Factors affecting the impact of a library and information service on the International Baccalaureate Diploma Programme in an international school: A constructivist grounded theory approach.

A thesis submitted to Charles Sturt University for the degree of
Doctor of Philosophy

Anthony Tilke, BA, MEd.

September 2009
Contents

Certificate of Authorship 4  
Ethics statement 5  
Acknowledgements 6  
Abstract 7  
Glossary 9  
Chapter 1: Introduction 11  
Chapter 2: Literature Review 18
  A Library and information services in secondary or high schools 18  
  B International schools and international education 77  
    International Baccalaureate Diploma Programme 83  
    Constructivism and the school library 99  
  C Conclusion 103  
Chapter 3: Methodology 107  
Chapter 4: Results 128  
Chapter 5: Discussion 181  
Chapter 6: Conclusion 235  
Reference List 243
Appendices:

A  IBDP subject groups  268
B  Examples of titles of Extended Essays  269
C  Standard questions for students interviewed in 2006  274
D  Standard questions for G12 students interviewed in 2007  278
E  Questions to six teachers, representing the six subject groups of IBDP, in 2006  279
F  Questions to teachers, interviewed in 2007  282
G  Questions to senior administrators, interviewed in 2007  284
Certificate of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Charles Sturt University or any other educational institution, except where due acknowledgement is made in the thesis. Any contribution made to the research by colleagues with whom I have worked at Charles Sturt University or elsewhere during my candidature is fully acknowledged.

I agree that this thesis be accessible for the purpose of study and research in accordance with the normal conditions established by the Executive Director, Library Services or nominee, for the care, loan and reproduction of theses.

Signed:
Ethics statement

Ethics in Human Research Committee, Charles Sturt University, protocol no: 2006/032.
Acknowledgements

I gratefully acknowledge the support, advice and encouragement provided by my supervisory team: James Herring (Principal Supervisor), and Joy McGregor and Ken Dillon (assistant supervisors).
ABSTRACT

The study of the impact of the school library in an international school on a particular curriculum for a cohort of students aged 16-18 years focussed on the role of the school librarian within the International Baccalaureate Diploma Programme [IBDP]. The IBDP is an expanding international pre-university course, for which students require high levels of learning skills, aptitudes and abilities. In the literature on this curriculum, the role of the school library in supporting students and faculty is largely anecdotal. An international school is accepted to be typically a private school for various nationalities of students in the K-12 range, with the language of instruction being English, and teachers representing various nationalities. The study was qualitative and used a constructivist model of grounded theory, to develop a theory for the particular situation. Techniques used included observation of students in a natural environment: a school library (which served a whole school (K-12) population). Several students were interviewed twice, once halfway through the two-year programme and at the end. Other students were interviewed to provide comparison. Teachers and administrators were also interviewed. The study found that the main impact of an international school library/ian on the IBDP is focussed on the provision and maintenance of a helpful atmosphere in an appropriate place to enable students to study effectively. Otherwise, a specific role exists with regard to the extended essay, through provision of resources and librarian support with regard to skills of bibliography construction and in-text citation. These aspects were valued by the IBDP school community. Constraints on the role of a library in support of the programme included the need for significant content transfer, limited time and limited pedagogical use of the library, which is due to teachers’ limited previous experiences of library provision and use, non-inclusion of pedagogical use of a library in teacher education courses and lack of inclusion in IBDP subject documentation. A further tension identified by the study was that promotion of a library and information sector-advocated model of the school library may be unsuited to prevailing pedagogies and curriculum. Consequently, the role of a library/ian in support of IBDP may be unperceived by the IBDP.
school community, though student views about the library changed during their IBDP candidature, identifying some value for library support. The role of teachers was important, as their encouragement and expectations of student use of the school library was vital; teachers’ use and perception of value of the school library was based on their own experiences of libraries, both in previous schools as teachers and as school students themselves.
# GLOSSARY

*Acronyms used in this work*

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AASL</td>
<td>American Association of School Librarians</td>
</tr>
<tr>
<td>AECT</td>
<td>Association for Educational Communications and Technology</td>
</tr>
<tr>
<td>ALA</td>
<td>American Library Association</td>
</tr>
<tr>
<td>ALIA</td>
<td>Australian Library and Information Association</td>
</tr>
<tr>
<td>ASLA</td>
<td>Australian School Librarians Association</td>
</tr>
<tr>
<td>CAS</td>
<td>Creativity, Action, Service</td>
</tr>
<tr>
<td>CD</td>
<td>Compact disc</td>
</tr>
<tr>
<td>CILIP</td>
<td>Chartered Institute of Library and Information Professionals</td>
</tr>
<tr>
<td>DVD</td>
<td>Digital video disc</td>
</tr>
<tr>
<td>EBEUK</td>
<td>Evidence-based Education UK</td>
</tr>
<tr>
<td>EBL</td>
<td>Evidence-based librarianship</td>
</tr>
<tr>
<td>EBP</td>
<td>Evidence-based practice</td>
</tr>
<tr>
<td>EBR</td>
<td>Evidence-based research</td>
</tr>
<tr>
<td>ECIS</td>
<td>European Council of International Schools</td>
</tr>
<tr>
<td>ESL</td>
<td>English as a second language</td>
</tr>
<tr>
<td>FTE</td>
<td>Full-time equivalent</td>
</tr>
<tr>
<td>G</td>
<td>Grade</td>
</tr>
<tr>
<td>IASL</td>
<td>International Association of School Librarianship</td>
</tr>
<tr>
<td>IB</td>
<td>International Baccalaureate</td>
</tr>
<tr>
<td>IBAP</td>
<td>International Baccalaureate Asia Pacific (region)</td>
</tr>
<tr>
<td>IBDP</td>
<td>International Baccalaureate Diploma Programme</td>
</tr>
<tr>
<td>IBO</td>
<td>International Baccalaureate Organization</td>
</tr>
<tr>
<td>iBooks</td>
<td>Laptop computers manufactured by Apple Computer, Inc.</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communications technology</td>
</tr>
<tr>
<td>IFLA</td>
<td>International Federation of Library Associations and Institutions</td>
</tr>
<tr>
<td>IL</td>
<td>Information literacy</td>
</tr>
<tr>
<td>IT</td>
<td>Information technology</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>ITGS</td>
<td>Information technology in a global society</td>
</tr>
<tr>
<td>JRIE</td>
<td>Journal of Research in International Education</td>
</tr>
<tr>
<td>LIS</td>
<td>Library and information sector/science</td>
</tr>
<tr>
<td>L1</td>
<td>Library classroom</td>
</tr>
<tr>
<td>LRC</td>
<td>Library resource centre</td>
</tr>
<tr>
<td>OCC</td>
<td>Online curriculum centre</td>
</tr>
<tr>
<td>OFSTED</td>
<td>Office for Standards in Education</td>
</tr>
<tr>
<td>QCA</td>
<td>Qualifications and Curriculum Authority</td>
</tr>
<tr>
<td>QR</td>
<td>Quiet room</td>
</tr>
<tr>
<td>SLMS</td>
<td>School library media specialist</td>
</tr>
<tr>
<td>SLRC</td>
<td>School library resource centre</td>
</tr>
<tr>
<td>TL</td>
<td>Teacher librarian</td>
</tr>
<tr>
<td>TOK</td>
<td>Theory of knowledge</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United National Educational, Scientific and Cultural Organisation</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>US/USA</td>
<td>United States of America</td>
</tr>
</tbody>
</table>
INTRODUCTION

This study identifies factors affecting the impact of the library and information service of an international school on the International Baccalaureate Diploma Programme [IBDP], an international curriculum for 16-18 year-old students in their final two years of secondary or high school education. This chapter provides a brief overview of the research topic, including identification of key terms, methodological features, the significance and limitations of the study, the organisation of the thesis, and the context of the study.

Context of the study

The study took place in an international school (in Asia) which was a private rather than state-funded institution, directed by a board that mainly consisted of parents, and offered an international education throughout, with a student body, aged three to eighteen (K-12), of approximately 700. Students typically originated from over 40 countries. Curricula included that offered by the International Baccalaureate Organization (IBO). In the secondary or high school, teachers originated from a number of English-speaking and other countries, there was a departmental structure, and all students in grades 11-12 (aged between sixteen to eighteen years) undertook the IBDP. Teachers were generally experienced IBDP teachers. One library served all students, teachers and parents. The library was managed by one librarian, with support staff. Research was undertaken by the practitioner (librarian) between 2005-7.

The international school in the study offered IBDP as the standard course for all grades 11-12 students. The school’s admission policy was not predicated on giftedness, so a student body with differing ability ranges was enrolled and the school’s operations reflected a premise that whole-year cohorts of grades 11-12 students could be IBDP candidates. This was a difference historically from practice in international and other schools where IBDP has been an option amongst others available to students in the same cohort (Paris, 2003). This difference may be reducing, in international schools at any rate (McCluskey, 2006). The IBDP as an option especially applied in North America, where it
was seen as a programme for gifted students (Buchanan, Douglas, Hachlaf, Varner & Williams, 2005a). However, a trend or desire to see IBDP offered more inclusively for students of varying abilities and as a model for national governments regarding their own 16-18 education programmes (Hill, 2003; Metais, 2002; Walker, 2004) has occurred.

**Research questions**

The research questions are:

*Primary question*

- To what extent does a library and information service in an international school have an impact on the International Baccalaureate Diploma Programme

*Secondary questions*

- What are the expectations of IBDP teachers, school administration, students and school librarian of the school library in support of the diploma programme?
- What are the demands and requirements on the school library from IBDP teachers and students following the programme?
- What interpretations of the impact of the school library on the programme can be identified in IBDP and other International Baccalaureate Organization [IBO] documentation?
- Do trends or requirements identified in the literature regarding the role of the school library match any role found for the school library in IBO documentation?
- Does the school library and information service in the research meet or match any stated roles, requirements or expectations regarding delivery of services to support the IBDP?

**Identification of key terms**

A number of key terms need to be defined: school library and librarian, international school, the IBDP, the IBO, and impact studies and evidence-based research [EBR]. However, this study found that not all terms are capable of absolute definition and, where relevant, this is discussed in the literature review. Nevertheless, initial definitions are presented here.
A school library has been referred to as part of information services in a school, existing as part of the educational process. Such a term included traditional library provision, but also as wide a range of learning resources as possible, in whatever format, not least information technology [IT]. The concept also includes space, facilities and services provided and the staff to facilitate them (Australian School Library Association [ASLA] & Australian Library and Information Association [ALIA], 2001); UK school library guidelines refer to a ‘learning space ... as its principal purpose’ (Bartlett & Douglas, 2004, p. 24). A school library may be referred to by various terms. These include school library resource centre [SLRC], learning resource centre [LRC], school library learning resource centre and school library and information service. This last term is preferable, as it accurately describes a school library as an active and inclusive facility, though, for the sake of brevity, in this study, the terms school library or library are also used. (This is true of the term school librarian, though, when relevant and to preserve context, the term used in particular citations may be retained.)

A school librarian was defined by ASLA and ALIA (2001) as a specialist teacher who enables the school library to function. UK guidelines referred to the person who staffed the school library as a librarian through education and training (Barrett & Douglas, 2004). Lonsdale (2003) noted a wide variation in terms used to describe those who staff school libraries. The terms teacher-librarian [TL], librarian and school library media specialist [SLMS] were used in the literature as different staffing structures existed in various countries and thus terminology reflected the country or region concerned. For instance, the following designations were used in Canada: library technician, professional librarian, teacher-librarian and teacher non-librarian (Coish, 2005). The American Library Association [ALA] equated the term teacher-librarian with that of school librarian and school library media specialist (ALA, 2005). In a United States [US] context, literature may refer to a ‘credentialed school librarian’ (Todd, 2007, p. 66). Indeed, the terms school librarian and teacher-librarian were used interchangeably in one article (Callison, 2005). In the UK, the term ‘chartered librarian’ has been used (Streatfield & Markless, 1994), though this term was not limited to school librarianship. Therefore the term school librarian is also applicable (Herring, 2004, 2006). Another
European example indicated that ‘in the Dutch educational system the term teacher-librarian does not exist’ (Boekhorst & van Veen, 2001, p. 90), simply the term ‘librarian’. Therefore, for a school librarian, a variety of terms exist, mirrored by differences in education, training, profession and status, though sometimes specific titles may be used imprecisely. The term school librarian is therefore a more inclusive term and is used in this study. Librarian job titles, as identified above, are variously used in international schools, which operate independently in various countries, catering mostly for children of those employed in the diplomatic and business world, and which generally function in the English language (ALA, 2005). Whilst this definition may serve initially, it reflects more of a national point of view, and a generally accepted definition of international schools is not easily obtainable (Hayden, 2006b). Indeed, guidelines for libraries in international schools did not define an international school (Markuson, 1999). The literature review will therefore identify characteristics of such schools and whether there are any distinguishing factors which make a library in an international school different from libraries serving other types of schools.

The curriculum at the centre of this study is a baccalaureate, which offers a holistic approach to education for students aged 16-18 years, featuring breadth and coherence, inclusion and progression and internationalism, where the IBDP was ‘one of the most-widely known and respected baccalaureate curriculum models’ (Phillips & Pound, 2003, p. 4). This model has been developed by the IBO, an independent, non-governmental, international organisation that develops curricula, authorises about 2400 schools in 131 countries to offer its programmes (of which 1793 offer IBDP), and acts as an examination body for the IBDP (Bunnell, 2008, p. 328). The IBO operates through four world regions, of which Asia-Pacific is one. In this region, IBO programmes are offered in 250 schools in 23 countries (Bacon, 2007, p. 12).

Impact studies and evidence-based research (EBR) are tools examined in this study. Impact may be defined as the effect of a service on a person or group, whilst evidence is considered to be information that could be used as data to provide answers to research questions (Markless & Streatfield, 2006). Such brief, initial definitions, however, will be
discussed further in the literature review to identify if such tools comprehensively enable a school library’s impact to be accurately identified.

Methodological features
This study adopts a qualitative method. Such an approach has been considerably used in library science literature (Clyde, 2002), though comparatively few have been based on grounded theory, which is used in this study. In this methodology, theory arises from data (Bartlett, Burton & Peim, 2001), is interpretive (Stern, 1994) and suited to a study of what people do and allows their narratives to be identified (Charmaz, 2006). This study is not a comparative study involving different schools, nor a case study, but this study particularises experiences of students of a wide-ability range and teachers in an international school setting. Qualitative methods therefore may be effectively used to observe a natural setting (Merriam, 1998), which is an important factor in this study; there has been no disruption to normal service, provision and use. It is not a specially-designed project that has been evaluated, but rather regular, ongoing services available to all students. The study focuses on library use, but also includes experiences and views of students who do not use the library. Observation was used throughout the study, which although a standard technique, is relatively little used in library and information science [LIS] studies (Markless & Streatfield, 2006), and specifically those in school librarianship (McNicol & Elkin, 2003). This study recognises a trend of impact studies/evidence-based research in school librarianship and justifies a qualitative method approach, in a specific context where little or no evidence is available.

Significance and limitations of this study
Few studies of libraries in international schools exist, and none identifying impact, which is surprising in an era of accountability. Equally surprising, given that the IB Diploma Programme (IBDP) commenced in the 1970s for international schools, few studies related library use to IBDP (with the exception of McGregor, 1994; McGregor & Streitenberger, 1998; Latuputy, 2005), whether in libraries in international or other kinds of schools. The present study followed specific students through the programme, so examines subject and core elements of IBDP, focuses on library implications in existing IBO documentation and
reflects teachers’ points of view. It further identifies a relationship between teachers and the library/ian. Many of these aspects have not been identified in studies. In addition, because of the methodology used, theory about issues relating to a library role and impact in IBDP are identified. This study aims to capture and provide a narrative for and theorise about the views, values and perceptions of a particular IBDP school community, comprising students, their teachers, administrators and librarian.

This study contributes to the literature of library experience between school and university. Given attrition rates of students in tertiary education, especially in the USA (Cahoy, 2004; Lewin, 2006), it may be helpful to identify factors that could contribute to success. Given that the present research was conducted by a student of an Australian university and both Australia and the country in which the study took place are part of the IBO’s Asia-Pacific region, it is relevant to note that Australia featured in three top destination choices for tertiary education amongst international students (Bagnall, 2005). Such students may well have experienced the programme, therefore any impact of the library on what students achieve through the IBDP could be of interest to tertiary educators.

Whilst an over-riding focus on the Asia-Pacific experience is not the raison d’etre of this study, nevertheless, where relevant, literature of studies and commentators in the region are identified and possibly highlighted. This is both to situate and validate the location for this study, but also enables an Asian-Pacific voice in literatures that could be considered over-rich in Western experiences, given that this curriculum organization has a world-wide remit. This is particularly important in an IBO context, where the Asia-Pacific region has seen rapid development of the IBDP (Keher, 2006), not least in China and Australia (Keher, 2005).

This study particularises experiences of groups of students and teachers who are not statistically representative of the available population, nor of particular demographics. Students were interviewed after observation identified a continuum of non-users to
regular users of the library. Teachers were interviewed because of their subject affiliation, rather than country of origin, experience or that they used the library.

The study is based on the regular practice of a particular school; the school’s infrastructure and facilities will not be exactly replicated in other schools. Because the study focuses on particular teachers and students at a specific time, and in the context of one institution, this can be a limitation as international schools vary from country to country, as well as in their organisation and student and staff backgrounds and circumstances.

Organisation of this study

Following this introduction, a literature review is presented, which focuses primarily on relevant aspects of school librarianship, not least impact and evidence-based research, the role of a school librarian and studies that identify how grades 11-12 students use the school library. More briefly, there is discussion of literature relating to the context of the study (international schools and the IBDP), and constructivism (as it was found that this concept occurs in a number of areas in the literature review). A following chapter identifies methodology, focussing on grounded theory, relevant techniques and how these were employed in the present study. The results chapter presents findings based on observation and interview, involving teachers and students at one international school. At the conclusion of this chapter, categories are identified from the findings. A discussion chapter is placed next and relates findings through categories to trends and differences in the literature, before leading to a grounded theory for the particular situation. A concluding chapter identifies issues and significance of this study.
LITERATURE REVIEW

In order to set the study in perspective, this review of literature identifies four discrete areas. Firstly, aspects of library and information services in secondary schools, which is the main focus of the literature review. Other literatures are discussed more briefly: international schools, the IBDP and constructivism. These areas are central to this study. An understanding of the literature as it relates to recommended and actual roles of the school library and librarian, together with how the library may and is used by older students, the role of teachers, information literacy and how library use may be evaluated is relevant. As the setting is an international school, it will be useful to comprehend understanding about international schools and what the literature says about a library role in such schools. This study focuses on a specific curriculum, therefore relevant IBDP literature is discussed, especially in relation to the role of the school library. A further section briefly discusses a theme that emerges from the three previous sections, and serves to discuss understandings and perceptions of constructivism as it relates to pedagogy and recommended and actual roles of the school library. Larger sections include discussion and conclusions, whilst sub-sections present literature, with grouped discussion and conclusions, leading to an overall, final conclusion.

A. Library and information services in secondary or high schools

This section of the literature review discusses, in relation to secondary school libraries:
- Role statements and outcomes-based standards
- Evidence-based research and impact studies
- School librarian roles
- Use by grades 11-12 students.

School library development may be achieved through several means: firstly, statements of intent, mainly provided by professional organizations, then standards which were based on outcomes, followed by evidence-based practice, focussed on identifying differences that a library made to student learning (Todd, 2004). This continuum represented a change from traditional input methods, such as resources, staffing and accommodation, to a consideration of student learning as a means of evaluating school...
libraries. Moving from a discussion of the ideal or recommended to what happens in school libraries may further suggest attention should be given to someone who causes activity to happen in a library – arguably, the librarian – and how s/he focuses services on the needs of students in grades 11-12.

**Role statements and outcomes-based standards about school libraries**

It is the link with curriculum that has been the focus for guidelines and role statements in various countries (Todd, 2003c), though there may be an unperceived potential in relation to curricula (Kinnell & Pain-Lewins, 1988). Therefore, it is relevant to discuss the aims, content and achievement of various documents, and their effect on the library and information sector [LIS] and the education sector.

As well as identifying use of space and resources, role statements have linked libraries to ICT and information literacy, such as in Australia (ASLA & ALIA, 2001). UK guidelines advocated that policy should focus on curriculum, learning and teaching methods, as well as information literacy and self-evaluation (Barrett & Douglas, 2004). In Canada, documents emanated from provincial rather than national government (Oberg, 2004), and varied between policy documents, guidelines and standards, some of which reflected a resource-based learning ethos (Haycock, 2003). With the exceptions of Canada, and New Zealand (Ministry of Education and National Library of New Zealand, 2002), most such role statements have been developed by professional library organizations, rather than by government agencies that were responsible for educational matters. Such a difference was specifically noted in The Netherlands, where school library documentation had been produced by school librarians but, unusually, ‘the government [now] stressed the central role of school libraries’ (Boekhorst & van Veen, 2001, p. 82).

In the international context, a statement on school libraries from UNESCO and the International Federation of Library Associations [IFLA] identified the mission and context of a school library, together with staffing, funding and educational goals. Both organizations jointly issued guidelines, a concise statement of generally held LIS beliefs and values. It was mainly concerned with provision, though with some reference to
functions of a librarian, information literacy and assessment (IFLA, 2002). For a particular type of school that is a context of this study, a major accrediting organization, the European Council of International Schools [ECIS] issued guidelines for libraries in international schools (Markuson, 1999). This document provided significant detail to develop a library programme to various levels, though, possibly pragmatically, it did not indicate an overall vision for school libraries.

In the USA, standards, rather than guidelines, were predicated on an understanding that a library had moved from a repository of books to ‘an active, technology-rich learning environment with an array of information resources’, in which the librarian ‘focuses on the process of learning rather than dissemination of information’ (ALA, 1998, p. 1). The focus was on process and outcomes for students who could use information flexibly and creatively. An accompanying, influential document, Information Power (American Association of School Librarians [AASL] and Association for Educational Communications and Technology [AECT], 1998) provided standards, indicators and levels of proficiency, and focused on collaboration, leadership and technology. The influence of such documents was such that Everhart (2000) noted that various individual state governmental agencies responded with their own state guidelines in the USA. However, whilst recognizing that documents produced by ‘fee-paying professional organizations’ were praiseworthy, they ‘should not be adopting the role of government agencies’ in this regard (p. 14).

Standards were traditionally associated with input measures, whereas a newer trend in the UK to relate standards to both process and outcomes enabled use as management tools in professional practice, however effective use of such tools needed prior use of a clear understanding of what a school library was (Williams, Wavell & Coles, 2001). Wavell (2004) noted that guidelines and standards were developed in an environment of accountability and need for effectiveness, though the plethora of documents could add to ‘confusion and frustration’ for individual practitioners (p. 13).
Documentation that outlined the role of a school library in the USA was identified by one mainstream educational writer (Pratt, 1994). He also noted that references to school libraries should also be highlighted in curricular documentation, as

most educational jurisdictions publish documents on the use of the school library-resource center. But these injunctions are rarely referred to in curricula. It is not enough to assume that curriculum users will automatically use such resources. Curriculum documents need to remind teachers frequently that school librarians can provide important services to teachers and students (Pratt, 1994, p. 280).

