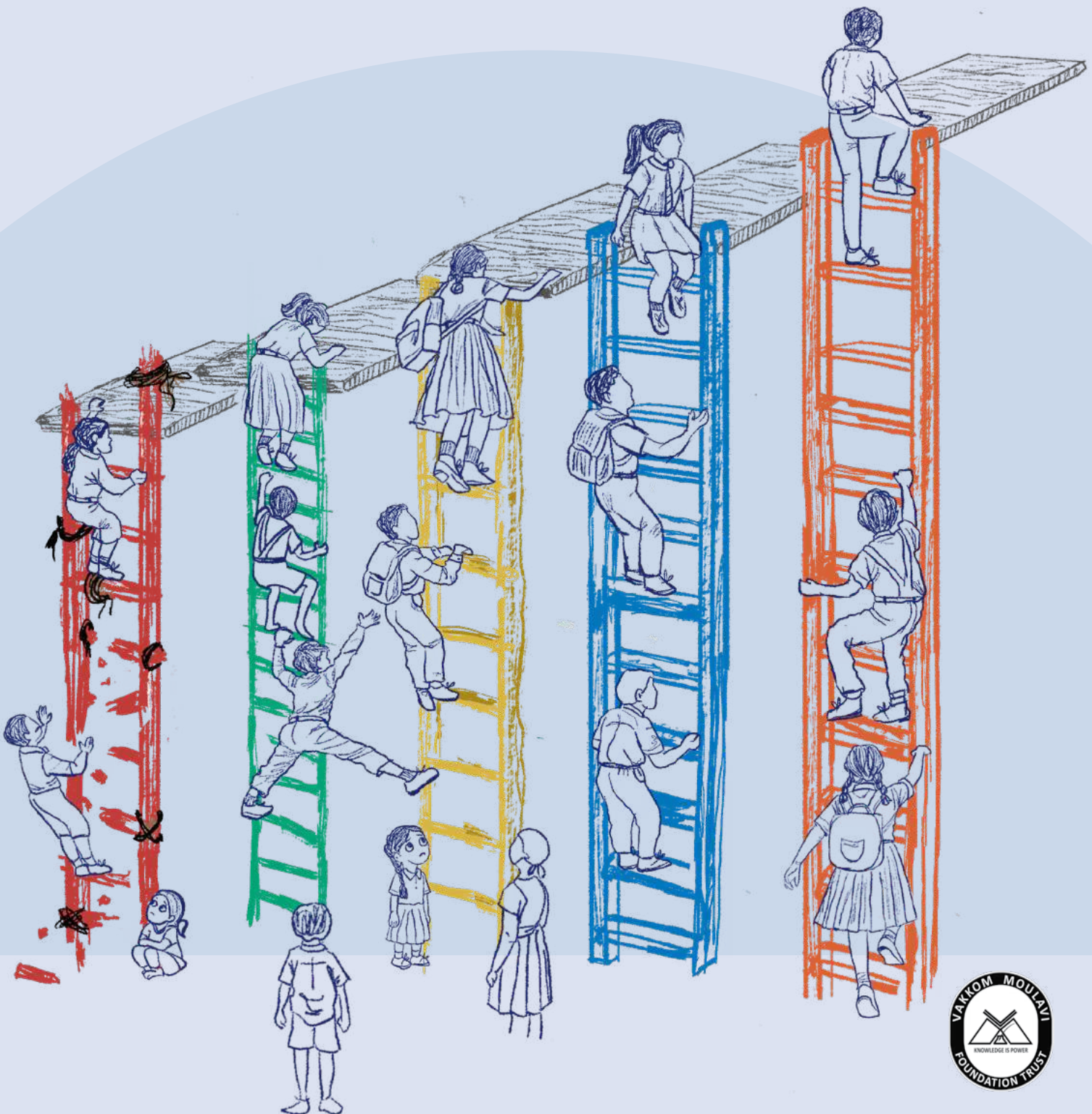


Separate and Unequal?

Language, Curriculum and Management
in Kerala's School Education System

With comparative lessons from Finland





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Disclaimer

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Foreword

This report comes at a very opportune time when the future of education in Kerala is being debated and new policies and programs are being prepared. With its insights based on analysis of multiple datasets, it aims to provide evidence and understanding about the current state of our school education system, to enable informed decision-making.

For over a century, Kerala society has been deeply concerned about ensuring equal education opportunities for all children and has rightly taken great pride in its achievements. Among them is the fact that every child in Kerala completes secondary education. But there is a pervasive sense of malaise about the education system in the state, including what and how much children are learning as well as the disparities between different socio-economic groups in their educational achievements. The growth of private unaided schools, the expansion of English medium instruction, the role of Malayalam in education, the burden of additional tuition classes, the quality of the examinations, along with other issues, are topics of discussions amongst many stakeholders. However, many of these discussions take place without detailed analysis of the situation on the ground.

Separate and Unequal? delves deeply into different sources of education data for Kerala, and systematically documents the evidence about early grade learning and the patterns of enrolment in schools of different management types, languages of instruction and curriculum over different level of school education. It shows the concentration of students from poorer households in government schools who are learning mainly in Malayalam, especially at the lower primary level. The report provides a hitherto unseen snapshot of an education system that has diverged substantially from the one which existed three decades ago, and which has generated new inequalities.

In its most structured form, in modern society, formal education takes place in schools, through the interaction between a well-trained teacher and the child and through interaction with peers in classroom settings, using a defined curriculum and language of instruction, planned lessons, learning materials and assessment tools. *Separate and Unequal?* shows that these macro-characteristics of the education system which create the learning and social environment in which students receive their formal education differ substantially for different groups of children in Kerala society.

The final section of the report on Finland, contributed by researchers at the University of Jyväskylä, provides comparative information which is also very valuable for stakeholders and policy makers in Kerala. Finland's focus on the individual development of each child, research-based teacher training and formative assessment highlights an alternative vision and approach to education.

The future of a society depends upon the education of its youth. Education is about the development of children's minds, character, spirit and values, to enable them to acquire knowledge and skills and to learn how to learn. It takes place not only in schools but also at home and in society, in fields and playgrounds, through culture and media. However, formal schooling continues to be one of the most formative experiences in the education of children. As in the past, we must endeavour that all our children have opportunities for quality education and that our system does not become segmented and unequal.

It is my hope that this report will make a contribution towards this objective.

Prof. Jameela Begum

Former Dean of the Faculty of Arts and Senate Member of the University of Kerala
Member, Board of Trustees, VMFT

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Summary

Until about thirty years ago, the majority of students in Kerala studied in government schools or aided schools. They followed one common curriculum and were taught in Malayalam (or, in the mother tongue of linguistic minorities). Teachers were appointed according to similar rules in all schools, which covered their education and training qualifications, the number of students they would teach and so on. Textbooks were provided free of charge. Kerala's celebrated progress in school education, including universal enrollment in grades 1-10, was achieved through a common, publicly funded education system.

In just over a generation, the school education landscape has changed dramatically and rapidly. Private unaided schools have sprung up all over the state, and they can offer curricula which are different from the State government curriculum. English medium education is offered in government and aided schools. And yet, these momentous changes have been insufficiently recognised in the public sphere or analysed in academic and policy circles.

This report presents the current status of the school education system in Kerala based on analysis of three large quantitative datasets: (i) surveys of reading proficiency conducted as part of the Annual Status of Education Report (ASER) (ii) the census of schools in the Unified District Information System for Education Plus (UDISE+) and (iii) the survey of households carried out by the National Sample Survey (NSS) on education. While these datasets cover all states in India, the report analyses the specific data for Kerala. The analysis is done at the student or school level, depending on the dataset. To our knowledge, it is the first time these datasets have been analysed for Kerala.

The report is written for a broad audience. While a lot of additional analysis has been done, the report presents conclusions based on simple tabulations, charts and map visualisations.

Seven main points emerge from this analysis:

1. About two-thirds of students in grade 2 and half the students in grade 3 are NOT able to read a simple passage which is at the level of grade 2.
-

Even amongst grade 5 students, 33 percent could not read this passage. The results are for rural students. Kerala performs best amongst other Indian states on the ASER assessment. Still, these proportions should be treated as unacceptable for a state that universalised secondary education decades ago and which places a high value on education. The ASER assessment was about reading proficiency only, and did not cover comprehension of the passage. Moreover, the percentage of students who could not read proficiently was higher among those who chose to read the passage in Malayalam, compared to those who chose to read an English passage (also at grade 2 level). Fewer students in government schools could read proficiently compared to those in unaided schools in grade 3.

2. The school education system is highly differentiated by type of school management, language of instruction and curriculum, across different levels of education.
-

About 20 percent of schools are now private unaided and two thirds of these have secondary or higher secondary classes. By contrast, half of government schools are lower primary (LP) schools (classes 1-4) and another 18 percent are upper primary (UP) schools (up to grade 7). These proportions are similar for aided schools. Turning to language of instruction, almost all unaided schools are English medium and significant proportions of government and aided schools offer English "parallel sections", rising with the level of education. The curriculum also sharply differentiates the different school types. The majority of unaided schools follow the Central Board of Secondary Education (CBSE) curriculum. All state government and

aided schools follow the State Board. In the government sector, only Central government schools follow the CBSE.

-
- 3. English is now a medium of instruction in a majority of schools in Kerala (either as the only medium of instruction or as a parallel section along with Malayalam).**
-

Even amongst government LP schools, 30 percent have English medium sections, as do 43 percent of aided LP schools. At the higher secondary level, 80 percent of government and over 90 percent of aided schools have English medium sections. As for students, at the primary level, over 60 percent are studying in English medium (taking all schools together). At the higher secondary level, in the science stream, almost all students are in English medium but in the humanities stream, only 60 percent are enrolled in English medium sections. Schools which are English medium or which have English medium sections are located all over the state, with no apparent spatial disparities.

-
- 4. Students move from private unaided schools to government and especially aided schools, after lower primary (grade 4) and especially after upper primary (grade 7).**
-

The reasons may be many, including cost, perceived quality, choice of curriculum and so on. But the main implication of this observed trend is that families who can afford the fees invest in private English medium education up to primary or upper primary education and then move their children to publicly funded education for secondary and higher secondary education, presumably to continue studying in English medium.

-
- 5. Kerala's school education system is also segmented by the economic status of families, starting at the lower primary level itself.**
-

Children from poor households tend to study in Malayalam medium government schools. At the primary level, two-thirds of children from the poorest households are studying in Malayalam medium, mainly in government schools. Even at the higher secondary level, 50 percent of these children are in Malayalam medium. On the other hand, amongst the richest 20 percent households, only 30 percent of their children study in Malayalam in primary schools. By the

higher secondary level, close to 90 percent of them are in English medium.

-
- 6. As a result, the social composition of different types of schools is also distinct. Private unaided schools have almost no students who are Below the Poverty Line (BPL).**
-

Many government schools, especially LP schools, have high proportions of BPL students (above 25 percent). BPL students comprise more than 50 percent of enrolment in many schools. Schools with high concentrations of poverty are distributed all over Kerala. These schools also have a different composition of teachers compared to unaided schools. In particular, the majority of teachers in government and aided LP schools, which enroll high numbers of students from poorer households, do not have an undergraduate degree and have only a diploma level teacher training qualification. In unaided schools, even at the LP level, the majority of teachers have a bachelor's degree and B.Ed. professional qualification.

-
- 7. The differentiation and segmentation in the education system are linked to policies regarding unaided schools and the language of instruction in government and aided schools, including the opening of English medium "parallel" sections.**
-

At the same time, over three decades, teacher education programs and public examinations which have great impacts on student learning, have not been reformed to address the profound changes taking place in school education and the needs of new generations of students.

The findings raise some important issues about the future evolution of Kerala's education system and its public funding. The policy on language of instruction is playing an important role in separating out students into different tracks. At the primary level, when the foundations of learning are laid, students from poor households are studying in schools with Malayalam medium, less qualified teachers and high concentrations of poverty. Publicly funded English medium education disproportionately benefits students from richer households at higher levels of the school system.

English is the *de facto* language in higher education and in higher paying jobs in India as well as abroad. It is also an important language of social communication, in the media, films and arts. All sections of the society,

including the poorest, undeniably aspire to ensure that their children receive high quality instruction in English from the primary level onwards, to gain access to these opportunities. At the same time, the Malayalam language is central to Kerala's identity and culture and continues to have a strong presence in oral communication, media, literature and films. But it is currently used in formal education largely by students from the poorest households, who have no other choice.

Providing equal opportunities to students of all sections includes providing access to high quality instruction in English and Malayalam. The effective teaching of two languages is one of the central challenges of Kerala's public education system. It needs to be addressed to prevent further segmentation of the system by socio-economic background and language. The situation calls for a rethinking of education policy to ensure an equitable language policy in the public system. Sound bilingual education is one such approach, which necessitates revamping the teacher education program, teacher professional development, the assessment system and other aspects of the education ecosystem. Education financing also needs to be addressed to meet the costs of such programs as well as to meet the needs of students from disadvantaged backgrounds, and of schools with high concentrations of poverty.

The final section of this report is on the Finnish school education system. The Government of Kerala has established a collaboration with the Republic of Finland in 2022 with respect to school education in the state. The strengths of the Finnish education system include a strong focus on student learning and well-being, teacher professionalisation and autonomy, and limited use of competitive examinations and standardised assessments. The system is also addressing new developments, such as students from multi-lingual contexts, the decline in child population and the fiscal challenge of maintaining a geographically extensive network of schools, as well as the decline in the perceived importance of education for socio-economic mobility. Finland's experiences are relevant for Kerala for the future development of its education system.



We need only try to imagine the enormous changes in the cultural development of children that occur as a result of mastery of written language and the ability to read – and of thus becoming aware of everything that human genius has created in the realm of the written word.

Lev Vygotsky,
“The Prehistory of Written Language”



...and or happy you for I'll K.
Greatly El-dunc will ever happ
You beautiful tells her how happ
th me your father, I'll take you
me I'll be breaking my heart

What this report covers

An Introduction



This report presents an analysis of Kerala's school education system, based on large scale quantitative datasets. This provides insight into the broad characteristics of the system, within which formal teaching-learning occurs.

These characteristics include the different types of management, the languages of instruction and the curricula that exist in schools. They shape the content of what is taught and the teaching processes, which finally influence student learning. It is the first such study of Kerala's education system, using these data.

The report begins with an analysis of student learning outcomes in reading, which brings into sharp relief the question of the quality of school education. It then examines where Kerala's students are studying: under what type of school management, with what language of instruction and using which curricula. The analysis explores the transition of students between these different types of learning environments at different levels of school education. It also probes whether there is segmentation of these learning environments, specifically, whether higher proportions of the poor and disadvantaged groups are concentrated in certain types of schools and the characteristics of these schools.

Finally, the study highlights issues related to the use of different languages of instruction in schools, including the evolution of government policy, teacher education, textbooks and assessment, which would need to be addressed to improve students' learning.

It is worth stressing that the report does not present much data on teachers because the publicly available datasets have limited information on them. It also does not analyse classroom teaching processes or student outcomes on a variety of dimensions. Data on these crucial aspects are not readily available –

neither from large scale quantitative surveys nor from well-designed qualitative studies. Such rigorous analyses are definitely required. Nevertheless, analysis of the macro characteristics of the system is also essential as they intimately influence educational processes within the classroom.

