



SHRI RAM COLLEGE OF COMMERCE

ISSN 2581-4931 (Print)

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

VOLUME 2

ISSUE 2

JANUARY–JUNE 2018

Publication Date: September 28, 2018

Publication City: Delhi

Understanding Tax Neutrality – A Comparative Study of Indian and Estonian Tax Structure

Avi Gupta & Kawal Nain Kaur Kohli

Structural Breaks in the Indian Agriculture : A Painful Journey

Akriti Dureja

Crypto Banks: The Future of Indian Banking

Neeraj Anand & Rishav Jain

'Shell'tering Behind the Corporate Facade: Unmasking Money Laundering

Arshnoor & Kanksha Malhotra

Urban Housing in India

Shreya R & Shruthi Ramesh

Green Investment: Dimensions and Policy Perspective

Tushar Saini & Aishwarya Thakur

Development of the Industrial Sector in India: An Enquiry

Deepshikha & Monika Panchal

A Study of Some Determinants of an Education Policy

Bipul Verma & Khushboo Chattree

Exploring Multitasking: Boon or Bane

Madhavi Sharma & Janvi Khedia

Bilateral Causality between Economic Growth and Economic Development

Vaishnavi Paul & Deveshi Chawda

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

VOLUME 2 ISSUE 2 JANUARY–JUNE 2018 ISSN 2581-4931 (Print)

PATRON

Shri Ajay S. Shriram
Chairman, Governing Body

PRINCIPAL

Prof. Simrit Kaur

EDITOR

Dr. Santosh Kumari
Ph.D., M.Phil., M.Com., M.A. Educational Leadership and Management
(University of Nottingham, England, United Kingdom)

Assistant Professor
Department of Commerce
Shri Ram College of Commerce
University of Delhi
Delhi-110007
India

E-mail: strides@srcc.du.ac.in

COMMITTEE ON PUBLICATION ETHICS (COPE)

Prof. Simrit Kaur	Chairperson
Dr. Santosh Kumari	Editor of STRIDES and Convener of COPE
Dr. R. P. Rustagi	<i>Former</i> Principal (Officiating) of SRCC
Dr. Ashok Sehgal	Senior-Most-Faculty in SRCC
Dr. Suman Bhakri	Coordinator, Global Business Operations, SRCC
Dr. Mallika Kumar	Teacher-in-Charge, Department of Commerce, SRCC
Dr. A.J.C.Bose	Teacher-in-Charge, Department of Economics, SRCC

REFEREES

The following referees reviewed research papers for Strides, Volume 2, Issue 2, January-June 2018.

Dr. Anil Kumar	Associate Professor, Department of Commerce, SRCC.
Dr. Deepashree	Associate Professor, Department of Commerce, SRCC.
Dr. Rachna Jawa	Associate Professor, Department of Commerce, SRCC.
Mr. Avinash Kumar Jha	Assistant Professor, Department of Economics, SRCC.
Mr. Rajeev Kumar	Assistant Professor, Department of Economics, SRCC.
Ms. Kinneri Jain	Assistant Professor, Department of Commerce, SRCC.
CA Avinash Gupta	Assistant Professor, Global Business Operations, SRCC.
Mr. Harish Kumar	Assistant Professor, Department of Commerce, SRCC.

WEBLINK

Visit: <http://www.srcc.edu/publications/students-publications>

IMPRINT LINE

Printed and published by Prof. Simrit Kaur (Principal, Shri Ram College of Commerce) on behalf of 'Shri Ram College of Commerce' and printed at M/s Poonam Printers, C-145, Back Side Naraina Industrial Area, Phase-I, New Delhi and published at Shri Ram College of Commerce, University of Delhi, Maurice Nagar, Delhi-110007, India.
Editor – Dr. Santosh Kumari

License No. – DCP / LIC No. F. 2 (S / 37) Press / 2017
Registration No. DELENG/2018/75093
ISSN 2581- 4931 (Print)

All correspondence relating to publication of the Journal should be addressed to:

The Principal
Shri Ram College of Commerce
University of Delhi, Maurice Nagar
Delhi - 110 007 (India)
E-mail: principaloffice@srcc.du.ac.in

Publication Date: September 28, 2018
Printing Date: September 25, 2018
Publication City: Delhi

ORIGINAL

भारत सरकार
GOVERNMENT OF INDIA



भारत के समाचारपत्रों के पंजीयक का कार्यालय
OFFICE OF THE REGISTRAR OF NEWSPAPERS FOR INDIA
पंजीयन प्रमाण-पत्र
CERTIFICATE OF REGISTRATION



प्रमाणित किया जाता है कि प्रेस और पुस्तक पंजीकरण अधिनियम, 1867 के अन्तर्गत इस समाचारपत्र को पंजीकृत कर लिया है :
This is to certify that this newspaper has been registered under the Press and Registration of Books Act, 1867 :

1. समाचार पत्र का नाम
Title of the Newspaper

**STRIDES - A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF
COMMERCE
DELENG/2018/75093**

2. समाचार पत्र की पंजीयन संख्या
Registration Number of the Newspaper

3. भाषा/भाषाएँ, जिसमें/जिनमें समाचारपत्र प्रकाशित किया
जाता है

अंग्रेजी ENGLISH

Language/Languages in which it is published

4. इसके प्रकाशन का नियतकाल तथा जिस दिन/दिनों/
तिथियों को यह प्रकाशित होता है

Periodicity of its publication and the day/days/
dates on which it is published

अर्ध वार्षिक HALF YEARLY

5. समाचारपत्र की फुटकर कीमत
Retail selling price of the newspaper

FREE DISTRIBUTION

6. प्रकाशक का नाम/Publisher's Name

राष्ट्रीयता/Nationality

पता/Address

SIMRIT KAUR

INDIAN

341, NARMADA APARTMENTS, ALAKNANDA, NEW DELHI-110019

7. मुद्रक का नाम/Printer's Name

राष्ट्रीयता/Nationality

पता/Address

SIMRIT KAUR

INDIAN

341, NARMADA APARTMENTS, ALAKNANDA, NEW DELHI-110019

8. सम्पादक का नाम/Editor's Name

राष्ट्रीयता/Nationality

पता/Address

DR. SANTOSH KUMARI

INDIAN

T-7, NEW TEACHERS FLAT, SHRI RAM COLLEGE OF COMMERCE, UNIVERSITY OF DELHI, MAURICE
NAGAR, DELHI-110007

9. जिस स्थान पर मुद्रण का काम होता है, उसका
सही तथा ठीक विवरण

True and precise account at the premises
where printing is conducted

M/S SUDHA PRINTING PRESS

B-21/3, OKHLA INDUSTRIAL AREA, PHASE-II, NEW DELHI-110020. (2) M/S POONAM PRINTERS, C-145,
BACKSIDE NARAINA INDUSTRIAL AREA, PHASE-I, NEW DELHI.

