

The Availability of School Facilities and Their Effects on the Quality of Education in Government Primary Schools of Harari Regional State and East Hararghe Zone, Ethiopia

Tadesse Hailu Afework

Lecturer, department of educational planning and management

College of education and behavioral sciences

Haramaya University, Ethiopia

Email: hailutadese@gmail.com

Telephone: 251- 0920470190

P .O .Box 119, Haramaya University, Ethiopia

Maeregu Biyabeyen Asfaw

Lecturer, department of educational planning and management

College of education and behavioral sciences

Haramaya University, Ethiopia

Email: bmaeregu@yahoo.com

Telephone: 251- 0911167152/251-0920675913

P. O. Box 138, Dire Dawa, Ethiopia

Abstract

The research was carried out in 24 primary schools in Eastern Hararge zone and 12 primary schools in Harari regional state. Its major objective was to study the availability of school facilities and their impacts on quality of education. The study sample was selected through simple random sampling technique and available sampling techniques. School principals, district and regional education bureau heads were the sample of the research. The data collection instruments were questionnaire, interview and observation. The data analysis was done using statistical tools such as percentages, frequencies, means and grand means. Research result showed that the availability of school facilities and instructional materials were unavailable, less in quantity and quality that created a great challenge on teaching and learning activities that in turn had a negative impact on the improvement of the quality of education.

Keywords

Academic achievement, instructional materials, quality education, resources, school facility

Background

The primary purpose of teaching and learning process is to bring a significant change in behavior through active participation and critical thinking of the learner. This cannot take place without the availability and proper use of school facilities and other needed resources. Regarding available school resources Ogunsaju (1980) emphasized that, quality of education that students receive depends on the availability of an overall school facilities in which teaching and learning takes place. Quality, relevance and access to education can be attained if and only if educational materials are properly available and utilized in an educational institution. According to Durbin, et al. (1989), resources are the only means through which organizational activities, service and satisfactory ends are attainable. For the achievement of organizational objectives, resources play the crucial roles.

School facilities, which are consists of all types of buildings that use for academic and non-academic purpose, equipment, classroom facilities, furniture, instructional materials, audiovisual aids, toilet, ICT, library and laboratory materials and others play a pivotal role to smoothly run teaching and learning process. As Buckley, Schneider and Shang (2004), school facilities enable the teacher to accomplish his/her task as well and help the learner to learn and achieve effectively. Additionally, they emphasized that the availability and proper use of school facilities can affect the interest of the teacher to teach effectively in turn that positively affects student's academic achievement. Therefore, the school facilities in the school needs a proper attention as they have a great value in the support of teachers and students morale, motivation and plays a significant role to improve the quality of education.

As Ethiopian Ministry of Education (2002) to ensure the quality of education, students should have quality textbooks, instructional materials and other school facilities in sufficient quantity and quality. Hedges and Theoreson (2000) also argue that, the adequacies of school facilities do not a guarantee for student's academic performance but the proper utilization of the facilities has a great value. As indicated above, to improve the quality of education, the availability of school facilities and the proper management of these resources should given a great attention. Improving the quality of education, therefore, has become the burning issue of the time. Quality education depends on a complex combination of factors that come together at the school and classroom levels. The most important of these factors is widely understood to be quality of school resources.

Ethnographic and perception studies have also indicated that inadequate school facilities have a negative impact on teachers motivation that in turn negatively affects students achievement (Earthman, 2002) in the same way Lawrence (2003) emphasized that the unavailability of school resources negatively affects staff and students motivation. A good school environment and adequate school facility have a significant positive effect on teacher's motivation and student's achievement. Additionally O'Neill (2000) described that school facility impacts on student achievement, attendance and teacher retention. Reynolds, et al., (1996) found that a negative impact on student achievement where school facilities

As Khan and Iqbal (2012) Adequate and quality school facilities are basic ingredients for quality education and to achieve the intended goal of the school program. They also strengthen the idea by emphasizing that learning is a complex activity that requires students and teachers' motivation, adequate school facilities such as standardized buildings and classrooms with their facilities, instructional materials and equipment for child's development.