The report also discusses Finland's education system, its public policy and its approaches to language pedagogy and teacher development. Since 2022, the Government of Kerala has been collaborating with the Republic of Finland in the field of education. Like Kerala, Finland also achieved universal education when it was relatively poor, through publicly provided schools. Its schools used primarily one language along with one minority language. In time, Finland became one of the high performing countries in education, with its students performing very well on international assessments, such as the Program for International Student Assessment (PISA). The focus on student learning and development and the preparation of high-quality teachers have been the hallmarks of the Finnish system. Finland's education system now faces new challenges as it becomes more multi-cultural and multi-linguistic with more immigrants from different countries and cultures.

This report is intended for a broad audience. Many detailed tabulations and analyses were done and only a few are presented here, so as not to overwhelm the general reader. Those who are interested in finding out more are welcome to explore the dataset and the analyses.

DATA SOURCES

This study analyses three large datasets:

The Annual Survey of Education Report (ASER)

The survey covers rural children in India. A random sample of households is selected from each district. Children aged 5-16 years in each sampled household are tested using simple tests in language and mathematics. In reading, the highest test used is a simple passage at grade (Standard) 2 level.

- > In this study, we use detailed child-level data on the grade 2 reading test from the 2018 survey. These data were obtained from ASER and go beyond the tabulations presented in their published reports. Although data are available for 2022, they were not used because of the possible negative impact of school closures

during the COVID-19 pandemic on student learning.

Unified District Information System on Education Plus (UDISE+)

UDISE+ database is a census of the school education system in India, which is managed by the Ministry of Education (Government of India). Every school in India (including unrecognised schools and religious schools) submits data on a variety of school-level variables in a common format. Data is uploaded either by the school, or by officials at the block level (in some states), and a certificate of correctness of the data is given by the school head and the relevant education authority at the local level.

- > This study uses micro data for all schools in Kerala.¹ The tables, graphs and maps in this report focus on 2021-22, the latest year for which data had been released when this study was being prepared. However, data from all years since 2018-19, when online uploading of data became mandatory, have been analysed as part of this study, and there is little change in trends across the past three years. COVID-19 had no significant impact on student enrolment in Kerala.
- > Maps showing the geographical distribution of types of schools have been generated using the school's pin code.

The publicly released UDISE+ dataset has limited data on teachers, apart from the total number in each school and the individual teacher's educational and professional qualifications and some other characteristics. Important data such as the classes they teach or the subjects they teach and the language they teach in are collected, but not made public as yet.

National Sample Survey (NSS) on education

This survey of randomly selected households is periodically conducted by the National Sample Survey Organisation (Ministry of Statistics and Programme Implementation, Government of India) focusing specifically on education. It collects information on the participation of individuals aged 3-35 years in education, the type of educational institution they are enrolled in, the language of instruction, the socio-economic background of the households and other variables.

- > This study uses the 2017-18 survey known as "Household Social Consumption: Education Survey" (NSS 75th round), specifically the data collected from 4,461 randomly sampled households in Kerala.



¹ Each school has a unique UDISE code. However, the released microdata files provide the school's 'pseudocode', generated from the respective UDISE code, in order to protect privacy of the information.

Kerala's astonishing education progress

02

And emerging challenges



Amongst all Indian states, Kerala is the star performer in school education. All children complete 10 years of education. About half the children attend pre-primary school, according to NSS data. Even at the higher secondary level, the attendance rate is close to 100 percent. Kerala stands first in the Government of India's School Education Quality Index, prepared by Niti Aayog.

2.1 A star amongst Indian states

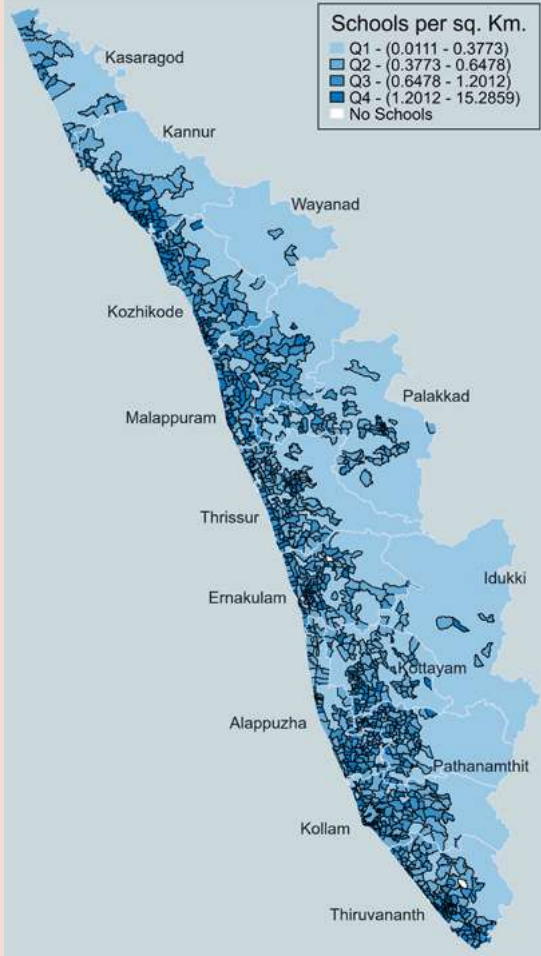
Universal participation of children in formal schooling up to the age of 17 years in Kerala is an outstanding accomplishment. In most parts of India, the traditional barriers to attending school include gender, religion, caste, income and geographic location. These have been overcome in Kerala, although such disparities existed at the time of the formation of the state. Further, in rural areas in other parts of India, secondary schools and higher secondary schools are not available within a reasonable distance. In Kerala, almost the entire rural population has access to a secondary school within eight kilometers. These are remarkable achievements, not only in comparison with other Indian states, but also with many developing countries. In fact, in a matter of a few decades, Kerala achieved school education indicators that are similar to those in richer countries, even though it was mired in poverty.

Box 2.1 summarises some key factors behind Kerala's exceptional performance.

Box 2.1: How did Kerala achieve school education for all children?

- > First, through enlightened public policy which adopted universal, free public education as its goal since the formation of the state in 1956, with a consensus built across all political parties. The main policy interventions included establishing schools in close proximity of habitations; provision of education in the mother tongue (mainly Malayalam, and languages of linguistic minorities); creating and implementing norms for teacher training; distribution of free textbooks in the mother tongue, for all subjects and classes; and provision of school uniforms and mid-day meals. This was financed through high levels of budgetary spending. Apart from government schools, private schools also received public funding for teachers' salaries subject to following all the government norms.
- > Second, through strong societal and family support for universal completion of 10 years of schooling. Kerala society has favoured education as an instrument of social justice and promoting equality of opportunity.
- > Third, through social and cultural mobilisation and political participation. Scores of social, political and community-based organisations encouraged the enrolment of children in schools, the establishment of community libraries to promote reading, the creation of extra-curricular programs for science, arts and culture, as well as the institution of scholarships, awards, competitions and public events.

Schools are available everywhere in Kerala close to the habitation. This has been an important factor in ensuring that students can easily attend school. As can be expected, the density of schools (per sq. km) increases with population density, which is towards the coastal areas in the west (Map 2.1). The highest percentage of postal areas (pincodes) which have more than 1.2 schools/sq. km are in Kannur (48%), Kozhikode (43%) and Thiruvananthapuram (34%). The districts of Wayanad and Idukki in the eastern high ranges of the state have the lowest density of schools, less than 0.37 schools/sq. km. The latter



Map 2.1: Density of schools in Kerala by postal areas (pincodes), 2021-22

Note: There are a total of 16,240 schools in Kerala. These were mapped to postal areas (pincodes) indicated in the school questionnaire. The school counts were normalised by the denominator of the area covered in sq. kms., for the respective pincode, yielding the indicator ‘Schools per sq. kms.’ for each postal code of Kerala. The map shows this indicator according to the position of the pincode in the quartile ranges of the indicator. The deeper shade of the color indicates a higher density of schools.

Source: Authors’ calculations from UDISE+ 2021-22.

have relatively large areas under forests, with low population density.

2.2 Kerala society and its education system are changing but there is little evidence and analysis to guide changes in education policy

Despite its successes, Kerala does not have a strong research base on education to guide public policy, whether in relation to the evolution of the system, pedagogy, curriculum, language of instruction, teacher training and professional development, materials development, assessment and so on.

Very little is known about classroom teaching processes and student learning. The focus of public discussion is largely on examination results.

This lack of analysis and research puts Kerala at a disadvantage in facing the challenges of the future. Over a period of about 30 years, only 75 articles have been published in peer reviewed journals. This is based on a search done of three important online research databases². The limited research capacity also puts Kerala at odds with other high performing education systems, with which the state should compare itself. Examples of such countries are Finland, Singapore, Korea and so on, which undertake systematic research on education to improve teaching and learning.

2.3 A break from the past: becoming a multi-lingual, multi-cultural society with an increasingly globalised youth

Migration has impacted Kerala society profoundly. Currently, over two million Keralites work abroad, mainly in the Middle East. However, a far greater number have worked abroad over the last 40 years, ever since large-scale migration of workers started. These workers come from all regions of the state and all social strata and they work in varied occupations – from construction workers to engineers, from domestic workers and shop assistants to highly skilled doctors and successful entrepreneurs.

² The search was done of EbscoHost, Jstor and Shodhganga, using the search term “education in Kerala”. See VMFT (2024). “Children Leading Change – Advancing Research on Climate Resilience and Environmental Sustainability in School Education.” Report of a Research Seminar 6-7, December 2023.

The demand for English education has spread during this period. People from all strata of society see it as the passport to better work, both within India in large companies in the private sector, and abroad. This trend has accelerated since the 1990s. English is also the preferred language for technical/professional subjects in higher education. Moreover, English has penetrated daily life through media, films and culture. The increasing use of English words and phrases in spoken and written Malayalam is testimony to this. Young people who know only Malayalam and have limited proficiency in English are disadvantaged at work and in life.

Over the last 15 years, workers from other parts of India (mainly Eastern and North Eastern India) have migrated to Kerala. By 2025, their number is expected to be five million (out of a population of about 34 million). They speak different vernaculars and have their own cultures, while at the same time learning to speak Malayalam and adjust to Kerala's culture. Children from these families are now entering the public education system.

Finally, over the last 10 years, Kerala's youth is becoming increasingly linked to "global culture" through the internet, social media and films. The state has the highest level of smartphone and internet penetration amongst Indian states. The COVID-19 pandemic accelerated the use of the internet, especially amongst the young. Students have much greater access to information (and misinformation) outside the school system. Furthermore, visual media has become more prominent compared to textual media, especially amongst young people.

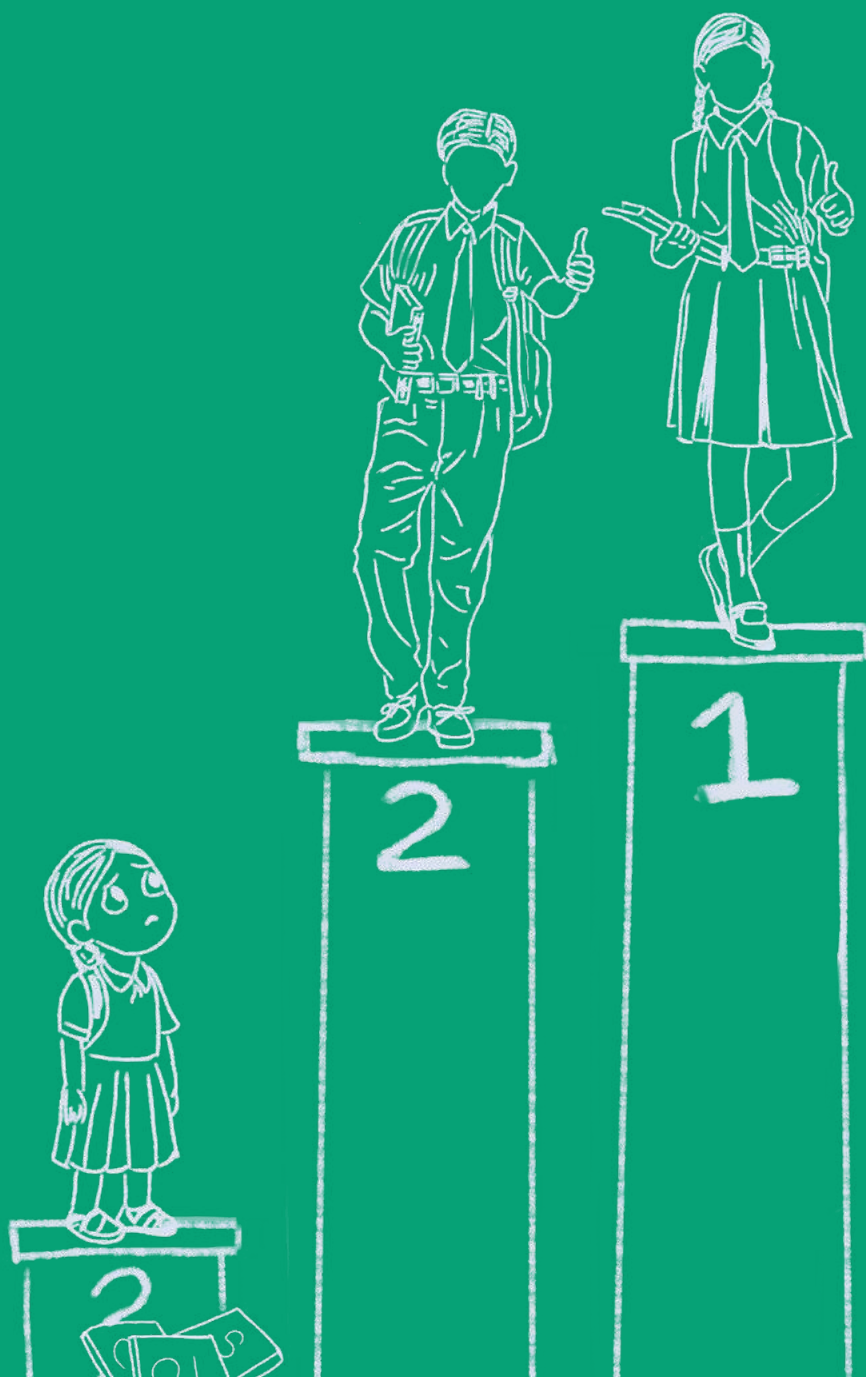
These profound social changes have great implications for the education system. The trends in the Kerala education system, discussed later, are partly a response to these changes, which will only intensify in the future.



A crisis of learning in Kerala?

03

Challenges at the base



Despite its achievements, there is a widespread feeling in Kerala that the quality of school education is low, or even falling, at least in a substantial number of schools. These opinions are prevalent among a wide swath of stakeholders: school teachers, teacher trainers, university faculty, policy makers and parents.

The personal experiences of teachers based on actual classroom teaching lend considerable weight to these assertions. However, not much systematic evidence has been presented about this phenomenon.

Assessments of student learning, which are based on a sample of students, have become common in many countries in order to provide information to policy makers, the public and parents about the overall levels of learning in an education system (rather than the level of each student). One such survey in India is conducted by the Annual Status of Education Report (ASER), which is carried out in rural areas only. Because the survey is conducted at the household level, it captures students in all type of schools.

