

# The Catalyst role of School Architecture in enhancing Children's Environmental Behavior

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## **ABSTRACT:**

*The interrelationships between school design and children learning are well established. Less evident is the relationship between sustainable school design and the level of environmental behaviour of the children in attendance. Newly erected primary schools in Australia have been broadly graded as either sustainable or conventional. This paper evaluates the impact of both sustainable and conventional school design on children's environmental behaviour, and examines the correlation between school design and children's environmental behaviour.*

*624 children, aged 10-12 years old, completed a survey. This sample, from seven selected primary schools in Victoria (Australia), includes four conventional schools and three sustainable ones. The survey was developed according to GEB (General Ecological Behavior) scale and a few more school specific variables.*

*The outcome of the survey was analyzed using an independent sample t-test and two-way between groups ANOVA in order to assess environmental behavior differences of children in both sustainable and conventional schools taking into account factors that either explicitly and/or implicitly impact on their behavior such as sustainable school design, teachers' environmental behavior and parents' environmental behavior.*

*The results show statistically significant differences in environmental behavior of children in sustainable schools and those in conventional schools. Comparing the means of children's environmental behavior indicates that children in sustainable schools possess higher levels of pro-environmental behavior than children in conventional schools.*

*The paper highlights the strong relationships between school design and children's environmental behavior, and expands recognition of the role of environmentally sensitive school design not only to improve learning environments but more specifically to engage children ecologically with their immediate built environment.*

*Keywords: Sustainable School Design; Environmental Behavior; Children*

## **INTRODUCTION**

According to the present status of the environmental challenges across Australia, it is essential to take more serious measures to deal with the upcoming hazards of the environmental issues. In order to Author A is a PhD Candidate in the school of Architecture and Built Environment, Deakin University. Author B is a professor in the school of Architecture and Built Environment at Deakin University.

address this, environmentalists have used several different approaches which are categorized into two groups of direct approach and mediated approach. Direct approaches are those measures affecting the status of the environment directly. An example is controlling the amount of carbon emission into the atmosphere. Mediated approach though is those measures that effectively impact the status of the environment through the mediated role of another agent. An example is to enhance the people's literacy through environmental education which mediates people's environmental attitude and behavior. The focus of this paper will be on the mediated approach of environmental education for children through the sustainable school design.

## **LITERATURE**

### **Children and Environment**

Environmental sustainability has become a major social issue in the present century (Wilson & Knopt, 2002). Since environmental sustainability is largely about human choices and actions, each individual has a lot to contribute toward change of environmental behavior. The change toward more sustainable environment involves the societal groups in different levels. Children's role as one of these levels becomes of special interest, and assisting each child to obtain more comprehensive understanding of the environment becomes crucial.

### **Environmental Education**

Public concern about the environment peaked in 1991 (Roberts & Bacon, 1997). Emergence of the environmental consciousness has encouraged programs of environmental education around the world in recent decades. Lucas (1972) categorized programs of environmental education into three classes; *Education about the environment*: facts, concepts, principals; *Education for the environment*: attitude and skills directed to conservation; *Education in the environment*: forms of outdoor education. "Learning about the environment supports environmental understanding and knowledge; Learning for the environment is directed toward environmental stewardship and action; Learning in the environment encourages interactions and experiences in the environment" (Disinger, 1990; Murdoch, 1993). All the three mentioned dimensions should be accessible through schooling in order to provide a comprehensive approach to children's environmental learning (Malone & Tranter, 2003).

Different environmental education programs and initiatives vary in their specific goals, but there is usually a typical outcome for most of the EE and that is to enhance participants environmental knowledge, attitude, and behavior (Borden & Schettino, 1979; Hungerford & Volk, 1990; F.C. Leeming, Dwyer, & Bracken, 1995; Musser & Malkus, 1994; Stern, Powell, & Ardoin, 2008).

