

Extended Education at College in India: Advancing Equity Through the Extension of Public Academic Support Programmes for Students from the Socially and Economically Disadvantaged Groups

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Abstract: The paper seeks to expand our knowledge on the importance of public academic support programmes (ASPs) in higher education (HE) in India, which extend supplementary instruction with the aim to improve academic performance and support academic efforts of students from the socially and economically disadvantaged groups (SEDGs). This paper shows that students from the most disadvantaged amongst the SEDGs, that is, those residing in rural areas and women who experience multiple barriers that compound the effects of their disadvantages, have taken advantage of supplementary instruction classes. These classes have allowed HEIs to account for students' academic needs and challenges related to their socio-economic disadvantages, that remain unmet in regular classrooms. By targeting educational resources to students who are most disadvantaged, these programmes compensate for the absence of parental support and recognise the underlying socio-economic obstacles of students from achieving academic success at college. Given the acknowledged role of higher education in providing economic and social benefits to individuals, the paper argues that on-campus state enabled ASPs targeting students from the SEDGs make HE in India more equitable and contribute in reducing social inequalities in the wider society.

Keywords: academic support programmes, supplementary instruction, caste, socially and economically disadvantaged groups (SEDGs), India

Introduction

Most nations around the world have focused on expanding their higher education (HE) systems equitably, as it is widely recognised that educating a large and a diverse student body has economic and social benefits for the economy, society and for the individuals (United Nations Educational, Scientific and Cultural Organisation [UNESCO], 2016). It has the potential to break the inter-generational transmission of economic and social disadvantages and improve individuals' chances of social mobility (Marginson, 2016).

While promoting equity in access to HE has been an important objective, higher education institutions (HEIs) around the world, including in India, struggle to improve graduation rates of students from disadvantaged socio-economic family backgrounds and reduce inter-group inequalities in academic achievements (UNESCO, 2016). Low academic achievements have negative implications for students' labour market prospects and occupational opportunities, which in turn perpetuate inter-group economic inequalities (Varghese, 2019). In other words, inter-group inequalities in academic achievement implies that the potential of higher

education as a means for increasing chances of inter-generational social mobility and achieving a more equal society remains unrealised.

Existing research suggests that deprived socio-economic family background is a barrier that continues to limit access to opportunities through the educational pipeline and manifests as socio-economic disparities in academic achievements (Reardon, 2011; St. John, Hu & Fisher, 2011). Moreover, concerns have been expressed about the inequalities that maybe reproduced by rising parental investment in supplementary tutoring outside regular classrooms, particularly by high socio-economic status families, in order to boost children's academic performance to stay ahead of their peers (Byun, 2014; Entrich, 2020).

In light of available evidence, this paper takes the view that provisions of on-campus public academic support programmes (ASPs) work towards advancing equity in HE and fighting persisting social inequalities in the wider society. These ASPs are effected by way of extending supplementary instruction classes aimed at addressing academic needs of students from the disadvantaged socio-economic families. Equity is understood here as a process of ensuring equality through acts of inclusion that bring students from the disadvantaged socio-economic group into the fold of educational opportunities with a belief that every person has potential, value and should be respected (Varghese, 2018). From this perspective, promoting equity in HE means redressing past unequal access and offering additional educational resources in favour of students from the disadvantaged socio-economic groups, so as to equalise opportunities of access to conditions of learning required to compete and succeed in the system.

In India, affirmative action measures have no doubt played an important role in promoting equity in HE by addressing barriers of entry and contributed to bringing in more students from socially and economically disadvantaged groups (SEDGs) to higher education institutions (HEIs). However, these gains have been overshadowed with these students lagging in academic performance vis-à-vis their privileged peers with persisting inequalities in academic success. Against this background, the focus of the paper is to answer the following two questions: what is the nature of academic challenges facing students from SEDGs in higher education in India? And, how extensions of supplementary instruction classes by HEIs are intervening to expand opportunities of learnings for students from SEDGs to succeed in college?