10. प्रकाशन का स्थान
Place of publication

SHRI RAM COLLEGE OF COMMERCE, UNIVERSITY OF DELHI, MAURICE NAGAR, DELHI-110007

दिनांक /Date:

4/5/2018

(आर. के. भारद्वाज/ R.K. BHARDWAJ)

उप प्रेस पंजीयक/ Deputy Press Registrar

कृते भारत के समाचारपत्रों के पंजीयक

FOR REGISTRAR OF NEWSPAPERS FOR INDIA

Owner (for reference):

SHRI RAM COLLEGE OF COMMERCE



**NATIONAL INSTITUTE OF SCIENCE COMMUNICATION
AND INFORMATION RESOURCES**
(Council of Scientific and Industrial Research)
14, Satsang Vihar Marg, New Delhi 110 067



S. B. Burde,
Head, National Science Library, ISSN
Phone: 91-11-26863759
E-Mail: issn.india@niscair.res.in

No. NSL/ISSN/INF/2018/210

Dated: June 01, 2018

**Shri Ram College of Commerce,
University of Delhi, Maurice Nagar,
Delhi - 110007**

Dear Sir/Madam,
महोदय/महोदया,

We are happy to inform you that the following serial(s) published by you has/have been registered and assigned ISSN(s) [Print].

हमें आपको यह सूचित करते हुए प्रसन्नता हो रही है कि निम्नलिखित प्रकाशन पंजीकृत कर लिए गये हैं एवं प्रिंट आई.एस.एस.एन. आबंटित कर दिये गये हैं।

ISSN 2581-4931 Strides - A Student's Journal of Shri Ram College of Commerce

It is mandatory that the ISSN must be printed on every issue preferably at the right-hand top corner of the cover page.

प्रकाशन की प्रत्येक प्रति के कवर पेज के दाहिने ओर के ऊपरी सिरे पर आई.एस.एस.एन. छपा होना अनिवार्य है।

We will be responsible for monitoring the use of ISSN(s) assigned to Indian Serials and for supplying up-to-date data of the same to the International Centre for ISSN, Paris. For this purpose, we request you to send us the forthcoming issue of your serial on complimentary basis.

भारतीय राष्ट्रीय केंद्र की जिम्मेदारी होगी कि वह भारतीय पत्रिकाओं को आबंटित आई.एस.एस.एन. की जांच करेगा एवं उद्यतन डाटा की जानकारी इंटरनेशनल सेंटर फॉर आई.एस.एस.एन. पेरिस को भेजेंगे। अतः आपसे अनुरोध है कि इस कार्य हेतु प्रकाशन की एक प्रति आई.एस.एस.एन. प्रिंट करके सम्मानार्थ भेंट हमें भेजें।

Kindly note that assigning the ISSN does not amount to approving the journal or its contents by National Science Library/CSIR-NISCAIR. In future, the names and/or logos of NISCAIR, CSIR should not be mentioned on the journal or the journal website.

कृपया ध्यान दें कि आबंटित किया जा रहा आई.एस.एस.एन. राष्ट्रीय विज्ञान पुस्तकालय/सी.एस.आई.आर.-निस्केयर द्वारा किसी भी जर्नल/पत्रिका या इसकी विषय-वस्तु को अनुमोदित करने का द्योतक नहीं है। भविष्य में पत्रिका या पत्रिका की वेबसाइट पर निस्केयर या सी.एस.आई.आर. का नाम अथवा प्रतीक चिन्ह नहीं दर्शाया जाये।

We solicit your cooperation in this regard.

आपके सहयोग के लिए हम आभारी रहेंगे।

Yours sincerely,

For Head
ISSN National Centre of India

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

ISSN 2581-4931 (Print)

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The college appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the college has taken the initiative to launch a new Journal named 'Strides – A Students' Journal of Shri Ram College of Commerce'.

ABOUT THE JOURNAL

It is a double blind reviewed bi-annual Journal launched exclusively to encourage students to pursue research on the contemporary topics and issues in the area of commerce, economics, management, governance, polices etc. The journal provides an opportunity to the students and faculty of Shri Ram College of Commerce to publish their academic research work.

PUBLICATION POLICY

Shri Ram College of Commerce is committed to upholding the high academic standards. Therefore, the Committee on Publication Ethics (COPE) follows a 3-Stage Selection Process while approving a paper for publication in this Journal. The policy is as follows:

Stage-1. Screening of Plagiarism

To maintain high *academic standards, academic ethics and academic integrity* each research paper received by COPE (Committee on Publication Ethics) is sent for screening of plagiarism on "Turnitin". The committee adheres to the maximum tolerance limit of 25%.

After screening for plagiarism, research papers are sent to the *Referees* (Subject Experts) for double blind review.

Stage-2. Double Blind Review

The journal adheres to a rigorous double-blind review policy. Each research paper received by COPE is sent for review to the *Referee* (Subject Expert). The reports submitted by the *Referees* are sent to the respective students for improvement (if any, suggested by the *Referees*). After reporting all the suggestions recommended by the *Referees*, the revised and improved version of the papers are re-submitted by the students to the COPE.

If a research paper is rejected by the *Referee*, no further proceedings are taken into account. Once rejected by the expert means cannot be published at all.

Stage-3. Approval by Committee on Publication Ethics (COPE)

After double blind review and screening of plagiarism, research papers are submitted for final approval to the Committee on Publication Ethics (COPE). The research papers approved by COPE are finally sent for publication.

Since COPE is the apex authority to take all decisions related to publication of research papers and articles in 'Strides – A Students' Journal of Shri Ram College of Commerce', the decision of COPE is final and binding.

INSTRUCTIONS FOR MANUSCRIPT DRAFT

The following guidelines are to be carefully adhered by the students before final submission of the manuscript. The submitted manuscripts not conforming to the following guidelines are not taken into consideration for any further processing.

Format

Format of the article on the front page should be:

- a) Title
- b) Name(s) of the student(s) and mentor along with their details
- c) Abstract
- d) Keywords

Abstract

The abstract should capture the essence of the article and entice the reader. It should typically be of 100 -150 words, and in Italics.

Font type and word limit

The research paper is to be typed on A-4 size paper with single line spacing. The complete length of the paper should not exceed 5000 words including endnotes and references. The font size should be 12 and font style should be Times New Roman.

Referencing style

The Journal adheres to the APA (American Psychological Association) Referencing Style, Sixth Edition. Students must refer to the APA Referencing Guidelines to ensure conformance to this reference style. For further information you may visit the following link - <http://www.apastyle.org>

Endnotes

Endnotes should be serially arranged at the end of the article well before the references and after conclusion.