3.1 Reading levels of rural students in lower primary – the ASER data

In the ASER survey, children aged 5-16 years in sampled rural households were asked to read a small passage at the grade 2 level by trained investigators. All children in the household were covered, irrespective of whether they were currently attending school or what type of school they were in. Each child was tested individually. If the child read the passage with ease, even if slowly, with

three or fewer mistakes, the child was considered proficient in reading. The same passage was used for children of all ages in the household, even if they were in higher grades. The results, therefore, show if children at different ages/grades are proficient in reading a grade 2 text. Children could choose to take the test in English if they wished. The test did not involve questions on comprehension. The grade 2 reading passage in Malayalam is given in the published ASER report for 2018. It is similar to the level of difficulty of text in the grade 2 textbooks in Kerala. The English passage was of a comparable level of difficulty.

The published ASER 2018 report³ shows that about half of the sampled students in grade 3 in Kerala could read a grade 2 text. In government schools, just over 40 percent achieved this level, while in private (unaided) schools, about 60 percent could read at this level. There is therefore a substantial difference between government and private schools in learning levels. As all children of this age group are currently in school in Kerala (unlike in many other states in India), the ASER sample is representative of rural students in Kerala. Reading proficiency in the state is significantly higher than the national average – across India, only 20 percent of rural children in grade 3 could read the grade 2 text.

For this study, further detailed analysis at the student level was done to assess differences between students who took the test in English and those who took the test in Malayalam, as well as students studying in government and unaided schools. The analysis is also done separately for students who are currently in grade 2, grade 3 or grade 5 (the first year of upper primary in the state).

Table 3.1 presents the percentage of rural students who could NOT read the grade 2 text, by these different categories.

Looking at students who took the test in both languages and studying in all types of schools, two thirds of grade 2 students could not read the grade 2 passage. By grade 3, the proportion who could not read the same passage was still high, but had gone down to about 50 percent. Even by grade 5, one-third of the students could not read this passage.

The results are even more striking when they are separated by those who chose a Malayalam passage and those who chose an English passage. In grade 2, there is virtually no difference in the percentage who could not read the passage (about 65-68

³ Annual Status of Education Report (Rural) 2018. Pages 52 (All India rural) and 135 (Kerala rural).

percent), whether the passage was in Malayalam or English. Reading proficiency starts diverging after that, and in a significant way. In grade 3, 58 percent of those who selected the Malayalam passage still could not read the grade 2 text. For those who chose the English passage, however, this proportion had dropped to 34 percent (from 68 percent in grade 2). For students in grade 5, the gap is still very large: 36 percent are not able to read the Malayalam passage and 19 percent are not able to read the English passage.

The result for the Malayalam test is very similar to that of students in government schools, and the result for the English test mirrors that of students in private schools. As will be shown later, government schools at the primary and upper primary level teach mainly in Malayalam, while private (unaided) schools teach mainly in English. It can be inferred that the students who chose to read the Malayalam passage were largely from government schools. Some may have been from private schools – they may have selected the Malayalam passage because they did not feel confident in English. But all those who chose the English passage are likely to have been from private schools.

The findings are quite alarming, especially given the fact that only a grade 2 reading passage was used for students of all ages, and that comprehension was not assessed. At least in rural areas of Kerala, a substantial proportion of students start lagging in reading from grade 2 onwards. Unless they get additional support in subsequent classes, they will continue to lag behind their grade level and they might reach a stage where they are unable to cope with the demands of the syllabus. However, grade 3 students who cannot read a grade 2 text may be able to read a grade 1 text, or words or letters. Additional support in grade 3 and subsequent grades can help such students to catch up or to accelerate their reading progress.

The ASER data also show that there will be a wide range of reading levels within a class. For example, in government schools, about a quarter of students in grade 5 may not be able to read a grade 2 passage, based on Table 3.1. A teacher of a grade 5 class will struggle to teach at such widely different levels, but it is more likely that she will have to leave the lagging students behind, as she is compelled to “finish the syllabus” (that is cover sections of the grade 5 textbook) as per the agreed schedule in the school calendar.

As the ASER uses only a grade 2 text to assess

reading level, this data does not show how many students in grade 3 or grade 4 are able to read at the required grade level. Even if 33 percent of students in grade 2 were considered reasonably proficient in reading, as indicated in Table 3.1, they may not be able to cope with the reading requirements of the next grade. This is especially true in the transition between lower primary and upper primary, and upper primary and high school, when there is a big jump in the difficulty level of academic texts. Hence, the proportion of students who fall behind expected grade levels in reading may increase in higher grades. The fact that students who are being taught in their mother tongue (Malayalam) in government schools, perform lower than those who are being taught in English, an unfamiliar language for most students in early grades, is also a matter of deep concern. In Kerala, government schools have trained and qualified teachers (at least as per the required credentials) who can teach in Malayalam, and reasonable pupil-teacher ratios. All students have textbooks and most schools have sound infrastructure. Despite these relatively favourable schooling conditions, the students studying in Malayalam medium in government schools seem to be at a significant learning disadvantage by grade 3. These students will face grave challenges to their progress in the education system, leading to a possible widening gap between those studying in Malayalam medium and those in English medium, and creating a crisis of equity in the system.

3.2 National Achievement Survey

Another possible source of information on students' learning is India's National Achievement Survey (NAS), which is briefly described in Box 3.2. According to published NAS data, Kerala performs relatively well compared to other states or the national average. For instance, in NAS 2021, 71 percent of students in grade 3 could read a small text with comprehension, compared to the national average of 64 percent (<https://nas.gov.in/report-card/nas-2021>). Despite its higher performance, the Kerala data shows that almost 30 percent of students in Grade 3 could not read at grade level, which would have serious implications for their learning in future classes. Since detailed data are not released, it is not possible to analyse this further.

3.3 Public examinations

Public examinations do not provide reliable information about student learning. In Kerala, the first public examinations are at the end of grade 10: the Secondary School Leaving Certificate (SSLC)

Table 3.1: Achievement levels of Kerala rural students in reading a grade 2 text, by grade level, language and management

	Percentage of students who could NOT read Grade 2 text and who are currently studying in		
	Grade 2	Grade 3	Grade 5
All Students	67%	48%	33%
Chose Malayalam passage	65%	58%	36%
Chose English passage	68%	34%	19%
Studying in government schools	66%	57%	27%
Studying in private schools	65%	40%	19%

Note: The data presented here relate to those students for which the language of the test they took and the category of the school in which they studied was recorded. In ASER, only two categories of schools are recorded: government and private unaided.

Source: Author's analysis based on ASER unit level data for Kerala, 2018

Box 3.2: The National Achievement Survey

India began the National Achievement Survey (NAS) about two decades ago and it has been administered every three to four years in selected grades and subjects. In 2021, the assessment was administered by the CBSE based on tests designed by the National Council of Educational Research and Training.

It is difficult to make comparisons over time for individual states and across states because of lack of specifics on student participation rate, data quality and changes in sampling and coverage over time. In 2021, students from private and Central government schools were included for the first time in the assessments for grades 3, 5 and 8 and the results are therefore not comparable with those of previous years. Further, assessments are conducted within schools and the manner in which the tests are administered can also affect the results. The student-level dataset is not available for further analysis.

exams for the schools following the State Board, or the Central Board of Secondary Education (CBSE) exams. Such examinations, if designed and conducted based on agreed-upon standards, serve the function of certifying each student's competence and also help to select students for higher levels of studies. However, the quality and content of examinations may vary from year to year, and the marks do not necessarily indicate the student's competence. Besides, the results are only available at the end of secondary school, by which time the lags in student learning are difficult to remedy.

3.4 Classroom processes and learning – issues to be considered

In general, three broad factors influence students' learning, especially in reading: a supportive environment in the home, whether the language of instruction is familiar to students and the learning environment, especially the quality of teaching. The differences in ASER results between different groups of students could be influenced by differences in one or all of these factors.

Teaching in the mother tongue is considered to be the best approach as it builds on the child's familiarity with the language. It is striking, however, that the ASER results are worse for students who took the test in Malayalam (for the majority of students, this is the mother tongue) and who are also taught by teachers who are proficient in that language.

On the other hand, students for whom English is not the mother tongue and who are taught in private unaided schools by teachers for whom English is also a second language performed better. Many teachers in private unaided schools, especially in rural areas, may not be proficient in teaching in English.

There are also differences between the two languages that make it imperative to understand how these languages are taught in the school. Malayalam has greater phonetic consistency which makes reading easier in some ways. However, there is a greater number of letters and consonant/vowel combinations to be mastered. The script has relatively complex visual characteristics. But the fact that students understand the meaning of the words they are reading is a great asset for young students who are learning to read in Malayalam. English has fewer letters but many words do not follow standard phonetic rules. Letters and letter combinations in English can have multiple pronunciations, also making it difficult for students to acquire reading skills. Further, most students learning English have

to learn how to decode words as well as learn the meaning of the words.

Studies from across India show that teachers do not explicitly teach listening and speaking skills, which are precursors for reading. They tend to emphasise mechanical reading in the sense of decoding, rather than reading for meaning. This is especially true of the teaching of reading in English, but it is also true of the teaching of reading in the mother tongue. Writing assignments for students often consist of copying words and sentences from the blackboard or textbook. After several years of drill and practice, students become adept at decoding English words, but they do not comprehend the meaning of the sentence or passage. It is ironic, that at the stage of entering higher education, or the job market, even after studying in English medium for several years, students have to be trained in speaking and listening, the primary skills they should have acquired in the early stages of learning a language.

There is not much published research on how teaching occurs in Kerala's classrooms, including the teaching of Malayalam language and English language in the early grades. Such research is essential to design teacher education and development programs, as well as learning materials that can help to improve the teaching of reading in both languages.

Until about thirty years ago, the majority of students in Kerala studied in state government schools or aided schools. They followed one common curriculum and were taught mainly in Malayalam (linguistic minorities were taught in their mother tongue).

Teachers were appointed according to similar rules in all schools, which covered their education and training qualifications, the number of students they would teach and so on. Managements of aided schools could appoint teachers but had to follow the same regulations, as their teachers were paid by the government. Textbooks in Malayalam were provided free of charge. Even until 1990, there were just over 130 private unaided schools, and a few Central government schools, which taught in English medium. Kerala's stupendous progress in school education was achieved through a common, publicly funded education system.

This is no longer the situation today. The education landscape is highly diversified. In theory, at least, parents and students can choose between different types of schools, language of instruction and curricula.

This differentiation is distinct from the concept of "differentiated instruction", which involves adapting the instructional process to the needs of individual students within a classroom and is aimed at allowing all students to develop at their own pace.

4.1 Kerala's school system is highly differentiated by management type, language and curriculum

A substantial proportion of schools are now private unaided schools

Of the total 16,240 schools in the state, about 5,000 are government schools, 7,183 are aided schools, and 3,164 are unaided schools. About 880 are classified as "others" (which include madrasas as

well as unrecognised schools). These numbers are from the UDISE+ dataset for 2021-22.⁴ (Table 4.1).

Most unaided schools have secondary and higher secondary classes (63 percent). The remaining are primary or upper primary schools. By contrast, amongst government schools, half are primary schools only (with grades 1-4) and another 18 percent are upper primary schools. About 25 percent are secondary and higher secondary schools (mostly the latter). Amongst aided schools, 47 percent are just primary schools, and 26 percent are upper primary schools and 20 percent are secondary/higher secondary schools.

This pattern of distribution reflects the historical efforts by different governments in the state to make primary and upper primary education accessible to all children in Kerala, including in rural areas, in close proximity to where they lived. The decline in the child population and higher levels of urbanisation, combined with the growth in demand for private schooling now pose new challenges in how to provide public education in the state at a reasonable cost while improving the quality of education.

English has become the predominant medium of instruction in schools of all management types

The majority of schools in Kerala, whether government, aided or unaided, are now either English medium only schools (21 percent) or offer both English and Malayalam medium (44 percent). About one-third are Malayalam medium only schools. (Table 4.2)

Unaided schools are primarily English medium. Close to 80 percent of unaided schools provide education in English only and another 14 percent offer English and Malayalam.

Within the government and aided sectors, the proportion of schools that provide English medium sections increases with the level of education. Even at the lower primary level, as many as 32 percent of government lower primary (LP) schools and 43 percent of aided schools have English medium sections. In the upper primary (UP) level, the majority in both categories offer English medium sections - 53 percent of government and 67 percent of aided schools. Overwhelming shares of government and aided higher secondary schools have English medium sections (80 and 93 percent,

⁴The number of schools indicated in state government documents, such as the Economic Review, is smaller. One reason is that UDISE+ includes unrecognised schools and madrasas. However, there are also some differences in the numbers of different schools, especially private unaided schools.

respectively). These schools also have Malayalam medium sections.

There are still a relatively large number of “Malayalam-only” schools in the government and aided sectors, but they are LP and UP schools. At the higher secondary level, only 7 percent of government schools and 1 percent of aided schools are “Malayalam-only”.

In government and aided schools, Malayalam medium sections and “Malayalam only” schools are probably being sustained by government policy, which restricts the opening of English medium sections in government and aided schools. Currently, the policy stipulates that there should be at least one Malayalam medium section in these schools and English medium sections are allowed only if the enrollment is above 30 in each class. Enrolment in many lower primary schools is too low and as a result, over 60 percent of the government LP schools and over 50 percent of aided LP schools are “Malayalam only” schools.

These dramatic changes in the Kerala education landscape, including public education, have serious implications for the management of the school system as a whole, as well as for individual schools. Most schools are now offering “parallel sections” with different groups of students in each section. School heads and principals have to manage teachers in different streams, by language and subject. In many schools, the same teachers teach in Malayalam and English medium, particularly at the lower levels. As will be discussed later, if students in the English and Malayalam medium sections belong to different socio-economic groups, there are challenges for the school management to address the differentiated needs of different groups of students, while maintaining a common school ethos.

Schools are also differentiated by type of curriculum

The majority of private unaided schools follow the Central Board of Secondary Education (CBSE) curriculum. Within the government sector, there are two types of schools: all state government schools (the overwhelming majority) follow the State Board curriculum, while Central government schools (a small but significant number) follow the CBSE. All aided schools follow the State Board curriculum.

The CBSE represents a nationally recognised curriculum which is accepted by higher education institutions across the country and which is also

recognised internationally. It places greater emphasis on science and mathematics and uses standardised national textbooks issued by the National Council of Education Research and Training (NCERT). The centralised Board exams that are organized at the end of grades 10 and 12, apart from being the same across the country, are also more closely aligned with the academic requirements of nationwide entrance examinations for medicine, engineering and other professional courses. The language of instruction in CBSE schools is English (or Hindi if a school opts for it). Teacher recruitment occurs at the school level, by the School Management Committee, following guidelines regarding qualifications and training laid down by the CBSE for affiliating schools.

The fact that most unaided schools in Kerala are affiliated to the CBSE, rather than the State Board, suggests that the curriculum, as well as the language of instruction, are major differentiating factors for parents, for which they are willing to pay. However, as seen in Figure 4.1, a significant number of unaided schools affiliate to the State Board, among each of the language of instruction groups (English only, English/Malayalam and Malayalam only). This shows that there is a demand both for a different curriculum and perhaps for better quality of teaching of the State Board curriculum, including in Malayalam.

