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Special School Bus Service Study – Summary Report

For Bus Association of Victoria

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1. Introduction

The Bus Association Victoria (BAV) has engaged the Public Transport Research Group (PTRG) at Monash University to undertake a research project on Special School Bus Services in Victoria, with a particular interest in understanding and improving student travel times to access special schools and exploring equity issues. Special school bus services cater for school access travel for a range of students including those with autism, deafness, intellectual disabilities and physical disabilities.

The research was led by Monash Public Transport Research Group and included two sub-consultancies::

- *PBA Transit Planning*: to review services and planning through two case studies; and
- *Janet Stanley*: to explore issues of social equity associated with the services.

This is a summary report of the research. Detailed findings and evidence from each of the three sets of studies are available in separate reports:

- Monash Public Transport Research Group, March 2022 “BAV Special School Bus Service Study Final Report – PTRG components” Prof Graham Currie, Dr James Reynolds and Dr Taru Jain
- PBA Transit Planning, Sept 2021, “Special Schools Study – Stage Two Report” 29-09-2021
- Janet Stanley, National Institute of Economic and Industry Research, Nov 2021 “Bowling Together - Social Equity and the Special School Bus for Students with an Impairment” Report for the Bus Association Victoria Inc

This summary report is structured as follows: the next section describes the aims, tasks and activities involved in the project. Section 3 outlines the key findings and recommendations. Key conclusions and summary of recommendations is provided in Section 4.

2. Aims and objectives

The overall aim of the project is to:

1. better understand conditions of travel for special school students;
2. establish if student travel time on buses can be reduced; and
3. establish if inequities exist.

The objectives of the three component studies of the project were to:

- PTRG component:
 - review national/international practices in Special School access;
 - review the published research literature and identify issues in Special School travel;
 - survey Special School Bus Service operators on student maximum journey times; and to
 - review available Victoria Travel Survey evidence on travel times;

- review the Melbourne University Special School Pilot Project¹
- Planning Case Study sub-consultancy (*PBA Transit*):
 - review routes and assess the planning of services for two case studies² to explore how travel times might be reduced; and to
 - assesses the feasibility of using the Electronic School Manifest System (ESMS)³ to measure student travel times.
- Social Equity sub-consultancy (*Janet Stanley*), which aims to:
 - better understand the experiences of students in travelling to special schools;
 - explore the equity context of travel for Special School children relative to other students;
 - place any inequities in the context of wider social and transport policy;
 - explore the case for inequities to be addressed on a social justice basis; and to
 - suggest improvements to services and their priority.

3. Key findings and recommendations

3.1 PTRG component

The *review of national practice in Special School access* found that:

- Approximately 10% of Australian school students (380,000) have an impairment.
- Only 89% of school-aged children with an impairment go to school.
- 88% of students with an impairment go to a regular school with:
 - 70% attending mainstream classes, and
 - 18% attending special classes.
- The remaining 12% of students with an impairment go to a Special School, being approximately 45,300 students across Australia and approximately 1.2% of the total student population [4].
- In Victoria in 2021 there were:
 - 16,261 Special School (full time equivalent) students, representing approximately 1.6% of all students[5];
 - 107 Special Schools: 80 government and 27 non-government [6].
- Most states, including Victoria, use buses and taxis for Special School transport. Victoria (2021) had 436 contracted transport services including 389 contracted bus services (the focus of this review).
- Victoria transports 7,000 to 9,000 Special School students at a cost of est \$7,500 per student per annum and \$19 per trip. These costs are comparable to NSW, but slightly higher than costs in SA and Tasmania (\$6-7000 per student per annum and \$16-7 per trip) [7-11].

Reviewing international practices found that:

- Curitiba, Brazil, runs segregated bus services using specialised vehicles to transport students to Special Schools. It runs some direct services. However, there is also a central terminal where some students transfer between routes [12-17].

¹ This was a 2018 ‘Smart Market’ trial undertaken by the Centre for Market Design, which used an online auction system to procure transport services for the Northern School of Autism.

² Glenroy Specialist School (metro), and Kalianna School Bendigo and Bendigo Special Development School (regional).

³ ESMS is a mandatory requirement for Special School bus services in Victoria. It is a record of student use of buses which tracks students using services so that no students are lost or missed.

