

An Analysis of Students' Transition Rates, Drop-out Rates, and Retention Rate in Secondary Education in Odisha

Mohammed Imran¹, Dr. Alok Ranjan Behera², Dr. Mitali Chinara³

¹PhD Scholar, School of Women's Studies, Utkal University

²Assistant Professor, Department of A & A Economics, Utkal University

³Professor, Department of A & A Economics, Utkal University

Abstract

Education is an essential element in the holistic development of individuals, encompassing both material and spiritual growth. Throughout the course of human history, education has continuously evolved, shedding light on various aspects of human progress. This paper develops into the examination of secondary school education status in Odisha, focusing on critical indicators such as enrolment, dropout rates, retention rates, and transition rates. The data used for this analysis is gathered from the Odisha Directorate of Economics and Statistics, specifically from the Educational Statistics and UDISE (Unified District Information System for Education) under the government of Odisha. The analysis of secondary education in Odisha reveals a declining trend in dropout rates from 2009-10 to 2014-15, with some stabilization or slight increases in later years. A gender gap in dropout rates, favouring boys initially, gradually narrowed. The significant dropout rates between 2014-15 and 2015-16 suggest effective policy interventions. Transition rates fluctuated slightly higher for girls but generally followed a similar trend. The highest transition rates were noted in 2011-12. While Gross Enrolment Ratio fluctuated, the Retention Rate remained high or improved, indicating good retention once students enrolled. This analysis highlights the need for ongoing efforts to reduce dropouts, enhance access, and address gender disparities in Odisha's secondary education.

Keywords: Secondary Education, Drop-out, Retentions, Transition, Gender Gap, Odisha

Introduction

Education provides a multitude of opportunities and enhances the prospects for a better life. The Capability Approach's diverse and complicated responsibilities for education are evident. Education is commonly described as the cornerstone for developing essential learning outcomes, forming the basis for various other skills and abilities (Azam & Kingdon, 2011). Additionally, education enables

individuals to live the lives they value and to increase their actual choices, thereby increasing their substantive freedom. Recognizing the impact of life choices shaped by opportunities necessitates education as both a means and an objective. Soft and hard skills can be instilled in the process of capability-enabling because teaching, learning, and human growth are intertwined. Certainly, education equips individuals with the competencies and skills essential for fostering critical and creative thinking, problem-solving, informed decision-making, adapting to new and unfamiliar situations, and facilitating effective communication. Education must provide high-quality materials, procedures, and environments that can aid in transforming learning objectives into talents (Chandrasekhar & Sharma, 2014). UNESCO emphasizes the importance of setting explicit and publicly stated objectives in the post-2015 development agenda for education. This is vital because education plays a fundamental role in achieving key Sustainable Development Goals (SDGs), such as poverty reduction, the promotion of democracy, peace, and the cultivation of global citizenship. Without strategic investments in education, India's youth would struggle to attain the SDGs related to quality education (Goal 4) and decent employment (Goal 8). For education systems to be equitable and effective in meeting the SDGs, there must be adequate public funding for education. The burgeoning number of students graduating from elementary schools in Odisha has put mounting pressure on the secondary school system. This surge is primarily due to the remarkable growth experienced by elementary schools in recent years.

Review of Literature

Student participation in education is a crucial aspect of ensuring inclusive and effective learning environments. It involves engaging young people actively in the educational process, empowering them to have a say in decisions that affect their learning, and promoting their involvement in various educational activities. Below is a literature review highlighting key findings and insights on youth participation in education, because youth cover secondary education, higher secondary education, and higher education. Secondary education foundation for skill and labour market. Mitra & Serriere (2012) explore the impact of youth participation in decision-making processes in schools. It highlights how involving young people in shaping educational policies and practices leads to improved learning outcomes and a more positive school environment. The research emphasizes the importance of creating spaces for young people to voice their opinions and contribute to school governance. The Role of Youth Participation in Addressing Educational Inequalities discusses the importance of including marginalized youth in decision-making processes to identify and tackle the root causes of disparities in education. This study emphasizes the need to empower young people as agents of change in their communities (Pal & Ghosh, 2007; Mitra & Serriere, 2012; YDR, 2017). Youth-led initiatives in education and their impact