4.2 Students follow different pathways in this differentiated system

As discussed below, there is considerable movement of students across the different types of schools, curriculum and languages of instruction. The changes in the academic environments of a large number of students as they progress higher up the education system is one of the defining features of Kerala’s education system today. It poses challenges for teaching and learning and for developing the full potential of students.

About a quarter of students (from pre-primary to higher secondary) are enrolled in unaided schools

Of the total students enrolled (6.4 million) from pre-primary to higher secondary, 29 percent enrolled in government schools, 44 percent in aided schools and 25 percent in unaided schools. Within urban areas, the share of enrolment in unaided schools is significantly higher, almost 35 percent. (Table 4.3)

Table 4.1: Distribution of schools by management and level of education

	Govt.	Aided	Unaided	Others	Total
Primary with grades 1-4	51%	47%	15%	41%	42%
Upper Primary with grades 1-7/5-7	18%	26%	17%	36%	22%
Secondary with grades 1-10/5-10/8-10	6%	7%	31%	3%	11%
Higher Secondary with grades 1-12/5-12/ 8-12/ 11-12	20%	13%	32%	1%	18%
Others	5%	7%	5%	19%	7%
Total	100%	100%	100%	100%	100%
Total schools (Number)	5,010	7,183	3,164	883	16,240

Note: The number of schools by the level of education is calculated based on the 'Highest Class' and 'Lowest Class' enquiry from schools, in DCF 2021-22 - 1.13(a). The classification of levels of schooling corresponds to what exists in Kerala. The school category codes from DCF 2021-22 - 1.12 are not used to determine the level of education in this report, as the UDISE+ classification of school levels differs from that used in Kerala.

Source: Authors' calculations from UDISE+ 2021-22.

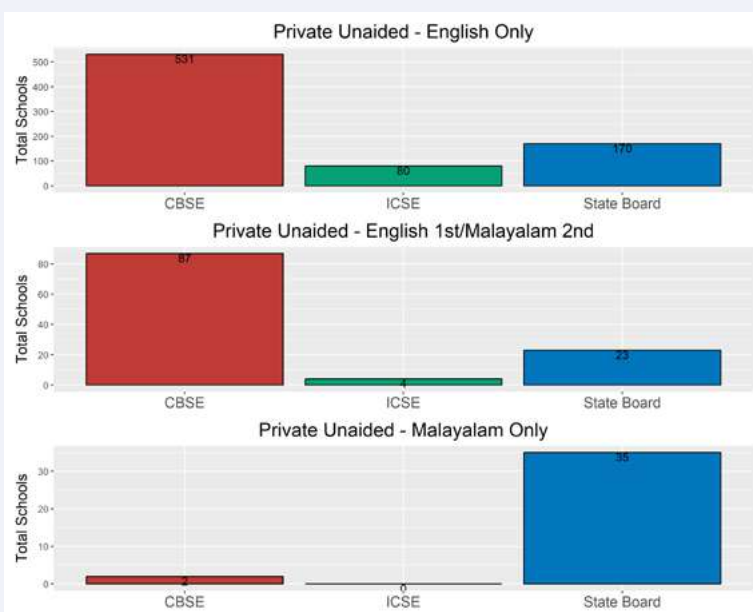
Table 4.2: Total Schools – Distribution of schools by management and medium of instruction

Medium of Instruction	Management				
	Govt.	Aided	Unaided	Others	Total
English Only	2%	1%	78%	80%	21%
Malayalam Only	47%	37%	7%	7%	33%
English 1st/Malayalam 2 nd	2%	4%	11%	10%	5%
Malayalam 1st/English 2 nd	45%	55%	3%	3%	39%
Malayalam 1st/Others 2 nd	2%	1%	0%	0%	1%
Others	2%	2%	1%	0%	1%
Total	100%	100%	100%	100%	100%
Total Schools (Number)	5,010	7,183	3,164	883	16,240

Note: Schools are required to indicate their primary and (Medium- I) and secondary (Medium – II) mediums of instruction (and more can be indicated). This is based on the number of students taught in the respective medium in descending order. The enquiry on 'Medium of Instruction' is done in DCF 2021-22 - 1.29.

Source: Authors' calculations from UDISE+ 2021-22.

Figure 4.1: Private unaided schools by Secondary School Board and medium of instruction, 2021-22



Note: The figure plots 'private unaided' schools which are classified as secondary schools and which indicated a curriculum Board. Schools in the "Others" management category are not included as 'private unaided'.

Source: Authors' calculations from UDISE+ 2021-22.

Private unaided schools are most popular at the pre-primary level and primary level

At the pre-primary level, the proportion of students going to unaided schools is close to 60 percent. At the primary level, this proportion falls to one-third and there are further declines in higher classes. At the secondary level, only 14 percent are in unaided schools and there is a slight increase at the higher secondary level. These data are from the NSS survey on education in 2017-18. (Table 4.4)

After primary education, many students in unaided schools move to government and aided schools

One of the most interesting features of Kerala's education system is the student transition that takes place across levels of education between different management types. According to UDISE+ data on students in each class, enrolment in unaided schools is highest in the lower primary classes (classes 1-4), and it drops steadily from grade 5 to grade 12. (Figure 4.2).

Aided schools on the other hand, see a sharp increase in enrolment from grade 5 to grade 10 and after which there is a sharp drop in grade 11 and 12. Enrolment in state government schools is steady up to grade 7, after which it rises in high schools, and increases even more steeply in grade 11. Central government schools show a steady but small enrolment.

One possible conclusion is that a substantial proportion of students in unaided schools move to aided schools after grade 5 and even more move to aided and government schools after grade 7. Some unaided schools do not have higher classes and this may explain some of the movement; however, this may not provide the full explanation, as parents could, in principle, choose another unaided school with the senior classes.

As unaided schools differ from government and aided schools on curriculum and language of instruction, this student transition could be occurring in different ways and due to different reasons. For instance, students in unaided schools with the State Board curriculum, which are a minority but important group, may move to state government and aided schools which have the same curriculum. Some students in unaided schools following the CBSE curriculum may move to state government or aided schools, perhaps because the

curriculum of the State Board is considered to be less challenging. It is easier to score higher marks on the State Board exams than the CBSE exams. An important question is whether students change their language of instruction when they move schools – this would appear less likely, as parents value English medium instruction. Hence, it is likely that students in unaided schools who transfer to government and aided schools enter the English medium sections of the latter.

A factor that motivates parents is the perceived quality of teaching at different levels of school education. If government and aided LP schools are considered of low quality, parents who can afford the costs may invest in better quality primary education which they believe is provided in unaided schools at that level. In high school and higher secondary education, the quality of teaching may be considered more rigorous in the government and aided sector, because of higher teacher qualifications.

A final reason for moving to government and aided school could be the higher costs of private unaided schools. As free English medium instruction becomes available in government and aided schools from the upper primary level onwards, those who cannot afford fees in private schools would shift their children to publicly funded schools.

The overwhelming share of students are in schools which are English medium or which have an English medium section

Earlier, it was shown that most schools in Kerala now offer English medium instruction, in all management categories. Looking at the distribution of students, it can be seen that 80 to 95 percent of students in every management type are in schools that are either English medium only or offer English medium along with Malayalam medium. Only 9 percent of students are in "Malayalam only" schools, the majority of which are the lower primary schools. (Table 4.5).

The vast majority of students in pre-primary and in higher secondary grades are studying in English medium, with lower proportions in Grades 1-10

Since UDISE+ does not release the information on students studying in different mediums of instruction by class or level of education, the NSS data for 2017-18 are used. Eighty percent of pre-primary students in the state studied in English

Table 4.3: Percentage share of students in schools of different management types, 2021-22

	Total	Rural	Urban
Government	29%	30%	25%
Govt. aided	44%	46%	39%
Private unaided	25%	22%	35%
Total	100%	100%	100%
Total enrolment (Nos)	64,23,120	47,09,303	17,13,817

Note: The management category of "Government" includes both "State Government" and "Central Government". The "others" category is not shown in the table. Management categories are classified based on DCF 2021-22 - 1.15(a).
 Source: Authors' calculations from UDISE+ 2021-22.

Table 4.4: Share of enrolment across school management type by level of education, 2017-18

	Government	Private Aided	Private Unaided	Total
Pre-Primary	23%	18%	59%	100%
Primary	38%	28%	34%	100%
Middle	42%	35%	23%	100%
Secondary	48%	38%	14%	100%
Higher Secondary	50%	29%	21%	100%

Note: The figures relate to the population currently attending educational institutions.
 Source: Authors' calculations using NSS 2017-18.

Figure 4.2: Total enrolment in schools by management and class, 2021-22



Note: The figure does not include 'Others' management category. The "State Government" and "Central Government" categories are shown separately to highlight that the latter is relatively insignificant in terms of enrolment. Pre-primary classes are not shown, as they include a variety of institutions, including anganwadis.
 Source: Authors' calculations from UDISE+ 2021-22.

Table 4.5: Total Enrollment – Percentage share by management type and medium of instruction, 2021-22

Medium of Instruction	Management				
	Govt.	Aided	Unaided	Others	Total
English Only	4%	1%	85%	84%	25%
Malayalam Only	15%	10%	1%	3%	9%
English 1st/Malayalam 2nd	4%	7%	11%	11%	7%
Malayalam 1st/English 2nd	74%	80%	2%	2%	57%
Malayalam 1st/Others 2nd	2%	1%	0%	0%	1%
Others	1%	1%	1%	0%	1%
Total	100%	100%	100%	100%	100%
Total Enrollment (Number)	18,62,020	28,28,548	16,24,221	1,08,331	64,23,120

Note: See note to Table 4.2.

Source: Authors' calculations from UDISE+ 2021-22.

Table 4.6: Percentage of students studying in English medium, by level of education and type of management, 2017-18

Level of education	Percentage of students in English medium - within each management type and all schools			
	Government	Aided	Unaided	All schools
Pre-primary	49%	77%	93%	80%
Primary	29%	59%	97%	61%
Upper primary	30%	55%	96%	54%
Secondary	24%	54%	93%	45%
Higher secondary	78%	82%	80%	80%
Higher secondary – Science	88%	92%	100%	91%
Higher secondary – Commerce	74%	78%	85%	78%
Higher secondary – Humanities	65%	61%	49%	59%

Note: Relates to population currently attending education.

Source: Authors' calculations using NSS 2017-18.

medium. It should be recalled that half the students in that age group did not attend pre-primary education at all, but of those who did, a large majority chose English medium. Even in government schools, the proportion was close to 50 percent at the pre-primary level (Table 4.6).

At the primary, upper primary and secondary levels, between 45-60 percent of students are studying in English medium. Those in unaided schools are almost all in English medium. But there is a considerable difference amongst students in government schools, where only 24-30 percent are studying in English in Grades 1-10. For aided schools, the proportion is almost double, between 55-59 percent.

The most significant change occurs in higher secondary, where 80 percent of all students are in English medium. Interestingly, at this level the proportions are roughly the same in government, aided and unaided schools.

The breakup of enrolment by academic stream in higher secondary education shows a clear hierarchy. English is virtually the sole language of instruction for the science stream, and the predominant one for the commerce stream. The lowest share of students studying in English medium is in the humanities stream. This pattern holds true for schools of all management types.

4.3 Spatial inequality is not significant – except for CBSE schools

There is a remarkable spatial distribution across all regions of the state of different types of schools. Government policy has been responsible for the equitable distribution of lower primary, upper primary, secondary and higher secondary schools which are run by the government or by private managements receiving government funding through grants-in-aid. However, even private unaided English schools are widespread throughout the state, except in the highland regions. Map 4.1 shows the density of English only schools which, as analysed above, are almost entirely private unaided

schools. In particular, the Malabar region, which was historically more backward educationally, shows no perceptible difference in the density of English medium only schools. The demand for privately funded English medium education is widespread across the state.

Equally importantly, there is a good spatial distribution of schools with Malayalam and English medium sections – which are mostly government and aided schools (Map 4.2). This shows both the demand from the parents and the willingness of government and aided schools to create English medium sections across the state.



4.4 Putting it all together: The implications for students' learning experiences

To understand the journey of different groups of students through this differentiated education system, a cohort of students would need to be followed over time. Such data are not available from either quantitative or qualitative studies. Nevertheless, a plausible story emerges from the above discussion.

There is a group of students who join English medium unaided schools in pre-primary or grade 1 and who continue through to grade 12. Most likely, they will be studying the CBSE curriculum. Similarly, there is



Map 4.1: Density of 'English Only' schools by postal areas of Kerala, 2021-22

Note: There are 3,358 schools with the medium of instruction 'English Only'. The methodology for deriving this map is described in the note to Map 2.1.

Source: Authors' calculations from UDISE+ 2021-22.



Map 4.2: Density of schools with Malayalam and English languages of instruction by postal areas of Kerala, 2021-22

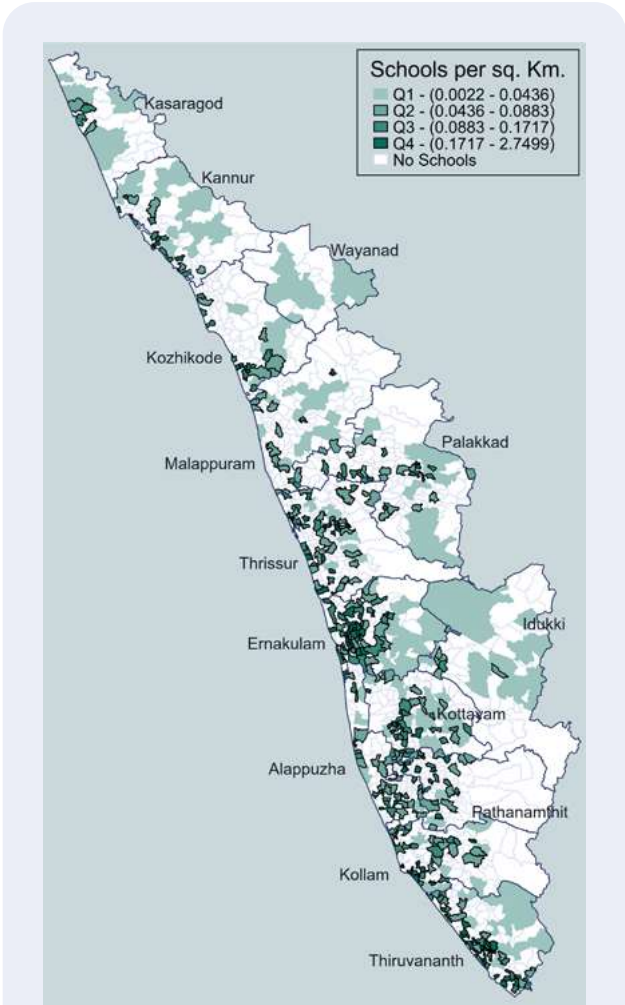
Note: There are a total of 6,324 schools with medium of instruction "Malayalam 1/English 2nd". The methodology for deriving this map is described in the note to Map 2.1.

Source: Authors' calculations from UDISE+ 2021-22.

a group of students who start in Malayalam medium government and aided LP schools and continue through in Malayalam medium, at least until grade 10. This demarcation creates a segmented system with parallel tracks of students, one of which is considered of less educational value. This is analysed in greater detail in the next section.