Montiel-Overall (2005) recognized, in a North American context, little synergy between professional and research literatures of education and school librarianship. Whilst the latter included references to pedagogy and educational philosophy, there were very few references to school libraries (or any other relevant - even broader - term) in mainstream educational literature.

Discussion
School librarians and their professional organizations clearly believe in the necessity of statements about school libraries, which are though invariably non-binding or advocated. Based on a premise of benefit of use from provision, they may assume a need for resource-based learning approaches and information literacy, sometimes without a statement or understanding of underpinning constructivist approaches to learning. Yet few instances of curriculum-issuing organizations adopting or generating guidelines about school libraries exist. This is also true of any specific inclusion of school libraries in various curriculum documents and Pratt (1994) makes an important point that, unless they are, it is unrealistic to expect libraries to be used effectively. Everhart (2000) questions a role adopted by library-sector organizations, indicating it belongs more with statutory bodies. Indeed, as Montiel-Overall (2005) found, scant references to school library use and provision in professional literature for teachers exist. Those involved with school libraries may be disheartened at the low profile of school libraries in the main educational landscape, though an articulated view of school libraries largely emanated from those responsible for its’ provision, not from a constituency who mainly would or could use libraries. The trend promoted by Todd (2004) would seem rather to be that of
offering various methods of identifying a curricular role for a school library than an evolution from input measures to outcomes. The energy of professional organizations, though not of curriculum development agencies, has been harnessed to the production, maintenance and promotion of guidelines, though possibly the main readership is librarians rather than any other professional grouping. As a result, librarians may have unrealistic expectations about the power or influence of guidelines whilst, conversely, guidelines may be mostly marketed within the LIS profession, rather than to allied professions. Role statements may indicate ideal situations, but other approaches, not least impact and evidence-based approaches, may try to identify the scene and provide evidence to inform and influence policy and decision makers and potential users about the utility of school libraries as they exist.

**Evidence-based research and impact studies about school libraries**

Evidence-based research [EBR] and impact studies have been adopted within LIS after use in other professional areas. As an applied rather than a theoretical science, EBR has also been referred to as evidence-based practice and, more specifically, evidence-based librarianship (Todd, 2007). Initial references in this section identify why and where such methods have been considered useful and what they contribute to a LIS landscape. ALA (2005) defined EBR as ‘reflective practice, or learning about best practice from the research literature’ and using data to improve practice to demonstrate ‘how libraries make a difference in teaching and learning’ (p. 2). Given (2007) referred to EBR as a formalized linking device between research and professional work. Streatfield and Markless (2002) defined impact as a ‘difference made to individuals or communities’ by a library service (p. 1). They identified (as did Urquhart, 2005) several elements: quality, both of learning experiences and life experiences, and educational outcomes. Impact and EBR have been developed in a number of areas, including business, health, social care and education, initially in North America, spreading to Australasia, UK and other parts of Europe (Markless & Streatfield, 2006; Todd, 2006), though Todd (2007) considered it was strongest in the UK health sector. Such approaches were adopted by the public sector in order to support trends towards performance management, accountability and a value ethos. It has also been undertaken within the larger LIS community. Impact and EBR was
characterized by being undertaken, though not exclusively, by practitioners. The order of various LIS sectors reflected the extent of adoption of such styles of research: school, health, higher education, public and workplace libraries. However, studies were of variable quality, established broad areas of impact and/or potential areas of impact, but ‘there is probably more evidence available about school libraries worldwide than about any other type of library’ (Markless & Streatfield, 2006, p. 40).

Such styles of research have been used also in the wider education arena. Looking at the impact of teaching, Hattie (2003) identified variables in student achievement. Student factors accounted for half the difference, for example prior abilities and attitudes to learning. Home, peers and school factors each rated 5-10% impact, whilst teachers contributed about 30%. Details for what constituted a school factor were not available, beyond identifying resources and facilities at macro-level. Mainly, influences on impact were due to teaching and factors did not specifically include anything that could be inferred as being offered by or through a school library.

The relevance of evidence-based approaches to school librarianship was advocated by Todd. Indeed, school librarians should move from ‘rhetoric about roles …to evidence-based, learning-centred practice’ as school executives had heard advocacy statements for some considerable time and did not link what a librarian did to student achievement (Todd, 2001, p. 5). Todd (2003b) advocated transfer of EBR to school library evaluation processes, focussing on ‘how the school library helps students learn, and the learning outcomes’, rather than quantifying resource inputs (p. 7). Loertscher (2003), in whose manual on EBR Todd’s paper (2003b) appeared, considered input data ‘never did provide a gauge on learning or a link to standardized test scores’ (p. 25). School libraries could make a difference to students’ lives and contribute to ‘the social good’ so effects were more important than simply advocating their benefits (Todd, 2003c, p. 4). As a result, EBR moved beyond anecdotal accounts ‘to establishing a sound research-based framework for decision-making’, concentrating on ‘services based on stated goals and objectives, and systematically demonstrating outcomes … in tangible ways’ whilst providing a critical analysis of inputs (Todd, 2003c, p. 10). Nevertheless, providing and
advocating use of libraries on the basis of a belief in their social good was not seen as currently relevant in an educational environment predicated on accountability, therefore it was important to use EBR (Todd, 2007).

Researchers have found a variety of approaches and results from the use of impact and evidence-based methodologies in school librarianship. A review of studies between 1970-1989 in which school libraries enriched standard curriculum in the USA was based on a premise that interaction of library personnel and services made a difference to students’ development. Studies reported such a relationship, especially in elementary schools. As the ‘single most powerful indicator of success in most of the studies examined’, future research should focus on ‘what kinds of librarians make a difference’ (Perritt & Heim, 1990, p. 76). Streatfield and Markless (1994) found limited research, which was often small scale, limited in focus and survey-based. Of both UK and US research, most studies ‘focused on the organisation and management of services’, rather than impact (p. 9). In studies of curricular issues, there was a tendency to assume the library contributed to learning and not examine this supposition in depth. Where good practice was recorded, it tended to be from a library rather than a pedagogical point of view. For instance, Gniewek’s (1999) selective review of literature on school libraries and student achievement featured the work of Lance (discussed below) and concluded that ‘a quality school library program is a powerful predictor of academic and reading achievement’ (p. 4). A library was defined using input measures (including a qualified librarian and varied and numerous resources). However, Yoo (2000) identified concern about rigour of pre-1990 research in USA; nevertheless, Yoo found most studies identified a ‘positive impact on educational achievement’, but few studies existed for higher grades (p. 19).

Furthermore, Callison (2001) concluded that early school library impact studies were not published and findings were mainly known within LIS circles, commenting that research needed to connect to a wider educational field. From the literature, Williams, Wavell and Coles (2001) found a school library could have a ‘positive impact on academic achievement’, though it was not possible to identify an optimal model of library provision (Section 3.1). They found that most studies were at primary school level, with little
research to identify the role of a librarian regarding students’ information literacy development.

Lonsdale (2003) too found libraries had a positive impact on student achievement, whether identified through reading scores, literacy levels or broader approaches to learning. Lonsdale’s meta-analysis identified less evidence of impact as students proceeded through high school. Nevertheless, a library ‘that is adequately staffed, resourced and funded can lead to higher student achievement regardless of the [local] socioeconomic or educational levels’. This was true of test scores related to library use and ‘a positive difference to students’ self-esteem, confidence, independence’ and responsibility for their own learning (pp. 30-31). Contributory factors included good ICT infrastructure; high-quality resources; collaboration between subject teachers and librarians, and curricular integration of information literacy. Student achievement as a concept was not used consistently as some research used standardized test scores, whilst others made qualitative judgements on more general (and intangible) aspects of education and again there was a need to identify what contribution librarians made to students’ information literacy development.

Research supported a belief that libraries could have an impact on students mainly in primary and early secondary school years in the UK (Johnson, 2004). However, it proved difficult to identify ‘best practice’ of a library contribution to learning due to varied ways of providing school libraries, difficulties in ‘isolating the impact of the library from other significant influences, and the challenges in establishing causal relationships’. Other factors included concern about rigour of methodologies and that studies concentrated on ‘short-term impact of special projects, rather than the continuing impact of core services’. (p. 34)

Researchers and writers promoted a body of impact/EBR research, some of whom identified a US origin. Writing for an international school readership, Ferguson and O’Hare (2004) referred to ‘abundant research linking well-funded school libraries staffed by professional teacher librarians committed to student achievement’ focussing on an
‘instructional role ... with student learning outcomes’ (p. 50), conclusions reached by citing Lance, Kuhlthau and Todd. Royce (1999) identified research into student achievement and libraries in guidelines for international school libraries, citing Lance and Todd. In Loertscher’s (2005) bibliography of impact/EBP-based research most references were to US studies, plus two studies from Australia and Scotland (Lonsdale, 2003; Williams & Wavell, 2001). The other non-USA reference was to self-evaluation guides for primary and secondary school libraries on the UK School Library Association’s website. Nimon (2004), commenting on the Australian situation, found most studies emanated from USA. Lance and Loertscher (2005) identified research in a practical manual that could be used in local advocacy situations, highlighting test-score style studies in US states, though two qualitative studies (Todd & Kuhlthau, 2004; Williams & Wavell, 2001) were included. Whilst Williams and Wavell (2001, 2002) had been identified in various bibliographies of impact studies from North America, Streatfield and Markless (1994) had not. However, these studies appeared in a Canadian-produced bibliography, along with other non-US studies (Bernhard, 2006). Both EBR and impact studies were thus used for advocacy purposes as well as informing and improving practice and services (Wavell, 2004; Todd, 2006), not least promoted by such bibliographies and manuals as those indicated above. Markless and Streatfield (2006) considered school libraries could contribute to both learning and teaching, based on EBR, though exactly what contribution remained to be largely established by research. Wirkus (2006) regarded EBR as a catalyst, not least to practitioner-based research. His review of published studies found student grade level was not a sufficiently important factor to be identified in reports though, where it was, references to the secondary sector were least mentioned.

The above is a synthesis of the overall situation, but impact and evidence-based studies have followed quantitative and qualitative approaches, and identified different things. Both approaches are therefore discussed separately as this has a bearing on the approach taken in the present study. After identifying salient features and studies in each approach, a section then discusses features of impact/EBR research that may be of interest for the present study.
Quantitative impact

With more heritage, quantitative evidence of school library impact could be found in studies dating from the 1950s, though more recent research (from 1990) was stronger as studies allowed for demographic statistical weighting (Hartzell, 2002). Hamilton-Pennell, Lance, Rodney and Hainer (2000) publicised results of research linking school libraries to standardised achievement test scores amongst school library practitioners internationally, identifying relevant US studies dating from 1965. Indeed, Loertscher (2005) grouped studies using standardised achievement test scores together under a heading ‘The Lance Studies’, to identify the influence of this style of research, especially in USA.

Lance (1994b, 2004a) authored and advocated research that linked student achievement to standardised student test scores, first carried out in Colorado (followed by other states in USA) during 1993-2005. Impact studies undertaken previously were generally small and specific in scale. However, a change was that the 1993 research was a state-wide study. It nevertheless utilised existing test data, though further analysing data to correlate library provision and use. The first study identified both direct and indirect school library predictors of achievement, mostly from resource inputs, though acknowledged that most variations in test scores were due to socio-economic factors (Lance, 2004b). In 1999, using standards and the impetus of Information Power (AASL & AECT, 1998), another study was undertaken in Colorado, when the focus changed from the library as a static facility to a proactive role of a school librarian (Lance, Rodney & Hamilton-Pennell, 2000a). Lance (2004c) concluded of this study that ‘even when key school and community socio-economic differences are controlled, school libraries alone still account for up to eight percent of test score variation’ (p. 8). Similarly modeled studies in other US states tended to examine achievement grades of students in elementary and middle school students. In the 1993 study, tenth grade was the only secondary grade to be included (Lance, 1994a) and overall the number of schools with older grades in the data was limited, resulting in some reservation of confidence about validity of data. However, a study in one state (Pennsylvania) looked additionally at the impact on Grade 11 students (Lance, Rodney & Hamilton-Pennell, 2000b). This focused on the school
The study recommended adequate funding for library resources, technology (not least subscription databases) and appropriate staff, with librarians developing a leadership role to integrate teaching of information literacy, and urged school principals to develop policies and procedures to enable this to occur. Williams, Coles and Wavell (2002) had reservations concerning methodology of the Pennsylvania study; findings were ‘not summarised according to grade level although each of the grades five, eight and eleven were treated separately during the analysis’ but conclusions referred to students in primary or secondary levels (p. 8). It was unclear how schools were selected and the agenda of the funding body, the state’s education department library office, was that ‘the impact of a school library needed to be demonstrated to school decision-makers’ (Williams, Coles & Wavell, 2002, p. 53). A study in Illinois (Lance, Rodney & Hamilton-Pennell, 2005) was at that time regarded as the final Colorado-type study, as findings were consistent with those from other states’ studies. Here also the library had an impact on students in all grades, though lessened in higher grades, again consistent with earlier findings, though statistics presented in the report were not identified beyond that of high school level, again reflecting Williams, Coles and Wavell’s (2002) reservations about the Pennsylvania study.

Although undertaken by a different researcher, the same style of research was utilised for a study in Massachusetts that matched state assessment scores against school library provision and use (Baughman, 2000). Findings echoed those of Colorado and Pennsylvania (Lance, Rodney & Hamilton-Pennell, 2000a, 2000b). Again, methodology and detail for each grade level was not clearly identified (Williams, Wavell & Coles, 2001). However, Baughman (2000) indicated that a significant factor for high school students was library opening hours, i.e. regularly open after the end of formal lessons each day, as there was a correlation with improved test scores; other factors mainly related to resource inputs.

An interpretation by Baughman (2003) that Colorado-type studies used ‘mostly correlation, factor analysis, and regression’ was compared to a study (in Texas, by Smith,
that questioned ‘regression since the assumptions required for its use may not have been fully satisfied with available data’, so mainly used ‘descriptive statistics’ (p. 83). In this study (Smith, 2001), socio-economic variables in state test scores accounted for 55%, whilst library variables accounted for 8.2% for high schools (a reduction from scores for elementary schools), using test score data up to grade 10. No statistical causal relationship between library impact and test scores was evident, though was ‘highly plausible’ (p. 1). Library factors at high school level again focused on resource inputs; also, technology, especially state-supported online databases, contributed significantly to library impact, as did longer opening hours (beyond formal teaching hours). In a review of Smith (2001) for a mainstream educational readership, Laitsch (2003) focused on such input measures that were required to enable school libraries to have an impact and accepted Smith’s distinctions and reservations regarding causality.

Commenting from a Canadian perspective, Haycock (2003) found most research emanated from USA, in which, for elementary and high schools, common factors were ‘good reading environment, including comfort and quiet, as well as larger library collections’ which ‘affect reading, literacy development and reading scores’ (p. 30). Provision of teacher-librarian staffing and funding for school libraries were positive links in other studies but, in Canada, it was difficult to establish a ‘clear and direct link between the presence of a teacher-librarian and library collections funding, against indicators of student assessments’ (Coish, 2005, p. 34).

Farmer (2006) studied causal links between aspects of library programmes that featured as principles in Information Power (AASL & AECT, 1998) on standardized test scores of students in both elementary and high school sectors in California. The literature review was rich in studies linking library factors to state reading test scores in USA, though acknowledging that it was a very specific context, and did not identify studies undertaken elsewhere or those that did not use test scores. Aspects of impact differed between school sectors, but common factors could be collaborative planning and support staff. It was not generally possible to isolate specific aspects in terms of test scores. However, Farmer concluded that ‘library media program implementation correlates with student academic
achievement, particularly in reading comprehension and vocabulary’, but ‘may actually have more direct impact on teachers than on students’ (pp. 30-1).

Regarding test scores, Farmer (2005) suggested school libraries/ians could be agents for educational change in an environment where accountability was an important element, and information literacy could be a strategy to bring about change. A constructivist way of learning was implicitly promoted, though the term was not mentioned. Librarians should seek ‘correlations between information literacy or library media programs and student achievement’ and ‘leverage such possible connections’ after collaboration with teachers and administrators. If a link was found between library use by students who scored highly in standardized tests, it was important the teacher librarian worked with other teachers ‘to increase library use ... [as] subsequent examination of test results will uncover whether library use is a consistent factor in student achievement’ (p. 153). However, Loertscher (2003) was concerned about linking impact to test results. He concluded that ‘our current frustration is centered in the fact that too much faith is being put in the almighty achievement test’ (p. 25).

Given the influence of Colorado-style impact research, it may therefore be relevant to focus on methodological features and pressures on such a model for research. These, and other issues, were addressed by Callison (2005) in a written discourse with Lance, who considered the various studies were very consistent: a clear trend of high use of libraries in elementary and middle school years, with significant decrease in use by grade 10. Accepting that the first Colorado study did not produce a causal result, Lance indicated that subsequent research allowed for various socio-economic factors. For high school grades, any identifiable school library effect on student achievement (in relation to test scores) was under 10%, so the challenge was associating library with other contributory factors, though a complication was the reality that multiple factors impacted on student learning. Those whose belief paradigm encompassed value in school library provision and use readily accepted research findings, but in order to convince others methodology for future studies needed to be that required by US federal educational policy organizations. Therefore, the research was not only specific to USA, but to an individual
state (as research within that state only would be deemed valid or relevant), hence replication of Colorado-type research in various states. A third Colorado study (of how school librarians taught critical thinking) would nevertheless relate to test scores. Discussion between Callison and Lance centred on the prevailing background of disparity of provision and use of school libraries in USA, an ageing and/or variable teacher-librarian population, and concerns by the library research community about methodology. Studies had been funded by library organizations in individual states thus having a practitioner focus, and required findings to be used mainly for advocacy purposes. Dissemination of this body of research should be prioritised amongst educators and educational policy officials, including publishing research in their research and professional press and conferences. However, ‘the most strategic option … is to infiltrate schools and colleges of education. Most school administrators and teachers never had to take a course … that introduced them to what constitutes a high-quality school library program’ (Callison, 2005, How can those answers make a difference? section). Lance promoted ‘research-based advocacy’ and asserted that ‘we need to do everything we can to strengthen the quantitative evidence for a cause-and-effect claim regarding school libraries and students’ achievement’. Until that happened, he considered that qualitative evidence would not convince policy-makers in the USA. (Callison, 2005, the challenge section)

Studies identified in this section may be characterised as being large-scale, using selected sites, which are specific to a particular situation, use statistical techniques to arrive at findings, focus on input measures and having an advocacy function. As the present study is interested in identifying values and perceptions, such an approach may be of limited relevance. This, therefore, suggests that attention should be turned to impact studies and EBR of a qualitative nature.

Qualitative impact

As variously indicated above, another trend in the literature is studies that adopted qualitative methods of measuring impact and evidence. Although considered of limited utility for US purposes, such approaches have nevertheless been adopted elsewhere.
Streatfield and Markless (1994) used observation and interview in several school libraries in UK to identify what contribution a library made to teaching and learning, isolating environment, reading support, research, resource provision, skills development and support from a librarian as factors. Whilst one model of library provision was advocated ‘by people with a professional interest in school library development’, effective library provision depended on the ‘dominant teaching culture at the school’ (p. 98) and ‘pluralism’ in terms of school library models was more appropriate (p. 142). Therefore, how a library was used depended on how students were taught and, as a result, what was identified as effectiveness similarly varied.

Olen (1995) used a longitudinal survey of final-year school students, prior to experiencing higher (specifically, teacher) education in South Africa, in order to identify impact of frequent school library use on subsequent academic success. Students were deemed successful if they were still enrolled on courses for which they had applied whilst still at school, three years previously. No connection between frequency of use and success was found, so other factors, such as activities carried out in a library (e.g. information skills development) needed to be investigated, with a rider that any meaningful results would develop only if qualitative methods were used.

Williams and Wavell (2001, 2002) took a different stance to the work of Lance and others, outlined above, into impact of school libraries in Scotland. Perceived impacts of the school library resource centre [SLRC] on learning, by students, teachers and librarians, were investigated. The literature survey identified a positive relationship between learning, particularly in the primary school sector, and SLRC provision. However, the study focussed on ‘the development of attitudes and skills which will equip students for lifelong learning’, which was broader in scope, and where ‘participants found it difficult to identify specific indicators of learning in the SLRC context as opposed to the more formal and stipulated curriculum outcomes’ (2002, p. 79). Possible indicators were identified by examining library use by various year and subject groups, including a group following a science course for 16-year old students. Outcomes provided potential
impact indicators of SLRC on learning in terms of motivation, progression, independence and interaction. Indeed, Johnson (2004) agreed that this research showed that libraries made a positive impact on reading development in young children; on academic achievement, particularly in terms of acquisition of language and ICT skills and information literacy; on the broader aspects of learning, such as increased motivation for learning, self-confidence and independence; and on enjoyment and choice of leisure reading material. (p. 34)

Todd and Kuhlthau (2005a) observed that whilst school library services were predicated on a belief that they made a contribution to society, exactly what that help was remained a matter for research (preferably an EBR approach) to identify. A study of student learning through school libraries in Ohio in 2002-3 involved 39 school libraries and focused on the perspective of students between grades 3-12 (with high participation from G11-12), who were asked to complete a web-based survey about how the school library had helped them. Students could choose from various researcher-perceived help statements (with one open-ended option). Impact was again strongest at elementary school level and which decreased as students grew older, possibly because they had developed sufficient information skills to work independently. The library’s role though was not considered passive as it supported ‘students in an active process of building their own understanding and knowledge’ through abilities to research and use information effectively, so became ‘an agent for individualized learning, knowledge construction and academic achievement’ (Todd, 2003b, p. 5). Key indicators were resources, information literacy development, knowledge construction, academic achievement, independent reading and personal development, technological literacy, individualized learning. Todd and Kuhlthau (2004) suggested major differences in this research as data was obtained directly from students and the student sample (over 10,000) was large. An effective school library helped most with ‘providing access to information resources necessary for students to complete their research assignments and projects successfully’, which included accessing print resources, electronic databases and the Internet (p. 20). Parallel research in Ohio was one of teachers’ perceptions of the school library, where overall teachers were more positive about the library than were all the students in the study. Teachers made positive links between school library provision and activities and
attributes of librarians and student learning. Whilst there was some evidence of teacher use of the library and interaction with librarians, perceptions suggested that teachers primarily saw the library as a relationship between students and library/ian, and not one for teachers (Todd & Kuhlthau, 2005b).

Overlooking non-US research, Lance considered the Ohio research ‘charted a new course for school library impact research - a qualitative one’ (Callison, 2005, Ohio Studies section). Acknowledging only this study as an example of extant qualitative research, whilst Colorado-style studies focused on schools for main analysis, the Ohio focus was on individual students and used only positive comments from students (and teachers). Callison considered KRC Research (2003) findings (discussed below) reflected more of reality and should be used for research focus, rather than purely positive use. Lance, whilst finding the Ohio research of value, considered the prevailing political reality in the USA indicated that qualitative studies were considered unscientific, so impact studies could only be supported by quantitative research. Such a climate for research and the corresponding needs of school librarians in the USA may account for Bogel’s (2006) review of the Ohio study; she saw it as a basis from which to ‘empirically measure ... data that aligns and substantiates the narrower measures of standardized tests’ (p. 52).

Although they too considered the study important, Markless and Streatfield (2006) expressed reservation about the selection of students who ‘chose to contribute their views’ and examination of only positive comments (p. 46).