The most popular and conventional method for environmental education has been through curriculum development. In Australia, despite the shift towards centralization of control over curriculum and development of national curriculum (Palmer, 2002), there is still no unified national scale environmental curriculum. There are also many states which does not have a cohesive curriculum within the state and prefer to have a teacher's oriented and school-oriented environmental education.

Other environmental education efforts have focused on environmental initiative or programs such as field trips or outdoor activities, and investigated the indirect impact of these programs on children's environmental awareness. The third method for environmental education is through applications in the built environment. The later approach seeks assistance from the built environment to transfer and translate some of the environmental concepts to the occupants of the space whether indoor or outdoor.

Although there have been a large number of research about the relationship between the school physical environment and educational outcome (Clark, 2002; Earthman, 1998; Leiringer & Cardellino, 2011; Woolner, Hall, Higgins, McCaughey, & Wall, 2007), there are few research on the impact of the school built environment on children's environmental awareness; the focus of this paper.

### **School Physical Environment and Children's Behaviour change**

Alongside the effective role of the school physical environment on children's educational outcome, designed environment has the potential to form its occupants' behavior, governs and supports interactions between people. This behavior change is in fact part of the desired outcome of environmental education if the environmental behavior is meant.

There is considerable evidence regarding the relationship between students' and teachers' behavior and attitude and their school physical settings (Day, 2007; Durán-Narucki, 2008; Moore, Lackney, Wisconsin Univ, & Urban, 1994). Schools physical environment transmit symbolic messages to children (Proshansky & Wolfe, 1974). Some of the spatial setting encourage and facilitate some of the behaviors while others might hinder and inhibit some behaviors. As a method to test the hypothesis that spatial changes in school environment could generate desirable changes in student's behavior, Weinstein (1977) recorded the activities and locations of the students on the floor plan of the rooms. She found that, in most cases, the desired and predicted behavior of students was attained. The behaviors observed could be social, physical or technical skills (Wilks, 2010). As such, school built environment is central not marginal to student's behavior and performance (Department for Education and Employment, 2001). Even minor changes in physical settings of the school have been reported as an effective factor to generate desirable changes in children's behavior. Weinstein investigated the spatial distribution of the 2nd and 3rd grade students' activities in open classrooms in two stages: before and after some changes in physical design. She found statistically significant differences in students' behavior between the two stages. Changing the spatial design of the classes encouraged students to move into the spots of the class which was previously avoided, and resulted in altering the frequency of specific behaviors (Weinstein, 1977).

### **Environmental Behaviour**

Environmental behavior is defined as the "actions which contribute towards environmental preservation and/or conservation" (Axelrod & Lehman, 1993, p. 153). Humanity might not be able to solve the current environmental problems, but at least through more positive environmental behaviors, we can prevent further failure. Due to the importance of the individual's action towards the environment, one of the clear goals of environmental education is to improve environmental behavior (Pooley & O'Connor, 2000) which ultimately determine the wellbeing of human being. Individual's environmental behavior and the impact people have on the environment have attracted public concern and have motivated large number of environmental and psychological research. Consequently, the volume of research devoted to environmental behavior has proliferated over the last four decades, and researchers have concluded that behavior change is necessary to preserve environmental quality (Frank C. Leeming, Dwyer, & Porter, 1993).

### **Sustainable School as a Catalyst to Encourage Environmental Behaviour**

There has been emphasis in the literature for the role of the built environment on behavioral change. School buildings and design have however rarely been considered as the tool for environmental education and environmental behavior change for children. In recent decades, environmental education has evolved significantly. The issue whether EE should be presented in the form of a separate course at schools or should a trans-disciplinary approach be used is now being questioned. Although teaching through curriculum continues to be a major method for EE, other less directly observable and more implicit methods such as learning through participation (hands on experiences) or learning through knowing eye (visual literacy) have also been developed. Children spend the most fruitful hours of their daylong at the school environment. If the school environment is sustainably designed, this long period of exposure could positively influence children's environmental attitude. It can act as the three dimensional text book or silent curriculum which might not be palpable, but effectively impact on positive or negative learning experiences of users of the space. Architects should therefore provide design for schools that not only generate and facilitate visual literacy, but also reveal environmental messages through school buildings and spaces.