In addition, a significant group of students move from unaided schools to aided or government schools, most likely to the English medium sections

of the latter, in upper primary, secondary and higher secondary classes. These transitions may involve changes in the curriculum (from CBSE to State Board) or it may be from unaided State Board schools to government and aided schools. The size of this group cannot be estimated from the above analysis. In all probability, they may not involve changes in the language of instruction, as students may continue in English medium. However, some students studying in Malayalam medium unaided schools may move to English medium sections in



Map 4.3: Density of Higher Secondary Schools with CBSE curriculum by postal areas of Kerala, 2021-22

Note: There are a total of 679 schools with the higher secondary board as 'CBSE'. The methodology for deriving this map is described in the note to Map 2.1.

Source: Authors' calculations from UDISE+ 2021-22.

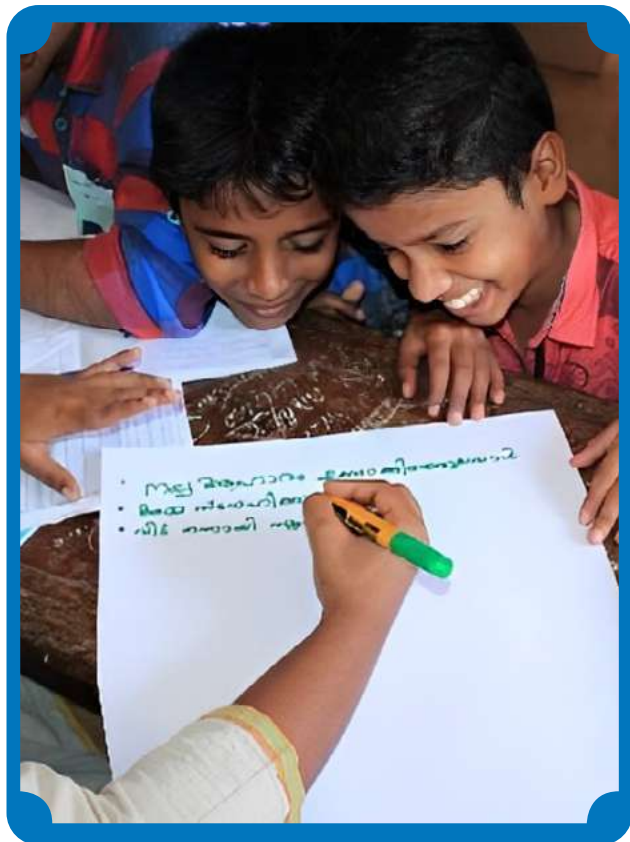
government and aided schools.

Students in government and aided schools studying in Malayalam medium up to grade 10, face the most difficult transition when they continue to higher secondary education, which is predominantly in English medium. The transition is extremely challenging if they choose the more “prestigious” science subjects, which is almost entirely in English medium.

These students are no doubt at a disadvantage vis-à-vis students who have had several years of instruction in English language in government, aided or unaided schools.

Students need to be supported in these transitions to foster their learning, especially as these transitions occur at critical stages in their physical and emotional development. This is especially true for those moving from Malayalam medium to English medium, as they are likely to come from poorer or less educated households. This support has to be organised at the school and classroom level, for which teachers and school heads need to be trained and for which additional educational resources need to be provided.

In addition, the impact on motivation and self-confidence of students has to be assessed, when they are separated into different sections in the same school, one of which (the Malayalam medium) is perceived to be of “lower” academic status. This poses challenges for school managements as well as for the management of the system as a whole, if the goal of education is the holistic development of the child.



Segmentation

Parallel universes



Differentiation in the education system, which offers different choices for curriculum, language and so on, could be considered to have positive features – even though, as described in the previous section, the way it is implemented in Kerala, it poses challenges for effective school management (especially in government schools) and for the motivation of students.

However, if students are separated into these different streams of school education, mainly because of their socio-economic background, the situation becomes even more problematic – especially if this type of separation persists from the primary level to the higher secondary level. This limits the opportunities of students afterwards, whether in higher education or in work. There will be a *de facto* segmentation of the education system.

In this section, we examine the segmentation of students by socio-economic background into different types of education, of schools according to the economic background of students, and of teachers in the schools where the students from the poorest households tend to study.⁵

5.1 Students: segmentation by socio-economic background

To assess whether this is happening, we compare the educational experience of the students from the poorest and the richest households and of different social groups – specifically, at each level of school education, what kind of school and in what medium of instruction do they study? The data are from the NSS household survey on education, 2017-18, which is the latest dataset available to examine this.

Students from the poorest and richest households

The findings are disturbing, even if they are not entirely unexpected (Table 5.1). In primary education, the students from the poorest households (the bottom 20 percent) overwhelmingly study in Malayalam medium, and almost entirely in government schools. They stay in government schools as they go higher up the system, studying mainly in Malayalam medium. Even at the higher secondary level, when almost all schools have English medium sections, about half of the poorest students are in Malayalam medium.

On the other hand, at the primary level, the students from the richest households (the top 20 percent) overwhelmingly study in English medium and mostly in unaided schools. As they go up the education ladder, substantial numbers among them shift to aided and government English medium sections. By the time, they reach higher secondary education, close to 90 percent are studying in English medium education in government and aided schools. That is to say, the richest households move their children from private English medium schools at the primary level to publicly funded English medium schools at the higher levels of school education. The transition from unaided to government schools, after primary, upper primary and secondary education, noted in the previous section, is happening largely amongst the students of the richest households, as well as the middle income households.

All students in Kerala, from the poorest to the richest, and irrespective of gender, caste and religion, reach grade 10 and this is one of the major achievements of the state, as noted earlier. This is due to the availability of schools all over the state as well as the policy of “automatic promotion” up to grade 10. Until the end of high school, therefore, there is apparently no difference in the progression of students from different economic backgrounds. The inequality becomes pronounced, however, in higher secondary education, in grades 11 and 12. According to the NSS data, in these grades, about one quarter of the poorest students are older than the appropriate age for grades 11 and 12. This suggests a high level of repetition, caused perhaps by repeating the grade 10 examination, in grade 11 or repeating the grade 12 examination. Amongst the richest households, the proportion of overage children is about 13 percent.

⁵ Students from Scheduled Tribe background are not specifically covered in this analysis. Due to their geographical concentration in certain areas of the state, and the specific contextual factors, this would need to be done separately.

Table 5.1: Percentage of students from poorest and richest households attending different types of schools and language of instruction, 2017-18

	Poorest students		Richest students	
	Primary	Higher Secondary	Primary	Higher Secondary
Malayalam medium	67	49	30	11
Government	57	28	19	4
Aided	10	9	10	6
Unaided	0	12	1	1
English medium	33	51	70	89
Government	16	28	5	35
Aided	6	6	18	32
Unaided	11	17	47	21
Total	100	100	100	100

Note: 'Poorest students' refers to students from households which are in the bottom 20 percent of households, when ranked by monthly consumption expenditure of the household. 'Richest students' refers to students from households which are in the top 20 percent. In 2017-18, the average monthly consumption expenditure in Kerala was estimated to be INR 3,823 for the poorest households, and INR 19,696 for the richest households.

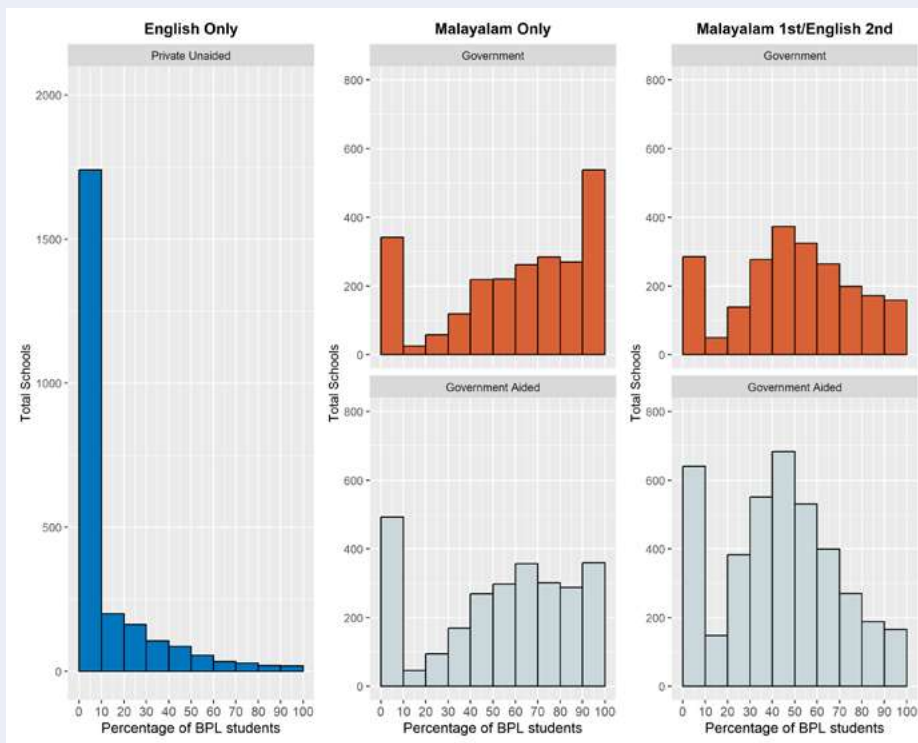
Source: Authors' analysis of NSS, 2017-18.

Table 5.2: Percentage of students from Scheduled Caste and General category attending different types of schools and language of instruction, 2017-18

	Scheduled Caste		General category	
	Primary	Higher Secondary	Primary	Higher Secondary
Malayalam medium	57	39	26	9
Government	51	34	15	3
Aided	6	4	10	6
Unaided	0	0	1	0
English medium	43	61	74	91
Government	12	42	15	28
Aided	17	11	19	47
Unaided	14	8	40	16
Total	100	100	100	100

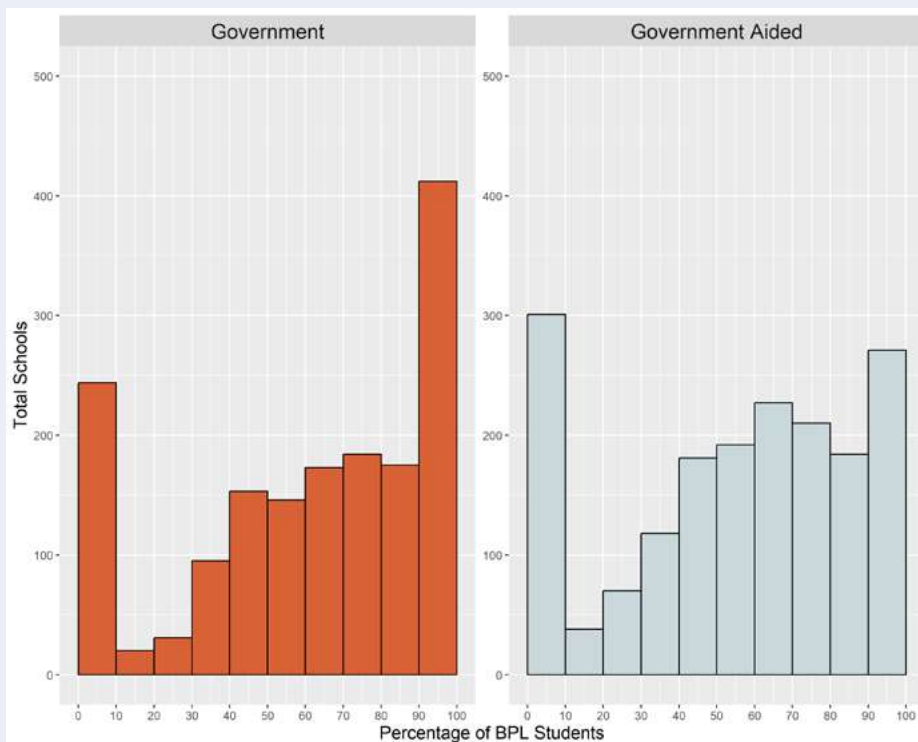
Source: Authors' analysis of NSS, 2017-18.

Figure 5.1 (a): Concentration of Below Poverty Line students in different types of schools



Note: The plots show various types of schools with different mediums of instructions. Not all schools are therefore shown in these plots. Government schools include State and Central government schools.
 Source: Authors' calculations from UDISE+ 2021-22.

Figure 5.1 (b): Concentration of Below Poverty Line students in government and aided lower primary schools (Malayalam medium only)



Note: See note to Figure 5.1 (a).
 Source: Authors' calculations from UDISE+ 2021-22.

The policy of “automatic promotion” is appropriate because students develop differently and retaining students and forcing them to repeat is often harmful for their growth. But what is equally harmful is to ignore students’ learning progress in each grade and the failure to provide adequate support by teachers at early stages, when gaps in learning emerge.

Students of different social groups

A similar pattern, though less pronounced, can be seen in the difference between students from Scheduled Caste (SC) and “General” category students in their enrollment in different types of schools. Among SC students in primary education, close to 60 percent attend Malayalam medium schools, which almost entirely are government managed. However, 40 percent also attend English medium schools and they are distributed more or less equally across the three management types. At the higher secondary level, 60 percent are attending English medium schools, almost entirely in government and aided schools (Table 5.2).

At the primary level, about three-quarters of the “General” category students are in English medium, and about half of them in unaided schools. By the higher secondary level, over 90 percent are in English medium, with the majority being in aided and government schools. Hence, there is a clear preponderance of the “General” category students in English medium education throughout the school education career, and they also seem to shift from unaided to government and aided schools in higher classes.

5.2 Schools: segmentation according to economic background of students

Do different types of schools have significantly different composition of students, according to their economic background? In the UDISE+ dataset, each school records the “percentage of students Below the Poverty Line (BPL)” in that school, which gives an idea of the extent of concentration of poor students in a school.

The graphs in Figure 5.1 (a) plot the distribution of schools according to the percentage of BPL students (shown on the X-axis). Most private unaided schools have either zero or less than 5 percent of BPL students. This might be expected because these schools charge fees and extremely poor parents cannot afford to send their children there. Under the Right to Education (RTE) Act, however, private schools are supposed to enroll a certain proportion

of low-income students. It is clear that BPL students do not get access to such schools.

On the other hand, amongst the government and aided schools, there are many schools with high percentage of BPL students, especially in the Malayalam only schools. A significant number of these schools report that 100 % of their students are below the poverty line. At the same time, there are also government and aided schools where there are no BPL students. In schools which are Malayalam/English, there is also one group which has no BPL students; the rest of the schools display a statistically normal distribution, with the highest proportion of schools having between 40-60 percent BPL students.

The concentration of BPL students is even more pronounced in government Lower Primary schools, as shown in Figure 5.1 (b). Schools with 100 percent BPL students constitute the largest group within government LP schools. Earlier in this section, using NSS data, it was shown that students from the poorest households tend to go to government schools at the primary level. This graph using data on schools from UDISE+ shows that government LP schools do indeed have high concentrations of students from poor households.