It is argued that supplementary instruction support programme, with all its limitations, has benefitted the poorest of the poor who are taking maximum advantage by participating in these classes. These classes have allowed HEIs to account for students' academic needs and challenges related to their socio-economic disadvantages, which remain unmet in regular classrooms. Amongst the SEDGs, female students and students residing in under-served rural locations have been extended access to equal opportunities of learning, with on-campus supplementary classes remaining their sole source of academic support. Through extension of supplementary classes, there has been a more equitable distribution of learning opportunities since students have been provided additional help in terms of teaching time, learning material and smaller classes. Thus, efforts such as extension of supplemental academic instructions by HEIs have made substantial contribution in promoting equity in HE in India.

Data and Sources of Information

This paper employs a combination of datasets, given the limitations of a continuous and detailed data set related to socio-economic origins of students and other vital statistics in HE (Mathews, 2010). To present HE development and show trends in participation of students from the SEDGs, the paper uses Gross Enrolment Ratio (GER) calculated for 18–23 years of age-group provided by the All-India Survey of Higher Education carried out by the Ministry of Human Resource Development.

To present the extent of access to private supplementary tutoring in India across social groups, the paper draws from available studies and presents most recent statistics in terms of percentage of students taking private coaching at the higher education level. The percentage are calculated from the 75th Round of the National Sample Survey, pertaining to the period July 2017-June 2018, that provide household information whether the respondents between 3 and 35 years currently attending education were taking/taken private coaching. From this information, the study focuses on those attending higher education (typically 18–23 years, inclusive).

Additionally, the CPRHE large-scale mixed-methods studies (Sabharwal & Malish, 2016; Malish & Sabharwal, 2015), using a multi-institutional case-study approach, are empirical basis of developing some of the arguments. Case studies of multiple institutions were spread across States in India which represented different regions of the country (north, west, south and east). These studies helped in providing a holistic understanding on academic challenges facing students from the SEDGs in HEIs, including their experiences and views on supplementary academic support offered by their HEIs¹.

In both the studies quantitative and qualitative research instruments were used to collect the data. The data was analysed using inferential statistics and thematic analysis. The CPRHE study one by Sabharwal and Malish (2016) was carried out in twelve HEIs located in six States across India. Sources of information included a survey of 3200 students studying in their second year, 70 focus group discussions with students, 50 student diaries and 200 interviews with faculty members and institutional leaders. Students studying in their second year were selected, as this is the year when students are well positioned to offer a fair assessment of their academic and college experiences (Zaitseva et al., 2013).

The CPRHE study two by Malish and Sabharwal (2015) was carried out in ten HEIs which were receiving grants from the federal funds for implementation of supplementary support programme. Sources of information included a survey questionnaire administered to all students enrolled in the supplementary classes-403 students responded to the survey questionnaire. The qualitative tools included 7 focus group discussions which were held with a sub-group of students who had also responded to the survey. Further, 28 semi-structured interviews were conducted with faculty members/instructors involved in teaching in supplementary classes, and faculty coordinators and institutional leaders involved in the management of the programme.

The rest of the paper is organised as follows. Next section presents recent developments in HE in India, with a focus on equity promoting measures for the disadvantaged socio-economic

1 The CPRHE study one (Sabharwal and Malish, 2016) was carried out in HEIs located in six states of India (Bihar, Delhi, Karnataka, Kerala, Maharashtra and Uttar Pradesh). The CPRHE study two by Malish and Sabharwal, 2015 was carried out in ten states across India. The 10 selected HEIs were spread across 10 states in India (Bihar, Gujarat, Haryana, Kerala, Maharashtra, Meghalaya, Punjab, Tripura, Uttar Pradesh and West Bengal).

groups in India. Section 3 presents existing academic challenges faced by SEDGs in HE in India, including access inequalities in private investment on supplementary support. Informed by existing literature on the importance and effectiveness of supplementary academic support programmes for students from the SEDGs, in section 4, the paper explores the disaggregated characteristics of participating students in supplementary instruction classes provided by HEIs, its teaching-learning features, and the nature of challenges students face as they navigate their access to supplementary classes. The paper concludes with policy recommendations.