As Callison (2005) indicated above, a market research firm was commissioned by AASL to undertake focus group research to provide opinions about school libraries from teachers, students and parents. Perceived value for both library and librarian was higher in elementary than middle or high school students, which also applied to their parents; ‘only teachers and principals seem to place importance on school libraries and librarians in the upper grades’ (KRC Research, 2003, p. 3). Older students tended to use the library less and relied more on use of the Internet, either at home or in a computer facility at school (that was not the library). This, Callison argued, was a more realistic starting-point for research. Loertscher and Woolls (2002b) were possibly prescient when they
advocated that research that looked at the emotional perspectives of teenagers and libraries was needed, though speculated that the results may be beyond an acceptable paradigm for the specialism, but that regular communication with teenage users was essential in order to gain credibility with such a digital-native audience.

Given that qualitative research may be typically smaller in scale and used by practitioners, Todd (2003b, 2003c) identified EBR in Australia and found few examples of practitioner research. Wavell (2004), from a literature review, also found limited evidence that EBR was undertaken. Findings for Todd focused on visibility of the school library’s contribution to learning, funding accountability, identification that the school librarian’s role was learning-centred, effective planning for library instruction of students, job satisfaction and an ability to move beyond advocacy. Perceptions about EBR included fear of over-accountability, high competency base for methodology and time management (2003b). In all but two cases, EBR was qualitatively evaluative (2003c). Here EBR was mostly used, not to guide professional practice, but to justify inputs and as defense or advocacy in possible adverse situations.

Also identifying a belief established in the literature that linked teaching, learning and school libraries, McNicol and Elkin (2003) noted a lack of consistent evidence to support such a paradigm. Their research aimed to develop a model of self-evaluation for school libraries in England that could more readily support and enable practitioner research. Existing research literature in UK and USA tended to be quantitative, based on inputs or performance evidence which did not ‘support the suggested links between school libraries and teaching, learning and attainment in areas such as collaboration … and the personal qualities of the librarian’ (p. 15). Evidence was difficult to identify due to librarians’ limited experience of qualitative research techniques and in isolating a library role from other influences on learning. Because of this, emphasis should be on learning in general, not on specific curriculum developments. Wavell (2004) found no clearly defined or accepted indicators for use of evidence of learning in a school library, so librarians found it difficult to evaluate, but focused on reading and information literacy, and indicators of learning developed in the study were similar to those of other qualitative
studies. Barrett and Douglas (2004) promoted self-evaluation as an aspect of overall educational policy to raise standards in schools. Impact was defined as a difference made to individuals from using the school library/ian, though that outcome was difficult to measure or isolate, but was possible to observe behaviourally, so qualitative methodologies, such as observation, were recommended. In a development of such an approach, a self-evaluation document for school libraries in England (Streatfield & Markless, 2005) was published by the English department of education, and reflected a wider trend of self-evaluation by schools themselves; it was therefore important that self-evaluation factors should mirror those employed by school inspectors.

In Australia, Hay (2005) adopted the Ohio model in preference to one of correlation with student test scores. Choice of model was focused on US practices, there being no mention made of, for instance, a study by Williams and Wavell (2001). Schools were selected if they conformed to benchmarks for effective school libraries. Students from grades 5-12 were invited to complete a web-based survey; 6718 did so; at 11%, the lowest group of responses was from grades 11-12. Specified help statements were the same as Ohio - namely, those associated with obtaining relevant and useful information. By grade, perception of help that a library was able to offer was, as other studies found, greatest with lower grades. Furthermore, the study found impact was lowest by grade [G] 9, but a slight increase thereafter, which was a difference from other studies. An overall small increase or leveling out of perceptions of help for access and use of ICT was seen by G11-12 possibly due to ‘timetabled ‘independent study periods’ in the library ... giving them greater access to the school library's technology production facilities’ (p. 25). Analysis of a free-choice survey question essentially provided the qualitative aspect (Hay, 2006) in which students considered that the most important support was in relation to ICT, especially the Internet. The term school library was perceived as place, learning environment and access to resources and facilities throughout and beyond the formal school day. The last factor was particularly identified by G11-12 students, allowing access before school started and due to limited home Internet access. Other comments focused on resources and assistance from library staff with locating and using resources, especially technology. Information needs for English as a subject was the most frequent
reason G11-12 students used the library, followed by social sciences, sciences and mathematics. Another similarity between this and the Ohio study was student completion of online questionnaires (with pre-selected comments) whilst they were in the school library, and with librarian involvement or support, which (together with the selection of schools) may lead to a suggestion of bias in these studies.

Observations by English (subject) school inspectors, in England, identified factors that enabled school libraries to make a contribution to the learning process, the most important of which was the involvement and support of the headteacher. Again, it was found that library use reduced as students progressed through grades of secondary education. Schools’ own evaluation of libraries was considered more effective when focused on impact, rather than an analysis of input measures. Librarians found it difficult to identify impact, though a key role of a librarian (however defined) in enabling a library to be effective was identified by inspectors (Office for Standards in Education [OFSTED], 2006). One inspector in the process considered that impact should be related to ‘standards and achievement’ and that the survey found a ‘direct correlation between library effectiveness and the use of specialist staff’ (Jarrett, 2006, p. 3). Shenton (2006) noted that the inspection system valued comments from students, though issues of objectivity and relevant experience of students, on which to make comments, could be of concern (as Williams & Wavell (2001) found).

A firm body of opinion indicated that studies relating to academic achievement through test scores were not transferable to a British context as US research was very context-specific. This was due to differences in staffing structure and level, resourcing levels, the specific impetus of Information Power (AASL & AECT, 1998) and a research focus on primary rather than secondary level education (Markless & Streatfield, 2006; McNicol, 2003; Smith, 2005; Williams, Wavell & Coles, 2001). One aspect of a British context was a trend towards self-evaluation, as indicated above. Gildersleeves (2006) reported an assessment of a self-evaluation model for English school libraries. As the process should relate to whole-school evaluation, there was a concern that a common language was not shared between the library and education professions. However, it was hoped that
evaluation would make visible the value of a library and inform understanding about methodology for future impact studies of school libraries, though LIS-focussed studies and advocacy were accepted as given. As part of this context, McNicol (2007) identified a need for training in impact, EBR and research methods, together with a perception of lack of robustness of existing evidence. Nevertheless, from a North American perspective, Farmer (2006) saw a secondary, though valid, role for qualitative research to illuminate findings established through quantitative research.

Discussion
Use of impact studies and EBR should enable school libraries/ians to avoid relying on advocacy (Todd, 2006). However, earlier studies especially tended to identify an LIS point of view and justify input measures. Indeed, a belief paradigm about the social good of libraries was a premise of studies, rather than focus on student learning (Streatfield & Markless, 1994; Todd, 2003c). The literature indicates difficulties in isolating factors and indeed agreement on what factors should be identified. For instance, findings presented in the literature review, above, indicates almost mutually-exclusive approaches of North American (quantitative approaches) and European/Australian studies (qualitative), in terms of method and what was studied. Concern over rigour of studies, not least with regard to practitioner research (McNicol, 2007), and clearly identifiable methodology exists. Impressions that quantitative methods are deemed more valid (Callison, 2005), with qualitative method used to add detail (Bogel, 2006; Farmer, 2006) exist and that larger studies have more validity is implied in both quantitative and, to a certain extent, qualitative approaches (i.e., Hay, 2005, 2006; Todd & Kuhlthau, 2004).

Initially, impact studies focussed on use for advocacy purposes, whilst EBP aimed to inform and improve practice. However, functions of the two now appear mixed. Whilst a valid function of research should be to inform debate, discussion and management decisions, a perception of manipulation of such research or even of vested interest, e.g. of funding bodies for such research, may cause concern. As Lance (Callison, 2005) and to a lesser extent Todd (2003b/c) indicate, there is an issue concerning political motivation for studies, both at macro and micro level (e.g. national or regional government and within
school organizations). Research has therefore been developed for use as advocacy with policy makers and to educate specific targeted groups (particularly by Lance and others): education administrators and especially those responsible for initial teacher education programmes. Therefore, a sponsoring organization may be an issue, especially regarding use of research in advocacy (Callison, 2005; Williams & Wavell, 2001), which may be an exclusive use or sole purpose in carrying out research; this may be true also for smaller scale, qualitative studies (Todd, 2003b) as well as the typically larger quantitative studies.

Some of the larger US studies (Baughman, 2003; Lance et al., 2000a, 2000b, 2005; Smith, 2001) identified 8% difference at high school level due to impact of the school library, whereas over 50% difference was due to socio-economic factors. Concern has been expressed about whether it is possible to express any school library contribution as causal (Farmer, 2006; Smith, 2001). A question arises as to how educational policy and decision-makers would view such a difference (8%), given significant amounts of input. This difference is unlikely to dovetail into Hattie’s (2003) estimate, where all school factors - resources and facilities - only contributed between 5-10% in total to student achievement. Hattie insisted his research was based on analysis of approximately 500,000 studies; after allowing for macro factors and providing a detailed analysis of the second most variable factor (teachers), he was reluctant to identify factors as being causal in nature and had concerns about the efficacy of using test scores. This suggests that reservations about making overt links of a causal nature regarding the impact of school libraries on student achievement, in terms of test scores at any rate, are valid.

Belated acknowledgment of Williams and Wavell’s work (2001, 2002) in North American literature perhaps suggests a homogeneous means of valuing a particular model of school library. In addition, there may be concern that the type of librarian typically employed in Scottish schools is different in terms of profession and education, and/or that methodology employed is different or just not perceived as valid in a US context. Certainly, a number of UK researchers and commentators considered a US context too specific to transfer.
Concerns relate to qualitative studies too, such as the propriety of qualitative research in enabling students’ true views to be expressed. Possibly built-in answers, as in Ohio and Australian studies, provided students with enough options, although equally students may have been prompted for or encouraged to opt for appropriate pre-selected answers, and may not truly reflect student views. The selection of students and how they were encouraged to participate are other issues (Markless & Streatfield, 2006). It may be that such an approach provides a built-in study result that is acceptable to a prevailing (LIS) paradigm, especially where schools took part in a study if a school library met LIS-generated criteria for selection. Claims made in the research and professional literature about the power of school libraries to induce change may be predicated on the needs of the times for accountability and exhort use of impact study results to provide supporting evidence; alternatively, claims may be given as the raison d'être for impact studies (McNicol & Elkin, 2003). Accepting findings of studies that relate to how students think and feel about libraries may be a challenge to professional belief (Loertscher & Woolls, 2002b).

Few studies relate purely to high school level, or beyond grade 10 (Wirkus, 2006). Studies and commentators identified more impact at elementary school level but studies still focus on either a general approach (covering both primary and secondary sectors) or primary level. There may be a concern about what may be identified in the secondary sector by an impact study showing life as it is experienced in a secondary school library. An indication of such a scenario may be seen from KRC Research (2003) and is a particular challenge to strong belief and professional organizations (Callison, 2005).

Studies (e.g. Streatfield & Markless, 1994; Todd, 2003a; Williams & Wavell, 2001, 2002) identify the importance of information literacy, and a librarian’s role in promoting the concept. Possibly the trend and fashion for linking to information literacy is too abstract for those for whom the term means little - the target groups for dissemination of impact research about school libraries. Additionally, the link with the role of a school library and librarian may be too tenuous (Lonsdale, 2003).
Issues arising from this stage of the literature review for this study are:

- the lack of impact/EBR studies on the IBDP
- The lack of quantitative impact/EBR studies relating the school library to older students, i.e. grades 11-12
- How to enable a student’s narrative to be identified as in the few studies of a qualitative nature where older students’ use of the school library is mentioned, methodology/technique employed may not have allowed students to identify, naturally, how the school library impacted on them.
- Justification of qualitative focus and rigor of methodology
- Concern that impact/EBR may be seen as another advocacy tool more than a means of identifying a natural situation for a specific use of potential library users
- Possibility of successfully isolating library factors, and whether or not they are causal
- How impact/EBR research is perceived by those not in an LIS paradigm.

Given a need to identify what research says about the use of libraries by older (grades 11-12) students, as the impact/EBR literature does not sufficiently identify this area, and also as the impact/EBR literature may suggest that attention needs to be given to the role of the school librarian, as distinct from a school library, these features therefore are treated below.

**School librarian roles**

Literature cited above referred to roles of the school librarian as part of the context. It is, though, pertinent to examine literature relating to these roles. Guidelines recommended and impact studies gave some indication of the job focus of a librarian. Job activities, qualities and qualifications of an individual who is responsible for turning a school library facility into an active service exist in research literature. These need to be identified as the librarian’s role and an understanding of school libraries that encompass material resources, human resources and services are central to this study. The role of a headteacher as it relates to the librarian is discussed separately, though not teaching colleagues. This is because it is difficult to isolate the role and influence of teachers from
identification of aspects of a school librarian’s role may further be warranted as Oberg (2006) referred to invisibility of teacher librarians in three ways: lack of reference to their role in educational literature; their work was often hidden in the achievements of others; and responsibilities for a building/room-based service. This section identifies functions of a librarian from the literature: a heavily-promoted role of collaboration, information expertise, staffing and behaviour management.

**Librarian functions**

Job functions of school librarians may be obfuscated by the type of librarian involved, as different models or types exist in different places. These differences may include qualifications, experience, competencies, status and job activities.

Various job titles for a school librarian were indicated in the Introduction. Two common terms in the literature are teacher-librarian (TL) and qualified librarian. Defined as a qualified teacher, with classroom experience and subsequent qualification in management of learning resources, a TL managed the library and collaborated with other teachers to develop instructional programmes that were resource-based (Haycock, 1998). They had a ‘captive clientele’ as students were ‘required to make use of library services and products each week’ (Henri & Hay, 1994, p. 2). Kinnell and Pain-Lewins (1988) recommended that school libraries in the UK should be managed by experienced, professional librarians, who preferably were also qualified as teachers. More pragmatically, current UK school library guidelines referred to a ‘reflective practitioner … [who] looks for opportunities for professional development … seeks to understand teaching and learning and knows the curriculum’ (Barrett & Douglas, 2004, p. 11). Professional qualifications and experience were deemed to be in librarianship, rather than teaching. For the independent sector in the UK, Turner, Matthews, Ashcroft and Farrow (2007) found that administrators preferred their librarians to have a library rather than a teaching qualification, and that prior, relevant experience was valuable.
Researchers and commentators have focussed on main functions of a librarian, whether TL or other. TL functions in Canada and Australia were ‘inservicing staff, cooperative planning and teaching, and collection development …[and] meeting the individual needs of students’ (Hay, Henri & Oberg, 1998, p. 78). Todd (1999) thought a librarian should develop students’ ‘information and critical literacies’ as a main function, one which was not often appreciated by adults in a school (p. 11). Herring (2000) referred to three roles as ‘educator, information manager and expert adviser’ (sixth heading). Macdonald (1997), reflecting the US situation, considered that librarians ‘function as teachers, curriculum resource specialists, technologists, and facilitators of many school-wide instructional projects’ (p. 115), roles identified in Information Power (AASL & AECT, 1998). For international schools, Markuson (1999) identified four roles: teacher, manager, consultant (to the staff of the school) and a literature and information specialist. Not unexpectedly in a document that required international agreement, IFLA/UNESCO school library guidelines (IFLA, 2002) did not recommend a specific model of staffing, nor expected education, but concentrated instead on stating abilities, knowledge domains and some indication of main duties. Smith (2001) identified ten job activities that school librarians undertook, including managing library ICT, providing information literacy instruction, planning and teaching with teachers, identifying learning resources for teaching units, selectively disseminating information about education to teachers, participating in reading support initiatives and contributing to various school (curricular) committees.

The above were mostly positive or aspirational views of librarians, but differed from focus group research (KRC Research, 2003) as to perceptions of the terms school library media specialist or librarian. Stereotypical images were associated with “school librarian”. Positive views were that the person was ‘well read, passionate about books, eager to help find information/resources for students and teachers, and is well organized’. Negative views suggested the librarian was not ‘computer literate … [or] a certified teacher’ and passive. However, a preferred term (library media specialist) indicated that s/he was ‘seen as a younger, more professional person who is more in-tune with what students like and are doing … who did go to school specifically for this job… [and] much
more savvy on the technological and media fronts’ (pp. 14-15). A shift was identified in the USA from more traditional roles to developing curricular teaching roles, together with collaboration and interpersonal skills (Shannon, 2002). Identification of desired attributes in candidates for school librarian positions in USA found agreement amongst school principals and faculties and students of library science about an ability to work well with others, managerial and teaching skills, understanding of prevalent educational philosophy in an institution, creativity and knowledge, educational technology and young adult literature (Roys & Brown, 2004). Similarly, for the UK, Turner et al., (2007) found that both administrators and librarians agreed that communication, information literacy, reader development and ICT were the most important management skills for librarians.

For a librarian in an international school, roles focused on managing a school’s information resources, developing teaching of information literacy skills, liaison, collaboration/planning, marketing to the school community (not least senior management/administration) and knowledge of school curricula (Ferguson & O’Hare, 2004). These were professional competencies (Haycock, 2003) and related to a TL’s leadership role, leading to ‘innovative teaching approaches’ (p. 34).

However, Turner (2007) found ‘no definitive model for how a school library should be staffed, despite the recommendations of professional organisations’ (p. 12), so that each country tended to follow differing approaches to the most appropriate staffing for their secondary school libraries. Indeed, Oberg (1995) found it was personality characteristics that enabled TLs to be effective.

**Collaboration**

Collaboration has been identified in the literature as a key function of librarians. Kuhlthau (2001) explained that ‘the library as a collection is giving way to the teacher-librarian as an essential agent in the learning process, who ... collaborates with teachers in guiding students in using these resources for understanding and meaning’ (p. 3). Australian and UK guidelines referred to a librarian’s role in mediating or collaborating
with teachers, working in teams, with support from management (ASLA & ALIA, 2001; Barratt & Douglas, 2004).

Collaboration with teaching colleagues meant that the TL was not limited to that of a resource provider (Henri & Hay, 1994). Kuhlthau (1993) noted the importance of planning and team teaching, but (as also identified by Henri and Hay, 1994) ‘lack of time for planning may have contributed to another problem, a basic confusion over roles’ (p. 7). These comments referred to North American and Australian situations, whereas in UK, Streatfield and Markless (1994) found the role of a librarian in UK depended on the style(s) of teaching in a school. They suggested that a librarian should identify a continuum of roles depending on pedagogical approaches, which varied within as well as between schools. Traditional styles of teaching and school organization in the UK made it difficult for a librarian to become involved in a school’s curricular infrastructure (Shakeshaft, 1998). Where teachers had library responsibility, most also had a regular (subject) teaching programme, though as far as teacher-librarians were concerned, this reduced to 40%. Together with the existence of departmental collections, these factors limited a role that the library/ian could undertake.

So, too, could subject or class teachers’ limited library use as ‘they often lack knowledge of information sources and skills’ together with ‘negative perceptions’ of the library (Olen, 1995, p. 69), which could arise from previous experience. Final-year school students’ (who subsequently became school teachers) use of a library in South Africa was such that just over half visited it less than twice or not at all during their final year at school, whilst another 25% visited once or twice a month. This suggested teachers had little experience of using or needing a library whilst at school themselves. In Holland, liaison, invariably instigated by a librarian, often took place informally (e.g. in corridors). Teachers of languages used the library most often, followed by those of social studies and the arts; science teachers rarely did. Whilst 81% of librarians provided material specifically aimed at teachers, just 16% indicated that teachers visited the library. (Boekhorst & van Veen, 2001) This very practical reason for limited collaboration was also seen in the USA, where KRC Research (2003) found that whilst ‘teachers and
principals … are more likely to view the librarian as a collaborator’ (p. 5), teachers infrequently visited the library themselves. IFLA/UNESCO school library guidelines recognised that ‘teachers’ education philosophy constitutes the ideological basis for their choice of teaching methods’, which could be ‘based on a traditional view upon the teacher and the textbook as the most important learning resources’. Even in such situations, a library could still support that teacher with resources, which could be regarded as a hidden or invisible role. (IFLA, 2002, p. 16)

Reflecting an Australian situation, a TL’s main roles were to ‘manage the library collection and purchase new resources, plan and teach information skills’, to enable ‘students apply these skills to tasks assigned by teachers’ and promote reading development (Maloney, 2002, p. 102). These comments appeared in a book for parents about boys and reading, reflecting a perception outside the profession that the role was limited mainly to library resource provision, albeit with some cooperation with teachers. Indeed, against the LIS literature can be set research by Hattie (2003), who studied differences between experienced and expert teachers and identified a number of factors which all related to teaching in a classroom situation. It would be possible to infer some collaboration/cooperation with a librarian, but none was stated, suggesting that it was not a common practice or was effectively hidden.

Rafste (2002) found no cooperation between teachers and librarians, though there were complementary roles, especially in an information process environment that was not linear, but existed as a continuum for students’ experiences. However, the process may not be valued by schools and teachers, who rather valued product in terms of received knowledge, not least manifested in the provision and use of textbooks in schools.

Nimon (2004) considered it was difficult for TLs to alter teaching and learning styles, as these varied as much with individual teachers as with policies of the institution, echoing findings of Streatfield and Markless (1994). On a practical level, Crow (2006) acknowledged that collaboration was difficult due to the high teacher-librarian ratio but suggested TLs participated in curriculum-mapping exercises and on subject teams.
Wavell (2004) noted that librarians may have their own agenda (e.g. information literacy) in promoting curricular use of the library through collaboration, which teachers may not realise. Whilst collaboration was widely promoted in guidelines and professional literature, research needed to examine any impact on or relationship with student academic achievement (Montiel-Overall, 2005). Collaboration prevailed within a social constructivist learning environment. Communication with teachers ranged through networking, coordination, cooperation and partnership, but collaboration was considered a higher stage and defined as ‘a trusting, working relationship’ involving ‘shared thinking, shared planning, and shared creation of innovative integrated instruction’ (p. 32).

In a study of how tertiary-level teacher education courses in Canada specifically focussed on school libraries, not least in relation to information literacy, Asselin and Doiron (2003) found that neither the school library per se nor ‘information literacy skills and pedagogy’ were ‘explicitly or systematically part of teacher education’ (p. 23). Whilst staff of faculties of education expressed value for the school library as a concept, this did not transfer to course content, so that newly-educated teachers were unable to relate use of the library to their pedagogical practice nor were they exposed to experiences with or supported by teacher-librarians, which could inform their practice. Asselin (2005) further noted isolated instances of input about school libraries in pre-service teacher education in Canada, where it was important to ‘set high expectations for preservice teachers’ (p. 201) about library utility and quality and collaboration with TLs, so such practices would be more natural in employment situations, and an improvement on existing variable levels of collaboration. Her paper was predicated on an environment of educational change (including accountability) and a belief that a school library could be an agent of change, possibly to a more constructivist learning environment.

