Almost from the beginning of universal education, educationalists and reformers promoted a rationale that the school building and learning were linked. This rationale was widely accepted in the United States, England and in Australia and was significant in influencing the design of schools. This paper outlines the development of this rationale and then draws on South Australian School Inspectors’ reports during the period 1900-1920 to show how this rationale was expressed in South Australian schools through a focus on school hygiene, appropriate aesthetic classroom displays and the development of school gardens.

school building design, school landscape and architecture, school inspectors

INTRODUCTION

The design of a new school is generally defined by its allocated budget, the number of planned enrolments, educational, and aesthetic needs. The design will need to address specific student and curriculum spatial entitlements and also legislative requirements (such as those required by building codes). The design of the school will need to be sufficiently flexible to meet both current and future curriculum initiatives, although often the future initiatives may be as yet, unknown. The design will be expected to support and enhance the educational priorities and goals for the school. Ideally, it is also be expected that the design will have an aesthetic component so that the school buildings are integrated and in harmony with the site. Bieler (1996, pix) has also noted;

learning to appreciate beauty is also a part of the educational context. And the quality of the environment can have an effect on children.... as they develop in spaces built with harmony and human needs in mind. The beauty of spaces and forms and the attraction of the colours chosen, effective acoustics, carefully selected materials, well-designed lighting and green surroundings all make a contribution which few would dispute.

Few would argue with Bieler’s articulation of the positive link between the quality of the school building and teaching/learning experiences. That is, the “better” the educational facilities, the more effective the learning experiences for students are likely to be. However, there has been little research undertaken on the relationship between school buildings and learning outcomes, still, the notion endures. However, the concept of linking educational outcomes with the school environment can be traced to the beginnings of universal education.

A significant development towards mass education had occurred in the late eighteenth century when Joseph Lancaster and the Reverend Andrew Bell both independently rediscovered the principle of monitorial instruction and successfully demonstrated that it could be applied to elementary education for the poor. Under the monitorial system, the number of potential students
could be very high and the cost of education per child significantly reduced over individual
instruction (Burchell 1989, p.2, 5). As Katz (1976, p.393) has noted, there was practically no
opposition to the introduction of mass education; in fact, education became compulsory only after
attendance had become nearly universal. However, as public education became established and
more widely spread, the problem of providing and designing educational buildings became a major
issue for architects since both organisational and architectural solutions had to be found to address
this new and growing issue. Profound changes in society brought about by industrialisation and
mechanisation during the nineteenth Century made the necessity of solving the problem of the
delivery of public education more and more apparent.

Roth (1966, p.24) noted there was practically no tradition of school architecture to begin with but
that a rationale for the design of school buildings developed, as public education became more
widespread. This rationale, which developed during the late nineteenth and early twentieth
century, supported a connection between school buildings, student learning and the promotion of
civic virtue in students and was significant in influencing school building design (Cutler 1989,
Symes 1996). The arrival of mass education acted as a focus for interest in the school building as a
site of possible social reform and, during the mid nineteenth Century, a number of architectural
treatises were published by educational reformers such Barnard and Mann (in the United States)
and by Robson (in the United Kingdom). These writings had common themes, proposing that
school buildings should be conceptualised in a particular way; namely as “noble” structures that
would support the inculcation of appropriate social values and transform children into virtuous
literate citizens. For example, Barnard wrote that a school should be a temple “consecrated in
prayer to the physical, intellectual and moral culture” which was committed to “leaving the
strongest impressions of truth, justice and patriotism every child” (Uline 1997, p.195). Barnard
also proposed that the school, in its arrangements and furnishings, was to be an “emblem of ethical
and rational standards” (Symes 1996, p.88). In a similar vein, Mann wrote that schoolhouse design
was closely connected to “the love of study…proficiency, health, anatomical formation and length
of life. These are great interests…and suggest great duties” (Cutler 1989, p.4). Robson also
believed the school building exerted an influence on a child’s personal development. He wrote,

… children… whose manners, morals, habits of order, cleanliness, and punctuality, temper, love of
study and the school, cannot fail to be in no inconsiderable degree affected by the attractive or repulsive
situation, appearance, outdoor convenience and in-door comfort, of the place where they are to spend a
large part of the most impressionable part of their lives. (Robson 1874, p.6)

A major consequence of the work of the educational reformers was the professionalisation of
public education and the invention of the belief that a special building (ie the school) was required
to enable children to meet their moral obligations and reach their cognitive potential. Thus the
school building was linked to educational theory and the curriculum, making them partners in the
learning process (Cutler 1989, p.2). Symes (1996, p.88) reported that the school architecture
dissertations were widely read in Australia and commented on the “striking continuity” between
the writings of the reformers and those of educationalists, reformers and school inspectors in
Australia at the time.