Table, Figures, Graphs

The first letter of the caption for table, figure, graph, diagram, picture etc. should be in capital letter and the other words should be in small letter - e.g. Table-1: Demographic Data of Delhi, Figure-1: Pictorial Presentation of Population etc.

MANUSCRIPT SUBMISSION GUIDELINES

Soft Copy: The soft copy of the manuscript should be sent through e-mail to the editor at strides@srcc.edu.ac.in and cc to principaloffice@srcc.edu.ac.in.

Hard Copy: The hard copy (3-Sets) of the manuscripts should be submitted in the Administrative Office of the College.

Declaration

As part of the submission process, the student and mentor needs to declare that they are submitting original work for first publication in the Journal and that their work is not being considered for publication elsewhere and has not already been published elsewhere. Again, the paper should not have been presented in any seminar or conference. The scanned copy of duly signed declaration by the students and their respective mentors has to be emailed along with the research paper.

COPYRIGHT

The student(s) remain the whole and sole author of their respective research papers published in 'Strides – A Students' Journal of Shri Ram College of Commerce' and hold its copyright. Also, the 'author' is wholly and solely responsible for plagiarism caught after publication (if any). The Editor, Referees, Mentors, COPE, SRCC, Printer, Publisher and Printing Press shall not be responsible for any plagiarism.

AWARD

The authors of best three papers from every Issue are awarded – First Prize, Second Prize and Third Prize on the SRCC Annual Day.



Principal's Message



The mission statement of the college signifying the existence and its road map to the achievement of its vision, reads as:

"To achieve and sustain excellence in teaching and research, enrich local, national and international communities through our research, improve skills of alumni, and to publish academic and educational resources"

To achieve and promote excellence in publications and applied research, the college has taken the initiative to launch a new journal exclusively to publish students' research papers and articles. It will be an add-on to the enriched catalogue of college publications and academic literature.

The Journal has provided an opportunity to the students of our college to focus on research. Since the students were not opened to the research methodologies at the undergraduate level, they were mentored by experienced faculty of our college. Simultaneously, their articles were also reviewed by the referees and tested for plagiarism before publication. After reporting all the suggestions recommended by the referees, the articles were revised and then finally published. The college had successfully released the foundation issue of the Journal **“Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17”** on the occasion of 91st Annual Day of the College held on 13th April, 2017. The Journal was released by Shri Prakash Javadekar, Hon'ble Union Minister of Human Resource Development, Government of India.

I would like to congratulate the students whose papers are published in this issue of the journal and simultaneously encourage all the students to contribute their research papers and articles for the successive issues of the Journal.

Best wishes for their future endeavors.

Prof. Simrit Kaur
Principal



Editor's Message

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The College appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the College has taken the initiative to launch a new Journal named 'Strides – A Students' Journal of Shri Ram College of Commerce' to encourage students to pursue research under the guidance of the faculty of Shri Ram College of Commerce.

It is a bi-annual Journal launched exclusively to publish academic research papers and articles by the students on contemporary topics and issues in the area of commerce, economics, management, governance, policies etc.

In order to maintain high standards of publication, COPE (Committee on Publication Ethics) has been constituted. The COPE shall be the apex authority to take all decisions related to publication of research papers and articles in Strides. The decision of COPE shall be final and binding.

To maintain high *academic standards*, *academic ethics* and *academic integrity*, a rigorous process of double blind review of research papers is followed along with screening of plagiarism of each manuscript received by the COPE



for publication. The research work published in Strides is original and not published or presented at any other public forum.

The foundation issue of the Journal **"Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** was successfully released on 91st Annual Day of SRCC held on 13th April, 2017 by Shri Prakash Javadekar, Hon'ble Union Minister of Human Resource Development, Government of India.

The successive Issues of 'Strides – A Students' Journal of Shri Ram College of Commerce' shall be bi-annually released.

I congratulate all the students whose research papers are published in this Issue of Strides and express my sincere thanks to their mentors and referees.

Dr. Santosh Kumari
Editor



Visit: <http://www.srcc.edu/publications/students-publications>

RESEARCH PAPERS

Understanding Tax Neutrality – A Comparative Study of Indian and Estonian Tax Structure Avi Gupta & Kawal Nain Kaur Kohli	1
Structural Breaks in the Indian Agriculture : A Painful Journey Akriti Dureja	15
Crypto Banks: The Future of Indian Banking Neeraj Anand & Rishav Jain	37
'Shell'tering Behind the Corporate Facade: Unmasking Money Laundering Arshnoor & Kanksha Malhotra	49
Urban Housing in India Shreya R & Shruthi Ramesh	57
Green Investment: Dimensions and Policy Perspective Tushar Saini & Aishwarya Thakur	71
Development of the Industrial Sector in India: An Enquiry Deepshikha & Monika Panchal	85
A Study of Some Determinants of an Education Policy Bipul Verma & Khushboo Chattree	101
Exploring Multitasking: Boon or Bane Madhavi Sharma & Janvi Khedia.	117
Bilateral Causality between Economic Growth and Economic Development Vaishnavi Paul & Deveshi Chawda	127



Bipul Verma
B.A. (H) Eco -IIIrd Year
Shri Ram College of Commerce
University of Delhi



Khushboo Chattree
B.A.(H) Eco-IIIrd Year
Shri Ram College of Commerce
University of Delhi

Mentor

Esther N. Ngaihte
Assistant Professor
Department of Economics
Shri Ram College of Commerce

A Study of Some Determinants of an Education Policy

Abstract

This paper focuses on certain aspects of education namely-accessibility, equity and quality. These are deemed essential pillars of a good education policy. The paper focusses on evaluating outcomes on each of them. For instance, the paper considers the question of how to evaluate if accessibility to education has improved, the tools that would be employed to judge it and the effectiveness of these tools in evaluating the outcomes. The paper further studies factors affecting each one of them. Regression analysis has been carried out to understand the impact of the underlying factors that affect accessibility, equity and quality. As an illustration, secondary data has been used to analyze the impact of numerous factors - infrastructure (such as proportion of schools with electricity or playground), nutrition (proportion of schools that provide mid-day meal, state-level health indicators), education level of instructors, proportion of teacher training institutes and performance of students on mathematical/language ability tests- on quality. Additionally, lack of data on some missing determinants has also been highlighted, such as measures that account for pedagogy and their impact on quality. Similar exercises were carried out for accessibility, and equity. The methodology for assessing performance on these three metrics has been outlined. Further the effectiveness of some of the existing measures was examined and modifications have been suggested in few cases.

INTRODUCTION

Research within the education sector in India in last two decades has highlighted the poor and ever worsening situation of quality of education within the Indian primary education system (Joshi, 2016). Not only do we fare poorly on overall indicators of education such as literacy as compared to other rapidly developing nations, we occupy the lowest spots across the world when it comes to quality of learning outcomes. There are many persisting concerns and challenges relating to access to and participation in education, quality of the education imparted, and equity in education.