Recent Developments in Higher Education in India and Equity Promoting Measures

HE sector in India has seen an unprecedented expansion over the last few decades. Between 1960 and 2019, the Gross Enrolment Ratio in India (GER) shifted from an elite stage (1.5%) to a stage of massification (26.3%); the student enrolment increased from 0.6 million to 37.4 million students and is the second largest system in the world after China (Varghese, 2015; Ministry of Human Resource Development [MHRD], 2019). An important feature of massification of HE in India has been an increase in diversity in the student body. Trends on enrolment in higher education shows that while inter-group inequalities in access to HE persists, there has been an improvement in enrolment of the SEDGs over the years. For example, between 2009–10 and 2018–19, the GER for the scheduled castes social group increased from 11.1% to 23% (MHRD, 2010, 2019). The SEDGs today constitutes 57% of student enrolment in HE in India (MHRD, 2019).

The goal of Education for All (EFA) helped in strengthening the school system and bringing a larger cohort of secondary school graduates from deprived groups to pursue higher studies. Importantly Constitutionally mandated affirmative action measures have been significant equity measures to promote access of students from the SEDGs to HE. Students from the SEDGs in India belong to socially excluded groups, such as, the scheduled castes (SCs: former ‘untouchables’), other backward classes (OBCs: lower in the caste hierarchy, but not ‘untouchables’) and scheduled tribes (STs: indigenous groups) who have been historically denied access to educational rights (Ambedkar, 1936). These groups are also more likely to be economically disadvantaged groups as compared to the rest (Thorat & Newman, 2010).

Constitutionally mandated affirmative action (AA) policies in admission in the form of reservation of seats in higher education institutions, financial support including free-ships and scholarships, and relaxation in the admission criteria have been important equity initiatives to address barriers of entry (Thorat, 2016), and improve enrolment of students from the disadvantaged social groups in higher education. The combination of policies (EFA and AA), however, has not had the desired equity effect in HE. Even when students from the SEDGs in India have gained access, their persistence and successful graduation from college remains a major challenge facing the HE system in India.

Challenges Facing Students from the SEDGs in India in HE

Existing research shows students from the SEDGs are more likely to perform poorly vis-à-vis their privileged peers in HE classrooms (Sabharwal, 2020). A relatively higher proportion of students from the SEDGs have lower grades (Henry & Ferry, 2017) and pending uncleared back-papers from previous semester that increases their odds of dropping out from institutions of HE (Sivasankaran, 2004; Sabharwal, Thorat, Balasubramanyam, & Diwakar, 2014). Among the dropouts, these studies further show that a larger share of students are from the disadvantaged social groups.

The degree attainment gaps in HE is a combination of disadvantages and challenges faced by students from the SEDGs which have a cumulative negative effect on the level of academic integration required to successfully graduate from college. Evidence from the CPRHE study one (Sabharwal & Malish, 2016) suggests that barriers facing students from SEDGs stems from inequitable conditions of academic preparation in preceding levels of education. Additionally, an unsupportive nature of academic environment for learning in regular HE classrooms hindered students' chances of moving out of a low academic performance trap (Sabharwal, 2020).

Barriers to Academic Preparation for College

Results from the CPRHE study one (Sabharwal & Malish, 2016) show that in their journey to HEIs, students from the SEDGs experience multiple barriers related to their family background and their schooling that influence their ability to be academically prepared for college. Students from SEDGs are more likely to reside in rural locations and from disadvantaged educational pathways that would have exposed them to under-resourced schools, out-dated high school curriculum and medium of instruction in regional language (that makes transition to English in HE difficult).

These students enter college with a stigmatised ethnic family identity, low educational levels of parents and experiences of poverty. These characteristics limit their possession of parental social and cultural capital known to be linked in providing privileges and advantages for academically preparing students with knowledge and skills to succeed in college (Perna & Thomas, 2008). Students' preparation for college begin early in the education process through additional academic private support outside regular classrooms, which SEDGs are less likely to access vis-à-vis their privileged peers.

In the light of available evidence, it is increasingly being argued that private supplementary tutoring supported by parental investment plays a (re)production role of sustaining and exacerbating social inequalities (Entrich, 2020). It is widely recognised that supplementary tutoring in India which has become an increasing and a widespread phenomenon (Azam, 2016; Bhorkar & Bray, 2018) is employed by high SES families that invest strategically in privately organised supplementary lessons in academically oriented subjects generally outside regular school hours. The main purpose of parental investment is to improve test-scores of their children-particularly at the high school level to qualify competitive tests for admissions to selective higher education institutions offering science and engineering subjects (Sujatha, 2014; Ørberg, 2018; Ghosh & Bray, 2020).