Regarding to the availability of textbook and other reading materials, the study conducted by USAID (2010) in Ethiopia reveals that there is a big gap among regions. From the regions of Ethiopia, Oromia, Somali, Benshangul-Gumuz and Sidama only 1 in 6 children had any other reading materials. Additionally, the study showed that school resources such as electricity, water, computer rooms, and laboratories are the common problems of all the regions. In relation to student's achievement, in mother tongue reading scores, prior to grade 4 as indicated for Harari regional state it is 38 out of 100 and 44.7 for Oromia region. This shows that, the quality of education is questionable that needs a great attention to determine the areas of quality improvement that might support the efforts of all stakeholders in the country. Additionally, the researchers work in Haramaya University on the training of school principals and supervisors and mostly student trainees work their practicum activities around Harar and East Hararge Zone schools, they had the opportunity to visit the schools in the upper mentioned places. Based on the observations during the practicum sessions and the informal discussions with teachers and school principals the challenges were identified however, to see the challenges empirically this study was conducted.

Even though, the study depicts the availability of school facilities in Harari Regional state and East Hararge Zone Government primary schools, were chronic, to see to what extent the problems were serious for the study, 36 questionnaires were distributed for 36 school principals. 34 questionnaires were completed and returned. The data were analyzed by mean and grand mean values of the school variables and presented in tables and graphs below.

Research Method

Sources of data

To get relevant data about the availability of school facilities; government primary school principals, district education office heads and Harari Education Bureau head were the sources of data.

As the objective of the study was to identify the availability of school facilities in government primary schools, 24 primary schools from Eastern Hararge Zone and 12 Primary schools from Hareri Regional state, were selected by Simple Random Sampling technique. Regarding respondents, available Sampling technique was used to select school principals. The district education office heads where the sample schools found were selected using a purposive sampling technique.

Data Collection Tools

Relevant data for the research study were collected through questionnaire, interview, and observation.

Questionnaire is very crucial to cover large study areas. The questionnaires were composed of close ended items. The close ended items contain Likert scale methods of summated ratings- a statement is made and the respondents indicated their degrees of agreement and disagreement which will relevant to various issues and address in the research functions. In line with this, interview was conducted with, education bureau expert, district education office head and supervisors. The interview was held on preferable time schedule, which was arranged by both the interviewee and interviewer agreement. The semi-structured interview questions were prepared which were related to the availability of school facilities that are used in teaching and learning process. The data obtained from respondents were recorded in Tape recorder. Additionally, the observation data gathering technique was employed to study the physical feature of schools including: school buildings, classrooms, office and classroom facilities, libraries, laboratories, play grounds, toilet, and other educational inputs.

Methods of data analysis

A total of 34 questionnaires were distributed to school principals. The data, which obtained from questionnaire, interview and observation, were analyzed quantitatively and qualitatively. Descriptive statistics such as mean, grand mean, percentage, frequency, graphs (for quantitative data) and narrative technique (for qualitative data) were used. The data were interpreted, and concluded based on the findings of the study.

Results and Discussion

The sample schools general condition will be presented below with their mean and grand mean values.

Table 1: Mean and Grand Mean Values of School Facilities Availability

No	School facilities	Rating scales N= 36					Mean
		1	2	3	4	5	
1.	Attractiveness of the school compound and fencing	8	11	13	2	2	2.41
2.	Classroom condition (floors, walls, and roofs, shutter, student seats, file cabinet, blackboards, and availability of space to accommodate all the students)	14	10	6	4	2	2.16
3.	Library services (reading room, chairs and tables, shelves, reference books, regular opening hours for the students)	13	15	6	2	0	1.91
4.	Toilet (quality of the toilet rooms, separate toilet for boys and girls, availability of water adjustment to the toilet rooms)	10	18	7	1	0	1.97
5.	Availability and functionality of portable water	10	12	8	4	2	2.11
6.	Availability and functionality of pedagogical centre	5	8	15	6	2	2.78
7.	Conditions of school principal's office (access to computer, telephone, guest chairs, shelves, shutter)	3	6	18	6	3	3.00
8.	Staff room (chairs, tables and shelves)	8	16	5	5	2	2.37
9.	Availability of the store room	22	10	2	2	0	1.55
10.	Availability of sanitary materials	10	16	8	2	0	2.05
11.	Provision of first aid in case of accidents	16	16	3	1	0	1.69
	Grand mean						2.19

Level Of Agreement :{< 1.49= not available}; {1.50-2.49=poor}; {2.50-3.49= medium}; {3.50-4.49=good}; {4.49-5=very good}