Considerable amount of literature exists on education in India that focusses on enrolment, drop-out rates and incentive schemes.

Handa (1999) points out that raising primary school enrollment itself is easier said than done. The relative importance of school supply versus households' demand factors remains controversial, with serious implications for education policy. For the study household's characteristics data and information on school infrastructure were used. The impact of school characteristics on household schooling decisions is measured using a reduced form demand equation for children's schooling. The independent variables of this equation include characteristics of the individual (age), household characteristics that capture access to resources (age and sex of the head, literacy status of head) and the vector of school infrastructural characteristics.

Historically, empirical analysis has focused on two complementary explanations-school supply and household level determinants of demand-and broadly support this claim. In particular, studies have generally found that attainment of education increases with improvement in school infrastructure, given household characteristics, and that, given school infrastructure, attainment of education increases with income and expected returns to educational investment.

However, attendance, performance of students, school infrastructure and quality of teachers should also be considered. Das (2007) points out that enrolment alone is not a sufficient indicator of education policy unless a standard education attainment measure is used.

There has been a welcome change in the way we look at education policy in recent years, shifting gears from measures that value quantum such as enrolment ratios to quality-driven metrics such as attendance rates and pedagogical considerations.

(Chaterjee, 2018) analyses primary education policies and their outcome in India from 2005 to 2011 and suggests that progress has been mixed. Attendance on an average day has worsened despite improvement in enrolment rates. Further, the proportion of

underperforming students based on the age-specific requirements set by the NCERT¹ is high.

This paper takes an output-driven approach, it looks into education from different facets and the efficiency metrics used in assessing them.

RESEARCH QUESTION

- 1) How do we measure educational outcomes with respect to accessibility, equity and quality?
- 2) How effective are the existing measures of accessibility, equity and quality?
- 3) What are the factors affecting educational outcomes with respect to accessibility, equity and quality?

METHODOLOGY

To check the effectiveness of existing measures, variability of the measure has been considered. This has been assessed using boxplots. The aspects of education concerned are qualitative and broad in nature, this is the reason behind considering variability, any measure with low variability might not capture diversity to the fullest extent. Thereafter, factors crucial for determining outcomes for each of these aspects have been considered. The significance of the factors has been judged using a simple linear regression model of the form-

$$Y_i = B_0 + B_1X_{1i} + B_2X_{2i} + e_i$$

Where Y_i is the proxy measure of the dependent variable in each case (say GER in case of accessibility) and X^i represent the independent variable hypothesized to affect the dependent variable.

ACCESSIBILITY

Gross Enrollment Ratio (GER) is widely used for measuring accessibility. GER is defined as the ratio of students enrolled in a grade and the total students eligible for that grade². A high GER is an indication of high enrollment and improved accessibility.

Analysis of GER data for primary classes (I-VIII) for Indian states shows that, GER generally varies between 90 to 100 in most of the states. Only three states have GER below 90 namely, Andhra Pradesh (83.3), Jammu & Kashmir (80.1) and Uttar Pradesh (86.2). All the Union Territories (except Delhi NCR) also have GER below 90.

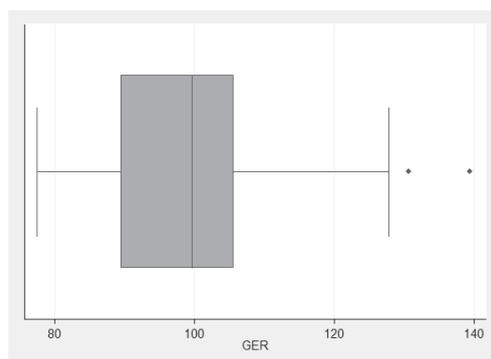
²The United Nations Educational, Scientific and Cultural Organization (UNESCO), describes 'Gross Enrolment Ratio' as the total enrolment within a country "in a specific level of education, regardless of age, expressed as a percentage of the population in the official age group corresponding to this level of education.

The low variability in GER is further ascertained by a boxplot³ of GER data. The boxplot clearly shows the clustering of the GER data about the median. The low variability in GER might suggest that GER may not be very effective in capturing differences in accessibility. Further inadequacy of GER in capturing educational accessibility is reflected from the fact that several states have GER exceeding 100. These include states of Bihar (107.7), Jharkhand (107.1), Delhi (116.6), Himachal Pradesh (101), West Bengal (104.2) etc. GER can exceed 100 in case of late enrollment, early enrollment, or repetition, resulting in the total enrollment exceeding the population of the age group that officially corresponds to the level of education.

The fact that 17 states and union territories have GER exceeding 100 points out that such distortionary cases are high in the Indian context. It is also possible that high GER may in turn reflect other inefficiencies say repetitions and dropouts. A better measure of accessibility would be Net Enrollment Ratio (NER), which excludes overage and underage students. The divergence between NER and GER is also a reflection of inefficiency of GER. However, most of the official statistics and studies continue to rely on GER.

Moreover, GER or NER both being based on enrollment data neglect the important aspect of actual attendance. Studies have recorded high absenteeism in primary schools despite high overall enrollment in the schools. (Public Report On Basic Education in India, 2000). Accessibility is a broad concept and its essence is that education should comfortably be within the reach of whosoever wants to attain it. If high enrollment is not corroborated with high attendance, it may in turn reflect that although it is easy to get enrolled, lack of transport facilities, and other facilities within school, inhibit the accessibility of education. Hence a measure discounting the GER for attendance seems more fitting.

Fig-1- Boxplot GER data for all states

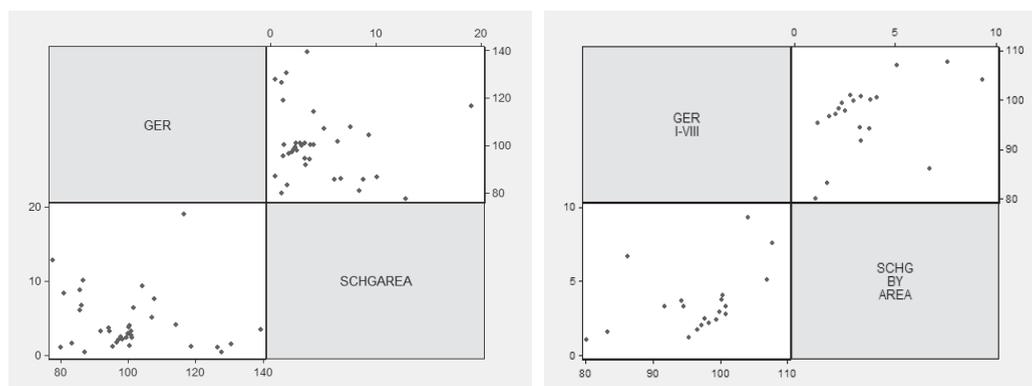


³The width of the box represents the inter quartile range i.e, the distance between the first and third quartile. The line inside the box is the median. The whiskers emerging from the box end at 1.5 times the nearest quartile.