This paper investigates the impact of the sustainably designed schools, as an indirect teaching tool, on enhancing children's pro-environmental behavior. The paper measures the environmental behavior of children in two different types of schools to investigate whether there is any significant difference between the two.

## **METHODS**

The paper identifies 3 sustainably designed schools and 4 Conventional ones in Victoria, Australia. A slightly modified version of General Ecological Behavior (GEB) framework is applied to assess general environmental behavior of children, their parents and teachers in the two designated type of schools. Based on the measurement of the environmental behavior of teachers and parents, the paper proceeds to investigate the relationship between children's environmental behavior and the three potential effective factors of school design, teacher's environmental behavior and parent's environmental behavior. The survey can be found in the appendix.

### **Selecting Criteria of Sustainable versus Conventional Primary Schools**

Sustainably designed schools were selected through *ResourceSmartAuSSI Vic*; an Australian Sustainable School Initiative in Victoria that aims to support schools and their communities to live sustainably. *ResourceSmartAuSSI Vic* is managed by Sustainability Victoria in partnership with the *Department of Education and Early Childhood Development* (DEECD). "This framework aims to help Victorian schools minimize waste, save energy and water, promote biodiversity, and cut their greenhouse gas emissions"(Victoria, 2013). Victorian government has been supporting the schools to attend this initiative and continue their sustainability activities. This overarching framework defines 5 levels as 5 stars for schools, so schools should pass the first 4 level to be awarded the 5 star certificates which is the most reliable and valuable certificate for sustainable schools. 5Star gives schools the opportunity to show continuous improvement in their environmental performance through the five levels. Therefore, based on ResourceSmartAuSSI Vic 5-star certificate, St Macartan's, Epping view, and Gembrook primary schools have been chosen as the sustainable schools and Geelong East, Rollin's, Belmont and St Patrick's Primary Schools have also been chosen as conventional schools. All these primary schools were public schools and located in Victoria State. Some of the common features and characteristics of the sustainable school buildings include:

- Passive design of the school building, such as appropriate orientation of the building to utilize natural sources of heating and cooling as much as possible; and careful design of the school building envelope (roof, walls, windows, etc.)
- Water tanks in order to store rainwater for flushing the school toilets and also watering the school garden
- Solar panels in order to provide electricity
- Worm farms
- Compost bins
- Well-designed outdoor environment and landscape

### **Participants**

Participants from 7 primary schools in Victoria, Australia were classified in three categories; children, their parents and their teachers.

#### **Children**

The children participants included 624 students from 7 primary schools, of which 387 children were from sustainable and 237 from conventional schools. The total number of the students in grade 4, grade 5, and grade 6 were respectively 244, 169, and 211.

**Table1**

**Children**

	CONVENTIONAL SCHOOLS				SUSTAINABLE SCHOOLS			
	GEELONG EAST	ROLLIN'S	BELMONT	ST PATRICK'S	ST MACARTAN'S	EPPING VIEW	GEMBROOK	
N	27	33	34	143	86	230	71	
TOTAL			237		387			

### Teachers and parents

Since teacher's concern about environmental issues is one of the potential external factors affecting children's environmental attitude and behavior, teachers of the same students who attended were one of the groups of participants. 42 teachers from 7 primary schools were asked to fill out a questionnaire containing the GEB items. This questionnaire was used to assess the environmental behavior of teachers who are in direct contact with children every day in the classroom environment.

**Table 2**

Teachers								
	CONVENTIONAL SCHOOLS				SUSTAINABLE SCHOOLS			
	GEELONG EAST	ROLLIN'S	BELMONT	ST PATRICK'S	ST MACARTAN'S	EPPING VIEW	GEMBROOK	
N	3	5	6	7	10	7	4	
TOTAL			21		21			

Since parent's environmental attitude and behavior level can be another factor impacting children's environmental awareness, the researchers collected data from the parents whose children attended the survey to further investigate the association between the two. Not all of the children returned their corresponding parent's questionnaire. Parent's sample size was almost 35% of the population of the children. A quite noticeable discrepancy in gender response rate was observed. In total 77% of the parents respondents were females and 23% were males. This could be because females care more about environment or they are less busy than males to respond the questionnaire.