A growing body of literature using macro level data sets in India suggests a socio-economic gap in access to private supplementary learning opportunities across educational levels, and particularly at the high school level. Students from high SES families, with better educated parents, living in urban areas and men are more likely to attend private tutoring and spend more vis-à-vis those from low SES backgrounds, from rural areas and women (Azam, 2016; Mitra & Sarkar, 2019).

Observers have noted that social inequalities in the extent of access to private supplementary tutoring in India at the school level imply under-representation of students from the SEDGs in high value academic subjects (such as STEM), and highly selective elite public universities (Agarwal, 2009; Ørberg, 2018). Similarly, international research suggests that high SES families (where parents are highly educated, have high income and high occupational status) are more likely to invest in greater quantities and better qualities of supplementary instruction to provide competitive advantages to their children over their peers for educational attainment and educational placement (Bray, Kwo, & Jokic, 2015; Entrich, 2020).

Moreover, at the HE level, estimates from large scale data sets such as the National Sample Survey Organisation (2017) show that opportunities to access private supplementary education follows the 'graded nature of the social order' (Ambedkar, 1936, p. 47) in the caste system where the groups are placed in a graded order one above the other in social status (higher castes/SCs/STs). Opportunities to access private supplementary tutoring follow a similar graded pattern with increased access among groups of higher social status and privilege.

Students from the higher caste families (which include non-SC/ST/OBC) had a greater likelihood of accessing private supplementary tutoring (21 %) vis-à-vis students from families considered disadvantaged caste (SCs-13 %) and ethnicity (STs-10 %). Social inequalities in access to supplementary learning opportunities that are designed to boost academic performance and improve students' chances to succeed in higher education implies that if access to these avenues are limited to privileged socio-economic groups, it can become a mechanism that reproduces social inequalities in post-secondary academic performance.

Unsupportive Learning Environments in Regular Classrooms in HEIs

Furthermore, in large and diverse HE systems, in terms of both socio-economic background and diversity in learning needs, available empirical evidence indicates unsupportive teaching-learning processes in regular classrooms as barriers to academic integration and increasing academic risks of students from the SEDGs to remain in a low performance trap. The CPRHE study one (Sabharwal & Malish, 2016) provides evidence of unsupportive teaching-learning processes.

The study shows that teaching-learning in regular classrooms took the form of lecture-based method, being the dominant form of transaction with minimal participation by students; absence of group work that restricted chances of collective learning; absence of informal interactions with faculty members and a deficit-perspective towards students from the SEDGs. It was not uncommon for faculty members highlighting students' deficiencies and considering presence of students from the SEDGs as a result of policy of reservation and not merit as the reason for lowering the average academic quality in their classrooms. In addition, barriers to academic integration also related to large class-sizes which are considered to present high risk

to students as these constrain teachers to engage with students, and limits both quantity and quality of curriculum coverage (Martin & Arendale, 1992).

Furthermore, the study points out that the consequences of negative attitude of teachers combined with large-class sizes and non-interactive teaching-learning methods resulted in students to hesitate to ask questions and clarify their academic doubts in their classrooms, and compelled students from the disadvantaged groups to seek support from peers more often outside their college. Such forms of coping mechanisms of seeking academic support indicate not only limited access to interactions in regular classrooms that foster academic integration, it points towards a fractured sense of belonging of students in HE campuses that can result in a feeling of marginality, low self-esteem and undermine academic performance (Strayhorn, 2012).

Availability of Supplementary Instructions on Campuses for More Social Equality in Academic Performance

Multiple studies show that availability of academic support programmes, such as supplementary instruction classes offered on campus for students from the disadvantaged groups is especially critical (Tinto, 2012; Grillo & Liest, 2013). As noted earlier, these students begin college academically under-prepared and have lower odds of graduating. Existing research affirms that campus-based efforts to provide academic support have positive benefits on their academic performance. Particularly also because families of these student groups are less likely in a position to invest their own resources in supplementary learning activities to augment academic credentials of their children as compared to high SES families.