The literature, therefore, was largely based on a belief that a strong collaborative structure needed to be in place in a school in order for students to develop adequate skills and fully benefit from library interaction in the curriculum. However, whether the concept had been accepted by teachers had not been identified (Todd & Kuhlthau,
2005b). Todd further referred to EBP research in USA, to conclude that collaboration between teachers and librarians rarely existed, questioned whether teachers saw collaboration as a part of their role and identified that the concept of collaboration brought considerable pressure (from within the profession) on school librarians (Kenney, 2006). Identifying a gap in the research literature, Montiel-Overall (2008) undertook a naturalistic, qualitative study of collaboration. Teachers and librarians were invited to volunteer to participate in the study, and those teaching students in K-8 grade range did so. There were no participants for the older student age ranges, which may suggest that collaboration, where it exists, may also be focussed in learning situations for younger students. A belief that collaboration would improve the librarian’s job was a strong trend in a survey of UK school librarians by Kilmartin (2008), though there was an acceptance that limitations in curriculum was a factor, and considered that input was required in initial teacher education in order to promote an awareness of the role of the library/ian. As a role for librarians, collaboration was heavily-promoted, but may be more dependent on personal qualities of individual librarians, and therefore more variable (Williams, Coles & Wavell, 2002). Gibson-Langford (2007) also found that collaboration tended to be focused on information literacy, rather than spending time in developing relationships, as the process of collaboration is people-centred. She described a social constructivist environment where collaboration would be relevant and of utility, and noted that some librarians were successful in a collaborative environment. However, she identified literature that questioned the effectiveness of collaboration, and the pressure on TLs to collaborate without understanding the nature of collaboration (which could mean that collaboration was associated with defining roles, rather than partnership), together with factors that limited teachers’ involvement (such as teacher training, workload, time, and limited experience in sharing).

Information literacy is discussed later in this review of literature, though another aspect of information relates to the librarian’s expertise, and is discussed next.
**Information expertise**

Skills and competencies in managing information and catering for users’ information needs is deemed a key aspect of a librarian’s job activity. Because they were not part of an academic (subject) department, librarians had an overview of an organization's information needs (Crowley, 1994). With students, this could involve working with an overload of information, partly due to greater access to the Internet (Loertscher & Woolls, 2002; Veltze, 1998). Some commentators saw ICT as yet another information role for a school librarian, whilst others as an extension of existing roles. In a case study of Internet use:

> in one sense, it added another role - of Internet mediator - to the many existing roles but in another sense, this role was merely an extension of the school librarian’s existing role as information resource provider and manager … [whilst] the role of the school librarian as Internet mediator had, in some cases, made teachers more aware of the curricular role of the school librarian. (Herring, 1997, p. 319)

Woolls (2004) considered that ‘helping teachers and students use the Internet wisely’ is an important role for a school librarian, who could help users’ ongoing learning skills in a move from ‘the crutch of Google’ to more comprehensive use of the Internet (p. 259).

However, teachers tended not to associate the library with their information needs, but mainly with that of students (Williams, 2006). Over twice as many teachers (12% of sample) used the library regularly for subject-based research as opposed to pedagogical/educational research. Teachers preferred to use the Internet, even though their search strategies may have been limited, or found materials serendipitously. Alerting teachers to current information about educational research (Smith, 2001) and providing resources for teachers, especially to support evidence-based teaching, was a recommended role for school librarians (Williams, 2006). One of the key personnel that a librarian could provide with information is a principal, a relationship that is discussed next.
Role of school principal or headteacher

Gildersleeves (2006) pointed to a contradiction between a LIS perception of a school librarian’s role and a ‘very narrow conception’ that was generally perceived by school management, which leads to a suggestion that it would be worthwhile to identify the relationship between a principal and a school librarian (p. 81).

One role for a principal was that of provider. A principal provided budgetary support for resources and staff support to a TL and arranged ‘flexible scheduling that allows cooperative planning time’ (Oberg, 1995, p. 6). Another responsibility was integration of the library programme into the school’s planning and evaluation infrastructures. Whilst Oberg (1997) found that principals generally understood a school library programme and its potential more than classroom teachers, it was also clear that TLs were unsure of their role, which made it difficult to gain support from principals. Studies undertaken internationally identified a role for a principal in library programmes (IFLA International Research Reference Group, 1998; Oberg, Hay & Henri, 2000). Further findings focussed on perceptions affecting library development, including current priorities, which included supporting collaboration between teachers and librarian and sufficient time for the TL to manage the library. (Oberg & Henri, 2005), suggesting that these factors were not firmly embedded in practice.

A good working relationship with the principal was identified as a key factor in a study of six TLs in Australian private schools (Boyd, 2002; Henri & Boyd, 2002). TLs used various strategies and personality traits in order to obtain support from the principal, including being proactive, positive, providing relevant data to support proposals, focusing regularly on a library contribution benefiting students, influencing ‘the real decision-makers ... [and] give him articles about education, learning and libraries’ (Boyd, p. 44). It was noted that this study in a specific sector of education needed to be replicated to see if findings were relevant to other types of schools.
Reflecting the importance of principals in the decision-making and managerial processes, prepared documents were available that librarians could use to convince such personnel of the value and utility of a school library (Loertscher, 1998). Baughman (2003) identified the importance to library development in USA of a positive perception of the library by the principal. However, the principal then needed to connect that perception to student achievement, through impact studies. This indicated that LIS-sponsored documentation were appropriate tools to use to convince decision-makers to make resource decisions in support of school libraries. However, Everhart (2006) found principals in New York tended to evaluate a school library through their own observation, often from informal visits, rather than documentation or evidence provided by librarians, as was the case in the UK independent sector (Turner et al., 2007). Nevertheless, a head teacher’s role was pivotal in supporting and acting on findings of self-evaluation research in school libraries (McNicol, 2003) and OFSTED (2006) identified such a role as being the most important factor in development of school libraries, both relating to UK. For the USA, a dichotomy was identified as focus group research, which included principals, found that whilst principals were likely to see a value in students using school libraries and librarians, ‘principals rarely use the library and tend to rely on the reference materials in their own offices’ (KRC Research, 2003, p. 3).

**Staffing and behaviour management**

As identified above, provision of resources and support for a school librarian to carry out roles and activities was required (Lance, 2001) and, in particular, time was needed for a librarian to develop an instructional role (Oberg, 1995; Royce, 1999). Adequate support staff was a factor recommended in school library guidelines for major English-speaking countries (AASL & AECT, 1998; ASLA & ALIA, 2001; Barrett & Douglas, 2004) and enabled more sophisticated levels of library programmes to be offered (Hartzell, 2002; Miller & Shontz, 1998; Smith, 2001). However, a librarian may not have clerical support (Turner et al., 2007). In Canada, actual practice varied from recommended provision and, in budget-reduction scenarios, support staff may have replaced rather than supported TL positions (Coish, 2005). In 1998, most schools in Australia employed a TL, though ‘this
person may not be a qualified teacher or a qualified librarian, although most are qualified teachers’ (Henri, 1998, p. 1). However, Lonsdale (2003) identified ‘the practice of schools using librarians rather than teacher librarians’ (or a similar situation to that in Canada) and an overall shortage of TLs, mainly due to financial reasons, ‘an ageing profession’ and a requirement that TLs undertake other, non-library or additional duties within schools (p. 5).

Callison (2001) noted that an instructional role for a school librarian dominated US research in the specialism during the period 1990-2000, reflecting roles recommended in guidelines. However, findings were limited regarding impact or value of such roles. Whilst he considered that a librarian’s role as ‘study hall monitor’ (p. 342) was previously prevalent, though no more, there may have been a dichotomy between literature and reality. One little-acknowledged aspect of a librarian’s role in the literature was that of behaviour management. A teacher may be present with a class in the library but outside of formal lesson times librarians could supervise large numbers of students, possibly in a solo capacity (e.g. at break and lunch-times, also before and after the formal school day (Turner, 2007). Gildersleeves (2006) specifically referred to ‘policing of the space’ (p. 81). No recommended ratios for supervision of students by library staff were applicable to UK school libraries (Barrett & Douglas, 2004). That the issue was included in school library guidelines (featuring advice sought from a teacher trade union) suggested that such a job activity was common for many school librarians, and could be an issue of concern for them. As the issue was mentioned in KRC Research (2003), it was apparent that this issue was not confined to the UK.

Discussion

As synthesized from the literature, an active role for a school librarian (often focussed on information literacy of students) involved being an educator/teacher, manager of information resources, technology expert, consultant and facilitator. The literature suggests (and secondary literature encourages) a change to educationalist from a more traditional role, as that of the library itself is changing (Kuhlthau, 2001). Collaboration is
seen as key (Lance, 2001), though doubts exist as to the practical extent of collaboration between teachers and librarian (Crow, 2006; Gibson-Langford, 2007; Kenney, 2006; Rafste, 2002). One pressure on this role is advocacy for an enabling pedagogy, which may however not exist in a school (Shakeshaft, 1998; Streatfield & Markless, 1994). Understanding or appreciation of such a factor has not largely been expressed, especially in earlier literature, though later writers and researchers (Asselin, 2005; Montiel-Overall, 2005) have done so. Therefore, collaboration as a job attribute is strongly promoted in the literature, but there is a lack of studies that identify what it is and how it helps, and one study suggests that collaboration exists at a low level (Todd & Kuhlthau, 2005b). Results of pressure to undertake and/or initiate a collaborative role include feelings of guilt and inadequacy on the part of librarians (Todd in Kenney, 2006) and striving for an unobtainable goal (Markless & Streatfield, 2006). Possibly, cooperation and communication may exist rather more than collaboration (Asselin, 2005; Boekhorst & van Veen, 2001; Kuhlthau, 2004).

More traditional views of librarians exist outside the profession (Maloney, 2002), not least amongst students (KRC Research, 2003) and administration (Gildersleeves, 2006); these more traditional aspects, together with practical issues, such as supervision of students (Turner, 2007), may be considerable work activities for the librarian. It may therefore be that teachers and students perceive the skills and qualities of a librarian in a different way from librarians and the LIS sector. A contributing factor may be the lack of inclusion of school libraries and information literacy in teacher education programmes (Asselin & Doiron, 2003).

More recent trends in different countries show varied (and sometimes, reduced) staffing for school librarians, not least due to financial pressures (Coish, 2005). TLs have been replaced by other categories of staffing (Lonsdale, 2003), indicating a question of a relative importance about the personal qualities of the person in charge of the library, her/his education and training, and whether practicing primarily as teacher or librarian. This is in the context of the absence of an agreed or optimum model of school librarian
(Turner, 2007). Interpersonal qualities of a librarian are identified in the literature (Oberg, 1997; Roys & Brown, 2004; Shannon, 2002), suggesting that this factor may be more important than the type, background and education of a librarian, though studies were of TLs (and the definitions may be loose (Henri, 1998)). It is not clear from the literature whether it is possible to identify what type of librarian is more suitable for a private school, such as an international school. The literature suggests that the principal and senior administrators are key to library development. Providing information and supporting a credible positive view of the library, possibly in an advocative manner, is suggested (Boyd, 2002), though Everhart (2006) found that principals did not use such information. Principals may have little practical experience of use of school libraries (KRC Research, 2003) to assist in weighing evidence about use or proposals provided by a librarian.

Therefore, several roles exist for school librarians, however defined, which are variously perceived by principals, teachers, students and the library profession. Specific factors for the present study include:

- Roles of the school librarian as promoted by LIS literature, especially a highlighted role of collaboration and a corresponding lack of research literature to identify the existence and/or benefit of such collaboration, especially for older students
- How educational administrators evaluate/value school libraries/ians, especially in an environment where there is little or no inclusion of school libraries in teacher education programmes
- Perceptions of what constitutes the role(s) of a school librarian, not least features of an interpersonal nature and education and training.

The literature concerning roles of a school librarian relates to many situations: countries, sectors, phases of schooling. Few though specifically feature the grades 11-12 student age
range, which is the focus of the present study. It is therefore pertinent to now discuss how these older students use a school library.

\textit{School library use by grade 11-12 students}

The discussion of librarian roles, above, included reference to teachers and administrators; the other main group in the school community is, of course, students. Whether or how students use the school library is a key aspect to identify. Todd remarked of Ohio EBP research referred to above that ‘what the students really valued was the library as a physical space for finding, locating, and getting access’ to resources and information (Kenney, 2006, p.3). However, this referred to all students. From an LIS point of view, impact and evidence-based research have identified that older students tend to use the library less, or that these students are not reflected in such research. This suggests that discussion about how (other) literature features use of the school library by older students, specifically those in grades 11-12, is appropriate. Space, resources and ICT have been identified overall as important aspects of secondary school libraries, not least in various guidelines. However, grades (G) 11-12 students may have specific needs and use patterns. The focus in this section is on use that G11-12 students make of a school library, together with a discussion of literature of information literacy relating to these students and whether it is of utility in tertiary education.

Streatfield and Markless (1994) observed use and interviewed users and library staff in several secondary schools, and whilst their study did not concentrate exclusively on higher grades, views of such students and their teachers were identified. Older students commonly used the library as a workspace for individual study. They noticed the atmosphere was different when the library was not supervised. Students considered they could use it effectively and could choose the library or other areas of the school for what they regarded as their own free time. Students, when asked, remembered infrequent or nil library use prior to G11. A theory of different kinds of library was developed, which included one where, apart from homework, student use of libraries would be minimal until about G11. The library, then, ‘may be ‘colonized’ by senior pupils as a social or
homework area’ whilst some would use it for ‘private study purposes’, mainly assignments using textbooks. This was library use in a ‘traditional/didactic school’ (p. 141). Other models of school library were identified along a continuum to active learning resource area. Different patterns of use by students in various grades were not relevant to these other models as a more unified pedagogical style prevailed and students of all ages learnt in a similar way.

Olen (1995) examined frequency of library use by final-year students in South Africa. Only 1.5% of those surveyed made daily use, whilst most students used it infrequently, if at all; those that did tended to do so for information sources. Only a quarter used it as a place of study, although Olen cited ‘Ruddock and Hopkins (1984) [who] found that libraries were seen by many 6th formers [G11-12 students] as places to sit and work in rather than as a collection of resources’ that could be used (p. 73).

A study of actual overall information needs of G11 students centred on academic requirements (rather than personal needs) and, given the nature of assignment deadlines, issues of prioritization and time management emerged (Latrobe & Havener, 1997). Students ‘existed in an information-rich environment’ (p. 192) and were motivated, articulate, confident and critical thinkers. Most important sources for all students were people, divided between peers and teachers, together with classroom instruction. Books as a source of information scored 94% in terms of consultation by students, as did libraries, leaving some confusion whether books referred exclusively to textbooks or all available types. Librarians though were consulted by just over half the students.

Spreadbury and Spiller (1999) interviewed students who used libraries in UK state and independent schools. Older students’ use was often characterized as a place in which to study (though borrowing resources was the second most recorded use for this group) and tended to use the library more regularly than younger ones mainly because of a heavier workload and allocation of private study periods. Students considered the library offered a unique quiet atmosphere in the school, aiding concentration. They tended to ask
Librarians for help finding information, rather than use a catalogue or browse shelves. Librarians were asked infrequently for help with assignments or advice about resources. Provision of textbooks to individual students - associated more with the independent schools - had a negative impact on library use. A quarter of teachers regularly encouraged students to use the library in relation to assignments, and this tended to occur more in the state schools; recommendation tended to reduce as students progressed through to higher grades due to expectations of continuance of such practice. Reduced encouragement could be due to ‘some schools concentrating on more traditional didactic practices’ when teaching older students (p. 22). There was a correlation between use of the library and teacher encouragement and tended to be heaviest in the humanities, followed by sciences and English.

Differences between library provision in state-funded and independent or private-funded schools in Australia, UK and USA may be suggested from the literature (Henri & Boyd, 2002; KFC Research, 2003; Spreadbury & Spiller, 1999), and may impinge on older students, if they use a library as a place in which to study. These studies found resource provision and accommodation tended to be better in private schools. Shakeshaft (1998) found more varied provision overall, though identified that study space was a common feature of independent school libraries in UK.

Overall, the literature has, until relatively recently, largely focussed on how students have used the Internet as a reference resource. Students, aged between 16-19 years, tended to start searching for information using the Internet and they could be discouraged when the topic was either not well-represented or gave them too much information and when effective searching was hindered by limited use of search terms, which could suggest a mediating role for teachers and librarian (Combes & Sekulla, 2002). However, Levin and Arafah (2002) found a considerable divide between extensive Internet use by high school students (including students of a similar age range to those of interest to the present study) in their own time and expectations, provision and quality of access in US schools. School libraries were not mentioned, though ‘library’ was used as a metaphor for Internet
use by students, who relied on it as a library when they wanted it, but without the inconvenience of going to one, remembering opening hours, rules and staff that students considered a barrier. In school, students were irritated by blocking of sites and subscription-only access, but not concerned by plagiarism issues. The Internet was used as a virtual study group, and the concept of individual quiet study seemed alien. Some students though realized when Internet use was and was not appropriate, and used it to manage their time and documentation. The Internet was a natural part of students’ lives and that, in comparison, its’ use in schools was limited in provision, access and scope.

Few students mentioned ICT use as a main reason for visiting school libraries in Sweden. Limberg and Alexandersson (2003) found that the library was perceived mostly as a book room for borrowing purposes and a place in which to work, especially for higher-grade students. These older students had limited awareness of how a library worked and this applied to online databases; however, students held a contrary view of their own abilities. In the library, students achieved ‘freedom from the classroom’ (p. 8), appreciated more comfortable seating for both study and leisure time, and associated it with a quiet atmosphere to aid reading and study. Librarians spent time on procedural matters, not least maintaining quiet. A contradiction was perceived between service and learning ethos of a library and school, the former was seen as apart from the rest of the institution. The findings were at variance with the ‘general rhetoric’ of professional literature about school libraries (p. 10). This study and several others changed a research focus from information and curricula roles of a library/ian to concentrate on how libraries were used by students.

Such a trend was first identified by Shilling and Cousins (1990), as their research focussed on spatial and social use of libraries by students. Although it examined all secondary school students’ use of school libraries, it did include older students in one case study, where the library was highly valued by headteacher and staff and expectations of older students and the library atmosphere was one of work and research. Inappropriate behaviour (associated with more social uses) was not allowed, though students had other
facilities, including a senior student lounge. This study is chiefly interesting for providing a different way of looking at how school libraries were used, and identifying four aspects of spatial use of libraries: colonisation, regulation, association and disassociation, related to perceptions and values of students.

Rafste (2003, 2005) also identified a ‘large gap between general rhetoric ... and actual practice’ (2005, p. 12) and aimed to show how students used libraries in Norway. Due to more opportunities for self-study, some IBDP students in one school used the library more (and were interviewed), though generally few students used the libraries, but most use was by final year students (the penultimate grade used it least of all grades). Although book use was low, students used computers considerably, mainly for emailing and chatting. Some students were able to move between social and academic use, but there were also students who used the library in one way only. Teachers considered it was not their job to ‘integrate the school library in their teaching’ as library use was entirely a matter for students and the librarian (2003, p. 6), and did not model library use themselves. Interviewed teachers had a general belief system that using a library could be helpful for students, though it did not exactly apply to their subjects, where, generally, textbooks provided sufficient information. Overall, libraries were used ‘more for working with textbooks that the pupils brought to the libraries than for searching and using information’ as textbooks provided sufficient information to gain good marks. The library was perceived as a place with imprecise regulations and where librarians worked in offices, thus lacked a presence in the libraries themselves. Students saw the space as theirs. Libraries could be ‘occupied’ by senior students, who set tone for atmosphere and what libraries were used for (and these included IBDP students). These students also provided a role model for younger students, thus perpetuating such uses. This ‘phenomenon’ occurred because the library was a ‘gray zone between the classroom and the schoolyard’ (2003, p.7). Indeed, classroom and library operated in parallel, with little communication between librarians and teachers. As libraries were comfortable, students preferred to use libraries for social purposes. The library was therefore part of the student socialization system and could be of more importance depending on whether other facilities were available, such as a cafeteria. Rafste (2005) concluded that students would
use the library academically if teachers valued the library and structured assignments regularly so that library use was validated, but such a situation required changes in the education and training of both teachers and librarians.

The library as a physical space was the theme of research in four high schools in Israel (Shoham & Shemer-Shalman, 2003). Most common reasons for preferred seating were a quiet atmosphere, convenience and sitting with friends. Older students preferred more sociable seating, valued privacy and ‘territorial space’ (p. 14), and defined quiet in different ways to adults. Two-thirds of the students visited the library to study, whilst the remainder talked with friends. In the USA, KRC Research (2003) found that a broad range of high school students had negative perceptions of a school library: ‘a nagging/yelling librarian, absolute silence required ... restricted Internet access and checkout limits’. Whilst provision in private schools varied, some offered ‘lots of computers, plus couches for lounging, sound-proof work rooms, class-only chat rooms, and movies available for students to check out’ (p. 7). The library was perceived by students and adults as being different and apart from the rest of the school. Without a librarian, students considered it ‘would be a noisy, chaotic, less productive place to work’ (p. 13). However, in this study, technology was seen as the main change in school libraries, both in terms of image and variety of available resources. Although this study was not focused purely on older students, student focus groups included older students, and the findings were applicable to all.

In relation to school libraries, studies included and/or focussed on how students used technology. McLelland and Crawford (2004) researched ICT use by students and teachers at a Scottish secondary school. Students aged 16-17 years used the Internet for all their subject studies. Older students increased daily use of computers for Internet access, word-processing and email over a two-year period to 45%. Students in the oldest grade were more discerning in use of websites; such understanding also applied to print resources. Librarians’ expertise was not highly regarded and most teachers never referred students to the school library for information. One aspect of ICT use that school librarians
considered could benefit older students concerned databases. Regular discussion of specific databases arose on a library listserv for international schools; a meeting of IBDP librarians debated and recommended a number of commercial databases that were suitable for use by students (Dando, 2004). Subscription databases could be available via a computerized catalogue module and networked throughout the school or linked through a school library’s webpage (Herring, 2004). Database use by G12-equivalent students at libraries of two independent schools in Scotland was predicated on an expectation that their final year should be preparation for university, involving individual research, taking responsibility for learning and developing time management skills (Wright & Christine, 2006). Students were encouraged to read beyond material directly provided for classes. Subscription databases were used because information was specialized and at an advanced (often undergraduate) level, so the library did not stock such material. Therefore, subscribing to specialized databases broadened and made more current an available information base. Database use developed ‘thinking skills’ by involving use of Boolean techniques, keywords and synonyms, and gave students ‘a foretaste of the type of resources they will be expected to use at university’ (p. 21).

Whilst not strictly focused on G11-12 students, one study looked at G10 students, where their pattern of library use and perceptions may guide them in future years, especially as the study is longitudinal in nature. Although Scott and Owings (2005) focused on resource input, it was predicated on the role of the library as a place of study. Flexibility of use, including individual student use throughout, before and after the school day enabled students to work on research papers, complete homework and access the Internet. Students were identified socio-economically and by ability, where ‘students with higher test scores were more likely ... to use the library sometimes or often for assignments’ whilst those in ‘private schools reported greater usage of the school library sometimes or often for homework, leisure reading ... assignments and Internet access’ (p. 15). Many students used library staff to help them find information. However, differences could not be identified between students’ achievement test scores and their attitudes about the library.
Frew (2006) observed G11-12 use of a UK school library for private study, which was considered a standard purpose, where a third of the student cohort used the library regularly, though other venues were possible. Students agreed a contract taking responsibility for their own learning, including acceptable ICT use. As librarian, Frew was relaxed about a traditional convention on silence, though other personnel whose exclusive role was to act as supervisors, to whom students reported during private study periods, was a factor and disciplinary issues were the province of pastoral staff. No role or involvement by subject teachers was indicated. Perceived tension was disturbance caused by younger classes, threatening an environment that was the main reason for using the library. Typically, students most often used ICT resources, rarely borrowed library resources, but used the library space to work on assignments, which were. Students occupied library space to complete assignments, using teacher-provided resources, supplemented, where necessary, by Internet sources, to do so.