**Table 3**

Parents								
	CONVENTIONAL SCHOOLS				SUSTAINABLE SCHOOLS			
	GEELONG EAST	ROLLIN'S	BELMONT	ST PATRICK'S	ST MACARTAN'S	EPPING VIEW	GEMBROOK	
N	20	31	31	-	71	50	14	
TOTAL			82		135			

**Table 4. Participants of 3 groups (Children, Parents, and teachers) of this study**

TYPE OF THE SCHOOL DESIGN		NO. OF THE CHILDREN PARTICIPANTS			NO. OF THE PARENTS PARTICIPANTS			NO. OF THE TEACHER PARTICIPANTS		
		FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL
GEELONG EAST	CONVENTIONAL	15	12	27	17	3	20	3	0	3
ROLLIN'S	CONVENTIONAL	20	13	33	25	6	31	4	1	5
BELMONT	CONVENTIONAL	23	11	34	23	8	31	4	2	6
ST MACARTAN'S	SUSTAINABLE	47	39	86	55	16	71	9	1	10
EPPING VIEW	SUSTAINABLE	119	111	230	38	12	50	4	3	7
GEMBROOK	SUSTAINABLE	34	37	71	10	4	14	3	1	4
ST PATRICK'S	CONVENTIONAL	79	64	143	0	0	0	4	3	7
TOTAL OF EACH GENDER		337	287	624	168	49	217	31	11	42

### Data Collection

Parent's plain language statement, consent forms, and questionnaire were provided 2-3 weeks before going to the school for the data collection. Children's were asked to take the forms to their homes

and ask their parents to study the plain language statement which was a brief description of the project, sign the consent form if they are happy for their children to participate in the survey, and answer the questionnaire. Children were encouraged to return the parent’s questionnaire at the day of the data collection. Although the teachers emphasized students to bring back the parent’s questionnaire, not all of them returned the forms.

In schools, the researcher allocated 45 minutes for each set of data collection. Data was collected from maximum 50 students each time. After a couple of tests (practices), it was found that this number is an appropriate number in each set, as one would not be able to control more number of the primary school children at once, even with the teachers supervision. In each school, at least one of the teachers assisted and supervised the children and encouraged them to answer the questions.

Before administering the survey, the researchers ensured that all children understood that the collected data is anonymous and the child could terminate attending the survey at any time without any consequences. Children were also asked to feel free to request more explanation if any question is not clear enough.