This exploratory study sought to investigate the extent of this “continuity” in regard to South
Australian schools with a view to contributing to understandings concerning the growth and
development of schools in South Australia in the early part of the twentieth Century.
RESEARCH FOCUS AND APPROACH

Very little material was found on the topic of the development of South Australian school buildings. There appears to be little data on the history of school buildings in South Australian and certainly nothing like Burchell’s comprehensive account of the development of school architecture in Victoria. However, it was known that South Australian had a strong school inspectorial system at the time in which this exploration was focused (1900-1920). It was also known that School Inspectors’ reports of their visits to schools were published in the South Australian Education Gazette. The Education Gazette was regarded as the key means of communication of Department policy to teachers in the State. These official publications provided not only administrative guidelines and policy, but also curriculum issues relating to teaching methods, programming and content of lessons. To paraphrase Rodwell (1992, p.107), in the Education Gazette, it is possible to catch insights of the “mood” of the Department and the various issues which were in the air at the time. The Education Gazette provided an account of what the Education Department wanted its teachers to do and to know. Inspectors’ reports published in the Education Gazette therefore became an important means of explaining to teachers what their obligations were in delivering curriculum and managing the school environment. Accordingly, issues that the Education Gazette published between 1900 and 1920 were examined for references made by Inspectors to the link between school buildings and student learning.

SUMMARY OF RESULTS

This examination of the numbers of the Education Gazette published between 1900 and 1920 showed that in writing about school buildings, Inspectors considered two broad themes. The first related to the hygiene conditions within the school and the second to the aesthetic conditions of the classroom and the school grounds.

There are two key aspects associated with health and hygiene and its effect on schools and their organisation. The first concerned the creation of a healthy school environment to improve student learning. Teachers became responsible for the establishment and maintenance of a healthy school. This was done by training, via directives in the Education Gazette and supervision from Inspectors. Later, this became a broader issue in which health and hygiene in schools became linked with broader issues of community health. In South Australian this culminated in the introduction of a system of medical inspection in schools.

The initial focus regarding healthy school buildings related to the elimination of the school environment factors that impeded student learning. The need to improve lighting and the importance of ventilation in schools were frequently reported by Inspectors as significant in improving acquisition of knowledge. For example Inspector Burgan (Education Gazette 10 October 1906 p.228) wrote that an improvement in the lighting, heating and ventilation in the school and the provision of appropriate school furniture would improve the hygiene conditions “to produce the mens sana in corpore sano, [“healthy mind in a healthy body”] without which educational progress must be greatly retarded”. This theme of hygiene was soon extended by other Inspectors to describe links between order and cleanliness and the improvement of teaching and learning. There are recurrent references in the Education Gazette by Inspectors to cleanliness, tidiness and neatness having a beneficial effect on students’ minds and therefore being part of a sound teaching methodology.
Ultimately, these reported concerns were translated into changes in school design. For example, several South Australian schools built during 1908 were praised by Inspectors for the extent of natural lighting and ventilation. Also, later in 1908 a new design of school desk was introduced. Written and pictorial advice was given through the *Education Gazette* on the correct posture to be adopted by students in using this desk in order to alleviate health problems such as curvature of the spine, round shoulders, stooping, contracted chest and defective vision (*Education Gazette* 4 November 1908).

By 1910, the references to the hygiene aspects of school buildings had been incorporated into a broader context of community health and the “well-being of the Nation.” (*Education Gazette* 14 June 1910, p.149) This meant there was an obligation for schools to adopt strategies that prevented the spread of disease into the community and which also assisted in promoting children’s health. Children’s health became the focus of the medical profession with schools becoming the focus for medical inspections. In fact, the *Education Gazette* of 7 October 1910 published an article that linked the three aspects of educational improvement, health and a system of medical inspection and advised that,

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the first essential step is the introduction of an effective system of medical inspection of schools in all the States ... The work of the school doctor ... should also include the effective and scientific management of school buildings and apparatus in respect to sanitation ...
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Such a scheme of medical inspection was adopted in South Australian in 1912 and was influential in affecting school design. For example, the report of the Medical Inspector in the 1916 South Australian Parliamentary Papers presented data in graph form showing the difference between visual defects in well and ill-lighted classrooms. In this report, the Medical Inspector also expressed concern with the need to improve ventilation and hygienic conditions in schools. The improvements in school buildings as a consequence of this initiative are well documented in subsequent Inspectors’ reports and it is noteworthy that from 1921 onwards, Inspectors were formally required to report on lighting, ventilation, warming, sanitation and hygiene under separate headings.

In addition to the emphasis on hygiene, Inspectors also reported on and supported actions taken by teachers which made the classroom as attractive as possible. There are frequent assertions throughout the *Education Gazettes* 1900-1920 that the educative part of the aesthetic environment plays a significant role in child development. However, the decoration and adornment of the classroom had to be done in particular ways to create a favourable and moral impression upon pupils. Teaching aids and charts needed to be close at hand but not next to “good” pictures. Pictures needed to be of a particular kind; for example, Symes (1996, p.98) noted,

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...teachers were castigated ...for use of unsuitable pictures of negative aesthetic value (like those supplied by the Northern Territory government or railway department) or for displaying unsightly pictures produced by local tradesmen.
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Flowers were important in the classroom but needed to be arranged “artistically”. As Inspector Whillas (*Education Gazette* 7 November 1906, p.248) recorded,