A study (Madden, Ford & Miller, 2007) of information resources used by students at one English secondary school, which included G11 students, found that younger students used a broad range of resources, whereas older students did not. The latter relied more on teachers, textbooks and information obtained by electronic means. There was a suggestion that more specialized subject needs of students contributed to such a trend.

Shenton (2007) found that a secondary school library had a considerable social function, and students used the library as a student lounge, in lieu of limited or no facilities of this kind. The library was also used by staff for meetings, and had limited conventional use. Older students though wanted a quiet environment for study, which was not always the case. The oldest students wanted the library to stock more textbooks that were used in lessons. Again, it was clear that relationships in the library existed between library staff and students, as teachers generally did not encourage students to use the library, though it was not clear why, but little liaison existed between librarian and teaching staff.
These studies were generally small in scale, in some cases focusing on use of one school library. Whilst each school library may be different, a school library was a place to use and inhabit for older students, and may be a different perspective from younger students. Studies enabled a student perspective to emerge, through observation of a natural situation and through interview or other conversation (e.g. focus groups in KRC Research, 2003) with individuals. Impact on students’ daily lives by school libraries could therefore be seen. Where distinct methodologies were involved (e.g. Rafste, 2003, 2005; Streatfield & Markless, 1994), it could be suggested that these studies showed how students perceived and perhaps valued libraries/ians.

The above studies, though mostly concentrating on how students used libraries and what they used in them, nevertheless identified considerable implications for students’ abilities to use libraries and information effectively, which suggests that a discussion specifically focussed on information literacy would be relevant.

*Information literacy in relation to G11-12 students and tertiary education*

A relationship between information literacy (IL) and school libraries has been identified in LIS literature: qualitative impact/EBR studies focussed on IL and recommended activity for librarians in development of students’ IL. Studies cited in the section immediately above suggest a concern that students may be unable to access information in a sophisticated manner that may be suitable for tertiary education. Because IBDP is a pre-university course, it is appropriate to look at such literature that relates to G11-12 students and what typically happens when students progress to tertiary education.

IL evolved as the preferred term from library and information skills and suggested a wider scope, including all aspects of information use (Brown, 1999; Gordon 2000a; Herring, 2004). However, there were many statements as to what constituted IL but no one agreed definition (Chartered Institute of Library and Information Professionals [CILIP], 2005). The term could change meaning for individuals over time as IL
developed in a continuum (Bruce, 1998). Herring (2006) and Herring and Tarter (2006) noted various and varied definitions in the considerable literature relating to IL, much of which was secondary rather than research-based. They broadly considered that a student who could both apply information skills and understand the rationale for applying such skills was information literate. IL included critical thinking, analysis, reasoning, understanding bias, communication skills, problem-solving, creativity, ICT and library skills (Brown, 1999; Craver, 1994; Shields, 1996). Students should be able to locate and use information effectively, skills central to ‘education for the technological environment and … the mission of the school library’ (Kuhlthau, 1993, p. 2), which may need support from the librarian (Markless & Streatfield, 2002; Todd & Kuhlthau, 2004). It was believed that these skills should be developed in students generally, but older students should be more experienced at using such skills. Additionally, information literate students at an ‘advanced level’ should be able to analyze needs and sources, develop effective searching strategies, think creatively and be motivated. Students should respect freedom of expression, understand ethical issues associated with ICT and be independent but construct new knowledge through collaboration, communicate accordingly and ‘realize that information does not become knowledge until contemplated by the mind’ (Riedling, 2004, p. 6).

Mellon (1986) developed a theory of ‘library anxiety’ from a study of first-year undergraduates as 75% of those in her study described initial experiences of a university library, related to library size, lack of locational knowledge and being unsure how to progress the research process, which made students feel inadequate. Goodin (1991) examined a premise that students left school without necessary skills to function effectively in tertiary education libraries; those who received skills instruction at school scored higher marks in a test than a group of students who had not. Effective transfer of such skills depended, in part, on the confidence of individual students, and that ‘learning to use the librarian as a resource is perhaps the most transferable skill acquired by students as a result of this study’ (p. 35). Daniel (1997) identified basic research skills students required in university libraries, involving a comprehensive understanding of how a library was organized, and searching, selection and evaluation strategies. However,
Langford (1998) considered school students would not use resources beyond that necessary so ‘if assignments are not structured to develop skills in certain areas such as using a periodical database, then students will not seek this information source voluntarily’. Langford took forward issues raised by Daniel, who, she noted, considered the majority of high school students had not experienced ‘these higher level information skills in independent assignments at a senior level’ (p. 16). One reason for such a situation may be that teachers were ‘uncomfortable in a library, so they avoid it altogether or send their students to “do research” without checking that the library has the right resources’ (Clark, 1995, p. 45).

A project involving eight G11-12 students at a school in the USA (Fidel et al., 1999) found that all used the Internet in the library, where the librarian offered individualized support. Usually, the students would only visit the library for a class assignment. They used the Internet as it was more convenient, less boring and involved less thinking and effort than searching traditional resources. However, their searching strategies were limited, though there was a disparity between student and teacher views of searching skills; students also experienced frustration when the Internet did not give them the results they wanted quickly enough.

Lonsdale (2003) noted ‘lack of specific evidence linking the role of school librarians to student acquisition of information literacy skills’ (p.2), though literature promoted a role, not least through IL models, guidelines and standards. Few studies identified a librarian’s role or any difference to student skills as the result of any such input. Todd (2003c) indicated IL was not a goal of school libraries, rather a process, so that students became knowledgeable and could deal with a ‘complex information world, and ... develop new understandings’ (p. 12). This may be an instance of Branch and Oberg’s (2001) observation that at the ‘core of information literacy instruction is a belief in the constructivist nature of learning and in the importance of the research process’ (p. 9). A survey of US school librarians to identify extent of collaboration about IL found, from a 26% response, that 68% were unable to teach IL, mainly due to teachers’ lack of support.
or knowledge. Information standards generally existed at local levels, but documentation was aspirational, with no formal benchmarks, so it was difficult to show students had progressed in IL (Whelan, 2003). Likewise, Asselin and Doiron (2003) found that information literacy was not a focus for the Canadian school system. From a study of teachers’ IL in the UK, Merchant and Hepworth (2002) recommended that IL should feature in initial teacher education programmes. The implication of teachers’ limited IL for older students was that some teachers tended to directly provide information that students required, rather than enabling students to find and evaluate information themselves.

Irving (2006) specifically identified views of students in their last year of secondary school. Any IL input was mostly confined to students’ first two years at school. After that, students experienced limited need to use such skills. Most students obtained information from teachers, textbooks and the Internet, which they preferred, and with Google being commonly cited as their preferred search engine. A library catalogue was not used; there was also limited awareness of journals, plagiarism and none of the term ‘information literacy’. Therefore, students entered tertiary education with limited or, at best, variable skill levels. However, this study implied a relationship between students and library/ian as teachers/teaching were rarely referred to and it fed off a prevailing LIS paradigm by also recommended that IL be added to a school curriculum, without an appreciation of prevailing styles of teaching.

An investigation into underlying assumptions of teachers was undertaken by Williams and Wavell (2006). Definitions and research about IL emanated from the LIS sector, where the term was promoted and concern expressed about its lack of inclusion in curricula, whilst perceived unfamiliarity of the concept existed in the mainstream education profession. Misunderstandings could occur as:

if information literacy from the information profession is founded upon constructivist models of learning but teachers are not necessarily practising constructivism, then this could lead to potential conflict (p.8).
Williams and Wavell (2006) found that teachers were initially unfamiliar with the term, but gradually articulated different aspects of IL, though associating it with Internet use. G11-12 students should have the ability to apply new information to existing knowledge, but how this might translate to examination results (the most powerful pressure on teachers) and coursework grades was a concern due to prescriptive curricula and associated assessment criteria. Senior students had problems with organizing and selecting information and, because of a narrow educational structure, habits became automatic, so encouraging critical thinking was difficult. Recognizing their thinking was predicated on subject discipline boundaries, teachers had reservations about IL models and monitoring and assessment. Ambivalence about a librarian’s role and threatening nature of a library compared with a classroom - where they had greater control - emerged as issues for teachers, who initially regarded IL as almost a discrete curriculum (content) unit, rather than ongoing pedagogical practice. Because students were unable to extract relevant information, teachers selected resources so students could concentrate on content, and were concerned about how to diminish tendencies to plagiarize. Teachers encountered librarians with varied expertise, qualifications and skills, but tended to be influenced by previous and possibly mixed experiences of school, public and university librarians, which led Williams and Wavell to consider that teachers therefore ‘may not automatically engage in collaborative work with the school librarian to support student use of information’. It was unlikely many librarians had ‘studied educational theories such as constructivism upon which information literacy frameworks are based’, which could apply to teachers too (p. 55). Librarians should provide resources not only for students but also for teachers’ use, and needed to recognise what activities and learning involving IL occurred in a classroom, pressures or limitations imposed upon teachers and relate IL flexibly to a ‘learning rather than library context’ (p. 61).

*Plagiarism*

Plagiarism may be viewed as a consequence of poor levels of information literacy. Plagiarism has been mentioned above, indicating students find it challenging to use information in an ethical manner. The IBO encouraged schools to promote academic
honesty, the negative side of which included cheating, collusion and plagiarism (International Baccalaureate Organization [IBO], 2003a). Plagiarism could result from ‘underdeveloped critical thinking skills and poorly designed assignments’ (Gordon, 1998, p. 47), but could be reduced by involving creativity, variety, choice and structure or scaffolding (Millard, 2005; Royce, 2003).

McGregor and Streitenberger (1998) identified roles for teachers and librarians in providing relevant information - and clear expectations - concerning researching, citing and constructing a bibliography. Their study in Canada in 1993 found that IBDP students focused on product at the expense of the process of research, with little understanding and tendency to directly copy ‘rather than paraphrase the information or synthesize the ideas’ (p. 10), therefore suggesting that students who sought meaning may be less liable to plagiarism. Discussing this study and echoing its findings, Riedling (2004) concluded that ‘plagiarism is avoidable with proper instruction’, so librarians should ‘provide information to students concerning plagiarism and copyright’ and teach students to paraphrase and summarize, to aid understanding (p. 95). The 1998 study was confirmed by a further study, in Australia, of G11 students (McGregor & Williamson, 2005), which also found that whilst students were aware of and could define plagiarism, they may not necessarily recognise it in their own work.

Williamson, McGregor, Archibald and Sullivan (2007) found that whilst students did understand how to cite in text and provide a bibliography, actual practice varied. Although it was important that a school librarian was a role model for good practice, older students had less contact with the library/ian and their information skills had regressed. However, they were over-confident regarding their own abilities, though some students were able to reflect that they had limited searching, citation and evaluative skills. Although all students used and preferred the Internet as an information source, they felt that subject textbooks were more reliable and valuable to them. Overall, plagiarism was due to time-limitations, information overload, poor notemaking skills and appreciating a product rather than process approach to learning, in which it was easier to copy.
Reflecting and expanding on the above, Shenton and Jackson (2008) also found that the lack of strategies and skills amongst students, heavy workloads, a limiting subject focus in UK secondary schools, a focus on product, and a lack of appreciation of information literacy (and specifically the role and function of the school library) in teacher education programmes could be factors in student plagiarism.

Focusing on experiences at an international school in Malaysia, though not identifying any role for the school library/ian, plagiarism resulted through use of technology as most students ‘inadvertently plagiarise by failing to cite their sources’, suggesting heavy workloads may be a contributory factor (Millard, 2005, p. 15). A Western bias could be a contributing factor as the concept of plagiarism differed from cultural values of students from Asia-Pacific countries (Jones, 2004a). However, ‘conventions of international schools assume an ethical stance of academic honesty that includes reference to one’s sources’ with a recommendation that students should consult teachers, though librarians were not mentioned (Ellwood, 2006, p. 35).

More specifically for older students, a view existed amongst tertiary education librarians in the UK (Boden & Carroll, 2006) that public examinations at secondary school level did not provide experiences where students could learn how not to plagiarise. Therefore, students arrived at university with little understanding of the concept, which suggests that a discussion of how students fared in tertiary education would be appropriate.

School to university
Secondary literature suggests that students’ information literacy developed in final years of secondary education should be of utility in tertiary education institutions, though this section reviews largely studies in this area.

Some evidence existed that there was a positive link between school library provision and use and a student’s performance in higher education (Haycock, 2003). Kuhlthau’s (2004) study in 1988 of students’ perceptions of information skills during their last year of high school and four years of college in USA found they gradually perceived library use as
more relevant and gained confidence in researching in college. Barranoik (2001) took an assumption that students would be ‘competent’ users of the Internet, which was not validated by observation as they were unable to use databases effectively, nor ‘how to analyze websites … complete citations … [and] a bibliography’ (p. 34). Indeed, citing a source was a new concept to some of the students, who reflected they developed research (not least bibliography construction) and time management skills and assisted with preparation for university. Although it related to a community college, Smalley (2004) found that students with skills developed through school library experiences achieved better scores than those without such learning experiences, a contributory factor being analysis of skill requirements for research in college by school librarians.

However, other US studies found otherwise, for various reasons. A study of IL competencies of college students’ use of virtual libraries identified a considerable gap between skills bases of students in their last semester at school and those at college. Students ‘bridged the gap while in college, and often as a result of their own trial-and-error efforts’ (Fitzgerald & Galloway, 2003, p. 204). Van Scyoc (2003) found, even with library education programmes, that many students experienced library anxiety and their school library experience tended not to be valued or recognized. Cahoy (2004) identified lack of confidence which could be important due to notable attrition rates of students in tertiary education in the USA. Therefore, a school librarian could educate students about academic libraries and assist in reducing anxiety levels, and instanced collaborative links between school and university libraries. Similar negative results appeared elsewhere. One quarter of first-year arts students were reluctant to use libraries at one Australian university, due to little prior experience and the daunting size of university libraries (Ellis & Salisbury, 2004). School library experience did not transfer easily to a tertiary education setting as ‘the secondary curriculum does not generally require independent research using journals’ (p. 7). Students’ technical searching skills were poorly developed, and they could not undertake basic tertiary-level research. Some students recognized variable value of information from the Internet, but most continued to prefer such sources, mainly due to familiarity. Irving and Crawford (2006) found generally low levels of skills and understanding of IL amongst first-year university
students in Scotland, including failure to use more than basic search strategies, and inability to critically evaluate information. Students used information resources as directed by lecturers, plus the Internet, but rarely databases, leading to a conclusion that most students ‘pick things up haphazardly’ including ‘the need to reference everything’ (p. 38).

Whilst a few studies have focused on students who were ending their high school career and during their undergraduate period (notably Kulthau’s (2004) study from the 1980s, and Fitzgerald and Galloway’s (2003) more recent study), there has been none from an LIS perspective for IBDP students.

Discussion
In this section, studies, albeit mostly on a small scale, generally focused on real, everyday or natural situations. These provided clear identification of the library as a place for study (Spreadbury & Spiller, 1999; Streatfield & Markless, 1994). Whilst a quiet environment may be valued as a place for study, a library could also be territorial and social in function (Shenton, 2007; Shilling & Cousins, 1990), which smaller studies tended to identify. Whether this was because of limited facilities elsewhere is not always clear as there was little or no indication that schools did not regard their library as simply somewhere the students had to be when not being taught (Shoham & Shemer-Shalman, 2003), and it may be a limitation that studies may not take on board a wider school environment, of which the school library was part. This trend in the literature is a difference from impact studies, which tended to look at different aspects, and highlighted positive contributions, according to an LIS perspective.

The role of librarians in these realistic/naturalistic studies could change from resource provider and facilitator, to that of disciplinarian and rule-enforcer (Frew, 2006; KRC Research, 2003; Limberg & Alexandersson, 2003). Use of library space was commonly identified in role statements, though there may have been an assumption that this was where library resources would be used. However, use of (traditional) resources is secondary to use of space, though even that place, with availability of and access to
technology outside of the library (Asselin & Doiron, 2008), is relative. Technology can make both library and librarian role invisible or redundant (Limberg & Alexandersson, 2003) and Internet use in particular is a natural part of young people’s lives, so a library can seem anachronistic and irrelevant (Levin & Arefeh, 2002). There may also be a disparity between student views of their own skills base and views of librarians and others (Combes & Sekulla, 2002; Scott & Owings, 2005; Streatfield & Markless, 1994; Williamson et al., 2007, the latter possibly seeing a role for adults in helping students, whereas students may not see the need for such assistance), which again is seen from an LIS perspective, rather than that of students.

Students do - and need to - study, but questions remain about the focus of their study. Content from class tuition, supplemented by textbooks, may be sufficient to earn them good marks (Rafste, 2003). Textbooks may have assumed a greater importance, possibly obviating need for independent research (Madden et al., 2007). In Spreadbury and Spiller (1999), textbooks were associated more with independent schools, and were found to limit library use. Whilst a later study (Williamson et al., 2007) noted the prevalence of the Internet as a convenient source of information, students still highly valued subject textbooks. Students used the library as a place for study, bringing their own resources (often only textbooks) with them. In such a situation, information skills, highly recommended by the LIS sector, may not be relevant. Indeed, there is little research evidence to link a school librarian with student acquisition of IL skills (Lonsdale, 2003). Teachers have been identified as the most important source of information for students (Irving, 2006; Latrobe & Havener, 1997) and teaching styles may be a limiting factor on use of libraries. Didactic teaching practices have been identified by Streatfield and Markless (1994) and Spreadbury and Spiller (1999), and associated with significant content and pressure of external examinations (Williams & Wavell, 2006). Students have been directly provided with information they need, though practices vary between individual teachers and the subjects they teach (Merchant & Hepworth, 2002), again another limiting factor on library use. When students need information, they rely on the Internet (Frew, 2006; Irving, 2006; McLelland & Crawford, 2004; Williamson et al., 2007), not only for academic information but also socially (Levin & Arefeh, 2002;
Overall, whilst studies have recognised the factor of textbooks, studies have not given due attention to it, preferring perhaps to concentrate on the Internet.

Possibly therefore librarians have unrealistic expectations about the need of research in curricula for G11-12. Creation of a librarian’s role, based upon such a premise, may be at variance with a reality that supervision of study space and the students that use it is a/the main role. For students, the library may be mainly a pleasantly-appointed facility and regarded as separate from the school itself, in a physical sense (KRC Research, 2003), pedagogically (Frew, 2006) and socially (Rafte, 2003, 2005). Such a view may be reinforced if students become teachers, as the literature found little evidence that school libraries or information literacy formed part of initial teacher education programmes (Asselin & Doiron, 2003; Merchant & Hepworth, 2002; Shenton & Jackson, 2008).

Studies in this section may be at variance with rhetoric of professional literature and guidelines (Limberg & Alexandersson, 2003; Rafte, 2005). Studies may be real and persuasive because of a qualitative approach, often using observation and interview techniques, enabling students to say what they really think and be observed doing what they normally and naturally do. Therefore, studies in this section may be more compelling than more idealised studies that may be associated with impact research. In other words, allowing data to indicate categories may enable a valid paradigm to emerge.

Expectations or assumptions exist that students will require sophisticated levels of IL to succeed or survive at tertiary level. Professional literature exhorts the benefits and use of IL, but there is little evidence of a role for school library/ian (Lonsdale, 2003). This was all based on a belief that learning was constructivist, in which the research process was important (Branch & Oberg, 2001). Therefore, a possible contradiction between a constructivist pedagogy advocated by librarians and use of other pedagogy by teachers may result (Williams & Wavell, 2006). Whilst more recent literature may articulate an awareness of constructivism, it is not universally so, and remains an issue in the literature.
Features or patterns of this literature that are of interest for the present study include:

- The importance of identifying the natural situation for grades 11-12 students, and allowing their views and perceptions to emerge
- Identification of how students valued and used space in the library, if this is a major change in how G11-12 students used school libraries
- Students’ focus of study, styles of teaching/learning, role of teachers and textbooks
- Where students obtained information
- How students approached the research process
- Differences in natural studies compared to LIS professional literature, guidelines and possibly impact/EBR studies, where these have an advocacy function
- Implications for information literacy of students, not least related to an understanding of constructivism, and relevance for tertiary education
- A focus for the role of a librarian.

Conclusion of section A

Role statements about school libraries exist in various countries, but commonly produced by professional organizations rather than governmental agencies. Themes in these documents generally include information literacy and resource-based approaches to learning, aspects which are promoted by the LIS community. However, curricula documents, which tend to be issued by governmental agencies, do not make meaningful, if any, reference to library use. A contradiction and confusion about roles, functions and expectations may result, together with a misplaced belief in the power of role statements. Although a common readership may be the aim, guidelines may cater only for a mainly library-orientated readership.

EBP/impact studies provide other means of identifying contributions of school libraries. Studies have indicated positive links between student achievement and use of libraries. However, there is concern over rigour and consistency of data and findings. Concerns
about this method include selection of schools and motivation of funding/sponsoring bodies of the research. In addition, a lack of transference of findings exists as these studies emanate from and are specific to states within USA (which is contextualized by a specific testing structure). There is uncertainty whether such indicators of school library impact are indirect rather than causal. Qualitative methodology offers another way of interpreting impact. Studies tended to look at broader impacts on learning. Again, the strongest impact was in the elementary phase and reduced as students became older.

Concerns about this method include general application of findings of specific, small-scale studies, which sometimes used specially established projects, rather than evaluating ongoing use or provision. There was also lack of a standardized definition of student achievement (though a strong trend to information literacy as achievement occurred) and concern about the rigour of research methodology, especially that undertaken by practitioners. Again, it was difficult to firmly identify causal impacts of the school library on learning. That impact studies continue to focus on elementary and middle school years is a feature. Possibly, perceived difficulties of identifying impact at higher grades hinder the prospect of research in this area. The extent of practitioner EBR/impact research too may be limited, possibly due to time spent on and belief in promoting guidelines or role expectations of school librarians, with too much guidance from secondary rather than research literature.

Different definitions, qualifications, roles, expectations and types of school librarians exist. Newer or evolving roles include that of educator or teacher, manager of information services and resources, consultant and facilitator, with personal and intra-personal skills also being a feature. There is considerable promotion of a view that a role should focus on information literacy of students. Collaboration is seen as key, and which assumes or benefits from a constructivist curriculum (which is sometimes unperceived), though it is unclear how extensive the practice of collaboration actually is. This may be due to lack of clarity about the role of a librarian in curricula documents and both by teachers and students, possibly because of previous experience and image. As professional and research literature advocate certain roles, this in turn pressurizes school librarians to press for change which requires or benefits from a constructivist approach to
learning. However, a wholly constructivist pedagogical approach may not be in place within a given school, and therefore can cause tension within schools and the profession. A key decision-maker and senior manager is the school principal, with whom the librarian is encouraged to develop strong inter-personal skills, in order to develop a good relationship with a principal.

Professional energy is expended on identifying an optimum model of school library/ian and type of librarian. However, there are different models, which may be equally valid, but context specific, though that context could also be national. Equally, especially from an ethnographic research base, a conclusion may be drawn that the reality of a librarian’s role may not agree with that advocated largely through secondary literature.