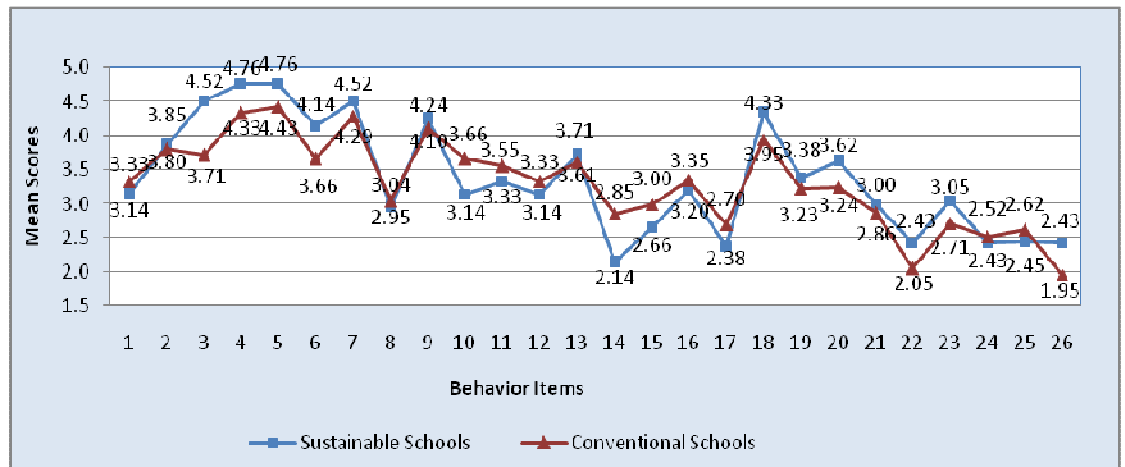
**ANALYSIS**

To evaluate the impact of sustainable school architecture on children’s environmental behavior, potential influential variables were taken into account. To measure the impact of the school design, factors such as curriculum, teachers’ and parents’ environmental awareness were considered. Research shows that although almost all primary schools in Victoria include some environmental education in their educational system, they don’t have a mandatory and pre-defined curriculum. Each school has developed its own unique environmental behavior curriculum. As such, no two schools environmental curriculum was alike, and controlling the impact of curriculum was not completely achievable in this study. Teachers’ environmental behavior was compared in two different types of school in order to investigate any differences. The environmental behavior of parents whose children attend sustainable schools and those whose children are at conventional schools were also examined. After careful investigation and obtaining a comprehensive knowledge about the impact of these two factors, further analysis is preceded continued on children questionnaire?

**Teachers’ Environmental Behavior Differences in Sustainable and Conventional Schools**

The impact of teacher’s environmental behavior on children’s environmental behavior is of great importance regarding to opportunities teachers provide for environmental education of children at schools. Teacher’s environmental behavior level is measured with GEB measure.

Graph 1 shows the mean differences of all teachers’ environmental behavior of both sustainable (Blue line), and conventional (Red line) schools. It indicates that some of the behavior means scores are higher in sustainable schools and some others are higher in conventional ones.



*Graph 1: Teachers’ Environmental Behavior at Sustainable and Conventional Primary Schools*

An independent sample t-test was conducted on 42 teachers (11 male, and 31 female), in order to find out whether any of these environmental behavior differences between the sustainable schools and conventional schools are significant. Teachers' environmental behavior is considered as the continuous dependent variable and type of the school design (Sustainable/ Conventional) is considered as the categorical independent variable.

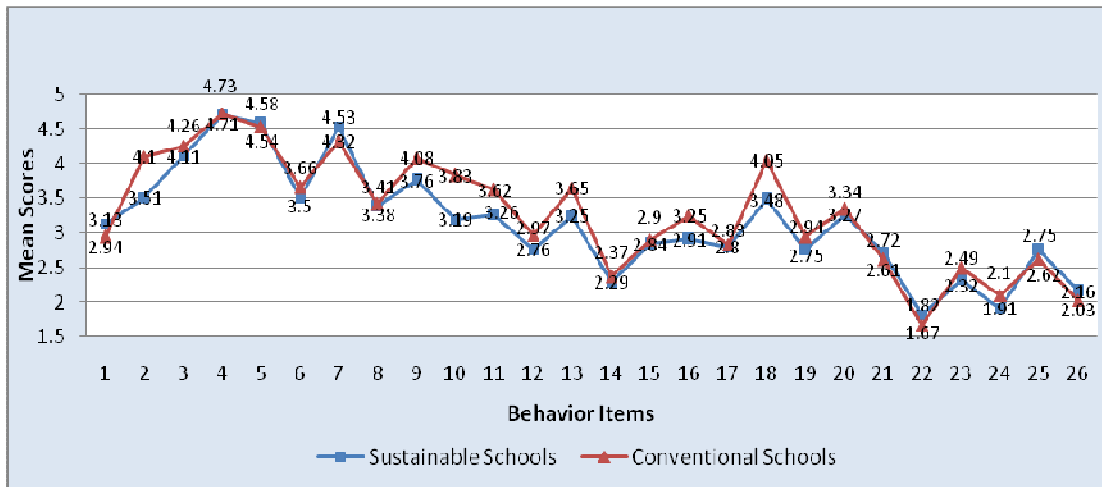
Output of the t-test shows that magnitude of the differences in the means (mean difference= .066, 95% CI: .344 to .476) shown on the graph are very small (eta squared=0.002), and not significant for teachers in sustainable primary schools (M= 3.37, SD=.287) and teachers in conventional primary schools (M= 3.31, SD=.865;  $t(24.3) = .332, p=.74$ , two-tailed).