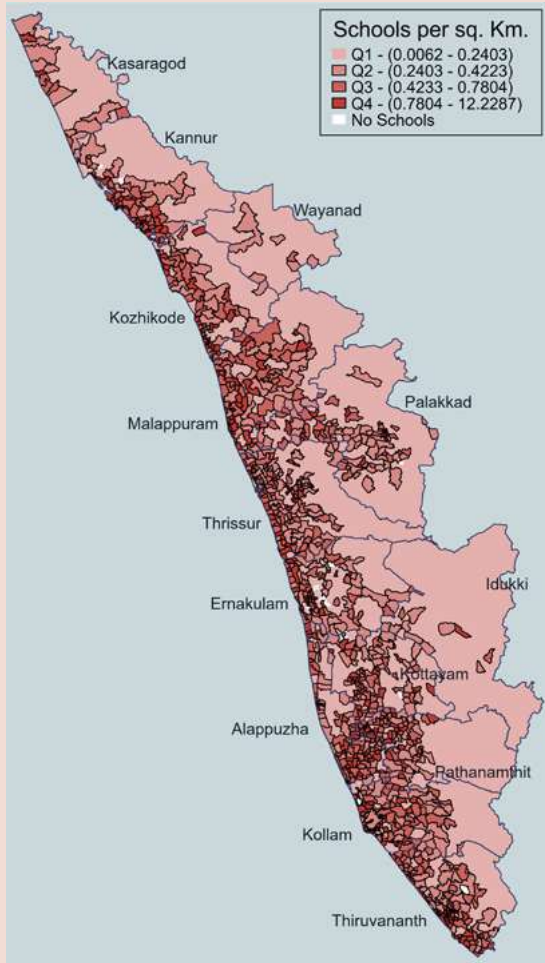
Interestingly, the “high poverty schools” – that is schools, where BPL students comprise more than 25 percent of total enrollment, are distributed all across the state, as shown in Map 5.1. There is a somewhat greater concentration of such schools in the districts of Alappuzha, Pathanamthitta and Thiruvananthapuram as well as in the coastal areas. In terms of numbers, the majority of the “high poverty” schools are government and aided lower primary schools.

Schools with a relatively high concentration of SC students (more than 25 percent of enrollment) appear to be geographically concentrated in the Alappuzha, Pathanamthitta and Kollam districts, as well as parts of Thrissur and Palakkad districts (Map 5.2).

5.3 Teachers in different types of schools

As mentioned at the outset, the publicly released UDISE+ dataset has little information on teachers. Only two indicators could be considered of relevance for this study: the teacher’s education level and professional qualification.

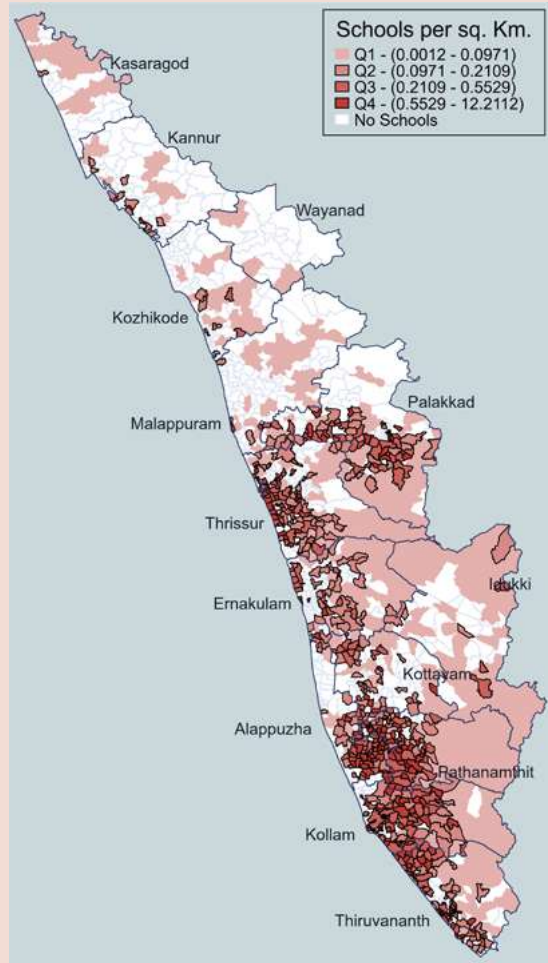
We compare the education level and qualifications



Map 5.1: Spatial distribution of schools with high proportion of BPL students across postal areas of Kerala

Notes: Schools with more than 25 percent of BPL students were listed across all the posted codes of Kerala. The methodology for deriving this map is described in the note to Map 2.1.

Source: Authors' calculations from UDISE+ 2021-22.



Map 5.2: Spatial distribution of schools with high proportion of SC students across postal areas of Kerala

Notes: Schools with percentage share of SC students higher than 25 percent of total enrollment were listed across all the postal codes of Kerala. The methodology for deriving this map is described in the note to Map 2.1.

Source: Authors' calculations from UDISE+ 2021-22.

of teachers in the lower primary Malayalam medium schools in the government and aided sector and lower primary English medium schools in the unaided sector. Students from the poorest households are largely in the former, so this comparison shows whether these students are taught by teachers with different academic and professional background.

In government and aided LP schools, between half and two-thirds of the teachers have less than

graduate level education. In unaided LP schools, 60 percent have graduate education and another 15 percent have post graduate or higher level of education (Figure 5.2).

The difference is even more pronounced when it comes to teacher professional qualifications. Two-thirds of teachers in Malayalam medium government and aided LP schools have only a diploma or certificate level education. Again, in contrast, over 53 percent of teachers in unaided LP schools have a

Bachelor of Education degree (Figure 5.3).

In practice, the proportion of teachers in unaided schools with higher educational and professional qualifications is even higher than the numbers reported above, which are only for LP schools. This sub-category has been chosen in order to have a fair comparison with the government and aided LP schools, since it is not possible to determine, which teacher is allocated to which class in composite schools (with upper primary, high school and higher secondary classes).

5.4 Putting it all together: parallel track for students from poor households

Poverty has a high impact on students' abilities to succeed in formal education. Children from poor families have lower nutritional levels and are more susceptible to disease. They often do not have additional learning resources at home. Their parents work long hours or have low educational levels and cannot help with homework. These constraints lie outside the education sector proper and broader policies are required to address poverty and inequality in society. But educational policies also play a big role in reinforcing or alleviating the disadvantages that students from poor households face in school.

In Kerala, students from poor households tend to stay in the "Malayalam medium track", from lower primary to higher secondary education. By and large, they study in the government and aided schools. A significant number of these schools are "high poverty" schools – that is, they have a relatively large share of students who are Below the Poverty Line. This concentration of poverty in a school compounds the learning disadvantages of the individual student who is from a poor background.

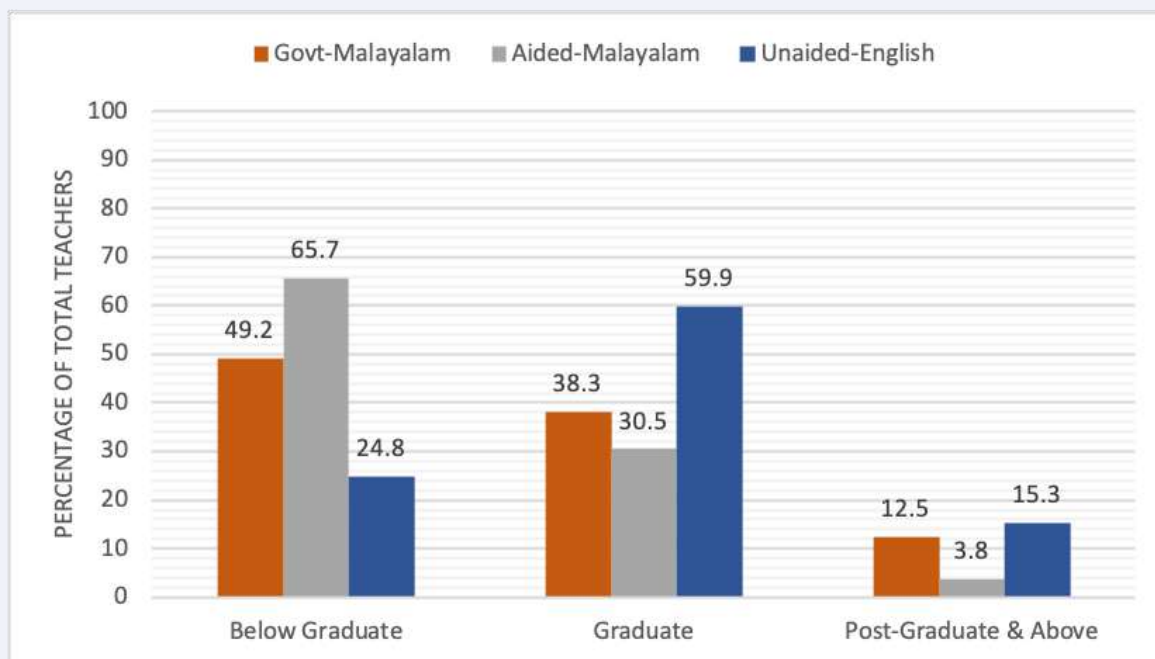
Students from the poorest households, who are in government LP schools, are taught by teachers with lower educational and professional qualifications, compared to the students from the richest households who attend private unaided schools. Lower instructional quality adds to the disadvantages of the home learning environment faced by children from the poorest households.

This segmentation, which starts at the lower primary level, affects students from poorer backgrounds, as they struggle up the education ladder. Learning levels start to diverge from early grades as shown by the ASER data presented in Section 3 of this report.

Those who are studying in Malayalam medium and in government schools – who tend to be from poorer backgrounds as shown here – have lower levels of reading proficiency. Learning difficulties are cumulative but because of the lack of knowledge about children's learning up to grade 10, the differences become apparent only in grades 11 and 12, at the higher secondary level. At this stage, the opportunities for these students become far more restricted, often to humanities courses in Malayalam medium. Failures in public examinations and repetition of grades in higher secondary makes further progress even more difficult. The inequality in the school system, which is initiated at the base and sustained by language of instruction, teacher quality and type of school management, should be a matter of deep concern to all sections of Kerala society.

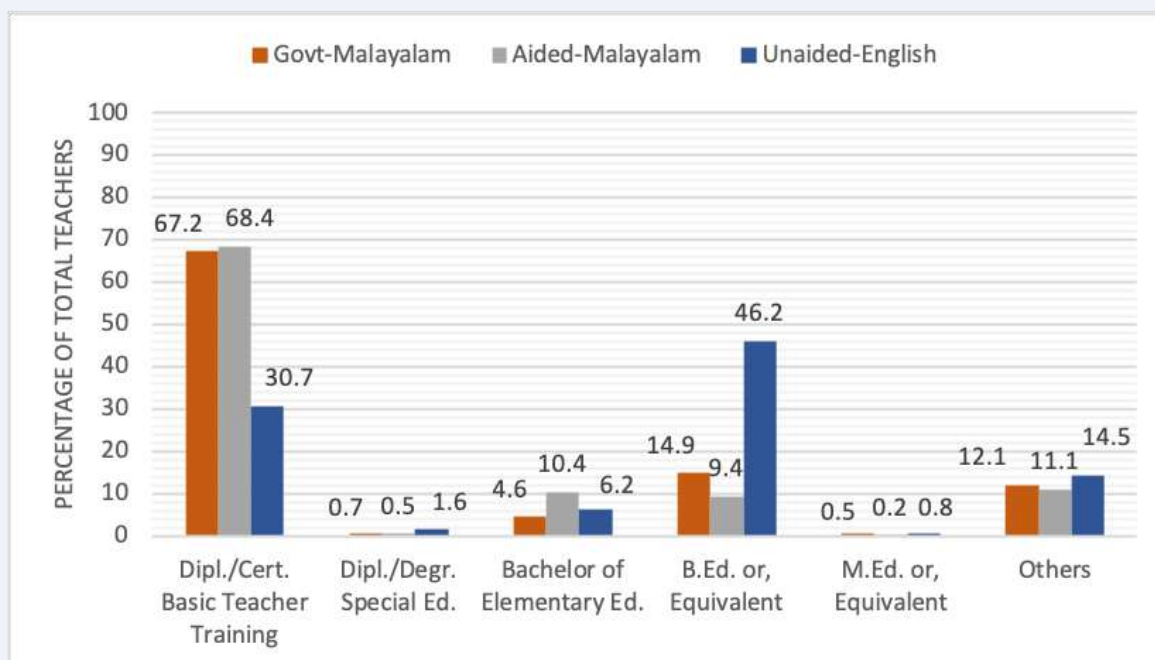


Figure 5.2: Academic qualifications of teachers in lower primary schools, by management and medium of instruction



Notes: The graph shows teachers in schools from which have only grades 1 – 4 (Lower Primary schools) and compares schools which are ‘Government – Malayalam Only’, ‘Government Aided – Malayalam Only’ and ‘Private Unaided – English Only’.
 Source: Authors’ calculations from UDISE+ 2021-22.

Figure 5.3: Professional qualifications of teachers in lower primary schools, by management and medium of instruction



Notes: See notes to Figure 5.2. The ‘Others’ category includes teachers ‘pursuing relevant professional courses’, other not specified courses, as well as those with no professional qualifications.
 Source: Authors’ calculations from UDISE+ 2021-22.

Language and Schooling

Policies, teacher education,
textbooks and examinations



This section examines the evolution of policies regarding the language of education and the overall education ecosystem (teacher education, textbooks and examinations) and the role they played in the differentiation and segmentation of the school system.

6.1 Policies relating to language of instruction

The Kerala Education Act specifies that the “the medium of instruction in all institutions shall ordinarily be Malayalam”. The main exception was in relation to linguistic minorities, whose mother tongue is Tamil or Kannada, where “provision shall be made for instruction in their mother tongue if there be sufficient number of pupils”. (Government of Kerala, Kerala Education Act and Rules, Chapter VIII).⁶

This policy began to be changed in the early 1990s, through two channels, and in an informal manner, to a certain extent. First, private unaided schools which could offer English medium instruction were allowed to be established more easily. Their number started increasing especially after 1996. Second, English medium “parallel sections” began to be opened in government and aided schools, partly in response to the outflow of students to the private unaided schools.

The process of opening the English medium sections in government and aided schools was not formalised through a Government Order (GO) until 2003. Starting in the mid-1990s, the school headmaster/headmistress (HM) or principal together with the concerned education officer could take the decision to open these sections. According to the informal guideline provided, an English medium section could only be opened if there were already two sections in Malayalam. The number of sections in a school depends on student enrolment. However, many schools converted Malayalam medium sections to English medium sections at their own discretion,

despite a GO being issued in 2003 to curtail this practice. In 2012, the Education Department revised the GO and authorised schools to open an English medium section even if there were only one Malayalam medium section, thereby giving official sanction to the actual practice on the ground. The order cited the fall in the number of primary school students as a reason (which could have been due to their enrolment in unaided schools and/or the decline in the population). However, all government and aided schools have to maintain at least one Malayalam section and this provision has remained in subsequent revised/updated GOs.

The above restriction affected the government and aided lower primary schools in particular. Due to the wide network of schools close to habitations, their enrolment fell as the child population declined. This was also true of upper primary schools, though they were larger than LP schools. Secondary and higher secondary schools are significantly bigger and can therefore have an English medium section. In effect, government policy ensured that only the lower primary schools in the government and aided sector were forced to remain “Malayalam only” schools.

A very significant aspect of government policy was that no additional funding would be provided for the English medium parallel sections in government and aided schools. The GO of 2012 says explicitly that “there shall be no financial commitment in this regard”. Thus, no new teachers could be hired for these English medium sections. School heads and principals assigned teachers who were considered to have adequate English language skills to these sections. Shortages of subject teachers who were proficient in English abounded. In some schools, especially aided ones, additional teachers could be hired for these sections through contributions from parents or the management. In others, the same teacher might be teaching the English and Malayalam medium sections together or sequentially. Even in the English medium section, classes may be effectively conducted in Malayalam, with the main difference being that the English textbooks are used, and written homework and tests are done in English.