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...Pot plants in the windows and flowers on the mantel make the school beautiful, and children eagerly assist in this work. Good pictures are frequently found in the walls of the larger schools, but they should be kept scrupulously clean...The teachers are keenly alive as to the moral effect of clean and tidy rooms and surroundings. Many schoolrooms are very tastefully decorated with pictures and specimens of the children’s handiwork.
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That is, appropriate classroom arrangements addressed a moral imperative that was assisted by the provision of “tasteful decoration.” This moral imperative also became a familiar theme in Inspectors’ reports with appropriate classroom decoration actually described as “silent moral teaching.” (South Australian Parliamentary Papers 1921, p.42)

Hyams (1988, p.120) has noted,

the inspectorial system was the chief vehicle for achieving uniformity of classroom practice and regimentation of teachers in order to set and maintain educational standards…Inspectors noted provision of and adherence to rigid Education Department requirements.

As such, the recommendations regarding classroom decoration were dutifully carried out in schools across South Australian. Evidence of this influence and of the ways in which classrooms were organised and decorated can be seen in photographs (1) of classrooms of the time.

The “silent moral influence” was extended to include making the school grounds as attractive as possible, particularly the development of the school garden. The positive influence on children’s progress was generated from the aesthetic effect of a good garden, from the labour expended by students in the development and care of gardens and also for the skills it developed which would be of future use to students. As Inspector Smythe (Education Gazette March 1901 p.50-51) reported,

Besides the good moral effect and influence exercised on the minds of pupils by attention to these matters, the experience and skill acquired in the cultivation of plants and the treatment of soils must prove of considerable future benefit in after life.

The school garden emphasis was strongly supported by the Education Department and the Education Gazette included a regular column on gardening and school grounds. This proved extremely popular, as indicated by the increasing space devoted to issues associated with plants, trees and gardening advice in the Gazette. A clear demonstration of the importance of the school garden emphasis is found in the celebration of Arbour Day to encourage the value of cultivating school gardens. Again, the influence of School Inspectors in supporting the promotion of the school garden is evidenced in photographs of the time showing the Arbour Day ceremony (2).

The development of the school environment became a symbol of educational progress as Inspector Martin noted,

The new buildings of today …must tend to the betterment of the child; but still a greater factor to the betterment of the child is the better school environments which have come and must continue to come. The decorating of the classrooms, the beautifying of the playgrounds and the making of garden plots are all educative. (South Australian Parliamentary Papers, 1915, Vol.3).

CONCLUSION AND FUTURE DIRECTIONS FOR STUDY

Cutler (1989) and Symes (1996) noted that by 1900 there were distinctive styles of architecture for public buildings, such as prisons, post offices, railway stations, hospitals, banks and asylums, and that these settings were both suitable for and symbolic of the purposes that were carried out within their walls. The design of these public buildings was intended to express the importance of the work that was carried out inside the building and also to increase its effectiveness. Schools were also participants in this trend and the development of the rationale that linked learning and the school building was a significant feature in influencing their design.
The advent of mass education generated the need for an “architecture” that had not previously existed. The school rapidly became an important community institution. Learning and the school building were seen to be linked and the school building itself was considered to play a positive part in the child’s education. The reports of South Australian School Inspectors strongly echo this idea and support the concept of the school building representing a basis for the development of learning and moral development. This rationale was accepted and promoted through official documents in South Australian, with School Inspectors actively advocating for improvements in school buildings that would enhance the capacity for student learning. Initially this began as an emphasis on school building hygiene: ventilation, lighting and sanitation. Later, the hygiene of the school building became part of a broader public health issue. These concerns manifested themselves in changes to school design; in the size and number of windows, the size of classrooms, and the provision of appropriate furniture. Concurrently the decoration of the classroom and the involvement of pupils in improving the school grounds were actively promoted as “silent moral influences” in students’ educational development. In this way, the school building became an important feature in children’s’ lives, promoting hygiene, order, industriousness and moral welfare.

Regretably, the school building does not feature prominently in educational research. Yet as Churchill noted, “We shape our buildings, and they shape us.” (Ellis 1988, p.19) There is significant scope for further historical research on school buildings, including in South Australian, the account of the development of South Australian school architecture. Any future studies in this field will assist in contributing to a better understanding of our society through its educational development.

The view that there was a link between the school building and student learning was assumed and accepted and few of today’s teachers would argue with the notion. Nevertheless, this brief overview also highlights other important issues relating to school buildings: is there a definite (and positive) relationship between the school building and the acquisition of knowledge and skills? Do teachers and students work independently of the condition of school buildings? Do school buildings, designed in specific ways, enhance students’ educational achievements? These are also matters for further research.

Notes
1. See for example, the following photographs in the Mortlock Collection: Pupils and Teacher, ca 1890 (B 46952); Classroom, ca 1910 (B 36574); “A” room, Norwood (B 17568); Classroom, Keilli (B 36210); Classroom, ca 1910 (B35520); Chemistry Lesson, ca 1913 (PRG 280/1/10/381).
2. See for example, the following photographs in the Mortlock Collection: Arbor Day, Houghton (B 31083); Arbor Day, Coomandook (B 59129); Arbor Day, Bakara (B 30026).
REFERENCES