- In Europe:
 - a transponder system has been developed that allows students to wait within 100m of the bus stop, tells them when the bus is arriving, triggers flashing lights, and informs the bus driver of any students with special needs[18].
 - Nordhorn, Germany, ran a project to increase the use of the city bus network by children with impairments, including to get to school, by training students and bus drivers [12, 13, 19].
 - In Sweden 62% of those using special school bus services travel for longer than 20 minutes, compared to just 53% of those travelling on regular school bus services [20].
- In Toronto, Canada:
 - there is a ‘Purple Tag’ system used on regular school buses so that drivers can readily identify students with impairments.
 - there is also a separate Special School bus service. Special School students travel 81% further and 78% longer than they would if they were to travel to their nearest school, which is twice the excess travel experienced by mainstream students[12, 21-25].
 - There was a period of chaos in 2016 because of a shortage of drivers. Some Special School students had extra-long journeys, where lost or were dropped off inappropriately[22].

Recommendation:

R1. Government, schools and operators should consider opportunities to adapt technologies and practices from overseas.

General issues identified in one published review of the field included:

- (1) “Understanding disability” and a need to question segregation and exclusion of people with disabilities;
- (2) “Stakeholder understandings of inclusive education” with respect to integrated schooling and travel so that students with impairments are not separated from peers;
- (3) “Disability rights legislation and policy”;
- (4) “School board transport service challenges and concerns”; and
- (5) “Alternative accessible student transport methods and opportunities” [12].

Specific issues of concern with the transport of students to special schools in the published research literature included:

- **safety** including: students being lost, left behind or left onboard; when boarding and alighted (manual handling, powered lifts etc.); being correctly restrained; emotional problems during travel; children escaping seat belts or restraints; risk of self-injury; infection control; emergency preparedness; and (especially) crash safety.
- **the needs of disabled children during transport:** familiarisation; reliability, comfort and long travel distances/time; isolation and a lack of connection to peers; equity issues; and medical needs.
- **Bus drivers and on-board aides** especially regarding: parental concern about capability; communicating with the children and understanding their needs; training; operating lifts, wheelchair tie downs and other specialised equipment; and the difficulty of the job, split shifts and low pay leading to poor staff retention.

Recommendation:

R2. Assuring the safe management of Special School Students both during travel and also in accessing and egressing bus services should remain a priority objective for special school services.

R3. Provision of well trained, experienced and capable driving and on-board aid staff for special school services is an essential requirement to achieve Recommendation 2.

The survey Special School Bus Service operators to identify maximum student travel times found that across 192 routes the average maximum journey time is 79.7 minutes, while the highest journey times are 155 minutes. Approximately 80% of metropolitan routes and 75% of regional routes have maximum journey times of over an hour, while 40% and 30% respectively are longer than 90 minutes. There is, however, much variation in average maximum journey time by school and by market group.

Table 1 shows average travel times found through review of the Victorian Travel Survey data.

Table 1: Average journey to school travel times

	Special School students	Mainstream school students	Factor
All modes	42.4 minutes	18.2 minutes	2.3
School bus	49.0 minutes	36.8 minutes	1.3

Journey times are on average 2.3 times longer for Special School students than for mainstream school students. For students using school bus services it is 1.3 times longer. The review also found that almost 40% of Special School students using the school bus have journey over an hour, compared to only 10% of mainstream school students.

A review of the Melbourne University Special School Pilot Project undertaken as part of the research suggested that improvements to the services in the pilot resulted from the addition of resources to provide 7 new direct routes. An online transport auction as part of the pilot appears to have provided prices that are similar to commercial rates. There are no plans to implement this trial elsewhere. In general this project demonstrates that investment in additional bus resources and good service planning will reduce student travel times.

Recommendation:

R4. Government should increase funding to the Special School Bus Service program so that additional services can be provided such that student journey times can be reduced.

3.2 Case study component (PBA Transit)

Table 2 shows travel times found in the review of bus routes for the case studies.

Table 2: Case study schools – student travel time

School	Location	Journey time (minutes)	
		average	maximum
Glenroy Specialist School	Metropolitan	65.3	155.4
Kalianna School Bendigo	Regional	39.1	128.2
Bendigo Special Development School	Regional	54.2	132.5

Most of the regional bus routes visited the two schools in sequence, adding 15 minutes to the journey for students at Bendigo Special Development School. Buses take around 3 to 3.7 times longer than traveling the same route by car. Metropolitan routes generally took more time than regional routes due to slower speeds, traffic congestion and the dwell time associated with wheelchair loading/unloading, despite metropolitan routes generally being of shorter distance.