Hence, while the state government continued to spend large amounts of public funds for education, no reallocation took place to support the changing content of public education and the increasing demand for English medium education.

⁶ <https://education.kerala.gov.in/kerala-education-rules/>

6.2 Teacher Education and language teaching

An important issue affecting the learning of students in different types of schools is the type of teacher training that teachers have received, including in which language of instruction. The teacher education system has not been adjusted to the changing profile of the school education system, and specifically the addition of English medium sections in government and aided schools, as well as the growth in unaided schools. As the government explicitly renounced any financial commitment for these parallel sections, and also left it to the discretion of HMs and principals to decide who will teach in the English medium sections, there was no effort to re-align teacher education programs. Consequently, a teacher, particularly in a government and aided school, may have undergone her general education and teacher professional training in different languages through her school and university education career, resulting in varying levels of language proficiency in English and Malayalam.

Teacher education consists of several tracks in Kerala. Lower primary teachers in government and aided schools must have undergone a two-year certificate level teacher training in Teacher Training Institutes (TTIs). The medium of instruction in TTIs is Malayalam. The minimum qualification for recruitment into the certificate program is currently 12 years of education (though many older teachers who were recruited in earlier decades, may have only 10 years of education). Teachers with higher level qualifications (graduate level) are not normally recruited for lower primary classes in government and aided schools. In LP schools with an English medium section, such teachers may teach classes in English, for which they have not been trained, as well as in Malayalam.

Upper primary and secondary level teachers in government and aided schools require a graduate degree (3 years) and a B.Ed. degree (currently 2 years). These courses are offered in universities. The medium of instruction at this level is English for all subjects (unless the subject chosen is Malayalam language or literature). Students may be assigned to Malayalam medium or English medium schools for their practicum. The practicum may involve teaching in a Malayalam medium school and preparation of lesson plans in Malayalam, even though the B.Ed. student is formally being taught in English.

Higher secondary teachers in government and aided schools require a Master's level educational

qualification as well as a Master's in Education (1 year). The language of instruction is English.

There is no test for language proficiency for recruitment in government schools. In aided schools, managements have greater flexibility in selecting teachers who meet the minimum qualifications (as prescribed by the government), and may include language proficiency (as well as other considerations) in the selection process. Unaided schools normally recruit teachers who are graduates with B.Ed. degrees and usually check English language proficiency during the selection process.

A crucial aspect of teacher education programs in Kerala is the lack of emphasis on language learning, a structured approach to bilingual education, and assisting students with different levels of proficiency in the language of instruction. Further, building the language proficiency of students across the curriculum, in different subject areas (not just in language classes), through appropriate pedagogical approaches, is not a core instructional goal. The assumption is that the medium of instruction alone provides language proficiency.

6.3 Textbooks

Although English medium parallel sections were introduced since the mid-nineties, there were no specific textbooks for students in these sections in government and aided schools. Teachers used English textbooks produced by the National Council



of Educational Research and Training (NCERT) for close to two decades. Authorised English textbooks prepared by the Kerala State Council of Education Research and Training (SCERT) were released only in 2013.

6.4 Examinations

Competitive examinations at the end of an education cycle often drives instructional practice and goals in the classroom. Formal changes in curricula and textbooks have little impact on teaching practice when the goal is to “cover the portions” of the textbook/syllabus, a phrase frequently used by teachers in the state.

The first public examination in Kerala (for schools following the State Board) is at the end of grade 10, the Secondary School Leaving Certificate (SSLC) exam. A student who has studied in English medium until then, but who may be considered by the teacher/school to be lacking in proficiency in English, can take the exam in Malayalam after the teacher enrolls him/her in the Malayalam medium section (before the exam). It is not clear that this is a satisfactory solution, as the student may also lack proficiency in Malayalam, having studied in English medium for several years.

The next public examination is at the end of grade 12. The majority of students at this level study in English medium, as shown earlier. The State Board exams are administered in both Malayalam and English and students can opt to answer the questions in either language, irrespective of the medium they have studied in during grades 11 and 12.

These rules were introduced so as not to penalise those who may have studied in Malayalam medium for most of their school career. The equity rationale is understandable. But the solution means that teachers do not have to ensure that there is adequate English language proficiency for those studying in English medium. Students also do not need to strive to achieve proficiency, as they can opt to answer in Malayalam. At the same time, standards in Malayalam language proficiency are also not high in the public examinations, partly because the poorest students are studying in Malayalam and partly because many students may have switched languages of instruction over the course of their education.

Students opting for the science stream in higher secondary, which ensure eligibility for competitive national examinations in engineering and medicine,

tend to take their examinations in English. Similarly in private unaided schools following the CBSE curriculum, the examinations (which are national) are in English at the end of grade 10 and 12. The CBSE examinations also allow entry into national higher education institutions (including in prestigious humanities programs).

Hence, by the time they are in grades 11 and 12, that is to say approximately 16-18 years old, the sorting of students into prestigious courses based on language and/or curriculum is complete. That process, however, starts early in the school career, at the lower primary level, as shown in this report.



07

Conclusion

Issues for consideration



The aspects of differentiation and segmentation presented in the preceding sections pose serious questions about the future evolution of the education system in Kerala, and, indeed, about the role of different languages in Kerala society. One important question relates to the public education system and what role it serves.

Despite the growth of the unaided sector in recent years, the public system is likely to continue, for many reasons, including the fact that thousands of teachers are employed in this system.

In Kerala's public education system, especially at the lower primary level, the majority of the students are from relatively poor background. They are also studying in Malayalam medium perhaps not out of choice, but because government policy does not allow the creation of an English medium section, where enrolment is low. This also means that the social composition of government and aided LP schools is skewed, with a high proportion of students from poorer households who face learning disadvantages at home. These schools have teachers with lower qualifications (however, pupil-teacher ratios are low). Further, because these students know only Malayalam (and perhaps not well), they continue to study in Malayalam medium at higher levels and by higher secondary education, they have limited options.

The question is whether this should be the role of the public education system: of providing Malayalam medium education to the poorer sections of society, and English medium education at higher levels to the better off, and especially those who may have had the opportunity of attending private English medium schools at lower levels of education. Neither the goals of equity and social justice nor of providing a dignified position to the Malayalam language seem to be served by this approach.

The societal demand for English language skills is overwhelming in Kerala, for both economic as well as aspirational reasons. When English is the route for better jobs, higher incomes and higher status in the society, there is every reason for all families to aspire to getting adequate knowledge of English for their children. If English medium instruction were offered in the government and aided LP and UP schools, it is doubtful whether many would opt for Malayalam medium even amongst the poor at lower levels of education. And as a result, the proportion of students studying in English at the higher levels would also increase.

The Malayalam language has strong roots among the people, and it has played an important role in creating the social and political identity of Kerala from the middle of the 19th century onwards. The merger of the three Malayali speaking regions (two of them princely states and one under British rule) in 1956 to create the state of Kerala was no mere administrative re-organisation of physical territories. It was primarily a recognition of collective struggles over political rights and social justice and of a vision of jointly building the future, underpinned by the bonds created by a common language and shared cultural heritage of the people. The vibrant tradition of journalism, literature, film and other arts in the Malayalam language continues to this day.

Nonetheless, Kerala society is becoming increasingly bilingual, with the deep penetration of English in the Malayalam media, film and popular culture. The Malayali child is exposed to English in the community outside the school. Social media has made English ubiquitous. Malayalam is now written in Roman script and English is written in Malayalam script. English is no longer an alien language for the Malayali child, even while Malayalam continues to be the main spoken language at home and in society. The question is whether the public education system should provide effective bilingual education, making all students competent in both Malayalam and English, instead of separating them out into different streams, which are also linked to socio-economic background. There are many such models of bilingual education and many more are being developed as societies become increasingly multilingual.

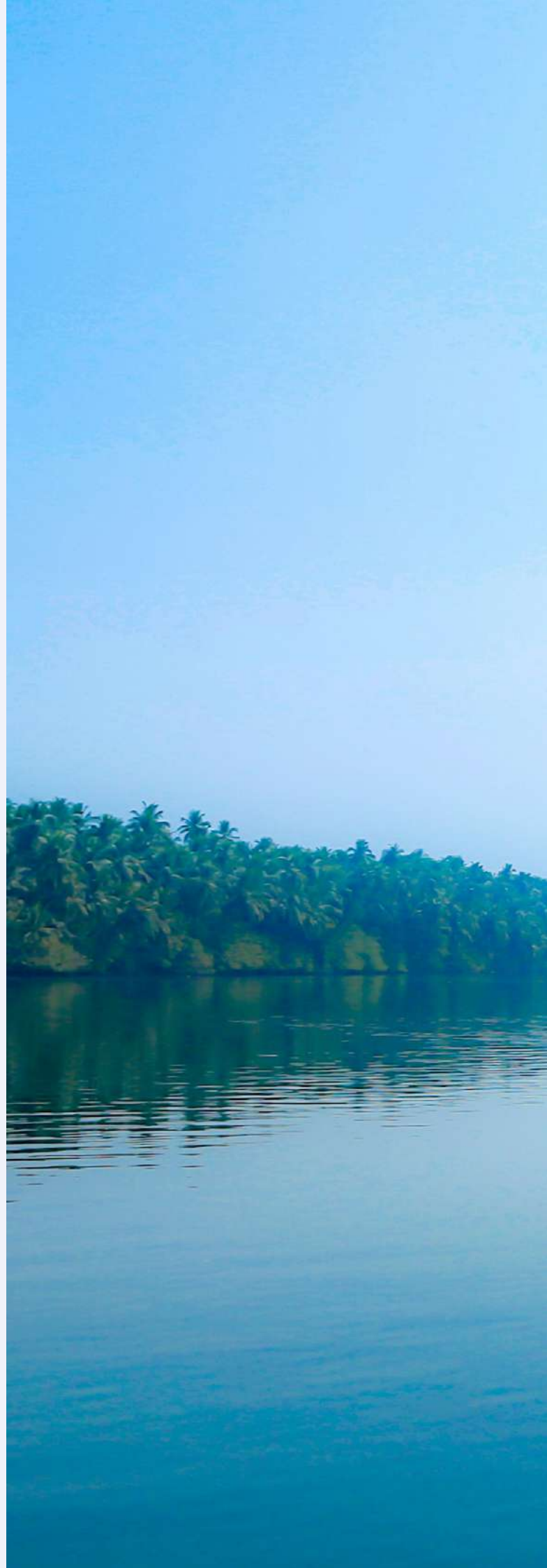
Moving to such a system will require revamping teacher education, the allocation of linguistically competent teachers to different classes and subjects, a new approach to developing materials and reconsidering the assessment system. It will also require costing of additional resource requirements. Given the decline in the child population, Kerala does

not have to spend money on expansion of schools - it may even generate savings - and should re-allocate resources to improving education quality in the public education system.

Apart from technical considerations, however, a broad consultative process is required. Perceptions of people are as important in designing and implementing new strategies. If different groups of people perceive any new approach as palliative care for the poor – for example, if bilingual education in government schools is seen as an inferior substitute for full time “English medium” instruction – it is doomed to failure.

The difficulties of engaging in public consultation and consensus building are not to be underestimated - especially, as the processes of language learning and the multiple and long-term dimensions of education quality are not easily understood.

Yet, the alternative of not engaging with change is to have an increasingly segmented system – separate and unequal.





Finland's School Education System

Some defining characteristics



The structure of the Finnish education system

Education is one of the sources of pride and cornerstones of the Finnish welfare society. Finland is renowned for an educational system that offers equal opportunities for education for all irrespective of their ethnic origin, social background, wealth or where they live (Finnish National Agency for Education, 2022). Some of the key values characterising Finnish education system are equity, trust, teacher autonomy, and well-being (Niemi et al., 2016; Pollari et al., 2018). Education from pre-primary to higher education is free of charge. The textbooks and education materials in compulsory education (nowadays until the age of 18) are free. In addition, students also get a free hot school meal every day in compulsory education. Health care and welfare services are also free of charge.

The Basic Education Act was approved by the Finnish parliament in 1968, and the transition to new uniform basic school system (comprehensive school) started in 1971 from the Northern Finland. Municipalities are responsible for arranging education for all 6–18-year-olds living in a municipality (Finnish National Agency for Education, 2022). Nowadays, the compulsory education lasts 12 years in Finland. The compulsory education starts at the age of six (one year of pre-primary has been obligatory since 2015) and ends at the age of 18, meaning that students need to continue their studies in upper secondary school level (either in vocational or general upper secondary school) after the comprehensive school (consisting of grades 1–9). The comprehensive school is divided into primary education (grades 1–6) and lower secondary education (grades 7–9), which have typically been located in separate school buildings. Nowadays it is more common to combine these two into a so-called comprehensive school, where pupils from the age of seven up to the age of 15 study under the same roof.

Children start their formal education (grade 1) in the year they turn seven. Almost all schools are public ones, and there are very few private schools in Finland. Only 2% of students in compulsory education attend schools that have a private provider (Eurydice, 2023). Finland is also known for small differences in learning outcomes between classrooms and schools (Niemi et al., 2016). Basic education in Finland is nonselective: schools do not select their students. As the quality of instruction and education is equal all over the country, most students go to a municipal school near their homes. This neighborhood school principle makes it possible for students to study in the same schools with their

neighborhood peers. Some students can be in the same class with some of their classmates throughout the comprehensive school.

The Finnish education system (Finnish National Agency for Education, 2022) consists of early childhood education and care (ECEC), pre-primary education (cf. preschool or kindergarten in other countries), primary and lower secondary education, upper secondary education (general upper secondary education/vocational education and training), higher education (universities/ universities of applied sciences), adult education, and non-formal education. The Finnish education system has no dead-ends (Finnish National Agency for Education, 2022). Students can always continue their studies on any level of education regardless of the financial situation of a student's household as long as they meet the admission requirements of the level in question. This is one of the key principles of the Finnish education system.

National Core Curriculum for basic education

The national core curriculum and local curricula steer the work of teachers and educational professionals (Finnish National Agency for Education, 2022). The national core curriculum provides a uniform foundation for local curricula. The purpose of the core curriculum is to enable a reform of school culture and school pedagogy which will improve the quality of the learning process and enhance students' learning outcomes and wellbeing (Finnish National Agency for Education, 2022). In Finland, all the teachers, teacher educators, stakeholders, and even parents can comment freely on the first draft of the core curriculum (Lavonen, 2020). Designing and development are always carried out in heterogeneous groups with experts from different fields (Lavonen, 2020).

The recent core curriculum for basic education adopted in 2016 is characterised by active involvement of students, meaningfulness and joy of learning, as well as school cultures that promote interaction. The national core curriculum (Finnish National Agency for Education, 2014) promotes positive differentiation, flexible arrangements in schools, and strong support for all students as part of a good operating culture of a school. In addition to traditional school subjects, the national core curriculum (Finnish National Agency for Education, 2014) includes the following transversal competence areas: thinking and learning-to-learn; cultural competence, interaction and expression; taking care of oneself, managing daily life; multiliteracy;

ICT competence; working life competence and entrepreneurship; and participation, involvement and building a sustainable future. These transversal competencies are taught as part of the school subjects (everyday teaching).