Whereas use of libraries by younger students may be characterised by steady use and borrowing of mainly print resources, that by G11-12 students tends to be mostly associated with study space, followed by technology. Students may not require or need to use other library resources. The influence of teachers was important and their perception of the role of the library could be ambivalent, unclear or non-existent. Where students use library collections, they tend to have limited understanding and practice of how a library operates and is organized, though this is not their perception. Students appreciated a sense of privacy and atmosphere and comfort of a library because it was unlike that of a classroom. Students could even influence the atmosphere of a library (as libraries could have a social function) and their view of what constituted the traditional quiet atmosphere varied from that of adults. Within such scenarios, the activities of librarians were more traditional and passive and their image was more negative amongst students, though students at the same time felt that librarians fulfilled a necessary presence in the operation of a library.

Research and commentators question whether students in G11-12 have sufficient skills, aptitude-development and experience for information literacy requirements in tertiary education. This may be because assignments are not structured to enable (school) students to develop rich information literacy experiences by teachers who may have little
information literacy, specifically library, experience themselves or curricula which does not require such effort to succeed. Students feel they should be able to use information effectively in higher education, including using libraries. When this is not the case, students may become anxious and rely on basic Internet searches or survival skills and instinct.

Specific areas that are not clearly found in the literature are:

- causal links of impact between school libraries and student achievement
- specific linkage of a role of a school librarian with information literacy development by students
- the existence, extent and benefit of collaboration between teachers and librarian
- clear expectations in curriculum documents about the roles of libraries and librarians
- Awareness of the role of libraries/ians in teacher education programmes.

The review above represents elements of interest for the present study. In the LIS literature, though, there may be potential gaps concerning literature relating to school libraries and the IBDP and international schools. As the specific context is of a library in an international school, it is relevant to look at the international school literature to ascertain whether a clear understanding exists about the role of a library in an international school.

B. International school and international education; International Baccalaureate Diploma Programme; Constructivism and the school library

Literature presented here relates, to a topic (constructivism) which, as it features in each discrete area of the literature review to a greater or lesser extent, would seem to suggest that discussion would be relevant. Because of this, a brief discussion is presented last in this section. However, literature related to the context of the research questions is discussed first.
International schools and international education

The purpose of this section is to provide an understanding of a particular type of school organization, an international school, and the education it typically provides. It will also identify any relevant role for a library and librarian within an international school. The specific context for this study is an international school, and it is of interest to the study as to whether the specific school reflects trends in the literature relating to international schools.

That international schools operated autonomously for ‘children of personnel employed in diplomacy, foreign service [and] multi-national corporations’, with teaching and learning taking place in the English language for Kindergarten to G12 years (ALA, 2005) could be considered to reflect a more national point of view. This is because lack of consensus has been noted in attempts to define such schools in an international context (Buckheit, 1995; Cambridge, 2002; Cambridge & Thompson, 2002; Hayden, 2006a; Hayden & Thompson, 1995a/b, 2000; Hayden & Wong, 1997; Heyward, 2002; James, 2005; Pearce, 1996). Contradictions highlighted a distinction between use of ‘international’, ‘foreign’ and ‘overseas’ in a school’s name (Heyward, 2002, p. 21), terms which schools could use at will (Zilber, 2005). Richards (1998) suggested that the terms international school and international education implied ‘clearly defined concepts’ though the opposite was true, except for ‘the single most common characteristic … a multinational student body’ (p. 173). However, the reality of fee-paying private education, with possible associated perceptions of elitism, was also significant. Many students attended an international school that was relatively near where their family was currently domiciled, and they may therefore exist in a sanitized environment, making little contact with the local culture (Cambridge & Thompson, 2004). Hayden and Thompson (1995b) noted a significant rise in the number of international schools during the last century, which was partly due to globalization and the development of multinational organizations, communications and technology (Bagnall, 1997) and had become a distinct economic global market (MacDonald, 2006). The international school concept was ‘experienced by a growing number of students who are globally mobile arising from the professional mobility of their parents’ (Hayden & Wong, 1997, p. 349). The school in this study (in Asia) was
established early in the eighty-year history of international schools (Hayden, 2006b). The founder of the school ‘had some ideas about internationalism as his guideline’. It was accepted that English was regarded as the most appropriate language for the school and it was ‘a community undertaking, to be owned and run by the foreign community and not by any individuals’, both common features of international schools (Pedlar, 1990, pp. 90-1). The European Council of International Schools [ECIS] grouping of schools tended to be more international (ECIS, 2002), whilst another organisation for international schools attracted those with American affiliation and English-language curricula (International Schools Services, 2002), though neither also defined international schools. However, English tended to be a main language for teaching (East Asia Regional Council of Overseas Schools, 2005; McCluskey, 2006), which indicates that English as a medium for teaching and learning could be a common denominator for international schools.

Lowe (1998) noted the development of international education ‘in the context of ... the International Schools movement’ as a relatively new area of academic study (p.19). A distinction should be noted between the sense of international education as education for internationalism and use of the term in relation to comparative education (Crossley & Watson, 2003). Indeed, Cambridge and Thompson (2004) referred to an ambiguity in various uses of the term international education, whilst Hayden (2006b) noted several distinct and discrete uses of the term, before focussing on her interpretation, that is, an education provided through the institution of an international school. A distinction may therefore be made between internationalism/international education and international schools (Hayden & Thompson, 1995b) as international school teachers individually practiced their own, possibly national, styles of teaching (Allen, 2004), which was a factor made more significant by the transient nature of teachers in international schools (Bagnall, 1994). Hayden (2006b) considered it probable that many teachers in international schools grew up, were educated and perhaps had teaching experience in their home country, which was likely to be an English-speaking one. Staff therefore had pedagogical styles that reflected similar practice in a relatively small range of countries. That an international teacher certificate for teachers who met standards that reflected a learning-centred approach and whose practice reflected an international context was
developed (ECIS, 2006) suggested a perceived need to develop unified standards and pedagogical practices.

Heyward (2002) concluded that an international school could be practically so defined if it had ‘an international teaching staff, an international student body, a board of governors that represents different cultural views … an international academic curriculum’ (p.21), which may include IBO curricula. Hayden and Thompson (1995a) reported that IDBP was mentioned repeatedly in relation to international schools curricula. MacKenzie, Hayden and Thompson (2001) identified a perceived link by parents between international (school) education and IBDP, which all suggested an expectation that international schools would offer IB curricula. A typical international school student body was a mixture of all or most ability ranges, not just academically gifted, who generally progressed to higher education (Bagnall, 1994), and was true for students at the international school in this study (Pedlar, 1990).

The school library and librarian in an international school
Specific literature concerning library services in international schools is limited. A review of literature (Ferguson & O’Hare, 2004) about school librarianship to inform the role of a teacher librarian in an international school accepted given assumptions. Citing work of proponents of a pro-active role for a TL and national LIS professional organisations, both library and librarian were presented as change-agents of curriculum and pedagogy.

In terms of research literature, a case study of information-seeking behaviour (Gordon, 2000b) has been published. Clark (1995), referring to her unpublished study of the teaching role of a librarian in international schools, found that the ‘understanding and support of administrators was essential if the library is to play an active role in the curriculum’ (p.46). McCluskey’s (2006) survey of specific aspects of library provision in international schools was unpublished. Searches undertaken between 2004-6 of The International Education Research Database, maintained by the IBO (http://research.ibo.org) did not produce any results using terms such as school library, resource centres, learning resources, information literacy, librarian and similar terms,
together with international school. A search of the re-launched database in March 2007 resulted in Jones (1997), a dissertation about barriers to effective use of IT in classrooms in international schools, which contained some small reference to libraries. A research journal specifically for international education was also searched for references to school libraries, with nil results.

In the secondary literature, an international school library may have a more developed role for the wider school community than that of libraries in most other types of schools. This required a response from the librarian in terms of provision of materials in various mother tongues and cultures, including the host country (Adams, 2005; Ferguson & O’Hare, 2004; Sears, 1998). Tilke (2002) noted the challenge of a ‘considerable transient student base’, so that reader development initiatives may be helpful, not only for links with the host country, but other countries too (p. 57). Adams (2005) provided examples of job activities for librarians in international schools, and noted that a librarian, setting up a library at a new international school in Vietnam organized and developed the collection, which included periodicals and databases.

Guidelines on school library provision and use in international schools, originally developed for ECIS in 1987 were revised in 1999 (Markuson, 1999) and included contributions from Todd (1999) and Royce (1999). The document differed from guidelines for national systems (which tended to be published by professional organizations of librarians) because ECIS was concerned with all aspects of schools, not just school libraries, and, although a voluntary organization, accredited schools, but did not issue curricular documentation. (In a related area, that of information literacy, ECIS issued guidelines for international schools, which promoted a library role (Gordon, 2000a).) However, library guidelines (Markuson, 1999), have not stated an overall vision for a library in an international school because of the wide variety, type and size of international schools in the world. Nevertheless, it offered significant detail to assist in developing a programme to various levels. Student learning was seen as the over-riding focus. Support materials, including other guidelines, were cited in the document’s bibliography, which were largely Anglo-American in origin. Whilst guidelines were
merely recommended, ECIS required a ten-yearly accreditation process of member schools, documentation for which included standards and practices for an effective school library. Self-assessment was part of the process, a preparatory step to a visit by an ECIS-nominated team of practitioners who inspected the whole school and provided an evaluation report. Seven standards for libraries referred to policies, staffing, space, resources, organization and cataloguing of collections and user education (Markuson, 1999).

**Conclusion**

Within the general literature about international schools, an understanding of a school library would not appear to exist. Indeed, a generally agreed definition of international schools does not exist, but several common features emerge: catering for internationally mobile families; teaching and learning in the English language; privately funded; providing a curriculum that is perceived as being international in context. Teaching styles are not homogeneous but may reflect the national background of a teaching workforce who, whilst internationally-mobile, emanate from a limited range of countries. Nor are schools themselves homogeneous, in spite of voluntary groupings, but prefer to be part of loose networks. Whilst curricula varies, that of the IBO is often cited, and internationalism aspired to. Many of these features apply to the school in this study, suggesting that it is typical of many institutions that call themselves international schools. Sparse literature, especially published research studies, suggests there is not a heritage of good LIS practice specifically for international schools, though guidelines promote a curricular role for libraries and a changing role for librarians. Whilst a number of international schools follow school patterns of various national systems, which is also reflected in the role and contractual status of a librarian, that person may bring with them assumptions and paradigms of school librarianship, from their own country. There may be a tension between that and prevailing pedagogical practices of teachers, who may come from different countries, with their own teaching styles and experiences and perceptions of school libraries. A model of good library practice is therefore promoted mainly by librarians, rather than organisations and decision-makers in international schools and curriculum organizations catering for international schools. Again, a number
of these factors may relate to the school at the focus of this study, though whether an international school library is sufficiently different from other kinds of school libraries is not identified by the literature, suggesting that factors relating to other types of school library, as identified in section A, may largely apply to those in international schools.

Whilst a clear understanding of the role of a school library/ian was not apparent from the general literature relating to international schools, it may be that such an understanding could be identified from the literature relating to the IBDP. A discussion of this literature is therefore presented below.

**International Baccalaureate Diploma Programme**

Within the context of an international school, the focus for this study is the library’s utility to G11-12 students who undertake the International Baccalaureate Diploma Programme [IBDP]. As IBDP is the curriculum upon which impact of an international school library is made, identification of essential features and implications for a library are relevant. This section, therefore, is in two parts. First is a discussion of significant aspects of IBDP, the IBO and international schools, and core features of IBDP (specifically Theory of Knowledge and the Extended Essay). The second part looks at the role of a library/ian in support of this programme.

The IBO developed three curriculum programmes: IBDP, having been established first (1970), attracted most students as middle and primary years programmes commenced in 1994 and 1997 (Hayden, 2006a; IBO, 2002b/d). Literature may refer to IBDP as ‘IB’ when specifically referring to IBDP, though in 2007, a new visual identity and inclusive term was launched to reflect how people saw the organization, using a shortened name: International Baccalaureate [IB] (IB, 2007a). All diploma students undertook a Theory of Knowledge [TOK] course, prepared an individual Extended Essay and participated in a school’s creativity, action and service [CAS] programme (Hayden & Wong, 1997; Hill, 2003; IBO, 2002c, 2003b), as well as studying one subject from each of the diploma’s six groups (which are outlined in Appendix A). As an overall concept, IBDP offered
‘breadth’ through subject groups and ‘coherence’ through TOK and ‘writing, analytical and research skills far beyond what is usually asked of a student in high school (through the extended essay)’ (Sjogren & Vermey, 1986, p. 27). Students completed written assignments and coursework, which was assessed both by teachers of the school concerned and external examiners. Assignments included developed pieces of writing that should involve research, such as an essay for TOK and extended essays (IBO, 2002c). A certificate option existed where students followed courses and sat examinations in subjects only, and did not undertake the core elements of the diploma programme (Kyburg, Callaghan & Hertberg, 2004).

**Significant aspects of IBDP**

Some aspects of IBDP distinguish it from other curricula for older students. The purpose of this section is to identify those, especially where there may be implications for school libraries.

Metais (2002) suggests IBDP is increasingly viewed as a model for national curricula, and some evidence exists of state funding for IBDP (Kyburg et al., 2004), indeed Cambridge and Thompson (2004) found that half of the schools that offered IBDP were those in the state or public sector. However, Bagnall (2005) and Buchanan et al. (2005a) suggested it attracted mainly wealthy private schools. They also indicated that IBDP was more suited for some - not all - gifted students, though it was offered for whole year groups (Rataj-Worsnop, 2003). The prevalence of the largely understated certificate option, especially in North America (IBO, 2004c; Buchanan et al., 2005a) may dilute a common understanding of standard expectations of an IBDP student world-wide. This in turn may affect how research - particularly from North America - is viewed as expectations and benefits in the secondary literature are predicated on students experiencing the whole diploma, not isolated subjects. It appears more general that IBDP is offered as an option (Department of Education, 2000; Ford, 2007; Paris, 2003; Tekle, 2005), leaving a question about the extent that it is offered as a standard programme for all students of a year-group in a mixed-ability school. IBO regions had flexibility in interpreting IBDP requirements (Bagnall, 2005; Keher, 2006), and it is possible that
IBDP is viewed differently in parts of the world. In order to be more inclusive, regions may overlook needs of international schools, as such schools now form a smaller proportion of the types of schools offering IBDP (Hayden, 2006a).

In relation to international school students, Hayden, Rancic and Thompson’s (2000) study of such students at university (half of whom had been IBDP candidates) identified various specific IBDP-related factors that students found important in their overall international school experiences. These factors included critical thinking, time management skills, independent study skills, research skills, group work, an understanding of internationalism, and the subject structure of the IBDP (which required students to study six subjects from different disciplines of knowledge).

More recent studies (Buchanan et al., 2005a; Kyburg et al., 2004; Kyburg, Hertberg-Davis & Callahan, 2007; Shaunessy, Suldo, Hardesty & Shatter, 2006) have identified lack of research into impact and effectiveness of IBDP, as IBO (2004b) itself indicated, not least into effectiveness of teaching styles and affects of provision of learning resources. Whilst research grows, IBDP literature is still dominated by the writings of enthusiasts, advocates and practitioners (e.g. Blackburn, 1991; Mathews & Hill, 2005; Tookey, 1999). Implications for school library/ian involvement in IBDP relate to lack of reference to a library (whether in an international or other category of school) in studies, secondary literature and IBO documentation. Such a lack of identity may be more important if IBDP is seen as a diploma model for various national systems (Metais, 2002). There may be issues for the ability of a school library to respond to IBDP demand (if an option) when different programmes for G11-12 students are offered simultaneously in a school.

Studies (particularly Shaunessy et al., 2006; Taylor & Porath, 2006; Vanderbrook, 2006) focus on skills, pressures and support to assist students. However, there is a singular lack of reference to both libraries and librarians, suggesting that library models in this curriculum do not correspond to that recommended in LIS professional literature. Given that studies emanate from North America, as do various school library impact studies, it
may be surprising that there seems to be no relation between the two. Tension exists (Stobie, 2007) between understanding of IBDP as a process vehicle and as a traditional, content-rich curriculum, which conflict with promotion of a model of school libraries based on constructivism. Given this, a question arises as to the role of a school library in a curriculum where (LIS) aspirations and expectations are quasi-constructivist, but pressures on subject teachers and students may be different (as was found in section A). In such a demanding curriculum (Vanderbrook, 2006; Yip, 2000), with time and workload pressures (Taylor, Pogrebin & Dodge, 2002), students may not have time to use a library. They may not need to. Earning good grades through content-rich lecture style teaching (Kyburg et al., 2004, 2007) and using IBDP to enter better universities, with significant scaffolding provided by teachers (Burris, Welner, Wiley & Murphy, 2007) may negate any perceived use of a school library; such structured support may not allow for or require independent study through a library. A school library role is not identified in a literature that is characterized as mainly IBO documentation and writings of commentators or practitioners, and relatively few studies. A factor may be lack of teacher education in library use or experience of good practice. Other factors may include reliance on textbooks (Tekle, 2005) and/or the Internet, which may have taken over any role a library may have undertaken in the past.

Relevant IBDP documentation has not identified a role for a school library/ian. This was true of various IBDP subject guides from each subject group current in 2007 (English A1, English A2 (group 2), Biology, Geography, History, Mathematics Higher Level, Visual Arts) and an annual publication of procedures, which referred to a library only as an examination venue (IBO, 2007b).

Skills (information literacy) may not be relevant in a content transference model of learning. Even if some areas of IBDP are more enquiry-based, there is concern that skills are only implicit and limited to TOK and the extended essay (Stobie, 2005, 2007). If a number of students only undertake certificate options (Kyberg et al., 2004), they may not need, require or experience information literacy skills. An exception may be made for time management/prioritization skills, a negative aspect of which may be prevalence of
plagiarism. At any rate, Kyberg et al. indicated that students needed good levels of a broad range of skills and aptitudes, including motivation, before they commenced the diploma programme (though, in the secondary literature, Goodban (2004b) suggested that students matured specifically as a result of being IBDP students). Librarians promoted research skills (Lear, 2002), though noting, from their perspective, a lack of identification of information literacy in IBDP documentation (Brown & Laverty, 2001) and Clark (1995) alluded to library anxiety that students may encounter when entering tertiary education. Students thought IBDP could be or was stressful (Burke, 2005; Hill, 2003; Paris, 2003; Yip, 2000) and pressures encountered required support (Burris et al., 2007). Stress and pressures could result in plagiarism (Taylor et al., 2002). Students who succeeded in IBDP needed to develop various skills to cope and succeed (Kyburg et al., 2004, 2007; Snapper, 2006), not least time management skills (Taylor & Porath, 2006; Tekle, 2005; Vanderbrook, 2006), with some evidence to suggest that the IBDP was not suitable for academically-weak students (McKenzie, 2001).

TOK and the extended essay have been mentioned in this discussion of significant aspects of IBDP, leading to an implicit assumption that a library role may be limited to these aspects. A central or desired element of TOK is critical thinking (IBO, 2003b) and as this is a significant aspect of information literacy (with which librarians have an interest and a recommended role), it may be expected that library/ian involvement in TOK would feature in the literature. However, that was not the case and was also true of discussion of resourcing for TOK courses (Alchin, 2004; Austin, 2006).

The extended essay process prepares students for the type of independent research and writing expected in higher education (Andain, Rutherford & Allen, 2006; IBO, 2003c; Qualifications & Curriculum Authority [QCA], 2003). Whilst the importance of citation and referencing has been highlighted (Austin, 2006; Fox, 1998), only Jones (2004b) and IBO (2007a) have identified a role for librarians in this regard. Both IBDP documentation and Munro (2003) have identified elements of information literacy (the term was specifically used by Munro) developed through the essay process. However, varied student experiences have been recorded, not least regarding use of resources in libraries.
(Voipio, 1993; Yip, 2000), again with little role indicated for school libraries/ians. From a teacher’s perspective (Jones, 2004b), the IBDP coordinator should maintain oversight of the essay process, but ‘work in tandem with the teacher-librarian’. If students discussed ideas early enough, the librarian could obtain specific material. A workshop on researching should be held which may enable students to ‘make better use of the library, and that the library will correspondingly find and acquire more resources to support the students’. It was important to make ‘firm and explicit links between the library, faculty and students, [otherwise] many students will never use the school library for their extended essay’. A librarian had a role in advising teachers and students about ‘research, referencing and essay structure’ (pp. 198-9). This is the most developed statement of library involvement in the extended essay from a non-LIS source. (An indication of the specific nature of extended essays is provided through examples given in Appendix B.)

Issues arise in relation to resource provision and process for the essay, if this is accepted to be the function of libraries. A role for a library/ian has not been articulated in the literature (excepting Jones, 2004b), whether related to resources or services (such as database access) or an advisory role. This may suggest a hidden role for libraries/ians, or that students, teachers and schools make other arrangements, including departmental and teachers’ personal libraries, and university library access. The technical and specific nature of extended essays has been identified by various commentators and practitioners (Dickinson, 1997; Fitzhugh, 1993; Hunter, Payne & Hobman, 2004; Mathews & Hill, 2005; Morley, Beverley & Ruhil, 2004) but without mentioning a role for a library/ian. There are expectations that research and other skills are required to successfully complete an essay. Indeed, particular emphasis is given to bibliographic and citation skills (Coffey, 2006). Given rhetoric about the role of libraries/ians in information literacy, it is surprising that little or no mention of libraries is made in this connection. If a role for libraries exists in the essay process and if, overall, essay topics in social sciences are most popular (Chris, 1999), the library may be perceived as a research facility purely for these subjects. This may necessarily limit a role as perceived by teachers and students and become a self-fulfilling prophecy.
Role of a librarian and library in support of IBDP. The above suggests an unclear or unperceived role for libraries/ians in schools that offer IBDP. IBO documentation has not formally outlined a detailed role or purpose for the school library, nor made reference to library roles, functions or impact in research literature about IBDP. This was true of secondary literature. Mathews and Hill (2005) provided detailed accounts (including student experiences) about IBDP in one US high school, but without mentioning a library. This was also the case for Pound (2006) about IBDP in the UK, with papers by mostly practitioners, including Andain et al. (2006), Austin (2006), Coffey (2006) and Snapper (2006). They made repeated reference to their institutions, yet, save for two passing references to libraries by one author, no identification of a role or contribution by libraries/ians was made. However, contributors to Loo and Morley (2004) referred to libraries; where practitioners, contributors worked in international schools in south-east Asia. Nevertheless, papers concerned with core aspects of IBDP made positive reference, whilst papers concerned with subject (group) areas made passing reference or none. Librarians, though, have contributed a literature, and this is discussed below with regard to provision and use of school libraries, support for extended essay, professional development of IBDP librarians and IBO documentation and guidelines.