on educational empowerment, examine youth-driven projects that have led to positive changes in educational settings. The study highlights the importance of fostering leadership skills among young people to enable them to take an active role in shaping their learning experiences (Ho *et al.*, 2015; Collura *et al.*, 2019). When it comes to youth participation in education, there are both opportunities and obstacles. The literary works outline the difficulties and chances posed by young people participating in school. Barriers have been addressed, encompassing challenges arising from institutional resistance, insufficient adult support, and limitations in resources. The study also looks at the possible advantages of including student engagement as well as young voices in educational decision-making processes (Mooji & Dev, 2001; Mitra & Serriere, 2012). Ilomaki and Lakkala (2018) investigate how digital technology might improve young people's involvement in the educational process. It examines how to involve young people in educational activities by using online platforms, social media, and virtual collaboration tools. The report also discusses the risks and difficulties that could arise from using digital technology.

Youth participation in education is a multidimensional concept that plays a vital role in creating more inclusive and effective learning environments. Empowering students to be positive participants in their education not only improves their academic outcomes but also contributes to their personal development, leadership skills, and sense of ownership in the learning process. However, it is essential to address the challenges and barriers that may hinder youth participation to ensure that all young individuals have an equal opportunity to engage meaningfully in education.

Research Gap

An examination of the literature on students' involvement in education indicated that while there are a few studies that cover Odisha's education situation. The educational achievements in the state are up to par, sufficient expansion in secondary education to accommodate the rising demand, the quality of education in schools to meets satisfactory standards, and feasibility of achieving universal enrollment and retention in these schools within the specified timeframe is rarely addressed in existing literatures. Considering above research gaps present study aims to examine following objective.

Objective

- To analyse students' transition rates, drop-out rates, and retention rate in secondary education in Odisha.

Data and Methodology

This study makes use of secondary data largely from the Ministry of Education (MoE), as well as publications like Selected Educational Statistics, UDISE, UDISE+, and the Economic Surveys of Odisha. Different educational indicators like gross enrolment ratio, dropout rates, transition rates and retention rates are taken for the analysis for the period of between 2008-09 to 2016-17. For this study, descriptive statistics like frequency, table, charts, and graphs were employed.

Results and Analysis

Currently, both the secondary and senior secondary sub-levels are included in the secondary school education cycle. Each secondary education sub-level has exams administered by national or state examination boards. These kids fall into the 14 to 17-year-old age range. Further, there are two methods to receive a vocational education: as a senior high school elective and through the Training and Polytechnics. To apply for higher education, students must have to pass the senior secondary exams. However, only a strong academic record, as demonstrated by the grades earned, aids pupils in getting accepted into higher education institutions.

In the Indian education system, there are three main levels of education; elementary, secondary, and higher education. Following the introduction of the National Education Policy (NEP) in 2020, elementary education is divided into Middle, Preparatory, and Foundational levels, catering to the age groups of 11-14, 8-11, and 3-8 years, respectively. Prior to the NEP, elementary education consisted of two sub-levels: primary education, covering ages 6-10, and upper primary education, covering ages 11-13. A 'no detention policy' was in place up to the elementary level of education (Table 1).

Table 1: The Indian education system and new education policy's organisational structure

Levels of education	Existing Education	New Structure of NEP	Levels of education
	Age in years	Age in Years	
Higher Education	18-23	Flexible	Higher Education
Senior Secondary	17-18	14-18	Secondary
Secondary	15-16	11-14	Middle
Upper Primary	11-14	8-11	Preparatory
Primary	6-10	3-8	Foundation
Pre-Primary	5	-	-

Source: Developed based on NEP, 1986 and NEP, 2020.

Student Engagement in Education

In today's technologically advanced and globally connected economy, the education of young students, particularly at the secondary and tertiary levels, holds a substantial impact on income redistribution, economic growth, and poverty reduction. Secondary education plays a pivotal role as it equips students with formal reasoning, abstract problem-solving abilities, and critical thinking skills. Moreover, it provides occupationally relevant knowledge, making graduates adaptable to the demands of the local and global markets.

In the context of the National Youth Policy (2014), which emphasizes enhancing system capacity, ensuring quality education, and promoting skill development and lifelong learning, investing in the education of youth is crucial. Graduates with a minimum level of secondary education are highly sought after in the job market due to their ability to undergo further training and align with the evolving needs of globalized local economies. These educated youth not only contribute significantly to the national economy but also play an essential role in the global arena. Therefore, fostering effective secondary education is key to nurturing skilled and knowledgeable youth, empowering them to participate actively in the economy and society.