Consequently, the results show that teacher's environmental behavior was not significantly different in the two types of schools, ignoring the impact that teachers' environmental behavior might have on children. The research continues to examine other factors affecting children's environmental behavior including parent's environmental behavior and school design.

### Parents' Environmental Behavior Differences in Sustainable and Conventional Schools

To understand if the parent's environmental attitude and behavior should be included in analysis as one of the factors affecting children's environmental behavior, several investigations are carried out. Out of 624 questionnaires which were sent to students' houses, 259 parents (~ %41) responded of which 114 parents belonged to sustainable schools and 145 belonged to conventional schools.

Graph 2 shows the environmental behavior mean scores of all parent participants for each of the questionnaire item in sustainable (Blue line) and conventional (Red line). Since the graph shows the slightly different mean scores for two types of schools, a t-test is conducted to verify the magnitude of this difference.



Graph 2: Parents' Environmental Behavior at Sustainable and Conventional Primary Schools

Output of the t-test divulge that there is a significant difference in the behavior mean scores of parents in sustainable schools (M= 3.143, SD=.383) and parents in conventional schools (M= 3.282, SD=.371;  $t(257) = 2.937, p=.004$ , two-tailed). However, the magnitude of the difference in the behavior mean scores (mean difference= .138, 95% CI: .231 to .045) was small (eta squared= .032). According to eta squared, although there might be no practical significance between the mean score of parents in conventional schools and means scores of parents in sustainable schools, but interestingly this little difference is in favor of the parents of conventional schools. Therefore, researchers could not overlook the possible impact of parents' environmental behavior on children's environmental behavior and

included this factor alongside the school design factor for further analysis.

### **Children's Environmental Behavior Differences in Sustainable and Conventional Schools**

Two-way between groups ANOVA is conducted to explore the impact of parents' environmental behavior and sustainable school design on children's environmental behavior as measured by the Life Orientation Test (LOT). This analyzing technique gives the researchers the opportunity to look at the individual and joint effect of two mentioned independent variables on children's environmental behavior as the dependent variable. The '*main effect*' for each independent variable is tested and also the possibility of an '*interaction effect*' is explored (Pallant, 2013). Two-way between groups ANOVA answers the following questions:

-What is the impact of parent's environmental behavior and sustainable school design on children's environmental behavior?

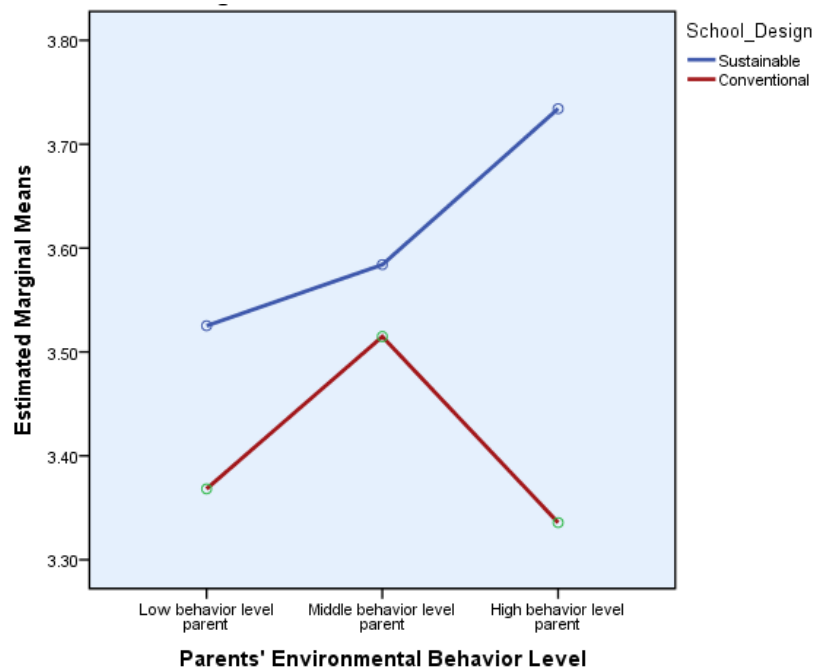
-Whether parents' environmental behavior moderates the relationship between the school design and children's environmental behavior?