Although, GER may not be a very good tool in capturing all the aspects of accessibility, it can reasonably be assumed that the observed variation in GER is caused by some underlying differences within states. Analysis has been carried out to study these underlying determinants.

**Fig 2 - Plot of GER and no of govt SCH per 10sqkm area (a) for all states
(b) for 20 selected states**

(The GER data is from DISE flash statistics 2016)



Through analysis of cross sectional state wise data of India, factors that are crucial in determining improved accessibility as measured by GER have been studied. In this analysis the impact of availability of school within a 10 square km radius on accessibility has been considered.

A plot of GER primary students (class 1 to 8) and the number of schools per 10 square km area as shown in figure 2 (a), shows a positive relation between the two, but the observed relation is not very sharp, and many data points are scattered away from the cluster. Figure 2 (b) plot the same relation for 20 selected states⁴, again the relationship is positive but not very sharp. This analysis shows that the Gross Enrollment Ratio and number of schools in an area are positively related to some extent which can mean that the policies aimed at improving the availability of schools implemented thus far, have been successful in increasing enrollment in India. But the lack of a strong relation might indicate that apart from the physical presence of the school itself, factors such as availability of transport and better infrastructure within the school could also potentially affect enrollment.

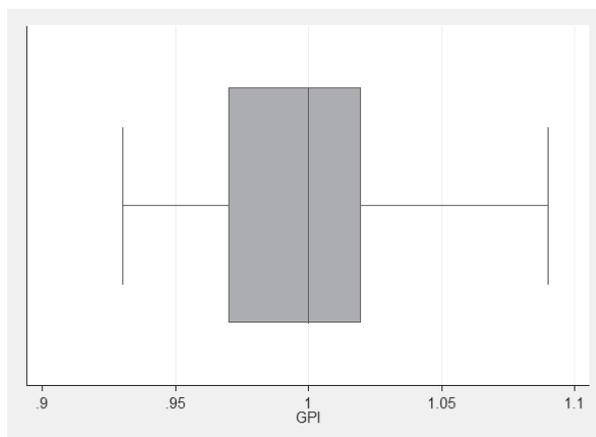
EQUITY

While issues in equity include a wide spectrum such as caste, class and disability, this study only aims to understand gender equality in education. A measure for gender

⁴Union territories and north eastern states were excluded from the analysis owing to their smaller size to eliminate outlier observations and observe whether that made a difference to the relationship obtained.

equity in education is the Gender Parity Index (GPI) which is the ratio of female to male enrollment discounted for the state wise gender ratio⁵.

Fig 3– Boxplot of GPI data



Analysis shows that just like GER, the variation in GPI data for Indian States is small. The minimum and maximum value of GPI is 0.93 and 1.09 respectively. Average GPI across states is 1.002 and standard deviation being 0.0388 with most of the data points clustered between 0.9 and 1. It is also clear from the above boxplot data that the GPI data is clustered around the median value of 1. From the data it seems that there is gender parity in terms of enrollment. However, the low variation in GPI is a caveat to such an interpretation. Further, as the preceding analysis shows the enrollment data itself has little variation, being based on enrollment data variation in GPI is further reduced. Moreover, education equity is a very broad term and looking at it just in terms of enrollment parity would be myopic. These distinctions between gender parity goals [achieving equal participation of girls and boys in all forms of education based on their proportion in the relevant age-groups in the population] and gender equality goals [ensuring educational equality between boys and girls] needs to be understood well. The Gender Equality Index is a tool used by EU and its member states to assess how far (or close) they are from achieving a gender-equal society. The Gender Equality Index⁶ measures gender equality in eight areas which includes work, money, knowledge, time, power, and health. In comparison the enrollment data as used in GPI doesn't capture all the dimensions of gender equity. Say girls may be discriminated against based on availability of resources or biased classroom pedagogy. This might further get reflected

⁵The Institute for Statistics of UNESCO also uses a more general definition of GPI: for any development indicator one can define the GPI relative to this indicator by dividing its value for females by its value for males.

⁶Gender Equality Index was developed by the European Institute for Gender Equality (EIGE), a full-fledged European Union agency for gender equality.

in the performance of boys and girls in various areas, which again is not captured by GPI. An Equity index as similar to the one used by EU rather than a parity index would be more appropriate in case of educational equity. Such an index could be based taking into consideration access and participation, gender-aware educational environments, processes, and outcomes.

Although GPI may not effectively capture educational equity, it can reasonably be assumed that the variations in GPI among states are caused by some underlying factors. Henceforth, further analysis has been carried taking GPI as a proxy for gender parity. Through the analysis of cross-sectional-state-wise data of Indian states, factors that are helpful in assessing any improvements in equity with respect to gender have been examined.

Fig 4(a) - Plot of GPI and proportion of schools with girl's toilet. (b) - Plot GPI on State female literacy (all states)

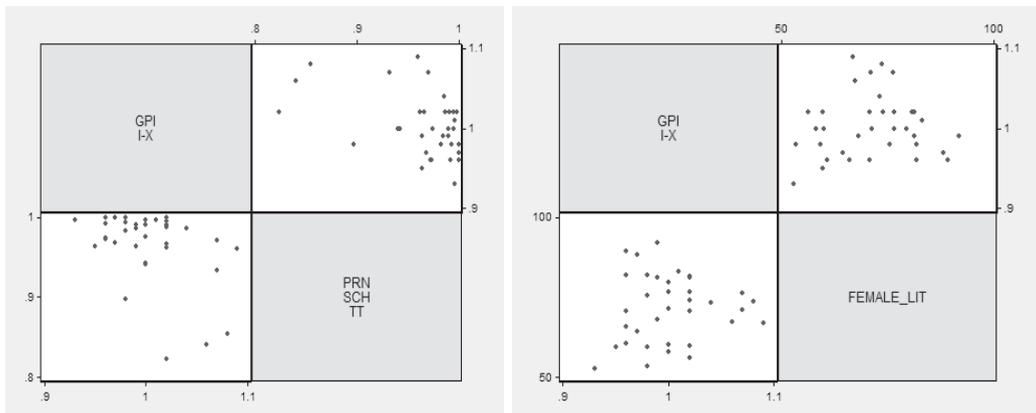


Fig 5- Regression result if GPI on state female literacy and portion of schools with girls' toilet