The Gross Enrolment Ratio (GER) reflects the level of educational development and denotes the increasing variations across levels of education.

Table 2: GER of Secondary Education in Odisha

Year	Boys	Girls	Total
2008-09	57.61	57.72	57.48
2009-10	61.40	61.18	59.89
2010-11	68.76	67.58	69.27
2011-12	75.03	72.74	77.43
2012-13	77.03	75.54	78.60
2013-14	77.16	80.31	78.70
2014-15	75.69	75.17	75.43
2015-16	78.19	78.38	78.28
2016-17	79.40	79.83	79.61

Source: UDISE, Educational Statistics

The table 2 represents the Gross Enrollment Ratio (GER) of Secondary Education in the state of Odisha for different academic years. GER is a key indicator in education that measures the percentage of the

eligible population in each age group that is enrolled in a particular level of education (in this case, secondary education).

In the academic years 2008-09, there was near parity in Gross Enrollment Ratios (GER) between boys and girls, albeit with a slightly lower overall GER. Several factors could have contributed to this phenomenon, including limited access to secondary education facilities, socio-economic influences, or cultural norms influencing enrollment patterns. Moving to 2009-10, there was an increase in GER for both genders, despite a decrease in the overall GER. This could have been influenced by population dynamics, fluctuations in the number of students entering secondary education, or shifts in educational policies.

In 2010-11, a significant upswing in GER was observed, indicating a noteworthy increase in secondary education enrollment. This positive shift might be attributed to enhancements in educational infrastructure, successful awareness campaigns, or policies aimed at promoting secondary education. The upward trajectory continued into 2011-12, suggesting that government initiatives, scholarships, and awareness programs could have contributed to this positive trend.

The subsequent years witnessed a sustained growth in GER, signifying continuous efforts to improve access to secondary education for both genders. In 2013-14, it was noteworthy that the GER for girls exceeded that of boys, indicative of a heightened focus on girls' education and the pursuit of gender parity. Although the GER remained relatively stable with slight decreases, various factors impacting enrollment rates might have been at play.

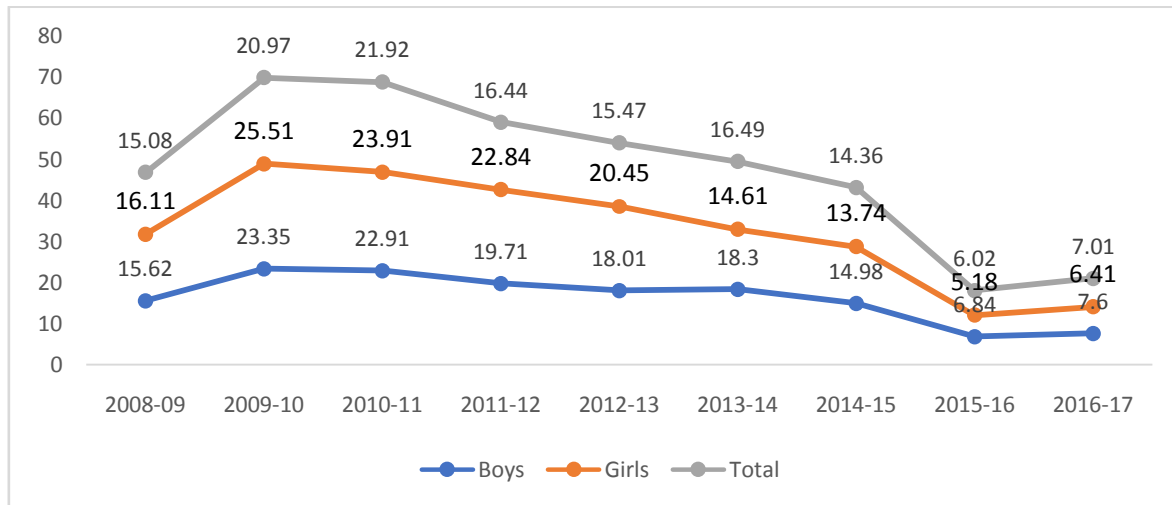
The academic year 2015-16 showed consistency in GER, suggesting a stable enrollment rate. In 2016-17, there was a further uptick in GER, approaching 80% for both boys and girls, which is a promising indicator for education in Odisha. Potential reasons for these trends include shifts in government policies, increased investments in educational infrastructure, effective awareness campaigns, gender-focused initiatives, and demographic factors.