Through supplementary instructions, students' academic requirements are supported outside of regular classroom, leading to greater academic integration of students from SEDGs and improving their social relationships with other students, in turn positively impacting their academic performance (Tinto, 2012). More specifically, existing international research on the use of tutoring and supplemental instructions in higher education show that it improves the average academic performance of students, and improves retention to graduation (Congos, 2003; Grillo & Liest, 2013). Grillo and Liest (2013) also found a positive association between quantity of hours spent in supplementary classes and students' mean GPA—more tutoring hours led to higher GPAs which then led to a higher likelihood of graduating.

Results from existing international research suggests that academically at-risk students (students whose high school ranks were lower than the average for the college entering class or those scoring 0–25th percentile range on university admission test) who had access to additional academic assistance showed significant gains in their test-scores and were more likely to persist in college compared to those who did not use these services (Hodges & White Jr., 2001; Grace-Odeleye, 2020). Similarly, a study by Entrich and Byun (2020) on involvement in supplementary learning activities at college found that access to additional learning opportunities had a compensatory effect, because students from lower SES families tended to benefit more from their participation in supplementary learning activities in terms of increased likelihood of employment.

On-Campus Supplementary Academic Support Programme with a Compensatory Agenda in India: Insights on the Purpose of the Programme, Its Features, and Characteristics of Students that it Serves

In India, policy efforts to promote equity in HE has recognised the underlying socio-economic obstacles of students from SEDGs that place them at risk of not meeting the academic demands of higher education. Federally funded on-campus academic support programmes have been initiated for students from the SEDGs (UGC, n.d.). Universities and colleges which have at least 100 students belonging to SEDGs are eligible to receive additional financial grants under this programme, mainly to organise course-specific special (supplementary) classes. Financial assistance is provided to purchase equipment's, books, journals and honorarium to coordinators, teachers and post-graduate student instructors involved in teaching and conduct of classes, including provisions of additional expenses towards the cost of part-time support staff.

The main aim of the programme is to extend additional support in academic subjects to students from the SEDGs to catch up with their peers, boosts their academic performance and reduce their failure and dropout rates. While the term 'remedial' is used in the wording of the programme, strategies adopted to provide additional academic support does not include courses taught within postsecondary education that cover content below the college level which is the widely recognised approach to remedial education (Radford, Pearson, Ho, Chambers, & Ferlazzo, 2012). The programme guidelines define remedial coaching broadly as a strategy that offers support in the form of supplementary classes connected to courses that should enable students to apply that support to the tasks required by the course (UGC, n.d.).

The academic support strategy of the programme is more aligned with the Supplemental Instruction approach (Martin & Arndale, 1992) that provides academic support in the form of study groups connected to specific courses. The broad purpose of the programme is thus to ensure that once students from the SEDGs are in the institutions of higher education, they are offered and receive appropriate learning and teaching support to successfully complete their academic courses.

Participants as Beneficiaries and Self-Referral Dimension of the Programme

Importantly, participation in the programme is voluntary, and those students who participate in the programme are considered its beneficiaries. Participation in the programme is acknowledged in the literature to form the core component of the academic support intervention, since it is only when students participate in the programme that there are chances of achieving better results (Tinto, 2012).

The results from the CPRHE study two (Malish & Sabharwal, 2015) indicate that the main source of information on the availability of classes were their teachers (71%), followed by circulars displayed on notice boards (22%), and in some cases from their friends (7%). However, the role of faculty member was limited to providing information on the availability of supplementary classes, with students self-referring themselves for seeking additional academic assistance, as opposed to being referred by their teachers. For example, students themselves identified that they need to join supplementary classes for additional academic support (71%) was a more common reason vis-à-vis teachers recommending students to join these classes (64%). The self-referral dimension of seeking additional academic support

determined characteristics of students that went beyond their socio-economic status and were serving students who experienced multiple disadvantages.

Who are the Beneficiaries of the Programme Amongst the Most Disadvantaged Groups?

While the target and grants' intent was to boost performance in courses through providing appropriate additional academic support to students from SEDGs, most students who were self-referring themselves for supplementary classes were members of more than one disadvantaged group. Students opting for the supplementary classes were those who along with their disadvantaged socio-economic background (82%), were first-generation HE learners (81%), from rural background (78%) who lacked avenues & resources in schools that aid in college preparation, and women (64%).