Some routes are inefficient due to the sequence of stops or because they service stops close to adjacent routes. Some routes ‘double back’ or drive circuitous paths to service stops that could have been serviced more directly in a different sequence. Student journey time appears driven mostly by pick-up/drop-off sequence, suggesting that providing more buses (and therefore more routes) would be necessary to dramatically shorten travel times.

Recommendation:

R5. Planners and operators should, where appropriate, rearrange stop sequences and the allocation of stops to routes to improve route efficiency and reduce student travel time. Government should increase funding to provide additional services and reduce student travel time as per recommendation 4.

The review of route planning for the case study Special Schools found that:

- Planning appears to occur once a year and may not adapt to changes during the year.
- Planning routes and the management of changes appears to generally work in practice, but is somewhat informal so may miss opportunities to optimise journeys.
- The planning process may not be applied consistently by all Schools and Operators.
- There may be gaps in the knowledge and skills required to plan routes.

Recommendation:

R6. Planners and operators should use a more formal planning process based on: (1) ignoring routes from the previous year; (2) mapping stops for the coming term; (3) identifying the stop sequence that gives the most direct routes; (4) engaging operators to plan, test and deliver the services as they do currently; (5) identifying stops or pick-ups which do not conform to the optimal route designs and considering whether these can be serviced via an alternative mechanism (direct taxi, additional bus etc.); (6) assessing changes that may arise when a student stops attending or changes address; and more consistently update the ESMS Manifest to reflect the planned routes and the permanent changes that arise during the year.

R7. Schools should seek the help of experienced planners where necessary including occasional comprehensive reviews of services and even mid year reviews of service plans where appropriate.

R8. Schools should invest in training for the staff who plan and manage the services.

R9. Government should consider subsidising this training by funding the development of a curriculum and toolkit for use by schools given that it would improve the cost-effectiveness of these (government-funded) services.

The assessment of whether the ESMS can be used to measure student travel times found that:

- It does not provide all information needed to fully plan journey time reductions.
- Some manual processing of ESMS data is needed to convert it into a usable format.
- The ESMS data includes some incorrect data. This does not appear to have a major impact on the delivery of services, but could have a downstream effect on planning.
- Two methods have been identified for undertaking a larger-scale analysis of Special Bus Service routes costing an estimated \$80,000 (ex GST) for project setup etc., plus:
 - \$16,800 (ex GST) per school to undertake a full analysis (including direct observations), or
 - \$6,400 (ex GST) per school using the incomplete ESMS data set and various assumptions.

It may be possible to apply the first method to selected schools where there is likely to be more variation in travel times (e.g. traffic congestion, market group), and the second method to schools where variation is less likely.

Recommendation:

- R10. *Schools should more consistently update the ESMS system to ensure its accuracy.*
- R11. *ESMS can be used to more comprehensively understand student travel times. Stakeholders should consider expanding this analysis to more schools, as per the cost estimates provided.*

3.3 Social equity component (Janet Stanley)

The project components that sought to better understand the experiences of students in travelling to special schools included interviews with 18 people. It found that:

- Special School Bus trips are quite long, with one person stating that 70% are over an hour and another that 75% are on the two-hour limit.
- Journey length impacts vary from child-to-child, but long trips likely lead to stress, disempowerment, lack of comfort and other negative impacts.
- As the buses do not make toilet stops some children are forced to wear incontinence clothing specifically because of the trip length.

Recommendation:

Government should increase funding to provide additional services and reduce student travel time as per recommendation 4.

- R12. *Government, schools and bus operators should review the policies associated with maximum route travel time and toilet stops so that children do not need to wear incontinence clothing specifically because of route length.*

- Food and drink are banned on Special School buses, apparently to minimise risks (choking, allergic reactions etc.). They are also banned on mainstream school buses [26]. However, food and water are amongst the most critical physiological needs [27]. Given the length of the Special School bus trips this ban does not appear appropriate.