The Out-of-School Youth or Dropouts

The dropout rate measures the percentage of students or participants who leave or disengage from a program, course, or organization before completing it. It is a negative indicator and reflects the rate at which individuals are unable or unwilling to continue their involvement.

Dropout Rate = $\left[\frac{\text{Number of students/ members who leave or disengage}}{\text{Initial number of students}} \right] * 100$

Figure 1: Secondary education drop-out rate in Odisha



Source: UDISE, Educational Statistics

Figure 1 represents the dropout rates in secondary education in Odisha over the years from 2008-09 to 2016-17. Overall, there has been a declining trend in dropout rates over the years, indicating an improvement in secondary education retention rates in Odisha. The dropout rates for both boys and girls increased between 2008-09 and 2009-10. This could be due to various factors such as economic conditions, lack of access to quality education, or social factors. From 2009-10 to 2014-15, there was a consistent decline in dropout rates for both boys and girls. This indicates that efforts to improve the retention of students in secondary education were somewhat successful during this period.

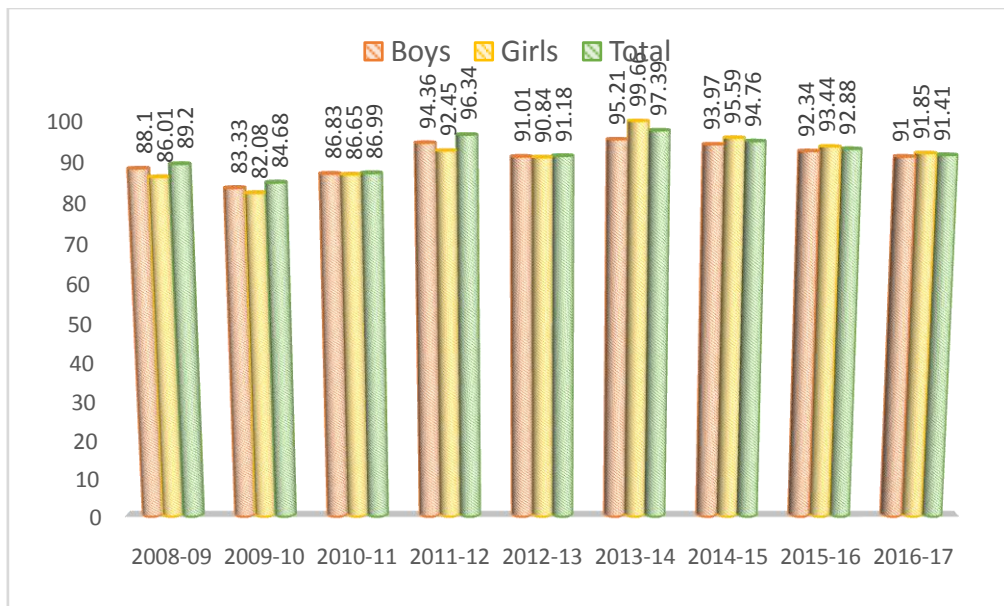
From 2008-09 to 2011-12, there was a noticeable gender gap in dropout rates, with higher dropout rates for girls compared to boys during this period. The gap seems to narrow down as the years progress. Dropout rates for both boys and girls seem to converge between 2011-12 and 2014-15, with girls' dropout rates approaching those of boys. There was a significant decrease in dropout rates for both boys and girls between 2014-15 and 2015-16. This could be due to specific policy interventions or educational reforms during that period. Dropout rates for both genders remained relatively stable between 2015-16 and 2016-17, with a slight decrease. This indicates that efforts to further reduce dropout rates might have slowed down during this period.

The trend line for secondary education dropout rates in Odisha shows an initial increase, followed by a period of consistent decline, especially in the middle years. The data also highlights the persistence of a gender gap, although it narrows down over time. Further efforts may be needed to sustain and accelerate the progress made in reducing dropout rates, especially for both boys and girls.

Transition Rates

In addition to dropout rates, transition rates are yet another capability-enhancing process indicator. It speaks of the proportion of new pupils who transfer from one educational level to the next.