The extension of supplementary on-campus academic support was found to address urban-rural disparities in access to provisions of educational resources. Students opting for additional avenues of opportunities of learning and participating in the supplementary classes were more likely to be from disadvantaged geographies such as from rural locations. Importantly, students opting for supplementary classes had experienced inequitable pre-college conditions of study who had studied in under-resourced government schools (97%), transacted out-dated syllabus (close to 90%), and studied in regional language (56%), which negatively influenced their abilities of transition to English as a medium of instruction in higher education.

Women in general and specifically from the scheduled caste group were more likely than the rest to opt for supplementary classes. For example, women were more likely to attend classes (64%) vis-à-vis men (36%), and especially women from the SC (76%) and OBC (69%) groups. Under-representation of men amongst student group suggests the reluctance of male students from the disadvantaged social groups to seek additional academic support. Similar findings have also been reported in the wider literature.

Existing research suggest that while students at risk are among those who are least likely to request for help (Martin & Arndale, 1992), and caste stigma attached to supplementary classes pose further challenge for active participation (Sabharwal, 2020), men from the disadvantaged racial groups (such as African American men) are more likely to be reluctant to seek support for academic issues (Palmer, Davis, & Hilton, 2009). Hooks (2004) explains that male sense of pride stems from a façade of confidence and masculinity that impedes their abilities to access campus resources, such as supplementary tutoring services.

Preponderance of Final Year Students and Those in High-Risk Programmes and Subjects

Supplementary tutoring was being sought mainly by students from the final year at the undergraduate levels predominantly to improve their chances to improve their exam marks and to clear their back-papers to successfully complete their higher education degree. For example, those attending supplementary classes, majority of the students (86%) were studying at the undergraduate (UG) level and the rest at the post-graduate levels. Further, 81% of the UG level students were in their 3rd year (final year), 11% in the 1st year and rest in the 2nd year (8%). Most students reported that they had one un-cleared back-paper (69%) followed by having less than 3 back papers (21%) and close to 7% reported to have more than 5 back

papers. The study further shows that most students (72%) with at least one un-cleared back-paper were studying in their final year, followed by students in 2nd year (17%).

Further, majority of students attending supplementary classes were enrolled in Bachelor of Arts (BA) programme (40%) offering social sciences and humanities subjects that most often have large class sizes that provide students with little opportunity for interaction with the professor or the other students. Economics and English were the two main subjects that students were seeking additional academic support followed by history, political science and geography-as these were the subjects offered in the BA programme.

On average, students in supplementary classes were also seeking additional academic assistance in traditionally difficult programmes and subjects (Bachelor of Science-29%; Bachelor in Technology & Bachelor in Computer Application: 20%, and Bachelor of Commerce-10%) that presents high-risk to students of failing or achieving barely passing grade. In the literature, common high-risk courses include science, technology, engineering, and mathematics (STEM) subjects (Dawson, van der Meer, Skalicky, & Cowley, 2014). Likewise, students reported to be seeking additional academic support in STEM subjects, such as, physics, chemistry, mathematics, statistics, computer programming and computer applications.

Academic Enhancement Expectations from Supplementary Classes

Similar to academic enhancement reasons of high SES families for investing in additional instructions for their children as noted earlier, students from SEDGs expected these classes which were offered by their HEIs to enhance their academic skills and improve marks in exams in the subjects (91%). Students also expected that these classes will improve their knowledge in core subjects, spoken English and communication skills, writing skills, study skills & time management skills. In addition, students expected to improve their social skills, in particular by enhancing their group discussion skills.

These findings indicate that students were aware of their academic needs, were taking steps for their improvement and relied on supplementary classes as a form of additional academic as well as social support. Majority of students (86%) attending supplementary classes were not seeking private supplementary tutoring in any of the subjects that they were studying at college. In other words, for students from the SEDGs, supplementary classes offered by their HEIs are the only source of avenue to enhance their knowledge in core subjects and clear their academic doubts. In its absence students noted '*we would not have been able to continue if supplementary instructions were not available*', implying that their persistence rested on the availability and additional learning provided in the supplementary classes.