Provision and use. Three views, from about the same time, indicate the unclear role for libraries/ians that has existed with regard to IBDP. Cordoba (1994) considered that an IBDP library was a research library which should be ‘organised to reflect the stages of research from the preliminary search for materials to the critical analysis and use of those materials’ and ‘reflect the academic and extracurricular activities of the IB programme’ (p. 36). However, Bagnall (1994) maintained, in relation to IBDP, that ‘a large number of international schools would not have libraries on campus’, though gave no information to support this view, which may be a limited perception based on previous experience as an international school teacher (p. 134). Addressing administrators of IBDP schools, Clark (1995) believed that libraries did not have a clear or recognised role in the delivery of the programme to students, and were consequently under-used.
Brown and Laverty (2001) identified roles for IBDP librarians at IBO-funded workshops in both Europe and Asia between 1998-2000, which focussed on information literacy and technology, and was thus similar to aspects of concern for other (school) sectors of school librarianship. As they suggested that roles should be adopted, it was clear they were not largely identifying existing practice. Uncertainty about how different an IB librarian was from other sectors existed (Crouch, 2003). However, Clark (2006) considered it was ‘an extension of being a good school librarian’, involving knowledge of the curriculum, teachers and students, in order to ‘go all out to be seen as a welcoming, cheerful, helpful and knowledgeable professional resource person’ (p. 44). Dunoon (2006) saw research, especially for the extended essay, as the focus of his role as librarian. Liaison, rather than collaboration, was suggested as a strategy for IBDP librarians (Markuson, 1999), and Clark (2006) specifically recommended that the librarian should liaise with the school’s IBDP coordinator as the library was ‘not an IB subject [so] active promotion and communication are needed’ (p. 40). A study of plagiarism of IBDP G11 students led McGregor and Streitenberger (1998) to question whether student learning could improve ‘if librarians and teachers work more closely together to mediate in the library research experience’. In particular, would more or ‘different collaboration between teachers and librarians have an impact on information use?’ (p. 18). Little adult intervention (including the librarian) in students’ research activities was observed, and there was an assumption that students could use information independently, and had prior experience of doing so, including paraphrasing and citation skills. These suggested and recommended roles, however, were not reflected in the few references to school libraries in IBDP literature.

With regard to provision of a library facility, Buchanan et al. (2005a) indicated a library needed to be provided and had a large role in IBDP, though no further details were given, the focus of their research being macro-resource inputs. In order to accommodate the needs of students to undertake independent research, Goodban (2004a) indicated that specific accommodation was required as ‘the IBO places much emphasis on all IB schools having a high-quality library, and a candidate school must present a comprehensive budget for the library’. A ‘fully trained and well-qualified librarian,
ideally a teacher-librarian’ should be employed, who needed to have ‘overall understanding of the DP curriculum and be sufficiently informed to be able to advise students on such important issues as resourcing their assignment or researching the extended essay’ (p. 15). Jones (2004a), who wrote for the same publication, concurred. However, details of IBO documents that specified such recommendations were not identified.

Two studies focussed on how IBDP students used school libraries. Rafste (2003) studied library use by students at two schools, where one offered IBDP. These students had more study periods, therefore more opportunities to use the library. Overall, first-year IBDP students used the library least, whilst second-year students most of all grades, and colonised areas of the library; the study did not find a specific role for a librarian within the IBDP (the focus of the study being socialisation aspects of the library space). Latuputty (2005), in practitioner research about library services for IBDP at an international school in Indonesia, found students used the library because they needed quiet study accommodation. Resources most used were reference and audio-visual items, often related to history topics (and were either used in class or at home). Many IBDP students were unaware of or had not used subscription databases and used computers in the library mainly for Internet access. Most students ‘found the librarians were helpful, nice, readily answered their questions and close to students’ (p. 18), though again, a role for a librarian was not identified. Student experiences have been identified in IBDP literature (e.g. Yip, 2000), but few even passing references to use of libraries exist.

Librarians provided examples of ways in which they supported IBDP. Scribner (2000) provided examples of ways in which collaboration between teacher and librarian could support Group 1. As librarian at an international school in Beijing, China, Scribner gave a session at a library workshop for the IBAP region in Singapore in 2000. Examples given possibly suggest inexact use of the term collaboration (as defined by Montiel-Overall, 2005) as the examples related more to liaison and communication. Clark (2006) detailed work undertaken to support subject departments at an international school in Hungary. For English, provision of support materials for set texts, though, as ‘sciences are very
much lab-based, so there has not been the need for extensive use of research materials’, therefore alternative science textbooks were provided as a discrete library collection (p. 41). Support for TOK tended to vary with an individual teacher’s approach, as a meeting of librarians in USA also found (Dando, 2004). Green (2007) advocated a new role for TLs at an IBAP-organized conference on information literacy in Singapore, which related to employment conditions in his own country (Australia): reducing number of TLs and TL positions and that EBR was used for issues of accountability. The presentation reflected a general situation of school libraries, and was not specifically predicated on the needs of the IBDP. However, the change he suggested was allied to constructivist approaches to learning (in which critical thinking was an important element), and one that TLs should be teaching, though they should be flexible and pragmatic in order to relate to teachers in the way they worked, if this was not the case.

Extended essay. Library use, identified above, indicated that the extended essay was a major assignment for IBDP students. Clark (1995) considered the librarian was not utilized sufficiently by teachers when students planned their essay. If students consulted librarians early enough, it was possible that they could avoid choosing a topic for which there was little material. Clark’s (2006) views had not changed a decade later, concluding that the essay was ‘another aspect of the course in which the librarian can be overlooked’ (p.42). Bearing out such a view, for instance, Austin (2006) provided a detailed account of the essay process, but omitted any mention of a school library/ian.

Though Chris (1999) noted that the balance of extended essays fell towards social sciences and English literature, and which considerably affected the library collection of his institution, librarians were aware that students may need to access a library and information infrastructure beyond their own school’s library (Markusson, 1999) and there were examples of links developed between school librarians and local universities, providing access to resources and information for students (Meyer, 2002). Some initiatives were instituted by universities (Doege, 2006; Houston, 2001; Florida International University, 2005; Vanderbilt University, 2005); these examples suggested that, in the USA at any rate, initiatives developed by schools and university libraries
provided focussed support to students working on extended essays. In order to provide good examples, it was common practice to make previous essays available in a school library (Dando, 2004; Wallace, 1997).

Librarians (Scribner, 2000; Viner, 2005, 2007) promoted a role for librarians in supporting students’ essay information needs, both within and without the school library. Latuputty (2005) surveyed students after completing the essay, on a premise they had used the school library for research. Most students had used non-fiction, though some could not find items they needed. However, students perceived their research skills were adequate (reflecting findings in the literature). Lack of clarity and uncertainty over their role meant that some school librarians had varied involvement with the essay process. Some coordinated the essay process and acted as supervisors for individual students, whilst others offered ‘work sessions’ for students during the summer vacation. There was also uncertainty about the extent of support allowed as ‘it’s ok to ask questions and make suggestions about where to find information, but librarians cannot provide resources directly’. (Dando, 2004, second bullet point)

**IBO documentation, guidelines and evaluation.** Although there has been some indication in this review that the IBO has not issued guidelines for school libraries, it is pertinent to identify what the situation regarding inclusion and evaluation of libraries in IBO documentation actually is. Little reference was made to use of libraries in IBDP curricular documentation, however references to library provision were made in several documents related to the process of accreditation to offer IB programmes. A broad expectation that a school valued and promoted library use existed (IBO, 2005b). Most detail was found in two documents (IBO, 2006b, 2006c) which indicated that a library should provide a range of resources, including ICT. IBO (2006b) advised a school that library provision should include that the facility was well designed and resourced for IBDP needs. Furthermore, library staff should have been consulted about library-IBDP needs and who should have current, ‘appropriate training in librarianship’ (p. 13). IBO (2006c) advised an authorization team to assess library provision in terms of being adequate, appropriate and sufficient. Some detailed questions asked whether study
facilities were available in the library (and who would supervise students there) and whether there was student access to other libraries in the locality.

Guidelines for libraries in international schools (Markuson, 1999) made some recommendations for international schools, but by definition these did not relate to other types of schools that offered IBDP. Overall, Clark (2006) considered that lack of written IBO guidelines may be due to resource inequalities in school libraries in different parts of the world.

The IBO required member-schools to provide a five-yearly evaluation in order to continue offering programmes (IBO, 2004a). A major part of this evaluation was the school’s self-study assessment, relating to five standards, including support for the programme and resources. Evaluation of libraries was therefore possible. However, this process varied according to IBO region as ‘Europe ... and Asia-Pacific regional offices operate a far more detailed review system of questionnaires directed to all relevant sections of a school and its communities - the head of school, the DPC, the librarian(s), all IB diploma teaching staff’ (Goodban, 2004a, p.24).

A feature for all schools offering IB programmes was the initial authorization or accreditation and which represented the main or sole identification of school library relevance to IBDP. Jones (2004a) provided detail of possible library expectations by an IBO authorization team:

The library is a major focus for authorization teams. It should provide access to high-quality reference materials ... [in] a spacious and inviting area conducive to study and research. The stock of reference materials, periodicals and literature should be representative of the nationalities in the school ... Most schools find that they need to spend some money on their libraries ... for authorization, but a well-stocked library may not need ... much initial expenditure. (p. 41)

Student access to the Internet should include online databases. The librarian should be involved in purchasing decisions related to ‘all reference materials for the school’, including those to be held departmentally, which should be centrally catalogued by the
library. Particular types of resources that should be provided included print and on-line encyclopaedias, other subscription databases, anti-plagiarism software services, periodicals (both print and online), English and foreign language newspapers and magazines, foreign language materials, various reference books, specific resources for TOK and textbooks for subject areas. Furthermore, ‘departments should know what resources are available for their subjects in the library, and should work with the librarian to recommend reference texts. The same goes for TOK teachers’ (p.63). However, whether Jones recounted a checklist that all authorization teams would use or expressed a personal view or interpretation was not clear, but it nevertheless represented the most detailed account of a school library in non-LIS IBDP literature.

Discussion
Librarians promote a view that their work helps users make sense of information explosion and which provides a focus on digital sources of information and information literacy. However, conditions need to be met to enable this to occur, both with IBDP and in individual schools, suggesting acknowledgement that skills development is as important as core aspects of IBDP, though there may be a tension with a content-rich curriculum (Brown & Laverty, 2001). Low levels of perception about libraries exist amongst students (e.g. Yip, 2000) and their use is recorded as utilising the space of a library (Rafste, 2003), possibly indicating that students see IBDP in content-transfer mode, with little mediation needed from other information providers, such as a library/ian. Alternatively, research requirements for IBDP may be completed elsewhere, so any library role would not be required.

Little reference exists to use of school libraries/ian in IBO curricular documentation. Documentation about implementing IBDP does include reference to library provision, but except for teachers who would be involved in the application process, would tend to be little read by teachers in the normal course of events. Commentators, largely reflecting an Anglo-American situation, also do not refer to libraries/ian, with one exception (Jones, 2004a). This one reference may be due to awareness of library use through education and/or previous experience or possibly particular pro-active qualities of a librarian.
Concern has been expressed whether an international school could provide an adequate library to support IBDP (Bagnall, 1994). Such schools have been encouraged to access any local library infrastructure (in the English language), specifically for extended essay needs, suggesting that this is a particular issue for international schools, possibly especially in non-English speaking countries. As the extended essay appears to be the core research element in IBDP, it is thus a/the focus for library impact (Clark, 2006; Markusson, 1999), and any limit on the ability of a library to support students is a concern.

Concern by librarians (Clark, 2006) that their skills and expertise are not used sufficiently by teachers and students at planning stages of the extended essay, is borne out by a detailed account of the extended essay process, in which a role of a library/ian is not articulated (Austin, 2006). Only one commentator notes a positive, active role for a librarian (Jones, 2004 a/b). Whilst some university support for extended essay needs can be identified from the literature, a clear role for the school librarian in developing liaison is not a common thread, though examples exist (Dando, 2004). One case study (Latuputty, 2005) of the use of a library by IBDP students at an international school focussed on use by G12 students as it was considered that, as they had completed the essay requirement, students would be in a better position to comment. Library support, both school and university, to students through websites, databases and advice suggest that the essay is a - if not the - main aspect of IBDP as far as library involvement is concerned. However, some support (e.g. Florida International University, 2005) may be counter to the ethos and aim of the essay process, as it encourages students to see it as an extra element or obstacle to be overcome in the shortest time, rather than a formative and central experience of IBDP. There is uncertainty about any distinct IBDP librarian role (Clark, 2006; Crouch, 2003), any difference perhaps focussing on support for the extended essay, itself a unique feature of IBDP.

Librarians are included in the IBO’s main method of communicating with individuals who teach its programmes. Ad hoc support groups for librarians exist, though are
regional or local, and much depends on individual involvement. Therefore, the main official support is the OCC. Sharing information and peer support is the main function of this facility, with little official involvement from the IBO. The IBDP-LIS community would value IBO endorsement of guidelines for libraries that supported IBO curricula, as this is identified in guidelines that relate to international schools only. These recommendations have not been adopted by the IBO, possibly because of inequalities in school library provision in different parts of the world (Clark, 2006). Buchanan et al. (2005a) identified lack of information about resource inputs when schools introduced IBDP and which applied to library provision. Listserv discussions indicate perceived need for guidelines, mostly by librarians and schools who wish to offer IBO programmes. Attempts continue to develop guidelines and identify what is different about a library that offers IBDP (International Baccalaureate Asia Pacific Library Information Specialists, 2005). However, as identified in section A, time and energy spent on developing guidelines may be misplaced.

Conclusion
Although the IBDP was originally developed for and by international schools, this type of school is now less exclusively associated with the IBDP. The IBO is a world-wide organization, but nevertheless has distinct regions which can operate semi-autonomously, setting local conditions and criteria (for instance, in IBNA especially, where a certificate option is common). These factors may have affected how school libraries are profiled and used in the IBDP-world. Nevertheless, the IBDP is commonly offered by international schools around the world, and a focus on how libraries in such schools impact on IBDP is relevant, especially as little research on resources and use of resources relating to IBDP is available. There may be issues associated with IBDP being an option (thus competing with other needs in the school) and being accessed by students with wide ability ranges. A school may need to be wealthy and flexible in allocating resources for a library to be able to make an impact on IBDP.

Latuputty’s (2005) work is important as the only study that shows a school library/ian being involved with the extended essay process. The essay needs to be completed by each
IBDP student, so there is potential for the library to help and impact on each IBDP student. Furthermore, the process and experience is considered of utility in university life, so could contribute to a student’s skills base. Given a LIS literature focussed on use of resources and skills, an expectation may be that a librarian’s role would feature in this area, but little or no reference in IBDP literature indicated otherwise, prompting a suggestion that the library/ian role is a hidden one. A niche role may further exist as a predominance of essays in the social sciences may also limit perception of a library role by non-social science teachers and/or students. Nevertheless, in Latuputty’s study, whilst the school library was supportive of students, they did not have sufficient research skills to function independently, as a number of LIS studies have also found. As research was undertaken after the essay process, students may not have benefited from what was supposed to be a key research experience, leading to concern that the extended essay may not provide sufficient research experience to assist in tertiary education.

Skills and attributes that link to information literacy have been identified in subject areas of IBDP, not least critical thinking and the need for academic honesty. However, textbooks are seen as an increasingly common resource for a number of subject areas, and few references to resources of the type traditionally associated with school libraries have been made in practitioner literature, which prompts concerns that the curriculum is content-rich and thus not hospitable to a IL curriculum, nor requires the information resources that a library offers.

A role for libraries/ians has been promoted mostly by librarians, and only in the extended essay has a role been somewhat identified. It may be suggested therefore that a gap exists in the IBDP literature. There is therefore a difference between how librarians see their role in IBDP and others see it. Librarians, as a group, experience limited support, awareness or recognition from IBO in curricular terms. Therefore, it is probably that the role of the library is essentially a hidden or unperceived one as far as the IBDP school community is concerned.

Specific aspects of note for this study are:
• There is an unclear role for international school libraries in the IBDP, due to a variety of factors, including a content-rich curriculum, use of textbooks and lack of reference in IBDP curricular documentation.
• Any focus for library use rests with the extended essay.
• Whilst links may be made between aspects of information literacy and the IBDP, an understanding is not overt, nor is there a clear link with school libraries.

The school library role, as seen by the LIS, may be based on a belief that information literacy and research are helpful adjuncts of a curriculum for older students. Such a view owes much to a constructivist view of learning. As constructivism has features in the literature review, it is pertinent to look briefly at the relationship between constructivism and school libraries.

**Constructivism and the school library**

The term constructivism has arisen in discussion of literature in preceding sections of this literature review. Therefore, a brief discussion of constructivism and its relevance to IBDP and school libraries is provided. The aim of this section is to identify that elements in LIS literature promote constructivism as a hospitable pedagogy for the development of skills and validate use of libraries, though this may be unappreciated by both librarians and teachers. A further aim is to discuss whether there is a strong link between constructivism and school libraries, international schools and IBDP.

Callison (2001), in a review of school librarianship research trends, noted that constructivism was a theme through Kuhlthau’s work. Kuhlthau (1993, 2004) indicated that constructivist learning ‘builds on what students already know and actively involves them in learning through the use of a variety of resources’ to assist ‘problem-driven research incorporating their thoughts, actions, and feelings in a holistic learning process’ (1993, p. 2). Constructivism then equally valued process and content of learning, was
developmental and involved emotions as well as intellect, and thus was consistent with the educational philosophy of Dewey, Bruner and Vygotsky.

Codrington (2004) noted that ‘for most international schools ‘best practice’ will incorporate constructivist learning that adapts flexibly to meet the individual needs of each student’ (p. 185). Drake (2004) asserted that ‘all IB programmes actively promote, indeed one might say prescribe, the skills of critical enquiry, and independent and creative learning’ (p. 194).

Researchers and commentators in school librarianship have made connections between constructivist approaches, critical thinking and learning skills (Moore, 2002, 2005). Gordon (2000a) found that ‘without a conceptual framework’ supported by ‘prior knowledge to generate search terms, students have difficulty locating and recognizing relevant information’, so that information skills needed a context (p. 2). Students should critically evaluate the purposes of information and select, reorganize and rephrase as appropriate (Pitts, 1992; Veltze, 1998). McGregor (1994) highlighted complex thinking skills within a teaching programme for information skills in school libraries. Riedling (1998) noted a library role in supporting students to become critical thinkers. Information literacy ‘requires problem solving and critical thinking attitudes in conjunction with information and technology handling skills to create new knowledge’ (Brown, 1999, p. 60). Kearney (2000) identified a collaborative role with teachers in developing focused library services to support a constructivist curriculum. Studying teachers’ assessment of student research skills in The Netherlands, Stokking, Schaaf, Jaspers and Erkens (2004) too noted that ‘research skills … fits well into a constructivist approach’ (p. 100).

Links have been articulated between school libraries and constructivist-based teaching and learning in schools (Boyd, 1999; Gibson-Langford, 2007; Todd, 2001), with a suggestion that school libraries/ians could cause a shift to constructivist-based learning approaches (Boyd, 1999). Todd (2004) promoted a paradigm to the LIS community that learning outcomes from using a school library could be identified in relation to a mixture of information skills and process. Such an approach could make sense of content by using
‘meaningful, authentic learning activities which enable learners to construct new knowledge understandings’ (p. 9). Other commentators or practitioners though may not have made overt or articulated a connection between school libraries and constructivism. However, Streatfield and Markless (1994) identified that teachers’ views were the strongest impetus to use of a school library, and noted that a perceived unified and advocated model of ‘an integrated resource centre [for] … open, flexible, resourced-based and independent learning’, existed in the literature, together with an understanding that provision of such a library could change the pedagogical approach or approaches in a given school. As it was in the nature of a ‘Holy Grail’ (p. 136), there was considerable pressure on a librarian to develop such a model. However, such a change was unlikely to occur (except possibly in the very long-term) partly because teaching styles within a particular school could vary between individual teachers. Given that a departmental structure was usual in secondary schools, it was ‘not uncommon to find different educational approaches operating within the same school’ (p. 135). Therefore, teachers had ‘widely differing views about teaching and about the library’ (p. 137).

McGregor (1994), in a study of thinking and use of information by students in a gifted programme (IBDP), found that ‘students do not instinctively operate in a metacognitive manner’. Whilst there was variable awareness of process skills, students were product-based. Students needed to be taught to reflect and teacher-training education ‘should promote the cooperation between classroom teachers’ and librarians; additionally, education for both professions should include knowledge and strategies to develop a metacognitive paradigm (pp. 131-2). Thus, educational evaluation largely focused on outcome and was largely at odds with a process-model constructivist paradigm favoured by school librarians. Even when process was recognised, teachers tended to focus on the product - such as an essay - of the assignment (Markless & Streatfield, 2001). Barranoik (2001) observed various emphases in a process-product continuum for G12 students, indicating different pressures on teachers of different subjects to teach the same students in the same school in different ways. Herring (2004) observed that ‘in reality, student learning in today’s schools is the result of a range of approaches, from the behaviourist approach in introducing students to new areas of study to more constructivist approaches’
(p. 6), a view also reflected by Callison (2001). Loertscher and Woolls (2002a) presented a similar argument, though they insisted that different teaching styles ‘benefit from an information-rich, technology-rich working environment’ (p. 58). Williams and Wavell (2006) identified a gap between information literacy models being founded on constructivism whilst the pedagogy of individual teachers may not be constructivist in practice. A difference between constructivism and prevailing teaching styles did not appear to be appreciated in Irving (2006), who hoped that an IL curriculum could be incorporated into a school’s curriculum.

Reimers (2004), who studied impact of students’ experience of MYP on their performance in IBDP, concluded that ‘although in theory the Diploma programme supports interdisciplinary learning ... and metacognitive skills, realistically ... [it] is a content-driven curriculum’ (p. 16). Stobie (2005) found ‘too much content [was] prescribed and knowledge expected resulting in time constraints’ and that IBDP was ‘not suitable for all ability levels’ (p. 37). Snapper (2006) concluded that ‘IBDP arguably remains, in many important respects, a traditionalist curriculum with an old-fashioned liberal humanist foundation’ (p. 187). Possibly, a specific issue for post-compulsory education has been identified by Young (2008), who referred to the development and domination of different subject areas in curricula, not least aided by neo-conservative educational theorisers, who accepted that there was an almost self-evident canon of knowledge, which needed to be transferred. In such a situation, social realism, rather than social constructivism, was more dominant. As a result, students may well experience an educational environment where content-transfer is the aim.

From the above, it may be seen that links have been made between constructivism, information literacy, critical thinking, research skills and school libraries. Suggestions that IBDP is constructivist in intent and heritage exist, though researchers and commentators indicate that IBDP is a content-rich curriculum, rather than promoting a process or enquiry approach. In reality, pedagogical approaches in schools vary, with more than one approach being present at any one time, due to differences in individual approaches by different teachers. However, information literacy is predicated on a
constructivist way of learning and librarians are exhorted to develop an IL curriculum - if in relation to IBDP, there is doubt that the programme is, overall, hospitable to such an approach.

C. Conclusion of the literature review

Whilst literatures relating to school libraries, international schools, IBDP and constructivism may be disparate, there are some issues and features that form a conclusion to this review.

Educational literature shows constructivism is practiced, though different pedagogies exist in a school, so to focus exclusively on a constructivist-based pedagogy, as advocated in some LIS literature, may be unrealistic or at least limiting. Other than literature for school librarians, nearly always written by LIS-natives, there is little reference to a role or function of a library/ian in educational literature, but where mentioned, references to school libraries can be stereotypical, using images gleaned from a writer’s previous experience, possibly even as a student. More specifically, there is little relationship between curricula documentation and that of role statements for school libraries overall. This is also true for both IBDP and international schools, though the only guidelines developed for international school libraries emanate from a body concerned with many aspects of such schools, but which is a voluntary organization and does not issue curricular documents. Lack of synergy also applies to information literacy, which assumes a constructivist paradigm. Whilst school librarianship uses as lingua franca ‘information literacy’, it is a term not widely understood outside LIS. Information literacy is multi-faceted but there is possible mismatch between levels of information literacy at school and that required for higher education. In higher education, anxiety by students may lead to limited use of libraries and ineffective levels of skills base for research, which may in turn result in plagiarism.