Figure 2: Transition rates across secondary levels of education in Odisha



Source: UDISE, Educational Statistics

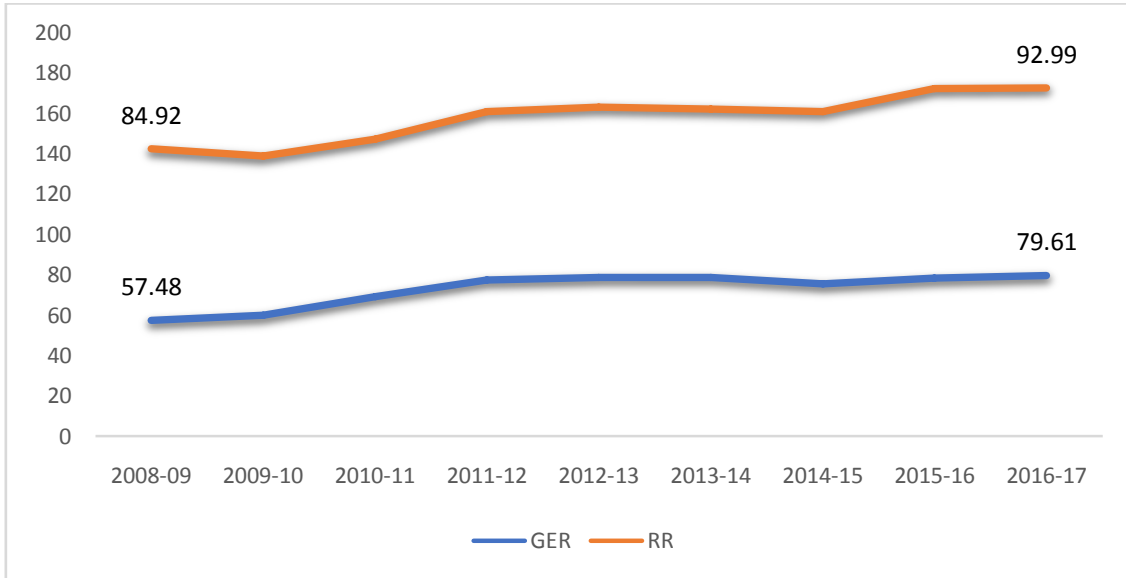
The transition rates for both boys and girls tend to fluctuate from year to year. In general, the transition rates for boys and girls are quite close to each other, with girls often having slightly higher transition rates than boys. The overall transition rate (Total) also varies from year to year but generally follows a similar trend to the individual rates for boys and girls. The highest transition rates are observed in the academic year 2011-12, with a total transition rate of 96.34%, which is likely indicative of a successful year in terms of students progressing to the next level of education. The lowest transition rates are observed in the academic year 2016-17, with a total transition rate of 91.41%, which, while lower, still indicates a significant majority of students successfully transitioning. Overall, this figure 2 provides insights into the progression of students from secondary education to the next level in Odisha, with variations observed from year to year. It can be used for educational planning and policy analysis to identify trends and areas for improvement in the education system (figure 2).

Retention rate for secondary schooling in Odisha

The retention rate refers to the percentage of students or participants who continue to be enrolled or engaged in a program, course, or organization over a specific period.

RR= [(Number of students/ Members who remain enrolled or engaged) / Initial number of students] * 100

Figure 3: Retention rate of secondary education in Odisha



Source: UDISE, Educational Statistics

Figure 3 represents, in 2008-09 GER was 57.48%, indicating that approximately 57.48% of the eligible age group population was enrolled in the relevant level of education. The RR (Retention Rate) is 84.92%, suggesting that a high percentage of students who initially enrolled in the previous year continued their education. GER increased to 59.89%, indicating a slight improvement in enrolment in 2009-10. However, RR decreased to 79.03%, which means that a smaller percentage of students continued their education compared to the previous year. In 2010-11 GER increased significantly to 69.27%, showing improved access to education. RR remained relatively stable at 78.08% in 2011-12. Both GER and RR increased further, with GER reaching 77.43% and RR at 83.56% in 2011-12. This indicates a positive trend in both enrolment and student retention. In 2012-13 GER continued to rise to 78.60%, while RR also increased to 84.53%. This suggests continued progress in both areas. GER remained relatively stable at 78.70%, and RR slightly decreased to 83.51% in 2013-14. While enrolment remained consistent, there was a slight drop in retention. Now in 2014-15, GER decreased to 75.43%, indicating a decline in enrolment. However, RR increased to 85.64%, suggesting that a higher percentage of students who were enrolled stayed in school. GER rebounded to 78.28%, and RR significantly increased to 93.98%, indicating a substantial improvement in student retention in 2015-16. GER continued to rise to 79.61%, and RR remained high at 92.99%, demonstrating both improved access and strong student retention in 2016-17. In conclusion, the data shows fluctuations in GER and