As Table 1 depicted, the attractiveness of the school compound and fencing (\bar{x} =2.41) were poor in the primary schools of Harari and East Hararghe Zone. Teachers and students comfort is an important factor to build their motivation towards teaching and learning. If teachers and students are comfortable teaching and learning becomes easier. Being comfortable is a combination of many different factors; specially when the school's compound is attractive which invites for staying there by having enough places for taking rests , having trees , flowers, lounges, reading places, portable water, noise control, and sanitation. From the observation held on schools, most schools did not well

furnish and was low in their attractiveness. Because of shortage of water, in most schools there are no flowers and trees that can attract students and teachers. In most schools the buildings were not modern and maintenance is a big problem due to shortage of budget and they were old, doors and windows were broken and the furniture in the classroom were inadequate and with low quality.

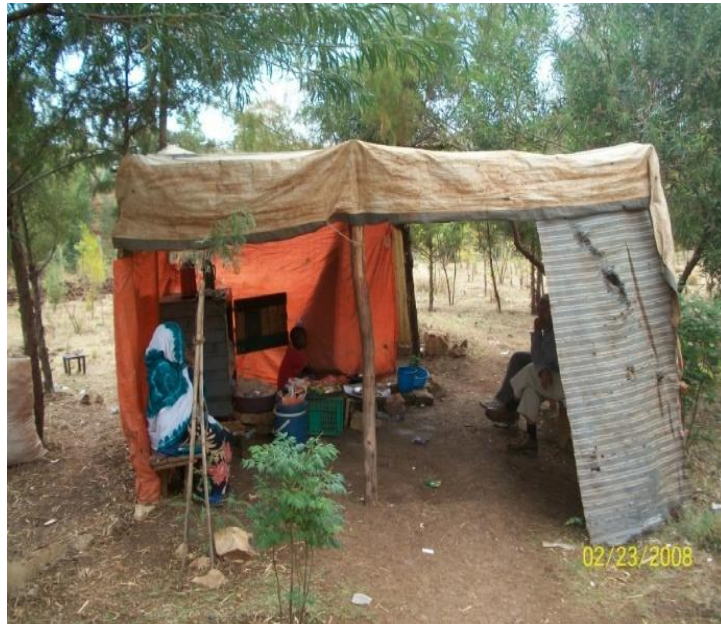
Regarding, classroom conditions as depicted on the above table, it was poor with a mean value of 2.16 that is below average. In most schools the numbers of students in the class are large and there was no more space for teachers and students to arrange group discussions and to move around. The classroom facilities such as chairs, tables, chalk boards and cabinets were not in their quality to be used by teachers and students. Some classroom doors and windows are broken that easily the attention of students was taken by distraction from the outside.

Regarding Library services, as the mean value 1.91 of the schools' variables depicted, the services were in poor condition. Moreover, in most of the sample schools the toilet quality was very poor. As the observation of sample school toilets, it is hazardous for children health as it is not cleaned. As one of school principal interviewee responded; *"The school toilet is not clean, there is no adequate water and sanitation materials for cleaning the toilet, students do not use properly and the buildings of the toilet are not modern. I am afraid it can be the cause for various health problems.* On the other hand, the availability of portable water was low with mean value 2.11. Only in some schools which were in towns there was a water service. In all other rural schools there was no water for different uses of the school. From the observation it was also seen that students at the break time go out of the school to find water to drink and late to come after the break time is passed. This also has a negative impact on the teaching and learning process to continue smoothly.

Figure 1: Sample Teachers and Students' Toilet



Figure 2: Sample Teachers' Cafeteria



The availability and functionality of pedagogical centers was good as the mean value result shows 2.78. In all sample schools there were pedagogical centers in which different teaching aids were prepared and teachers use for classroom teaching. But the main problem identified from the interview was, the room was not convenient and large enough to accommodate all the teaching aids and the materials in which the teaching aids prepared are not in their quality standard. The other problem responded by one school principal was *“in our school there is no a trained person to facilitate the activities of pedagogical center. The rooms are not convenient to store the teaching aids in safe and the materials used to prepare these teaching aids are not durable for a long time.*

Figure 3: Sample Pedagogical Center



The condition of school principals' office as depicted in Table 1, it was medium ($\bar{x}=3.00$). Compared with staff rooms and classrooms relatively it was better. In most schools there is no a computer but chair, table, cabinet and shelves were available. From the observation it is seen that in urban schools there is a fixed telephone and printers where as in most rural schools there was no computer and printer.