Supportive Features of Supplementary Classes: Small Groups/Class-Size, Discussion Method and Bi-Lingual Instructions

Existing literature shows that an important feature of supplementary instruction classes is its small class size that promote high levels of student interaction and supports student learnings (Tinto, 1993; Martin & Arndale, 1992). Research consistently points out that opportunities of personal interactions and feedback from teachers offered by small study groups of students is

associated with creating a sense of belonging (instead of marginalisation) and positively influence student retention, especially of at-risk students (Tinto, 1993).

In the context of India, three important dimensions of supplementary classes emerged to be most supportive of students learning and were often mentioned by participating students. These dimensions included small class size, interactive-discussion based pedagogy and bi-lingual medium of instruction. The class-size, teaching method and language of instruction in supplementary classes were also found to be in sharp contrast to regular classes, that were large in size, followed lecture-based method and used English as a medium of instruction (Sabharwal & Malish, 2016).

Small class size of supplementary classes (on average it was less than 25 students) enabled opportunities for students of greater engagement with regular teachers who were also teaching in the supplementary classes. Beyond facilitating additional personal interaction with teachers, advantages to students of small class size included teachers encouraging discussion and following a bi-lingual medium of instruction, which helped in creating a collaborative classroom learning environment and promoted greater peer-group interaction. The pedagogical style of the discussion method in supplementary classes coupled with comfort in the medium of instruction created an interactive academic environment in the classroom and increased confidence of students to ask questions and clear their doubts.

Importantly, classes being free of cost (84%) and study notes being provided (80%) were major supportive elements mentioned by participating students. In addition, classes being based on learning needs of students with a focus on students' individual problems and difficulties provided supportive and safe spaces that facilitated sharing of common problems and a feeling of connectedness. Group learning in homogenous academic peer groups in a diverse environment has been acknowledged in the literature to improve students' self-confidence, increase social connections of students to their HEIs and improve academic performance (Webb, 1989), in turn impacting their retention.

Attendance Barriers Faced by Students

As a result of supportive dimensions of teaching-learning processes being followed in supplementary classes and classes being free of cost, the CPRHE study two (Malish & Sabharwal, 2015) shows majority of students from the SEDGs who volunteered to participate in this programme were attending their classes regularly (70%). However, the CPRHE studies show that some challenges persisted that posed as barriers to their attendance. Barriers that students navigated to attend their supplementary classes related to students' disadvantaged family background; inconvenient timings of the classes; inefficient implementation in the form of lack of information on classes, classes not held regularly and delay in provision of supplementary classes to end of academic term.

Irregularity in Attendance and Poverty

A major reason for students not able to attend supplementary classes regularly (especially, those that were held after college hours) was because they were engaged in part-time jobs after college to supplement household income or helping in household chores. Working in jobs

took away time from students' studies and made it difficult in managing the workload of both regular and supplementary classes.

Timings of the Classes

Since majority of students attending supplementary classes were from the rural areas, distance of their college from their place of residence and class timings posed as a major challenge to students. Challenges of distance and timing of the classes resulted due to lack of transport facilities early in the morning and late in the evening, and, concerns of safety, since many of the students were travelling from far away and remote areas. Irregular supply of electricity posed as an additional barrier in efficient use of supplementary classes, especially if the classes were held during evening time.

Irregularity in Attendance and Caste Stigma

The student survey also revealed that students felt a fear of social stigma in attending supplementary classes, especially as participation stigmatised students of particular social groups with a remedial status. Spearman correlation revealed significant inverse association between regularity in attendance and feeling that the classes were attached with a caste stigma ($r=-.11$). In other words, the more the feeling of stigma attached to attending remedial classes, less likely was the regularity of attendance to these classes. These results are similar to findings in the literature that have found students feeling a social stigma (caste-in case of India) and shame attached to attendance in supplementary classes (Martin & Arndale, 1992; Mori, 2013; Sabharwal, 2020).

Inefficient Implementation of Student Support Mechanisms by HEIs Influencing Participation

It is noted in the literature that those students who volunteer to participate are students who are motivated to learn, which is considered critical to academic success (Tinto, 1993). The results from the CPRHE studies suggest that while traits such as motivation and perseverance could influence students taking advantage of the supplementary classes, an inefficient implementation of student support mechanisms by HEIs emerged as another important barrier to participation in the supplementary classes. This took the form of lack of information from HEIs on availability of classes, supplementary classes not being held regularly, and delay in organisation of classes.

