, demonstrating a massive expansion of educational opportunities.

##### *B. Occupational Diversification*

- *Decline of Agrarian Dependence:* The primary occupation has fundamentally shifted. Grandfathers were dominated by farming (72.5%). Fathers showed a significant move away, with farming dropping to 43.3%, and formal services/jobs rising to 30%.
- *Formal Employment Growth:* The growth in the services/jobs sector and the rise of business activities (13.3% for fathers) indicates a transition from a purely agrarian economy to one with a more varied, formal, and entrepreneurial structure.
- *Women's Role:* Grandmothers and Mothers remain primarily homemakers (80% and 82.5% respectively), reflecting persistent traditional roles. However, the presence of a small percentage of mothers in farming, service, and business suggests a gradual, though limited, entry into the formal workforce.





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*C. Persistent Disparities*

Despite the overall progress, the study identifies a small but significant fraction of other siblings (5% with only primary education and 5% with no formal education) who still lag behind. This highlights the existence of persistent barriers that prevent universal access and retention beyond the foundational stages.

*Suggestions And Areas For Improvement*

Based on the findings, the following suggestions are crucial for achieving universal educational and occupational parity in the district:

Area for Improvement	Detailed Suggestions	Rationale
<b>Addressing the Lagging Cohort</b>	Introduce targeted intervention programs, remedial education classes, and conditional cash transfers specifically for families of the 10% of other siblings who lack formal or complete primary education.	To ensure that no child is left behind and to address underlying socioeconomic barriers (poverty, lack of awareness, etc.) that prevent basic completion.
<b>Promoting Female Workforce Participation</b>	Focus on vocational training and skill development programs that are specifically designed for women, coupled with incentives for employers and support for flexible work arrangements.	To capitalize on the dramatic educational improvements among mothers and siblings and integrate them into the diversifying formal economy.
<b>Enhancing Quality of Higher Education</b>	Given the high attainment levels (H.Sec and Graduation), the focus should shift from <b>Access</b> to <b>Quality</b> . Promote internships, industry collaborations, and career counseling services.	To ensure that the large cohort of educated youth are employable and can secure high-value jobs in the services and business sectors.
<b>Supporting Agrarian Transition</b>	Introduce programs for modernization of farming techniques and agricultural diversification, alongside retraining initiatives for fathers still engaged in farming.	To facilitate a smooth and profitable transition away from traditional agriculture, securing livelihoods for the remaining agrarian population.

**REFERENCES**

- [1] Angelo, T. A. & Cross, P. (1993). Classroom Assessment Techniques: A handbook for College Teachers, Jossey Bass Publisher, San Francisco, C.A.
- [2] Boyer, (1998). "Reinventing Undergraduate Education: A Blueprint for America's Research Universities", A Report from the Carnegie Foundation.
- [3] Commission Of The European Communities: European Council, Brussels, (2001).
- [4] Commission Of The European Communities: European Council, Lisbon, (2000).
- [5] Davis, S. (1996). Slicing The Learning Pie. Educom Review. pp. 32-338
- [6] Dearing Report (1997). Higher Education in the Learning Society, London: HMSO
- [7] Drucker, P. F. (1994). Atlantic Monthly, Nov. 1994: The Age of Social Transformation, pp. 53- 80.
- [8] Duderstadt, J. (2003). Higher Education in the New Century: Themes, Challenges and Options, University of Southern California, Los Angeles, CA.
- [9] Evans, T. & Nations, D. (2000). Changing University Teaching: Reflection on Creating Educational Technologies, London, England: Kogan Page.
- [10] Kurzwell, R. (1999). The Age of Spiritual Machines: When Computers Exceed Human Intelligence.
- [11] Luke, A. (2000). Literate Futures: Report of the Literacy Review for Queensland Schools, Brisbane State of Queensland (Department of Education).
- [12] MacGregor, et al (2000). Strategies for Energizing Large Classes: From Small Groups to Learning Communities, Jossey Bass Publisher, Sand Francisco, CA.