Recommendation:

- R13. *Government and schools should review the policies associated with food and drink bans, find alternative approaches to manage other risks (e.g. choking, allergic reactions), and allow students to have food and drink as needed during trips.*

- Some parents do not mind the length of the bus trip, as it provides time for them to undertake work/other activities. However, this appears a result of inequities as after-school care is rarely available at Special Schools or accessible to students.

Recommendation:

- R14. *Government and schools should review provision of after-school care to Special School students to ensure that equitable access is available.*

- On some bus routes the bus support person arranges entertainment or activities to undertake during the journey. At one school teaching staff drive the buses and so are able to use journey time to prepare students for the day ahead. However, some schools ban mobile phones and electronic devices on the bus.

Recommendation:

- R15. *Government, schools and bus operators should review policies associated with electronic device bans. They should also support provision of onboard entertainment, activities etc. during bus trips to help reduce student isolation, boredom etc.*

- Some parents are concerned that illegal restraints have been used.

Recommendation:

R16. Operators and regulators should ensure that drivers and onboard attendants are appropriately trained in the use of onboard safety equipment. All devices should be legal, safe, comfortable and fit for purpose.

- In general, it appears that Special School Bus Services are very safe, high quality and operators have an emphasis on student comfort and safety. However, there is some concern that the Government is not well equipped to deal with an emergency.
- Operators and schools appear to have developed strong partnerships. However, the Government administrative structure also appears to be complex and inflexible⁴, and the lack of local decision-making may be resulting in longer trip times and other poor outcomes for students.
- Parents often do not have employment or access to cars. Some students receive a Conveyance Allowance that contributes to transport costs, but parents are expected to make school travel arrangements work themselves. This appears likely to lead to inequitable treatment for students across residential location, income, attendance patterns etc. many of which they are unlikely to be able to change.

Recommendation:

R17. Government, schools and operators should ensure that any concerns about safety/emergency preparedness are resolved and improvements made as appropriate.

R18. Government should build upon the strong relationships that already exist between operators and schools and, where possible, delegate decisions to the local level.

R19. Government should remove policy restrictions on student numbers for new bus services and taxi feeder services so that transport planners have flexibility to accommodate each student according to their needs (and within budget limitations).

R20. Government should review the adequacy of the Conveyance Allowance system and whether sufficient funding is being provided to meet the needs of students, especially those whose families do not have access to private vehicles.

The exploration of the equity context of travel for special school children relative to other students found that:

- The Special School Bus Service has the intention of providing equal access to education, but this is not always achieved. Because a separate service is provided students with an impairment may be seen as not belonging, as being a transportation problem, or may be otherwise treated inequitably.
- Segregated systems can become normalised, and so become blind to the impacts on students (e.g. not being able to form friendships with others, including mainstream students, or participate in recreational and extracurricular activities, or otherwise not having opportunities or their needs met in the same way as other students).
- Integrating Special School and mainstream student transport might risk exposing students with impairment to bullying. However, this **should not** be a reason for separate systems. Rather, all students should be free from being bullied.

Recommendation:

⁴ For example, 15 students are needed for a new school bus route, students must live within designated areas to be eligible for travel and attend school for more than 2 days a week. Taxis can only be used as a feeder with approval by the department.

R21. Government, schools and operators should consider opportunities to integrate Special School Bus Services with mainstream services. Integration would mean that onboard attendants would be able to help to reduce the bullying amongst all students. It would also allow interaction between mainstream and Special School students, and help mainstream students learn that impairment and difference is a part of life.

- The limited literature about effects of longer travel times on students with impairments suggests that travel times need to be reduced.
- Longer travel times is unequal treatment. There is a clear case that Special School students' school travel should not be longer than the travel for mainstream students.
- However, long travel times are also inequitable given that the needs of some of these students may mean that traveling on the bus is particularly difficult, less sustainable, less accessible or less safe than for mainstream students. Capability theory places an emphasis on a person's desired outcomes, rather than achieving equality [1-3]. To provide outcome equity with respect to the impacts of bus travel it may be that Special School students' travel should be less than that for mainstream students.

Recommendation:

Increase funding to provide additional services and reduce student travel time as per recommendation 4.

In placing inequities in the context of wider social and transport policy and exploring the case for inequities to be addressed on a social justice basis, this study found that:

- While the National Disability Insurance Scheme (NDIS) has largely been implemented, Victorian school bus travel will not be covered until 2023.