. regress GPI female_lit pct_sch_toi						
Source	SS	df	MS	Number of obs = 35		
Model	.011211719	2	.005605859	F(2, 32) =	4.47	
Residual	.040148295	32	.001254634	Prob > F =	0.0194	
Total	.051360014	34	.001510589	R-squared =	0.2183	
				Adj R-squared =	0.1694	
				Root MSE =	.03542	
GPI	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
female_lit	.0005831	.0005856	1.00	0.327	-.0006098	.0017759
pct_sch_toi	-.3995343	.1361341	-2.93	0.006	-.6768304	-.1222381
_cons	1.345953	.1320101	10.20	0.000	1.077057	1.614849

The first factor that has been considered for improved gender parity is the proportion of schools with girls' toilet. The second factor that has been considered is state female literacy. This is an independent variable and may act as a proxy for improved gender consciousness translating into improved gender parity through encouragement and creation of an environment conducive for the pursuit of education by a female child. We carry out a regression with state GPI as the dependent variable and the proportion of schools with girls' toilet in the state and state female literacy as the independent variable. The regression model turns out to be significant, but the sign of the coefficients is opposite to expectation as shown in figure 5. This is also evident from the plot of GPI on proportion of schools with girl's toilet which doesn't yield any clear systematic picture. The regression results show that some variable correlated with the independent variable has not been included.

The result can be interpreted as; building girl's toilet alone may not result in an improved parity in enrollment. As claimed in several reports the quality of toilets and their maintenance is also a concern⁷. For instance, lack of water or cleanliness might deter female students from using the toilet. The coefficient of state female literacy turns out to be insignificant, which is also evident from the lack of any clear pattern in fig 4 (b). It can be inferred that improved female literacy standalone might not translate into improved gender parity, however, more information is required to make any stronger claim.

QUALITY

The paper also aims to understand factors that influence quality of education. For this we use factors that influence learning outcomes or more specifically performance on assessment tests. The following two parameters were used for the same-⁸

- Ability to divide a three-digit number by a one-digit number among children from age group 6 to 14 years
- Ability to read and comprehend a paragraph designed for students in the second grade. These constitute the dependent variable for our analysis.

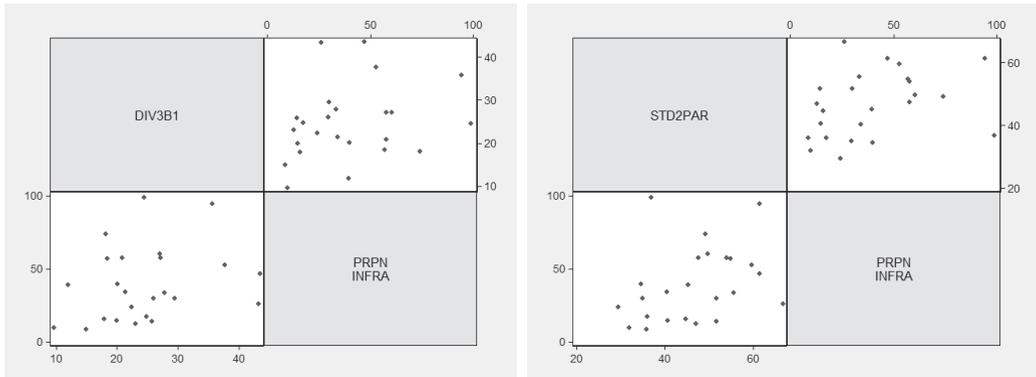
Based on availability of data numerous factors were considered as independent variables. These include education-level of instructor represented by proportion of teachers with education at the undergraduate level (or higher), number of teacher training institutes, infrastructure represented by proportion of schools with computers and/or playgrounds and nutrition represented by proportion of schools with mid-day meals.

⁷A report by Child Rights and You (CRY) on RTE published in 2013 highlights the problem of infrastructure quality in government schools. (Downloaded from <https://www.cry.org/resources/pdf/RTE-booklet.pdf>)

⁸Selected of parameters based on data published by the Pratham in the ASER (Annual Status of Education Report).

Fig -6- Scatterplot of percentage of students

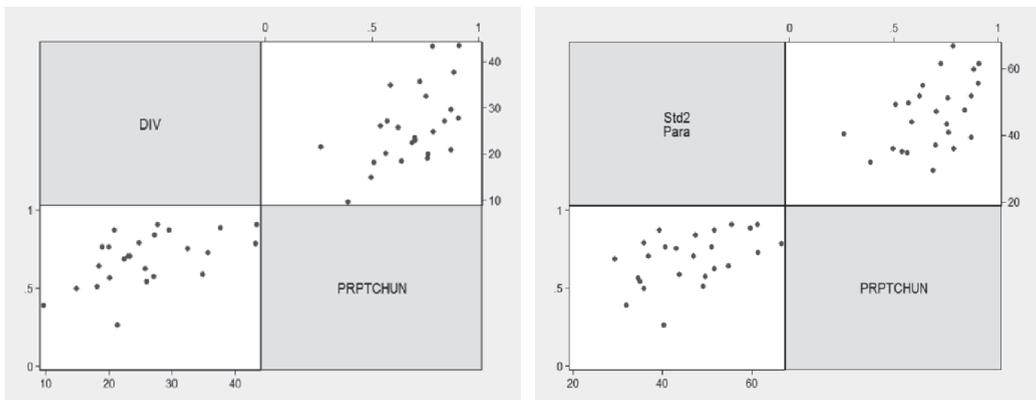
who can- (a)- divide 3-digit number by 1-digit number (b)- can read a class 2 equivalent para on percentage of total schools that have computer.



The relation between availability of 'good' infrastructure and learning outcomes, as evident from the scatterplot of the ability to divide and the percentage of schools with computers and ability to read and percentage of schools with computer, it has a positive relation on learning outcomes.

Fig-7 - Scatterplot of percentage of students

who can- (a)- divide 3-digit number by 1-digit number (b)- can read a standard 2 equivalent para on percentage of teachers with qualification equivalent to undergraduate degree or above.



Further, the scatterplots show a positive relationship between the proportion of teachers having undergraduate (or higher) education and the students' ability to divide and read a paragraph designed for students in the second grade.

Additionally, the analysis did not indicate any relationship between learning outcomes and proportion of schools with the mid-day meal scheme. This calls for the use of other indicators that can help in drawing a conclusive relationship between nutrition and assessment of quality.

Fig -8- Regression result of Percentage of students

who can divide 3-digit number by 1 digit number on percentage of schools with computer (proxy for infrastructure) and percentage of teachers with qualification equivalent to undergraduate degree or above.