Figure 4: Sample Principals' Office



Regarding store room and provision of first aid in case of accidents, as shown in table 1 its mean value result is 1.55 and 1.69 respectively. This shows that in almost all schools there was no a store room prepared for store purpose and simply they put school materials all together without order and layout. As one store keeper told for the researchers during informal communicational interview" *I am a store keeper, but do not qualified and do not get any training about managing warehouses. One of the major problem that the school faced, the room is small that cannot able to put all school materials separately and difficult to get the materials for use easily*". The same is true for the provision of first aid in case of accident and the school takes children to clinic when injured without providing them any help in the school.

Generally, the grand mean of variables indicated in Table 1 is 2.19 that are poor. In the schools the availability of facilities was in adverse condition in which it was very difficult to address the objectives of education in general and their schools in particular. To facilitate the teaching and learning process school facilities need to be fulfilled and managed as well to bring a significant effect on students learning.

Table 2: Application of IT and Other Electronic Materials

No	Facilities	Response of school principals N =36		
		Response	Freq.	%
1	Availability of computer Service for students	Yes	2	5.55
		No	34	94.44
2	Availability of computer Service for teachers and administrators	Yes	2	5.55
		No	34	94.44
3	Availability of printing service	Yes	12	33.33

		No	24	66.66
4	Availability of functional stencil designer for duplication	Yes	5	13.88
		No	31	86.11
5	Availability of functional duplicating machine in the school	Yes	16	44.44
		No	20	55.55
6	Availability of functional photocopy machine in the school	Yes	2	5.55
		No	34	94.44
7	Availability of a TV set to be used for educational purposes	Yes	9	25.00
		No	27	75.00
8	Availability of tape players for media and educational purposes	Yes	36	100.00
		No	0	0.00
9	Availability of CD/DVD players for media and educational purposes	Yes	3	8.33
		No	33	91.66
10	Availability of a functional overhead projector for educational purposes	Yes	0	0.00
		No	36	100.00
11	Availability of a functional LCD for educational purposes	Yes	0	0.00
		No	36	100.00

As it is depicted in Table 2, the majority (94.44%) of respondents reported that schools did not have a computer service for students. It is known that IT application inputs and internet services help students to widen their knowledge and skill for improving their learning. As Hedges and Theoreson (2000) mentioned, student's computer use and their academic achievement have a positive relationship. They also emphasized that for enhancing student's achievement the role of teachers in implementing use of computers should be high. Moreover, integrating computers into the classrooms and support students to use computers in reading rooms is more likely to occur at the primary rather than the secondary schools help to master basic skills for students that prepare them to apply complex concepts in the future. The same is true for teachers and administrators as computer and internet services are not available in the sample schools. Especially, teachers and administrators need computers and internet access for different purposes such as: teaching, studymnt, attendance, to update their knowledge and practices. However, teachers, students and school administrators have not got any technological skills in the times of technology due its unavailability of computers and internet accesses.

Regarding the availability of school materials such as Printers, stencil designer, duplicating machine, photocopy machine and TV set to be used for educational purposes, most of the respondents responded "no" as depicted in Table 2, 66.66%, 86.11%, 55.55%, 94.44% and 75.00% respectively. This result shows that in almost all the sample schools the availability of the above stated materials were very low that in turn has a negative impact on student's achievement.

Regarding tape players for media and educational purposes as Table 2 shows in all sample schools (100%) of them had the material for teaching and learning activities. It is known that audio tape players serve not only learning purposes but also for recreational duties. As the researchers observed in break times students are listening music and different educational and recreational programs are transmitted. However, the availability of CD/DVD players for media and educational purposes as indicated on table 2 is 8.82% that are seen only 3 schools from all sample schools. This is also a problem that inhibits schools not to teach students using visuals.

In accordance with availability of a functional overhead projector (OHP) and LCD (Liquid crystal display) projector for educational purposes, no sample schools had functional overhead projector

and functional LCD for educational purposes. As teachers use this equipment to display videos, images and other needed computer data on the screen, students benefit from what they observe. However, the unavailability of this equipment has a negative effect on teaching and learning process as teachers do not able to present different videos, images and data that help to provide information for their students.