209 parents out of total number of 259 parents were entered to this part of analysis. Those 50 parents' data could not be matched with their corresponding children and therefore, have been taken out of analysis. Parents' data were categorized into three groups according to their environmental behavior mean scores. Group 1 were called *Low Enviro-Behavior Level Parents* and they were parents with overall behavior mean of less than 3.10 (N= 78). The second group of parents, who were *Middle Enviro-Behavior Level Parents*, was those who possessed overall behavior mean between or equal 3.10 and 3.35 (N=59). *High Enviro-Behavior Level Parents* were those who had overall behavior mean of more than 3.35 (N=67). These parents' data were entered to ANOVA test alongside with their corresponding children. Therefore just 209 children's data out of 624 children was used in this analysis.

The sig. = 0.27 for *Levene's Test of Equality of Error Variances* suggests that the homogeneity of variances assumption have not been violated ( $p > .05$ ). The output of the two ways ANOVA indicates that the interaction effect between the school design and parents' environmental behavior level was not statistically significant,  $F(2,203) = 1.38, p = .254$ , meaning that the influence of sustainable school design on children's environmental behavior does not depend on their parents' level of environmental behavior. An alternative interpretation could be the influence of parents' environmental behavior level on children's environmental behavior does not depend on whether they attend sustainable school or conventional school. Further analysis in this paper will indicate if there is any significant influence (main effect) of each of these independent variables on children's environmental behavior at all. Output shows that no statistically significant main effect was found for parent's environmental behavior level on children's environmental behavior  $F(2,203) = .581, p = .56$ . This means that overall, when we ignore the type of the school design; parents' environmental behavior level does not influence children's environmental behavior level. Other factors being equal, children with any parental environmental behavior level, possess similar level of environmental behavior. Analysis has also revealed that there is a statistically significant main effect for school design  $F(1,203) = 6.10, p = .014$ ; however, the effect size was not large (partial eta squared = .029).

Graph 3 shows the children's environmental behavior mean scores for sustainable schools and conventional schools, across the three parents' environmental behavior level category. It appears that the largest difference in children's environmental behavior between the sustainable and conventional schools occurs when children have parents with high level of environmental behavior. The analysis also demonstrates that children in sustainable schools and conventional schools possess the most similar level of environmental behavior when their parents have middle level of environmental behavior; however analysis showed that these differences were not significant. Graph 3 also depicts the difference between the environmental behavior of children in sustainable schools and conventional schools. According to this graph generally children in sustainable schools behave more pro-environmental than the children in conventional schools.





*Graph 3: Interaction of school design and parents' environmental behavior level in children's environmental behavior*