The national core curriculum for basic education (Finnish National Agency for Education, 2014) emphasises phenomenon-based learning. Phenomenon-based learning is a learner-centered, multidisciplinary instructional approach that is based on students' active involvement, inquiry and problem solving. Larger topics (phenomena) are taught by integrating several complementary school subjects and not just one subject is taught. Instead, students investigate and solve their own questions by applying what subjects are relevant to the real-world problem (Finnish National Agency for Education, 2016). Although subject-based lessons remain (where they may only utilise one subject-specific angle to address a topic), students aged 7-16 are required to participate in at least one multidisciplinary module per year. The modules are designed to explore real-world phenomena that can be viewed from competing and complementary viewpoints.

The overall distribution of lesson hours for basic education and the minimum number of lessons for core subjects during basic education are decided by the Finnish Government. In Finland, the school days in comprehensive school are short compared to many other countries. In addition, the amount of homework is low compared to many other countries. Language arts and mathematics are the core subjects in basic education. Currently, children start to learn English as a foreign language already in grade 1. They can also choose to study another foreign language (such as French, German, Spanish, Russian) in grade 4 if there are enough students choosing the specific language studies in a certain school. Due to being an official language in Finland, Swedish is a compulsory subject in comprehensive school, and students start to learn Swedish in grade 6 (if not their mother tongue).

The Finnish education system is characterised by high student involvement and agency (Niemi et al., 2016). Students set goals, solve problems, and assess their own learning based on individually set goals. Individual goals and development at each student's own level is emphasised, which is reflected in differentiation of instruction and tailored individual activities (students can for example partly choose their own homework). Furthermore, strong emphasis is placed on supporting students' socio-

emotional skills, well-being, engagement in learning and motivation.

Language of instruction and multilingual education

Finland has two official languages, Finnish and Swedish. Both language groups have their own educational institutions at all levels. Approximately 6 % of students in primary and lower secondary education and upper secondary education attend a school where Swedish is the language of instruction (Finnish National Agency for Education, 2022).

The number of immigrant background students in Finland has been growing steadily since the 1990s (Vigren et al., 2022). In the instruction of migrant and multilingual students, the particular goal is supporting their multilingualism and the development of their identity and self-confidence (Finnish National Agency for Education, 2014; Vigren et al., 2022). The guidelines of the curricula require every teacher to consider the role of language in all learning and the challenges that not knowing the language of instruction poses for students. In addition, all students should be able to use their whole linguistic repertoire as their resource for learning (Finnish National Agency for Education, 2014). Every teacher is responsible for supporting the personal and academic growth of all the students regardless of the subject they teach (Vigren et al., 2022).

School as a learning community of teacher professionals

The principles that guide the development of Finland's national educational system emphasise the school as a learning community (Finnish National Agency for Education, 2022). Students' learning and well-being are highly supported, and all the teachers are responsible for supporting students' learning and well-being irrespective of the subject they teach. In addition, teachers are encouraged to develop their own work and they also develop the school operational culture together with students, parents, principals, and other teachers, that is, with the whole school community.

In comprehensive school, each academic year, every school must have at least one clearly defined theme, project or course that combines the content of different subjects and deals with the selected theme from the perspective of several subjects (Finnish National Agency for Education, 2022). These are called multidisciplinary learning modules.

Schools plan and implement the multidisciplinary learning modules, and the topics and duration may vary based on local needs and interests. Students participate in planning the modules, and teachers make sure that, throughout this process, students from varying grade levels work together.

In primary school (Grades 1-6), the same teacher (class teacher) typically teaches almost all the lessons for their assigned class. There may also be subject teachers, for example in Music, Physical Education, or in English or Swedish lessons.

Focus on student learning – teacher autonomy, differentiated instruction, student participation and well-being

Teachers in Finland are responsible for participating in the local curriculum design, designing learning environments, and, moreover, assessing both their own teaching and their students' learning outcomes (Lavonen, 2020). The teaching practices in early childhood education and care (ECEC), pre-primary, and primary school are mostly student-centered (Lerkkanen et al., 2016), and students are highly involved in planning the instructional activities. Students' individual interests and needs are taken into account in teaching, and interdisciplinary learning goals across subjects are emphasised. Students' participation in learning activities and school community is supported. In ECEC, the focus is on play and child-centered learning and collaboration.

Students are all individuals, so they cannot be taught in the same way. Teachers need to differentiate their lessons, which is reflected in that there are usually several different levels of assignment in the same class at the same time. Every student has their own specific learning goals that are considered and discussed every year together with the teacher, the student, and parents (Finnish National Agency for Education, 2022). Teachers facilitate teaching and design supportive learning environments, while students set goals for learning, reflect, and solve meaningful real-life problems. Students' curiosity in learning is supported by studying in environments outside of the classroom, such as the schoolyard, the forest, or a library. Students' learning by doing and collaboration with their peers is emphasised, and they also learn to build on their strengths, learn to monitor their progress, and take control of their own learning.

The well-being of students plays an integral role in primary and lower secondary education, and

it is also enforced by Finnish legislation and the national core curriculum (Finnish National Agency for Education, 2022). The concept of well-being has a broad meaning in Finnish education, encompassing physical, mental, social, as well as economic aspects. Each school has an assigned student welfare team that is responsible for the well-being of all students. Preventive collective student welfare services support the entire school community. It is the primary mode of implementation for student support services.

A thriving school community and a healthy and safe learning environment are essential for the well-being of students and learners. Collective student welfare services refer to the school or educational institution's action culture and measures that promote student learning, health and well-being, interaction, participation, and environmental health and safety. The student welfare team allocates the school's resources for remedial teaching and special education resources, as well as for the services of the school psychologist, nurse, and social worker. The student welfare team meets regularly to discuss general problems and give consultative help for teachers. Targeted student welfare services include for example individual meetings arranged in co-operation with the parents and the child.



The role of school management

A qualified person for the position of principal must hold a university degree, teaching qualifications for the relevant educational form, sufficient work experience in teaching positions, and a degree in educational administration according to the criteria approved by the Finnish National Agency for Education (<https://www.oph.fi/en>). The principal is responsible for pedagogical and administrative leadership in school, personnel matters, curriculum development, annual work planning, and the development of staff's pedagogical expertise. Importantly, the principal is accountable for the school's operational culture according to the school's core mission and guidelines communicated in the national core curriculum. The principal is supported by the school's management team, which typically consists of assistant principals and teachers.

Assessment of student learning and support for learning and school attendance

In Finland, the emphasis of assessment is on formative rather than summative assessment and student evaluation (Finnish National Agency for Education, 2022). In pre-primary and primary school, assessment is part of daily schoolwork. The main types of student assessments are continuous assessment during studies (formative assessment) and final assessment (summative assessment). The aim of continuous assessment is to guide and help students in their learning process. In addition, the aim of continuous evaluation and monitoring is to provide targeted support to students based on their needs in learning and school attendance. In Finland, there is three-tiered support system (support is provided at three levels: general, intensified, and special support) (Ministry of Education and Culture). Under the Basic Education Act, besides providing teaching within the framework of the curriculum, students have the right to receive guidance counselling and sufficient support for learning and school attendance throughout their compulsory education. Support must be given as soon as the need for it is detected.

The support given to the student must be flexible, based on long-term planning, and adjustable when the student's need for support changes (Ministry of Education and Culture). The different forms of support are remedial instruction, part-time special needs education, teaching assistant services and special aids. Except for special needs education based on a decision for special needs education, all the different types of support can each be used at all

three levels of support. It is also important to ensure that support for students is seamlessly carried through when they move from early childhood education and care to pre-primary education and from pre-primary education to comprehensive school, as well as during the various stages of education.

Each student receives a school certificate at least once every school year. There are no national exams for students in primary and lower secondary education in Finland. Instead, teachers are responsible for assessment, primary school teachers for their own class and subject teachers for their own subject, based on the goals. Self-assessment and peer assessment play an important role in evaluating and "learning to learn" skills. The first national examination takes place at the end of general upper secondary education.

Teacher-led research and university-led research

Each university providing teacher training has its own distinctive profile and emphases of pre- and in-service teacher training based on research conducted by the teacher educators and researchers at the university. Teacher training is research-based, and continuous learning and professional development are highly emphasised throughout the teacher studies. Teacher educators integrate research and teaching to support their approaches to teaching. The research can improve teacher educators' knowledge and practice, but also teacher education and teaching profession in a broad sense. While being actively involved in research activities, teacher educators are also role models for student teachers about how to be a teacher-researcher, who reflects on their own work. There is a growing national and international consensus that teacher educators play a key role in improving the quality of teacher education.

Basic funding for universities comes from the Ministry of Education budget. In addition, research is conducted with a competitive funding from Research Council of Finland (formerly Academy of Finland), foundations, European Union (EU) funding, and other funding sources. The extent of external funding has been increasingly emphasised. Research focuses for example on instructional practices and pedagogy (classroom interaction, dialogue), on families, childhood, and parenting (home-school collaboration, partnership), work life and teacher training (agency and identity development, teacher professional development, stress and well-being), learning in technology-enhanced environments,



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collaborative problem solving and online inquiry, learning and development (learning and motivation especially in early literacy skills and math, learning difficulties, special education/inclusion), education and society, diversity and justice, educational assessment, and interventions (emotional skills learning, whole school well-being).

Accountability and autonomy in the context of decentralisation

Finland has a decentralised education system, where teachers, schools, municipalities, and universities enjoy a high level of autonomy. Teaching has been and it still is a popular profession in Finland, and teachers feel valued by society (Pollari et al., 2018). Teachers in Finland have a high professional autonomy and freedom in implementing the curriculum and choosing teaching practices, instructional activities, and materials based on their classroom composition and their own preferences. Support for in-service professional development is provided. There are no inspections nor teacher evaluation in Finland, but teachers enjoy high trust, and they are regarded as reflective professionals of education and learning (Pollari et al., 2018).

Typically, parents also have a high trust in teachers (Lerikkanen et al., 2013; Lerikkanen & Pakarinen, 2022) and in education in general. Implementing the home-school collaboration is mandatory for schools and teachers. Parents should be highly involved in their child's learning and related decisions.

Instead of inspections, the Finnish Education Evaluation Centre (FINEEC) carries out national evaluations at all levels of education. FINEEC also supports ECEC and education providers and higher education institutions in their quality assurance work. Evaluations are carried out for improvement and quality assurance and not for ranking educational institutions. To promote its curriculum in schools, the Finnish National Agency of Education is always seeking new tools that support teaching in the best possible way.

Pre-service teacher training in Finland—an example from University of Jyväskylä

In Finland, teachers are highly educated, having a university level training (typically MEd). In general, Finnish teachers are also motivated and strongly committed to their work (Pollari et al., 2018). In Finland, teachers are not only experts in their own subject area, but also experts in teaching and learning. Finnish teacher training emphasises the study of

pedagogy: learning the art of teaching, tailored to how different people learn and responding to learners' individual needs. Pre-service teacher training consists of five years' university training including theory, supervised teaching practice (or in a local school run by a municipality), and research (including BA and MA theses). All teachers working in Finnish schools must have completed this 5-year master's program.

The pre-service teacher programs are research-based meaning that teacher educators develop the teacher education at each university by investigating their own work and trying to find out the best practices together with their colleagues and teacher students. The Finnish teacher education system is quite different compared to many other countries, mainly due to the way teacher training is organised (Pollari et al., 2018). Every university that organises teacher education has a teacher training school whose primary purpose is to provide supervised teaching practice for pre-service teachers. There are seven universities providing teacher education (as a primary school teacher) in Finland: Jyväskylä, Helsinki, Turku, Tampere, Eastern Finland, Oulu and Rovaniemi. There is also a possibility to study teacher education in Swedish (Åbo Akademi), which is the second official language in Finland. In addition, several universities provide subject teacher training.

The roots of the University of Jyväskylä go back to 1863 and the first Finnish-language teacher training seminary. In the Department of Teacher Education at the University of Jyväskylä, the emphasis of teacher training is on effective classroom interaction, socio-emotional and interaction skills, and inclusive education. Teacher education at University of Jyväskylä also emphasises the values of active citizenship, social equality, and an understanding of multiculturalism. The Department educates professionals for teaching and counselling from preschool to vocational institutions and adult education through 1) a degree program in primary school education (M.A.(Ed) after the completion of B.A.(Ed.); 2) a Master's program in school counselling 3) teachers' pedagogical studies for subject teachers and 4) qualification studies for school counsellors.

Comprehensive and research-based teacher education is one of the strengths of the University of Jyväskylä. The research is multidisciplinary, applied, and theoretical. The research of the Department of Teacher Education focuses on the processes of learning, teaching, and guidance, and on the future of schools and learning environments.

At the University of Jyväskylä, students in primary school teacher education study their first year in home groups (smaller study groups with a specific profile) which provides them with an opportunity to network and build close and supportive relationships with their teachers and fellow students. Home groups vary annually and offer opportunities to specialise in, for example, English teaching in the lower grades of elementary school, working in a multilingual and multicultural school (KiMo studies), or developing one's own creativity through art-based learning. University of Jyväskylä has a teacher training school where students carry out most of their supervised teaching practices.

Emerging challenges

There are also several recognised challenges regarding the Finnish education system (see also Lavonen, 2020). Finland's population is growing increasingly diverse. In Helsinki, roughly 18 percent of residents speak a foreign language as their native tongue (Helsinki facts and figures, 2023). Recent national discussions have shed light on the fact that not all children born to immigrant parents feel fully Finnish or embraced by society. More initiatives are needed which aim to tackle this sense of exclusion by offering workshops and strategies to tackle issues of discrimination and racism, in an effort to foster broad-mindedness in the society. Pre- and in-service teachers need to be better prepared for increasingly heterogeneous, multi-cultural and multilingual classrooms (Vigren et al., 2022).

Another challenge is declining birth rate and lowered number of students at all school levels. How to provide equal opportunities for education for all in the future in the country with long distances is a true challenge. In the economic situation with declining birth rate, the organisation and implementation of high-quality education will be an issue.

Other challenges are related to declining learning outcomes, struggles with well-being and increasing diversity in the society. There is increased polarisation in terms of students' learning outcomes and well-being. How to tackle this diversity and polarisation development and how to ensure equal opportunities for all in the future? How to tackle social exclusion and support inclusion at school communities and in the whole society? For example, the percentage of 20–24-year-olds NEET (Not in Employment, Education or Training) youth in Finland is 12 (OECD, 2022). Furthermore, education is not appreciated as much as it used to be as it is not necessarily the way to earn your living and a means

for socioeconomic mobility across generations in the society.

A changing society requires more and more transversal skills and competencies, such as multiliteracy skills and digital skills. There is a lot of information available on the internet, but critical literacy skills are needed to navigate this information load. We need to make sure that teachers are prepared and comfortable with the digital technology and pedagogy. Teachers are also struggling with students with reduced attention span and diminished academic motivation. In addition, teachers need to tackle some students' persistent problems relating to school non-attendance.



Finland has been particularly committed to building a good, publicly financed, and locally governed basic school for every child. ...This commitment ... has been so strong that some call it the Finnish Dream. This name provides a hint for other nations when it comes to educational transformation: it is better to have a dream of your own than to rent one from others.

Pasi Sahlberg, "Finnish lessons 3.0: what can the world learn from educational change in Finland?"

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