Lack of Information from HEIs on Availability of Classes

The results from the CPRHE study one (Sabharwal & Malish, 2016) suggests that participation is influenced by possessing knowledge of availability of provisions of support services. The results from this study show that a large majority of students (60%) were not aware that their HEIs were extending supplementary academic support. Since students did not have information, the uptake of the programme was accordingly lower in the case-study HEIs. For example, 59% of students from the SC group did not participate and avail benefits of the supplementary academic support provided at their HEIs (Sabharwal & Malish, 2016).

Supplementary Classes are not Held Regularly

While the majority of the students (65%) who attended supplementary classes reported that their classes were held regularly, 35% of the students indicated otherwise (Malish & Sabharwal, 2015). Reasons of classes not being held regularly most often mentioned by the programme coordinators included: limited availability of teachers after college hours or on holidays to teach in supplementary classes; low remuneration provided to the teachers for their additional efforts with many teachers not interested in taking these classes, and delay in payment to teachers who taught in supplementary instruction classes.

Delay in Organisation of Classes During the Academic Session

An important challenge that students faced was that the provision of academic support which must happen in the early period of academic year was being delayed and shifted to end of the academic term. The findings from the CPRHE study (Malish & Sabharwal, 2015) indicate that the classes were mainly organised after the results of the middle of the semester for courses with high failure rates in mid-semester exam or being held two-three times weeks before the end-semester exam. The organisation of the supplementary classes being delayed to the end of the academic year, created a situation of completing all classes in a short period of time, increasing vulnerabilities of students, and placing them at risk of academic failure.

Concluding Observations

This paper attempted to shed light on the nature of academic challenges faced by students from the SEDGs in India and argued that on-campus state supported academic support programmes are important mechanisms of creating conditions of re-distributing opportunities of learnings and advancing equity in higher education. Provisions of state supported on-campus academic support programmes are especially relevant since existing literature indicates in abilities of low SES families to spend on private tutoring to provide additional academic support and augment academic credentials of their children. Inequality in such forms of human capital investments means that students from high SES families have greater opportunities of acquiring knowledge and skills that increases their likelihood of gaining access to better career opportunities and access to subsequent economic opportunities, which in turn contribute to the reproduction of social inequalities in a society.

This paper demonstrates the important role state-supported supplementary instruction classes were performing in providing equal opportunity to students from low SES families, female students and those residing in rural areas, to seek additional academic support. Like students from high SES families, students whose parents are unable to invest and support their academic efforts had access to additional academic support through supplementary classes provided by their HEIs. Further, the teaching-learning dimensions followed in supplementary classes were more supportive to their learning vis-à-vis the environment of their regular classes.

The findings in the paper further revealed that students recognised the importance of accessing on-campus academic support for augmenting their academic credentials and were

self-referring themselves for seeking supplementary instructions. Unfortunately, their institutions were not informing them and delaying providing academic support, often too late in the course of their programme and their semester. This delay placed students from SEDGs at a considerable disadvantage – from a poorer academic starting point, they were having to catch up with their peers within a significantly reduced time frame.

It is important that institutions (1) shift their perspective of providing academic support programme from a reactive to a proactive mode and consider the delivery of supplementary instruction services from the first day of classes, (2) disseminate the information on availability of classes more widely and through multiple channels, (3) identify and attach supplementary instructions with high-risk courses and programmes with large-class sizes, (4) include course related study skills instructions (for example, encouraging reading of additional articles in the reference lists, or instructions on how to make notes) integrated with the content of academic disciplines, and (5) encourage participation of all students in supplementary classes irrespective of their socio-economic background so that students from SEDGs are able to participate without fear of stigma.

In conclusion, there is more research needed to examine the impact of participation in HE supplementary classes on academic performance and compare it with non-users of academic support. The analysis suggests that early intervention and pro-active support by HEIs will provide more equal and inclusive conditions for students from the disadvantaged socio-economic backgrounds to improve their academic performance, enhance retention and promote academic success. Future research should consider similar analyses of supplementary instruction programmes at colleges, globally, where HE systems have significantly diverse socio-economic student cohorts with learning needs that remain unmet in regular classrooms.

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