## DISCUSSION AND CONCLUSION

Considerable amount of information concerning the impact of school design, school architecture, or school physical environment on children's attitude, behavior, or academic achievements has been addressed through literature. There is a growing body of literature regarding the advantages of attending sustainable schools. There seems to be a gap between these two fields of research and the impact of sustainable school design on children's environmental behavior. This paper compares the environmental behavior of children in sustainable schools and conventional schools considering the environmental behavioral levels of both teachers and parents. GEB measure for both children and adults was employed. Few supplementary questions were added to make it appropriate in an Australian context. 624 children, aged 10-12 years old from seven different primary schools in Victoria State (three sustainable and four conventional), 42 teachers and 209 parents completed the survey. Only 209 out of 624 children's data was usable to analyze the differences between the environmental behavior level of children in sustainable schools and conventional schools. A t-test showed that there is no significant difference between the environmental behavior of teachers in sustainable schools and conventional schools, and as such teacher's environmental behavior as one of the potential factors affecting children's environmental behavior could be overlooked. This was not the case for parents though. Another t-test indicated that there is a significant difference between the environmental behavior of parents in sustainable schools and conventional schools. Therefore, at a secondary level of analysis, a two-way ANOVA was conducted to investigate the role of both parents' environmental behavior and school design on children's environmental behavior. A number of conclusions were drawn. First, there is no statistically significant interaction between parent's environmental behavior and school design, and so the effect of parents' environmental behavior on children's environmental behavior shows no difference in sustainable schools and conventional schools. The impact of school design on children's environmental behavior does not depend on their parents' environmental behavior level. This result paved the way to investigate the effect of sustainable school design on children's environmental behavior with the isolation of parents' and teachers' influence.

Second, the results also indicate that there is a significant difference between the environmental behavior mean scores of children in sustainable schools and conventional schools with higher estimated marginal means for sustainable schools. Although, as seen on graph 3 the magnitude of this difference is not large (3.75-3.35), it can support this study hypothesis that sustainably designed primary schools supply some opportunities for improving children's environmental behavior education. This relatively small difference might be an indication of lack of enough attention to, or investment on the sustainability design of primary schools in Victoria State and it performs as a warning to inform the decision makers and educationalists to strengthen the existing correlation between the sustainable primary school environment and children, and to foster children with environmental friendly behavior through the indirect teaching tool of sustainable schools design.

Although factors such as parents and teachers environmental concerns have been taken into consideration in this study, impact of other potential factors such as environmental curriculum of each schools and socio-economic situation of children's family, or the duration of the exposure to the school building needs further investigation. Each of the approached primary schools had their own developed environmental curriculum, and generally there was not a pre-defined, unified, and structured environmental curriculum for all schools to use. Therefore, this lack of consistency hindered the researchers to have a comprehensive control over the presented curriculum at schools.

In conclusion, the relationship between sustainable school design and children's environmental behavior provides further supports for the value of investments on sustainable architecture of school environment and encourages thorough attention of architects, designers, and policy makers in order to develop children pro-environmental awareness and behavior. Further studies are required to apply the methodology to different contexts. The researchers are currently involved in assessing whether the sustainable school features and characteristics can mediate the relationship between children's environmental attitude and children's environmental behavior. In other words, does sustainable school building facilitate converting the environmental attitude to the environmental behavior or action of primary school children?

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**CHILDREN'S ENVIRONMENTAL BEHAVIOR MEASURE FOR CHILDREN :**

- 1. I PARTICIPATE IN RECYCLING ACTIVITIES AT SCHOOL.**
- 2. I WORK IN THE SCHOOL GARDEN WITH TEACHERS.**
- 3. I DO NOT FORGET TO TURN LIGHTS OFF WHEN I LEAVE A CLASSROOM.**
- 4. I PICK UP LITTER LEFT BEHIND BY MY FRIENDS DURING RECESS AND LUNCH BREAKS.**
- 5. I DO NOT FORGET TO TURN OFF WATER AFTER WASHING MY HANDS IN THE SCHOOL TOILETS.**
- 6. I DO NOT BRING TOO MUCH FOOD TO SCHOOL AND I HAVE TO THROW AWAY THE EXTRA FOOD.**
- 7. I LOOK AT BOOKS ABOUT THE ENVIRONMENT (NATURE, TREES, AND ANIMALS).**
- 8. I DO NOT LEAVE THE CLASS WINDOW OPEN WHILE THE HEATER IS WORKING.**
- 9. I DO NOT TURN ON THE AIR CONDITIONER RATHER THAN OPENING THE**

**GLASS WINDOW WHEN IT IS WARM INSIDE.**

**10. I DON'T TURN ON THE CLASSROOM LIGHTS BECAUSE THERE IS ALWAYS ENOUGH LIGHT IN MY CLASSROOM.**