6 . regress DIV PROPNUNGD PRPNINFRA						
Source	SS	df	MS			
Model	665.73594	2	332.86797	Number of obs =	24	
Residual	1066.10239	21	50.7667806	F(2, 21) =	6.56	
Total	1731.83833	23	75.2973188	Prob > F =	0.0061	
				R-squared =	0.3844	
				Adj R-squared =	0.3258	
				Root MSE =	7.1251	

DIV	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PROPNUNGD	.2927396	.0896788	3.26	0.004	.1062424	.4792369
PRPNINFRA	.0409106	.0604729	0.68	0.506	-.0848496	.1666708
_cons	3.198794	6.103946	0.52	0.606	-9.495056	15.89264

When a regression of the learning outcome as indicated by the percentage of students who can divide a 3-digit number by a 1-digit number on factors of teacher quality and school infrastructure is carried out, the model turns out to be jointly significant as indicated by a significant F statistic at 1% level of significance. Further, the coefficient of teacher quality turns out to be significant at 1% level of significance, while that of infrastructure is not significant. The regression results give an indication of the importance of pedagogy and quality teachers.

The lack of availability of age-wise data for learning outcomes and attendance records act as a limitation of the data set used and consequently of the analysis itself.

CONCLUSION

The paper highlights some shortcomings in assessment of the outcomes when attempting to understand the impact of education policies on accessibility, equity and quality. Gross Enrollment Ratio, a measure of accessibility is restricted to enrollment

figures only and does not take attendance into account. The gender parity index faces similar issues as it too depends on enrollment. Other factors such as pedagogical biases and resource unavailability that might aid inequity are not taken into consideration. Inferior quality of learning outcomes is apparent from the analysis in this study and available literature. Effective management seemed to reduce dropout rates, however, limitations of the available data set hindered our ability to carry out further meaningful analysis

Analysis carried out on the available data shows that increasing the number of schools in an area directly translates into improving students' enrollment. While the thrust on infrastructure improvement seems to have paid dividends, quality of infrastructure remains a matter of concern. However, the weak relationship between proportion of schools with girls' toilet and enrollment with respect to gender, may reflect upon the inferior quality and/or lack of maintenance of infrastructure. As shown in the paper 'good' infrastructure does have a positive effect on learning outcomes, thus making quality of infrastructure as important as availability of infrastructure itself.

Further, the paper shows that learning outcomes improve as the education level of teachers improves. Along with the availability of physical inputs, education of the instructor is also a key factor in influencing learning outcomes. Vast literature is available on methods to revamp teaching in primary education in India.

Moreover, the paper emphasizes on the need for a holistic approach towards understanding and analyzing outcomes of the efforts made to improve education in India.

REFERENCES

- Abhijit V. Banerjee, Shawn Cole, Esther Duflo, Leigh Linden. Remedying Education: Evidence from Two Randomized Experiments in India, *The Quarterly Journal of Economics*, Volume 122, Issue 3, 1 August 2007, Pages 1235–1264
- Rema Hanna & Leigh Linden, 2010. Measuring Discrimination in Education, Working Papers id:2541, eSocialSciences.
- Kingdon, Geeta Gandhi. The Progress of School Education in India. *Oxford Review of Economic Policy* 23, no. 2 (2007): 168-95. <http://www.jstor.org/stable/23606611>.
- Kumar Rana, and Samantak Das. Primary Education in Jharkhand. *Economic and Political Weekly* 39, no. 11 (2004): 1171-178. <http://www.jstor.org/stable/4414769>.
- R. Govinda, Madhumita Bandyopadhyay. Access to Elementary Education in India. *Country Analytical Review*. (2008). http://www.nuepa.org/Download/Publications/Create/CAR%202008/India_CAR.pdf

Dostie, Benoit, and Rajshri Jayaraman. "Determinants of School Enrollment in Indian Villages." *Economic Development and Cultural Change* 54, no. 2 (2006): 405-21. doi:10.1086/497006.

Latif A, Choudhary AI, Hammayun AA (2015). Economic Effects of Student Dropouts: A Comparative Study. *J Glob Econ* 3: 137. doi: 10.4172/2155-6105.1000137

Subrahmanian, Ramya. (2005). Gender equality in education: Definitions and measurements. *International Journal of Educational Development*. 25. 395-407. 1016/j.ijedudev.2005.04.003.

Amarendra Das. (2007). How Far Have We Come in Sarva Siksha Abhiyan? *Economic and Political Weekly*, 42(1), 21-23. Retrieved from <http://www.jstor.org/stable/4419104>

Ishita Chatterjee, Ian Li, Marie-Claire Robitaille (2018). An overview of India's primary school education policies and outcomes 2005–2011. *World Development*. Volume 106. Pages 99-110. <https://doi.org/10.1016/j.worlddev.2018.01.016>.

LIST OF TABLES

1 - (a) – GER for all states

(b) - GER for 20 selected states

SL No	States/UTs	GER I-VIII	SL No	States/UTs	GER I-VIII
1	A & N Islands	87.1	1	Andhra Pradesh	83.3
2	Andhra Pradesh	83.3	2	Bihar	107.7
3	Arunachal Pradesh	127.8	3	Chhattisgarh	100.9
4	Assam	101.6	4	Gujarat	96.7
5	Bihar	107.7	5	Haryana	91.8
6	Chandigarh	86.7	6	Himachal Pradesh	100.9
7	Chhattisgarh	100.9	7	Jammu & Kashmir	80.1
8	D & N Haveli	85.6	8	Jharkhand	107.1
9	Daman & Diu	81.0	9	Karnataka	99.4
10	Delhi	116.6	10	Kerala	95.4
11	Goa	101.1	11	Madhya Pradesh	94.3
12	Gujarat	96.7	12	Maharashtra	98.3
13	Haryana	91.8	13	Odisha	100.2
14	Himachal Pradesh	100.9	14	Punjab	100.4
15	Jammu & Kashmir	80.1	15	Rajasthan	97.2
16	Jharkhand	107.1	16	Tamil Nadu	99.9

17	Karnataka	99.4	17	Telangana	97.8
18	Kerala	95.4	18	Uttar Pradesh	86.2
19	Lakshadweep	77.5	19	Uttarakhand	94.6
20	Madhya Pradesh	94.3	20	West Bengal	104.2
21	Maharashtra	98.3			
22	Manipur	130.6			
23	Meghalaya	139.4			
24	Mizoram	126.6			
25	Nagaland	100.4			
26	Odisha	100.2			
27	Puducherry	85.6			
28	Punjab	100.4			
29	Rajasthan	97.2			
30	Sikkim	118.8			
31	Tamil Nadu	99.9			
32	Telangana	97.8			
33	Tripura	114.3			
34	Uttar Pradesh	86.2			
35	Uttarakhand	94.6			
36	West Bengal	104.2			

Source – DISE School Report Card 2015-16 (downloaded from <http://udise.in/drc.htm>)

Table - 2 – (a) – GPI data for all states

SI No	States/ Ut	Gpi I-x
1	A & N Islands	0.98
2	Andhra Pradesh	1.02
3	Arunachal Pradesh	0.95
4	Assam	1.06
5	Bihar	0.98
6	Chandigarh	1.02
7	Chhattisgarh	0.96
8	Dadra & Nagar Haveli	0.96
9	Daman & Diu	1
10	Delhi	1.0
11	Goa	0.96