RR over the years. In some years, there were improvements in enrolment, while in others, there were fluctuations or slight declines. However, RR generally remained high or showed improvement, indicating that once students were enrolled, there was a good retention level. It is essential to analyse these trends to understand the effectiveness of education policies and identify areas for improvement in access and retention in the education system.

Government Programmes for Secondary Education

Free Bicycle Programme

The free bicycle scheme in Odisha aimed to promote education by providing free bicycles to students. This initiative was intended to improve attendance and reduce dropout rates, especially in rural and remote areas where students often had to travel long distances to reach their schools. Typically, the scheme targeted students in government and government-aided schools, with a focus on those studying in classes between 9th and 12th standard.

The government of Odisha usually implements this scheme through the School and Mass Education Department or a related department. Students meeting certain criteria, such as attendance and academic performance, were eligible to receive a free bicycle. Once eligible students were identified, the government would distribute bicycles to them through their respective educational institutions. The scheme was expected to have a positive impact on students' attendance, academic performance, and overall well-being by providing them with a means of transportation to school.

Financial Assistance

In India and specifically in the state of Odisha, numerous government initiatives and programs have been established to provide financial assistance and support to underprivileged and minority groups in the realm of secondary education. These endeavours are aimed at fostering inclusive and equitable access to high-quality education for all, with a special emphasis on historically disadvantaged communities.

One such initiative is the "Post-Matric Scholarship for SC/ST Students," a central government scheme that offers financial aid to students from Scheduled Castes (SC) and Scheduled Tribes (ST) who are pursuing their education in classes 11 and 12, as well as at the post-matriculation level. This assistance covers tuition fees, maintenance allowances, and various other incidental expenses.

The "Ministry of Minority Affairs" administers scholarships for students belonging to minority communities, including Muslims, Christians, Sikhs, Buddhists, and Parsis, who are studying in classes 1 to 10. These scholarships encompass tuition fees, maintenance allowances, and other associated benefits.

Furthermore, the "National Means-cum-Merit Scholarship (NMMS)" is a centrally sponsored scheme aimed at providing financial support to economically disadvantaged students in the 9th grade, with the goal of encouraging them to continue their education at the secondary stage. The allocation of scholarships is determined through a competitive examination process.

The "Kasturba Gandhi Balika Vidyalaya (KGBV)" program strives to provide education to girls hailing from disadvantaged backgrounds in educationally backward regions. This program offers free education, residential facilities, and comprehensive support for girls from marginalized groups.

In addition, the "Rashtriya Madhyamik Shiksha Abhiyan (RMSA)" places its focus on enhancing access to high-quality secondary education and increasing enrolment rates, with a particular emphasis on girls and students from marginalized communities.

To avail themselves of these schemes, eligible students are required to meet specific criteria relating to income, academic performance, and community background. The application procedures and deadlines may vary, so it is crucial to consult the respective government departments or educational institutions for the most current information and guidelines. Moreover, various non-governmental organizations (NGOs) and charitable trusts also extend scholarships and assistance to marginalized students pursuing secondary education in India and Odisha.

To reduce educational inequality, the government has implemented a dress code initiative for students. Under this program, every student is provided with essential clothing items, including a T-shirt, track pants, two school outfits, a pair of shoes, and a cap. This initiative not only supports disadvantaged students but also contributes to increased enrolment rates and reduced dropout numbers.

Conclusion

The dropout rates and transition rates in secondary education in Odisha have shown a decline over the years, indicating an improvement in retention rates. The gender gap in dropout rates was noticeable, with girls having higher rates than boys. However, this gap narrowed down over time. The significant decrease between 2014-15 and 2015-16 could be attributed to policy interventions or educational reforms. Transition rates for both boys and girls fluctuate but generally follow a similar trend. The analysis highlights the need for continued efforts to reduce dropout rates and improve access and

retention in the education system, particularly in narrowing the gender gap. This study can be used for educational planning and policy analysis to identify trends and areas for improvement in the education system.

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