Generally as shown in Table 2, the availability of electronic materials and IT application in the sample schools were very low that make teachers, students and school administrators not fully use their capacity on teaching and learning activities.

Table 3: Adequacy of Instructional Materials and Equipment

No	Items	Inadequate		Adequate		Not Available	
		No.	%	No.	%	No.	%
	Text books	10	27.77	26	72.22	0	0.00
	Stationary materials	22	61.11	14	38.88	0	0.00
	Teaching aids	24	66.66	12	33.33	0	0.00
	Music instruments	0	0.00	0	0.00	36	100.00
	Sport equipment	34	94.44	2	5.55	0	0.00
	Reference books	34	94.44	2	5.55	0	0.00
	Dictionaries	15	41.66	14	38.88	7	19.44
	Teacher guides and manuals	14	38.88	18	50.00	4	11.11
	Laboratory materials	8	22.22	0	0.00	28	77.77

As item number 1 of Table 3, for the question asked about availability of text books 26 school principals (72.22) of them responded as it was adequate. As one respondent said "*primary school curriculum is prepared in regions and easily dispatched to schools timely*". As the observation held on schools indicated, students had text books and use it for studying and doing home works as needed.

Regarding the availability of stationary materials 14 (38.88%) of them responded as adequate and 22 (61.11%) of them responded as inadequate. Stationary materials such as: papers, exercise books, notes books, chart and graph papers, pens, pencils and others have a significant positive effect to increase the motivation of teachers and students by adopting different methods of teaching in classroom setting, but as the study revealed there were a lack of stationary materials that had a negative impact on teaching and learning process.

Teaching aids are important to help students to understand the lesson on objective basis. Students learn the content of the lesson when it is supported with a teaching aid. As item number 3 of Table 3, indicate, 24(66.66%) of them responded it was not adequate and 12(33.33%) of them responded as adequate. The observation held on school pedagogical centers indicated the rooms are not wide, furnished poorly and managed loosely. On the other hand, the quality of teaching aids produced by teachers was low because of most of them are paper and wood results.

Regarding music instruments, the response of the respondents 36 (100.00%) of them responded as not available. As Parliament of Victoria (2013) Music education has an integral role in student's life. It has an intrinsic value and role in developing the whole personality of the child. Music education

increases personal and social development and possibly contributing to learning in other subjects and provides employment in a range of occupation. But, the music education does not have more emphasis as music instruments are not available. From the observation as shown in some schools only musical instruments pictures are available. As item number 5 of Table 3, all respondents 36(100.00) of them responded as sport materials were inadequate in schools. Even in some schools, there was no a ball and students simply play with a ball made up of clothes. As sport education helps for physical, social and mental development of a child, when schools did not able to actively involve students on sport education due to lack of sport materials, they do not have a good result in sport competitions with other schools. As one of the school principal responded "in our district there is annual sport competition, but our students do not able to compete with other schools because of lack of training and lack of sport materials".

In relation to reference materials, dictionaries, teacher guide and manuals and laboratory materials, in all sample schools their availability is low and specially in most schools 28 (77.77%) as observed there was no a laboratory. As laboratories benefit students to observe and practically do different activities based on the theory learned, the absence of this functional laboratory lead students to not put into practice what they have learned.

Table 4: Physical plant and material resources impact on quality of education

No	Effects of the following educational materials on teaching learning	Rating scales				Mean value
		1	2	3	4	
1	Lack of classrooms and offices	0	5	11	20	3.41
2	Lack of Play ground	0	7	10	19	3.33
3	Inadequate library services	0	8	12	16	3.22
4	Inadequate laboratory (with needed equipment and chemicals)	0	0	5	31	3.86
5	Not having ware houses	0	0	11	25	3.69
6	Not having toilet (for females and males)	0	10	14	12	3.06
7	Not having computer lab	2	0	2	32	3.78
8	Inadequate chairs, tables , chalk board, stationary materials	0	10	10	16	3.17
9	Not having computers and printers and photocopy machine	0	2	7	27	3.69
10	Lack of text books, reference materials, manuals, guidelines...	4	12	8	12	2.78
11	Inadequate water, electricity , telephone services	1	4	11	20	3.39
12	Not having, audio tapes, Over Head Projector and LCD projectors	4	10	8	14	2.89
Grand mean						3.20