12	Gujarat	0.96
13	Haryana	1.09
14	Himachal Pradesh	1
15	Jammu & Kashmir	1
16	Jharkhand	1.02
17	Karnataka	0.99
18	Kerala	0.99
19	Lakshadweep	0.97
20	Madhya Pradesh	1
21	Maharashtra	0.98
22	Manipur	1.04
23	Meghalaya	1.08
24	Mizoram	0.96
25	Nagaland	1.02
26	Odisha	0.97
27	Puducherry	0.99
28	Punjab	1
29	Rajasthan	0.93
30	Sikkim	1.07
31	Tamil Nadu	1.02
32	Tripura	1.01
33	Uttar Pradesh	0.98
34	Uttarakhand	1.02
35	West Bengal	1.07

Source – DISE School Report Card 2015-16 (downloaded from <http://udise.in/drc.htm>)

Table 3–State wise ASER Reading and Arithmetic test for children in the age group 5-16

SL No	States/UTs	Std2 Para	DIV 3D by 1D
1	A & N Islands	0.98	
1	Arunachal Pradesh	29.4	22.4
2	Assam	35.9	14.9
3	Bihar	43.9	34.9
4	Chhattisgarh	51.1	19
5	D & N Haveli	45.2	11.9
6	Daman & Diu	54	20.8

7	Gujarat	49.2	18.1
8	Haryana	61.4	43.5
9	Himachal Pradesh	66.7	43.3
10	Jammu & Kashmir	36	24.8
11	Jharkhand	37	23.4
12	Karnataka	40.4	21.4
13	Kerala	61.5	35.7
14	Madhya Pradesh	40.7	20
15	Maharashtra	54.8	18.4
16	Manipur	43.2	32.5
17	Meghalaya	32	9.6
18	Mizoram	35	26
19	Nagaland	34.6	20.1
20	Odisha	51.7	25.8
21	Puducherry	36.9	24.5
22	Punjab	59.7	37.7
23	Rajasthan	51.7	29.5
24	Sikkim	49.7	27.1
25	Tamil Nadu	47.5	27.2
26	Tripura	44.7	17.9
27	Uttar Pradesh	39.4	20.8
28	Uttarakhand	55.6	27.8
29	West Bengal	47	23

Note: Data represents the percentage of all eligible children in the age group 5-16 who (i) can read a para equivalent to a Std 2 level text in language of their choice (ii) can solve a 3-digit by 1-digit division problem

Source: ASER Survey Data 2016 (downloaded from <http://www.asercentre.org/education/>)

IMPRINT LINE

Printed and published by Prof. Simrit Kaur (Principal, Shri Ram College of Commerce) on behalf of 'Shri Ram College of Commerce' and printed at M/s Poonam Printers, C-145, Back Side Naraina Industrial Area, Phase-I, New Delhi and published at Shri Ram College of Commerce, University of Delhi, Maurice Nagar, Delhi-110007, India.

Editor – Dr. Santosh Kumari

License No. – DCP / LIC No. F. 2 (S / 37) Press / 2017

Registration No. DELENG/2018/75093

ISSN 2581- 4931 (Print)

Publication Date: September 28, 2018

Printing Date: September 25, 2018

Publication City: Delhi

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

HISTORY OF THE JOURNAL

The idea to launch this Journal was discussed in December 2016 by the former Officiating Principal, **Dr. R.P. Rustagi** with **Dr. Santosh Kumari**, the Editor of the Journal. Since the idea appealed to **Dr. Santosh Kumari**, she took the initiative to contribute to SRCC by creating this new academic research Journal and took the responsibility for its Creation, Registration, License and ISSN (International Standard Serial Number) etc. along with *Editorship*. Therefore, **Dr. Santosh Kumari, Assistant Professor in the Department of Commerce, Shri Ram College of Commerce** was appointed as the Editor of the Journal vide. Office Order – SRCC/AD-158/2017 dated March 14, 2017. She meticulously worked hard in creating the concept and developing the structure of the Journal. She introduced the concept of COPE (Committee on Publication Ethics) to maintain high academic standards of publication.

On behalf of the college, **Dr. Santosh Kumari** made every effort in seeking License from Deputy Commissioner of Police (Licensing), Delhi to register the Journal at "The Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India". The paper work for seeking license started under the former Officiating Principal, **Dr. R.P. Rustagi** on March 27, 2017. The foundation Issue of the Journal "**Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17**" was successfully released on the 91st Annual Day of SRCC held on April 13, 2017 by **Shri Prakash Javadekar, Hon'ble Union Minister of Human Resource Development, Government of India**. The title of the Journal got verified and approved by the Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India on April 21, 2017. On September 1, 2017, **Prof. Simrit Kaur** joined SRCC as Principal and signed each and every legal document required for further processing and supported **Dr. Santosh Kumari**.

On December 18, 2017, the College got the license "**License No. - DCP / LIC No. F. 2 (S / 37) Press / 2017**" to publish 'Strides – A Students' Journal of Shri Ram College of Commerce'. Due to change of Printing Press, the License got updated on March 09, 2018. On April 26, 2018, the SRCC Staff Council unanimously appointed **Dr. Santosh Kumari** as the '**Editor of Strides**' for the next two academic years.

On April 27, 2018 (The Foundation Day of the College), **Dr. Santosh Kumari** submitted the application for the registration of the Journal. On May 04, 2018, the college received the 'Certificate of Registration' for Strides – A Students' Journal of Shri Ram College of Commerce and got the **Registration No. DELENG/2018/75093** dated May 04, 2018. ***On behalf of SRCC, it was a moment of pride for Dr. Santosh Kumari to receive the 'Certificate of Registration' on May 04, 2018 at the Office of Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India (website - www.rni.nic.in).***

On May 07, 2018, **Dr. Santosh Kumari** submitted the application for seeking ISSN (International Standard Serial Number) at "ISSN National Centre – India, National Science Library, NISCAIR (National Institute of Science Communication and Information Resources). Weblink - <http://nsl.niscair.res.in/ISSNPROCESS/issn.jsp>". Finally, the College received the International Standard Serial Number "**ISSN 2581-4931 (Print)**" on June 01, 2018.

We are proud that this journal is an add-on to the enriched catalogue of SRCC's publications and academic literature.

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE
ISSN 2581-4931 (Print)



RELEASE OF FOUNDATION ISSUE OF STRIDES



Foundation Issue of the Journal “*Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17*” was successfully released on the 91st Annual Day held on April 13, 2017 by Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.



SHRI RAM COLLEGE OF COMMERCE

University of Delhi, Maurice Nagar, Delhi - 110 007

Phone: 011-27667905 Fax: 011-27666510

Website: www.srcc.edu