Recommendation:

R22. Government should accelerate the coverage of school bus travel under the NDIS.

- The Victorian Government's *Place-based Education Plans* [28] policies do not appear to address Special School transport.

Recommendation:

R23. Government should consider reviewing the Place-based Education Plans policies and other policies as necessary to fully address Special School transport.

- A wide range of the social justice literature discusses the inequities of segregated schooling systems, including how they result in longer trips to school, systemic bias, and are justified by 'albeist' assertions.
- International conventions on human rights emphasise the principle of inclusive education provided on an equal basis, and the best interests of the child being the primary consideration [29-31]. The Australian Human Rights Commission [32] states that "...the segregation of people with disability is inconsistent with the objects of the Disability Discrimination Act and the Transport Standards." The Royal Commission into Violence, Abuse, Neglect and Exploitation of People with a Disability [33] notes that inclusive education also builds understanding of diversity, benefiting the entire community.
- During interviews the researcher was told that:
 - with very few exceptions, inclusion in a mainstream setting is the best option regardless of a student's impairment, and
 - all schools should be like Special Schools, with private facilities for all students.

- Hence the policy basis of separate schooling for some students is not clear, and decision-making around this issue is not transparent.
- Some mainstream schools may be informally gate-keeping by making it more difficult for a student with an impairment to enrol, or suggesting going to a Special School instead. Students sometimes receive more assistance at a mainstream school than they would receive in a Special School. Unfortunately, such policies and gatekeeping, together with administrative burdens and complexity, can result in barriers to entry such that some people may avoid engaging with or even requesting a particular desired outcome [34].
- Interview participants also discussed how some new Special Schools are being built on urban fringes prior to the implementation of public transport services, limiting travel choices for students.

In seeking suggestions for improvements to services and their priority this project found that:

- The main solutions suggested in the research literature for long commutes are:
 - To improve urban planning so schools (and jobs) are closer to where people live. This implies integration so all children can go to a nearby school;
 - the use of bus priority measures; and
 - putting on more buses.
- It appears that under the current arrangements some improvements could be made through re-routing services, adding buses, and/or shifting travel to outside peak periods. A stakeholder reported that a Special School already uses staff-driven small buses (max. 5 students) to shorten travel times. Greater use of taxi services might provide similar benefits.
- Stakeholder discussion also suggested that more flexibility is required in the system: (e.g. allowing one-way travel by school bus where transit or other arrangements is preferred for the other direction). Improvements to the in-bus travel experience were also suggested, such as: seating arrangements that allow more student interaction; onboard entertainment; removing bans on food, drink, electronic devices; toilet breaks etc.

Recommendation:

Government should increase funding to provide additional services and reduce student travel time as per recommendation 4.

R24. Outcome equity impacts should be further assessed to determine the appropriate travel time standards that should be provided for Special School students. As discussed above, reducing travel time only as far as equalising with mainstream students may not result in true equity of outcomes.

R25. Government, planners, schools and operators might consider shifting school times to avoid peak traffic congestion, improvements to the travel experience and introducing greater flexibility into the system.

R26. In the shorter term, the Government should review wider policies, including locating new Special Schools in areas served by public transport, with an aim of reducing inequity and improving social justice outcomes.

R27. Over the longer term, the Victorian Government should work towards integrating schooling, so every child can go to the local school of their choice.

4. Conclusions and summary of recommendations

This project has examined school bus travel for Victorian students at Special Schools, with a focus on travel times and social equity. Table 3 summarises travel times found in this study.

Table 3: Student travel times (minutes)

Data source		Mainstream	Special School	
		average	average	maximum
VATS and VISTA	All modes	18.2	42.4	-
	School bus	36.8	49.0	-
Metro case study	Glenroy Specialist School	-	65.3	155.4
Regional case study	Kalianna School Bendigo	-	39.1	128.3
	Bendigo Special Development School	-	54.2	132.5

Travel times for Special School students appear much longer than for mainstream students. The longest times experienced by students on each route at the case study schools average up to 2 hours and 35 minutes.