Keys: 1= not at all; 2= to a little extent; 3= to a certain extent 4= to a great extent

As Fuller (1986) in Likoko, Mutsotso and Nasongo (2013) the quality and availability of school facilities experienced by a learner determines the quality of education. Additionally, they emphasized that, the quality and quantity of school resources can affect the quality of education and students performance. As the mean values of all variables depicted in Table 4, sample schools were suffering by lack of school facilities equipment and educational materials, in turn that greatly affected the teaching and learning activities. Additionally, as seen from the observation, there was a

lack of classrooms and offices, inconvenient play grounds, inadequate library services and in almost all schools there was no a laboratory. Moreover, most of the schools have no ware houses. As observation held on sample school showed, schools had no stores and different materials were kept in the office of the school principal, pedagogical rooms and even outside of the room in the school compound that easily taken by any individual and easily spoiled due to sun and rain. Generally, as the respondents' response showed, due to lack and unavailability of school facilities the teaching and learning activities and the quality of education was negatively affected.

On the other hand, as Table 4 shows, not having toilet (for females and males) ($\bar{x}=3.06$), not having computer lab ($\bar{x}= 3.78$), inadequate chairs, tables , chalk board, stationary materials, ($\bar{x}=3.17$), not having computers and printers and photocopy machines, ($\bar{x}=3.69$), lack of text books, reference materials, manuals, guidelines ($\bar{x}=2.78$), inadequate water, electricity , telephone services, ($\bar{x}=3.39$) and not having, audio tapes, Over Head Projector and LCD projectors, ($\bar{x}=2.89$) which all the variables are greater than average in which they affected the teaching and learning process and the quality of education. Generally the response of the respondents clearly showed that the unavailability of school resources have a great impact on teaching – learning activities and the quality of education.

Conclusion

As it is clearly seen, the primary schools lacked school facilities that help to effectively run teaching and learning activities. As information obtained from the data gathered showed school facilities such as: classrooms and facilities, computers, LCDs, library and laboratory services, stationary materials, printers and photocopy machines and others are inadequate. This in turn have a negative impact on teaching learning activities, teacher and student's motivation and managerial ineffectiveness. Primary school education is the base for the child's learning and future career, school facilities and instructional materials needs to be fulfilled to address the objectives of education in general and the improvement of the school in particular. It is also possible to conclude that the inadequacy of school resources and instructional materials highly affected the teaching learning process and prevent the schools practice for improving the quality of education.

References

- Buckley, J., Schneider, M., and Shang, y. (2004). Effects of school facility, quality on teacher retention in urban school district. National clearing house for educational facilities. Washington Dc.
- Durbin, J, et al. (1989). Management and organization. Ohio: Southern Western Publication Company.
- Earthman, G. (2002). School facility condition and student academic achievement: UCLA'S Institute for Democracy, Education and Access (IDEA): Los Angeles, CA.
- Ethiopian Ministry of Education (2002). The Education and training policy and its implementation.MOE: Addis Ababa.
- Ogusanju (1980). Some Aspects of School Management. Ibadan.

- Hedges, L., And Theoreson, A. (2000). Achievement in Mathematics, reading and Writing. NAEP. American Institute for Research.
- Khan, p., and Iqbal, M.(2012). Interdisciplinary journal of contemporary research in business. Vol. 4, No.3 P. 211.
- Lawrence, B. (2003). Save a Penny Lose a School: the real cost of deferred maintenance: Washington DC.
- Likoko, S. et al. (2013). The adequacy of international materials and physical facilities and their effects on quality of teacher preparation in encouraging private primary teacher training college in Bungoma Country Kenya. Vol. 2 Issue 1, p. 404.
- O'Neill (2000). The impact of school facilities on student achievement, behavior, attendance and teacher turn over at selected Texas middle schools in region XIII ESC. Unpublished doctoral dissertation, Texas A&M university College Staion, TX
- Ryonds, et al. (1996). Making good Schools: linking effectiveness and school improvement. London: Rout ledge.
- USAID (2010). Ethiopia Early Grade Reading study Data Analytic report: language and early learning. Ethiopia: Addis Ababa.
- Victorian government (2013). Inquiry in to the extent, benefits and potential of music education in Victorian schools.