Recommendations made by this study are as follows:

- R1. *Government, schools and operators should consider opportunities to adapt technologies and practices from overseas to improve Special School travel*
- R2. *Assuring the safe management of Special School Students both during travel and also in accessing and egressing bus services should remain a priority objective for special school services.*
- R3. *Provision of well trained, experienced and capable driving and on-board aid staff for special school services is an essential requirement to achieve Recommendation 2.*
- R4. *Government should increase funding to the Special School Bus Service program so that additional services can be provided such that student journey times can be reduced*
- R5. *Planners and operators should, where appropriate, rearrange stop sequences and the allocation of stops to routes to improve route efficiency and reduce student travel time. Government should increase funding to provide additional services and reduce student travel time as per recommendation 4.*
- R6. *Planners and operators should use a more formal planning process based on: (1) ignoring routes from the previous year; (2) mapping stops for the coming term; (3) identifying the stop sequence that gives the most direct routes; (4) engaging operators to plan, test and deliver the services as they do currently; (5) identifying stops or pick-ups which do not conform to the optimal route designs and considering whether these can be serviced via an alternative mechanism (direct taxi, additional bus etc.); (6) assessing changes that may arise when a student stops attending or changes address; and more consistently update the ESMS Manifest to reflect the planned routes and the permanent changes that arise during the year.*
- R7. *Schools should seek the help of experienced planners where necessary including occasional comprehensive reviews of services and even mid-year reviews of service plans where appropriate.*
- R8. *Schools should invest in training for the staff who plan and manage the services.*
- R9. *Government should consider subsidising this training by funding the development of a curriculum and toolkit for use by schools given that it would improve the cost-effectiveness of these (government-funded) services..*
- R10. *Schools should more consistently update the ESMS system to ensure its accuracy.*

- R11. *ESMS can be used to more comprehensively understand student travel times. Stakeholders should consider expanding this analysis to more schools, as per the cost estimates provided.*
- R12. *Government, schools and bus operators should review the policies associated with maximum route travel time and toilet stops so that children do not need to wear incontinence clothing specifically because of the route length.*
- R13. *Government and schools should review the policies associated with food and drink bans, find alternative approaches to manage other risks (e.g. choking, allergic reactions), and allow students to have food and drink as needed during trips.*
- R14. *Government and schools should review provision of after-school care to Special School students to ensure that equitable access is available.*
- R15. *Government, schools and bus operators should review policies associated with electronic device bans. They should also support provision of onboard entertainment, activities etc. during bus trips to help reduce student isolation, boredom etc..*
- R16. *Operators and regulators should ensure that drivers and onboard attendants are appropriately trained in the use of onboard safety equipment. All devices should be legal, safe, comfortable and fit for purpose.*
- R17. *Government, schools and operators should ensure that any concerns about safety/emergency preparedness are resolved and improvements made as appropriate.*
- R18. *Government should build upon the strong relationships that already exist between operators and schools and, where possible, delegate decisions to the local level.*
- R19. *Government should remove policy restrictions on student numbers for new bus services and taxi feeder services so that transport planners have flexibility to accommodate each student according to their needs (and within budget limitations).*
- R20. *Government should review the adequacy of the Conveyance Allowance system and whether sufficient funding is being provided to meet the needs of students, especially those whose families do not have access to private vehicles.*
- R21. *Government, schools and operators should consider opportunities to integrate Special School Bus Services with mainstream services. Integration would mean that onboard attendants would be able to help to reduce the bullying amongst all students. It would also allow interaction between mainstream and Special School students, and help mainstream students learn that impairment and difference is a part of life.*
- R22. *Government should accelerate the coverage of school bus travel under the NDIS.*
- R23. *Government should consider reviewing the Place-based Education Plans policies and other policies as necessary to fully address Special School transport.*
- R24. *Outcome equity impacts should be further assessed to determine the appropriate travel time standards that should be provided for Special School students. As discussed above, reducing travel time only as far as equalising with mainstream students may not result in true equity of outcomes.*
- R25. *Government, planners, schools and operators might consider shifting school times to avoid peak traffic congestion, improvements to the travel experience and introducing greater flexibility into the system.*
- R26. *In the shorter term, the Government should review wider policies, including locating new Special Schools in areas served by public transport, with an aim of reducing inequity and improving social justice outcomes.*
- R27. *Over the longer term, the Government should work towards integrating schooling, such that every child can go to the local school of their choice.*

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