Role statements, such as guidelines, advocate use and benefits, but other methods have been adopted by LIS to identify impact of the school library. Broad-based approaches
link studies of impact and EBR. Whilst studies have made links between student achievement and school library use, there is however concern about the rigour of methodology, not least in studies undertaken by practitioner-researchers. Where evidence has been found, it focuses on the primary rather than secondary sector, and on special projects than regular use. Quantitative impact studies use standardized test scores, about which there are concerns as being narrow and related to specific US states in which studies were undertaken. Researchers and proponents of such studies also identify a causal nature in data, though equally there are views to the contrary. Qualitative studies focus on broader educational aims, not least information literacy, which is equated with student achievement. However, there is a need to consistently identify what student achievement is and whether there is a link to information literacy. There has been no published research of impact or research-based practice relating to libraries in international schools, nor of school library impact on IBDP as a whole.

There is a lack of clarity about the role of a librarian in IBDP, including by school librarians themselves. Any role may be driven by students’ research needs in the IBDP, possibly purely related to the extended essay. Librarians see a role in support of academic honesty, not least citation skills. Research has not identified an optimal model of school librarian – nor is there any recommendation from IBO – so various types exist, possibly dependent on personality traits of individual librarians, and such a pattern is reflected in international schools. Little mention of libraries/ians in a wide range of IBO-IBDP (especially curricular) documentation, together with very few references in secondary literature, suggests at most a hidden role for school libraries in support of IBDP. There are suggestions that IBDP requires good levels of resourcing, including libraries, but specific standards or requirements do not exist. Inequalities in provision of libraries in schools that offer IBO curricula may exist and may be a factor in lack of guidance about resource needs for IBDP, a perceived need for which is articulated mainly by librarians. Although librarians are included in IBO support, in terms of the OCC website, to those who teach its programmes there is little official involvement, so librarians act as a self-help peer-support group, and this largely extends to professional development opportunities. Collaboration with teachers is a school librarian role that is heavily
promoted in the literature. In practice, collaboration tends to be, at best, variable: it may vary with subject specialism and student age range, but may also be due to personalities, previous experience of teachers, location and space, syllabi and examination structures, preferred pedagogy and support from school administration. There may also be confusion between and inexact use of the terms collaboration, liaison and communication.

Where there is a change in perceptions about libraries, it is largely due to ICT, which may result in too much information now being available to students, who require mediation in order to understand information content. This suggests a role for librarians, a view mostly promoted by the LIS. However, many G11-12 students use libraries only or mainly as a study space, and generally bring with them what resources (usually textbooks) they need. A number of mostly ethnographic or similar studies identify how libraries are used, and findings are somewhat at variance with those of impact studies. Teacher influence is important, determining whether students use aspects of libraries other than space, but teachers’ views of libraries tend to be ambivalent and who may perceive that a librarian’s role is passive. Such factors also apply to international schools as teachers’ practices and views about libraries vary according to their country of origin. The role of principals in library development is important, though they tend to use libraries little themselves, but, nevertheless, see a value in school libraries.

The literature for international school libraries does not factor accountability to the same extent that applies in libraries in national school systems, therefore the lack of impact studies in this sector may be unsurprising. This is true of any relationship in the literature between school libraries and IBDP. However, as all IBDP candidates must complete core elements, it follows that library support may impact on a student’s individual extended and TOK essays. Other impacts are variable depending on subject options, though regard for information literacy or academic honesty (in particular, through citation and bibliography construction) could potentially contribute to all areas of IBDP experiences for students.
Overall, the literature as presented in this review is disparate. Only in a discussion of constructivism does the literature gel to a certain extent. However, in terms of non-LIS literature, that is, mainstream educational literature, the school library may be seen to be a hidden factor, and this is also true for international schools and for the IBDP. The only natural link between all three literatures are school library guidelines for international schools, whilst the only study that links all three is practitioner research based on the experiences of a final year group of IBDP students in one international school library.

A clear gap in the literatures relates to the specific role of the school library in IBDP and international schools. There are, too, potential gaps in identifying the impact of a school library on older secondary school students, specifically grades 11-12 and for a librarian in supporting information literacy of these students. Overall, the literature review has focussed attention on the role of the school librarian, a factor central to the present study, as well as how older students use a school library in a natural setting. Furthermore, the literature review identified features in the setting (international schools) and focus (IBDP) that inform the present study. Above all, the literature review identified features of impact and EBR research and other means of studying the present problem, which suggests reflection on appropriate methodology.
METHODOLOGY

In order to explain use of methodology in this study, several key concepts are discussed, including an interpretivist, specifically constructivist, view of knowledge in a qualitative research tradition. Although impact studies and evidence-based research were discussed in the literature review, methodological aspects of this style of research need to be isolated, as they have a bearing on the present study. There is subsequently a focus on a particular methodology, grounded theory, with regard to associated specific methods of research: observation and interview.

Interpretivist approach
Adopting an ontological perspective suggests a historical choice between interpretivist or positivist. Whilst, broadly speaking, a positivist approach, based on deductive reasoning, tends to have a strong link with quantitative research, an interpretivist approach, associated with inductive reasoning, leans towards qualitative research. An appreciation that one research paradigm is not suitable for all situations is appropriate, as an empirical approach that works well in natural science research may not be most appropriate in a social science or humanities setting. Although interpretivism is an over-arching term, it is nevertheless associated with qualitative approaches to research. More than one explanation may be relevant and real, so that inductive reasoning is used to examine a situation in a natural setting. (Williamson, Burstein & McKemmish, 2000)

However, positivists consider that a valid approach in the natural sciences would transfer equally to the social sciences, holding that the ‘social world exists in the same way as does the natural world’ (Bartlett, Burton & Peim, 2001, p. 42). Nevertheless, experiments in a controlled setting, which work well in a natural science environment, do not take account of human ethical considerations, nor of the need for people to act naturally ‘in their usual environment’, where this is important to a study. Interpretivists, as the term suggests, believe that people interpret what happens in their world and respond accordingly, so that a researcher analyses, interprets and seeks to understand individuals’ reflections and identification of choices. (p. 43)
Qualitative methodologies may explore one or more contributing causes and effects of an action or situation. Burton and Bartlett (2005) considered that an ‘interpretivist paradigm’ could identify choices that participants make in social situations, in which ‘there is no one objective reality … just different versions of events’. Such studies focus on ‘detail and understanding rather than statistical representativeness’ (p. 22). Small (2003) observed of a qualitative approach that ‘naturalistic studies typically begin with little or no theoretical framework, often developing such a framework based on the data collected’ (p. 90). Talja, Tuominen and Savolainen (2005) argued that information science research best reflects a constructivist paradigm because of it’s acceptance of learning in a social environment, with influences, inferences, social codes and rules, though accepted there could ‘be no neutral viewpoint for describing metatheories’ (p. 80).

As the present study is concerned with the experiences, views and values of specific groups of individuals, in a specific context and natural setting, an interpretivist approach recommends itself as the most appropriate paradigm. In turn, this suggests that a qualitative means of presenting results from research data may be most appropriate.

Qualitative research

Overall, qualitative research encompasses various methods to enable explanation of social phenomena in as natural a setting as possible (Merriam, 1998) with ‘systematic, empirically based procedures for investigating events’ (Neuman, 2003, p. 102). It tends to be developmental or emergent and one in which the researcher acts as interpreter (Cresswell, 2003), as both Strauss and Corbin (1998) and Charmaz (2006) found. Lincoln (2002) considered qualitative research enabled readers to ‘imagine new and fruitful “categories” of thinking about … experience’ and used other perspectives to re-analyze data (p. 13).

Quantitative methods may not identify factors of impact of the school library on academic success (Olen, 1995). This may be because qualitative methods allow ‘insight and direction rather than quantitatively precise or absolute measures’, enabling exploration of ‘key audiences’ thoughts and concerns, retaining original language (KRC
Qualitative research focuses on perceptions and values of users of libraries, rather than inputs, which quantifies use of resources and facilities (Haynes, 2004). Whilst quantitative approaches are mostly used in recently published large-scale research about school librarianship, qualitative methodologies are also considerably used (and for school library research more than in other LIS areas) (Clyde, 2002), not least those ‘that provide an in-depth picture of the phenomena under study’ (Clyde, 2004, p. 14).

However, Baughman (2003) considered school librarianship does not have an established research methodological base, where both methodologies and methods are experimented with in terms of relevance and utility. Tension could nevertheless result from any preference for quantitative research over qualitative, but was ‘bogus’ so a methodology should be selected for relevance to the question being studied (Gordon, 2003, p. 17), as Kloda (2006) observed of a study that used quantitative techniques to identify student understanding about library jargon. In practice, there was a broad span of methodologies and techniques used in both traditions (Wirkus, 2006).

Qualitative research enables study of a topic in detail and depth so that ‘specific answers about processes within individual settings or involving individual students’ could be obtained (Neuman, 2003, p. 105). Closeness to data is a feature of a qualitative paradigm, where Barranoik (2001) reflected on her methodological use which ‘demanded a tolerance for ambiguity [and] a sensitivity to context and data’ (p. 30). As a perception of lack of objectivity and rigour may exist in relation to qualitative research methods, terms should be defined as closely as possible in order to give readers a clear idea of a researcher’s stance so that ‘subjectivity is not … synonymous with lack of rigour’ (Boden, Kenway & Epstein, 2005, p. 42). Markless and Streatfield (2006) preferred words and phrases such as resonance and ‘recognition of authority as more helpful than objectivity and generalisability in weighing up evidence’ (p. 27), indicating that context, connections and understanding were valid aspects of a qualitative approach. Given (2007) considered ‘qualitative research in LIS provides credible evidence about patrons’ perceptions of library services’, especially in natural settings (p. 17). The point of results
was not to achieve generalisability, but could be used, for instance, ‘where specific subpopulations have particular needs that are not reflected in broad generalizations’ (Given, p. 20).

Impact studies and evidence based research (EBR)
Accepting features and concerns relating to qualitative research identified above, the paradigm reflects the requirements of the present study, though, as this study is related to impact, there are issues of a methodological nature to be discussed relating to such types of research. Although there may be difficulties in separating techniques of such research from results, as a discussion of both may be pertinent at the same time (especially when looking at validity and persuasiveness of studies) isolation of methodological issues nevertheless provides a focus on issues related to choice of methodology employed in the present study. Indeed, some reference has been made to methodological issues of impact studies and EBR in section A of the literature review.

Techniques identifying outputs may not be most appropriate to identify value owing to the importance of perception (Usherwood, 1999) and a realpolitik approach in identifying for policy-makers what contribution libraries made to learning has been noted (Boudah & Lenz, 2000; Payne & Conyers, 2005), though evidence should be based on research in real contexts to be valid (Evidence-based Education UK, 2006). As LIS services impact on people, relevant ways of identifying impact are by observation and talking to individuals (Markless & Streatfield, 2001). Furthermore, studies should identify impact based on ‘educational outcomes’ and not merely be descriptive (Streatfield & Markless, 2002, p. 2.). However, a number of impact studies have been based on short-term, specific projects and were of varying quality. Failure of practitioners to publish their research could result from doubts about methodological validity and non-replication (Johnson, 2004), or even due to difficulties librarians and teachers had in defining and showing evidence of impact (Fisher, 2003).

Qualitative impact studies that situated the school library’s contribution within broader educational areas differed from the work of Lance and his colleagues. Lance (2004a)
promoted the concept of ‘SBR’ (scientifically-based research) but was aware that early impact studies on student achievement were methodologically weak. However, Colorado-style studies allowed for other factors, both statistical and infra-structural. Lance (2004b) considered that Colorado-style research identified both direct and indirect predictors of achievement, but argued that such research was empirically sound. A school library was thus a distinct influence on student achievement. Indeed, Lance argued that the school library was one of few identifiable factors on achievement. However, Markless and Streatfield (2001) maintained that such cause and effect is difficult to establish in social sciences. Though quantitative impact studies tried to correlate student achievement and school libraries, firm evidence that a particular factor caused another was not identified. These types of studies could be inviting for researchers to select some relationships and ignore other findings. In reality, many factors together impacted on achievement, but quantitative impact studies identified factors that could be further researched, possibly qualitatively, to identify firm factors of impact (Farmer, 2006). Pressure from and on the profession to provide results that justified resources and expenditure was a factor for the perceived need for such studies (Callison, 2004). Impact study reports could be descriptive and anecdotal, with unclearly-stated methodology, resulting in concerns about the quality of data collection, whereas ‘effective impact evaluation requires clear and consistent use of terms’ (Markless & Streatfield, 2006, p. 23). This leads to a suggestion that the purpose of impact research and pressure for advocacy – possibly in a culture of accountability – may compromise the research process.

From the above, it may be seen that impact studies/EBR allowed outcomes, values and perceptions of a service to be identified (Usherwood, 1999), though practitioners find it difficult to exactly identify a real contribution that a school library makes to learning (Fisher, 2003). Studies have both encompassed broader educational areas and have specifically focussed on individual students’ test scores. Whilst there is a belief that studies showed causal impact on student learning (Lance, 2004a), others consider that it is difficult to isolate just one factor as many factors combine to impact on student achievement. There is agreement on the need to identify the role of the school library with regard to student achievement and to isolate the role of the librarian from that of the
library facility itself (Callison, 2004). The purpose (and perception in the minds of
readers of studies) for undertaking research (e.g. for advocacy purposes) may be an issue,
especially where research findings are anecdotal (Markless & Streatfield, 2006) and
selective (Callison, 2004). As a school library is associated with values which vary
amongst settings and individuals (research about which is better served by qualitative
methodologies), the present study adopts an approach to impact research used by several
researchers (such as Williams and Wavell (2002) and Markless and Streatfield (2006))
which identifies any impact of the school library in terms of general qualities of learning,
and relates it to the context of a particular curriculum and group of students.

Methodologies to support a qualitative approach to research
A qualitative study of impact nevertheless requires a methodology to guide the research,
and several methodologies could be used. In particular, phenomenology and ethnography
are key methods which have been used by interpretivists (Williamson et al., 2000).
Phenomenology, as a philosophy, provided a foundation for all qualitative research
(Merriam, 1998), but was associated more with rich, detailed description than analysis,
though it allowed perceptions, attitudes, beliefs or emotions to be identified, through
reliance on interviews. A phenomenological approach could usefully show how people
managed or coped with a situation, though not identify causes. It accepted as valid
alternative realities, though not of individuals per se, rather as it related to a reality shared
between groups or cultures. There were several variations of phenomenology, though
broadly divided between identifying an experience of social phenomena and explaining
participants’ meaning of such phenomena (Denscombe, 2003).

Ethnographic approaches, reflecting an origin in anthropological studies, also provided
detailed descriptive accounts of specific, usually micro, societies (Bartlett, Burton &
Peim, 2001). Some ethnographic studies amassed data, from which it was hoped that
results would emerge (Denscombe, 2003). There were concerns that the methodology
was both inappropriately and over used (Wellington, 2000), not least because the term
was used almost interchangeably with other methodologies, and this was also true for
case study methodology (Merriam, 1998). In an ethnographic tradition, whilst
acknowledging the influence of grounded theory, Streatfield and Markless (1994) sought to identify the contribution made by a school library to teaching and learning through use of illuminative evaluation, which was based on the work of Parlett and Dearden (1977) (Markless & Streatfield, 2006). In Markless and Streatfield’s (1994) study, observation and interviewing were central techniques that enabled the richness of respondents’ views and language to be retained and generated theories.

Although methodologies indicated above would be of value, a grounded theory methodology best reflects the needs of the present study, as it values respondents’ views and values, both collectively as groups of users and individually. The approach undertaken looks for possible reasons and causes. It therefore generates substantive theories (Merriam, 1998) as explanation and interpretation of a specific natural situation.

**Grounded theory**

A grounded theory approach has therefore been identified as an appropriate means of identifying and interpreting impact and value for a specific institution with a particular group of people in their natural setting. However, several possible approaches exist within a grounded theory tradition, and a choice needs to be made as to which one to adopt.

*Development and features of Grounded Theory*

Grounded theory originated from research of Glaser and Strauss (1967) where theory arises from data during the research process and is grounded in such data and ‘the experiences of the researcher rather than being imposed upon the research’ by dint of an hypothesis (Bartlett, Burton & Peim, 2001, p. 46). Glaser and Strauss, separately, wrote further about grounded theory in the late 1980s; since circa 1990, Strauss has developed the methodology with Corbin. An initial issue then is which branch to follow, as it was important to distinguish between a phenomenological ‘grounded theory for the Glaserian school, and conceptual description for the Straussian school’ (Stern, 1994, p. 213). Stern maintained grounded theorists had no preconceived premises, but through ‘observation and questioning are guided by hypotheses generated in the field’ (p. 216) and then
interpreted and integrated data. Differences in approach between the two original developers of the theory included Strauss’s need to answer various criticisms about the rigour of the original methodology, so that grounded theory had been over-adjusted in response to criticism. Markless and Streatfield (2006) observed this divergence of approach, ‘with Glaser challenging Strauss and his later collaborators for, in his view, forcing data into a preconceived framework’ (p. 124).

Because theories are grounded they are ‘likely to offer insight, enhance understanding, and provide a meaningful guide to action’ (Strauss & Corbin, 1998, p. 12). Research design develops through the process of research and ‘data collection and analysis occur in alternating sequences’ providing guidance and theories to be examined in subsequent interviews or observations, as ‘it is the analysis that drives the data collection’ (p. 42). Nevertheless, total objectivity is unattainable but as much objectivity as possible could result through use of comparative thinking, using different perspectives, ‘maintaining an attitude of skepticism’ (p. 46), and following specific research procedures.

Denscombe (2003) noted divergences of approach, but tried to reconcile them and identify benefits of grounded theory, which works best in a small-scale setting, where there has been little extant research. Pragmatic and phenomenological origins (together with Glaser’s positivistic stance) of the method were identified, as was a limited role for a literature review. Denscombe was aware that researchers would need to justify their use of a particular version of grounded theory. Nevertheless, his key point was that grounded theory enables substantive theory to be developed, rather than to test an initial theory.

Dey (2004) too discussed various aspects of grounded theory from both branches. A basic tenet is theoretical sampling that enables flexible selection of areas for research to develop comparisons and ideas to contribute to theory. This is distinct from identifying sources that may both be representative and allow generalizations of particular phenomena. Qualitative data tends to be used in grounded theory, typically resulting from observation and semi or unstructured interviews (though the role of a literature review was not identified). Categories are identified from data, but these could change through
on-going comparison. Research concludes when data no longer suggests differences to emergent theory. A core category is developed where the researcher interweaves analysis into a story of the main themes. Dey’s concerns with the original method included validating theoretical sampling; coding (axial and selective), developed by Strauss and Corbin (1990), was a major development, but grounded theory should both produce and analyse data. There was common understanding about open coding, such as who, what, and how; axial coding integrated relevant categories, after which the researcher could become selective about what to code. Selective coding could facilitate deeper analysis of data and structure a narrative. For Dey, comparison is a key concept, although the original theory focused on ‘isolating single causes’. Rather than an inductive or deductive approach, grounded theory involves abduction, which ‘relates an observation to a theory (or vice versa), and results in ...a plausible interpretation rather than producing a logical conclusion’ (p. 91). This is acceptable as theories could provide different but compatible interpretations. Dey used and advocated creative use of grounded theory from both Glaser and Strauss to inform research rather than unvarying prescriptive, technical procedures.

Piantanida, Tananis and Grubs (2004) expressed feelings of frustration and confusion resulting from a reading of literature relating to grounded theory, as they tried to make sense of often conflicting views between the two main proponents of the theory. Concerned by the focus on development of specific procedures within the theory, they considered it was not possible to use a perceived correct or pure version of grounded theory, though recognized pressures on Glaser and Strauss to ensure validation. They found that some text (data) was capable of more meaning than other text, so supported ‘a more integrative logic of interpretive coding’ (p. 339).

Hopwood’s (2004) use identified an ongoing relationship between analysis and data-gathering. Initial analysis allowed themes to emerge, from which sampling enabled refinement of ideas or challenged assumptions, prior to coding, which could then be developed into themes. Where one theme emerged above others, sampling may again challenge or corroborate this theme. Comparative techniques may then be employed,
such as student-to-student and category-to-category. His approach was similar to Dey’s (2004), though comparison was undertaken in stages rather than continuously.

**Constructivist model of Grounded Theory**

Charmaz (2005) too noted that grounded theory was both a method and product of inquiry, though was often associated with a particular means of analysis, but should be viewed as ‘flexible, analytic guidelines’, allowing researchers to be ‘close to their studied worlds’ (p. 508). She discussed various works of Glaser, Strauss and Corbin, noting positivist and constructivist elements, and supported a constructivist approach that focused on the studied problem and not the methods involved in such a study.

A researcher brought an interpretivist approach to a study and it was important to accept that data had values and categories had powers. Previous studies lacked credibility, possibly because methods were rarely followed through in entirety. Comparison in grounded theory, through active codes to identify actions, processes and assumptions (of participants and researchers), is important. Each piece of data is inter-relational so could inform other data, as well as codes and categories. Various studies had not taken sufficient account of context as ‘people are active, creative beings who act, not merely behave’ (p. 523) and this may involve actions resulting from habit not strategies. The concept and value of narrative provides a means of portraying data and research findings, though interview should not be the sole means of collecting data. Charmaz (2005) outlined four criteria for grounded theory: credibility, originality, resonance and usefulness. The method that Charmaz outlined is constructivist in intent, and constitutes a third model of grounded theory; Charmaz developed this approach further in her book Constructing Grounded Theory (2006).

Accepting a relationship of grounded theory with ethnography, Charmaz (2006) maintained that data from observation and field notes should focus rather on ‘phenomenon or process’ of the studied problem (p. 22). Charmaz identified psychological and sociological aspects of the interview technique, indicating that each interview is capable of producing rich data and should be treated as a unique event. This
may involve individual responses (e.g. prompts) from the interviewer when the interviewee provides views, therefore it is important to code from full transcriptions of interviews.

Coding should be sensitive and flexible to individual responses, so line-by-line coding may be appropriate for some data. In vivo codes could help to retain the meaning of respondents’ language - thus the researcher needs to be careful about the language used in both initial and focused codes. Balancing the need to ‘keep the codes active and close to the data’, a researcher ‘can move across interviews and observations and compare people’s experiences, actions and interpretations’ (p. 59). Coding is not a linear process and repeated visits are possible to glean new codes. Whilst another type of coding (axial), developed by Strauss and Corbin (1998), could provide coherence to data that may otherwise be fractured, because it looks for relationships or roots, nevertheless rigid application of axial coding may limit interpretation of data.

Charmaz (2006) preferred the term sub-category as explanation of elements of categories and their relationships to illuminate meaning of a category. Charmaz encouraged researchers to challenge their own preconceptions, as this can be an issue in assigning codes. An example in the context of the present study would be for the researcher to accept and rationalise the question: are libraries of help with what students need to complete the IBDP? Memo-writing throughout the research process was core to development of a grounded theory. Memos not only enable a researcher to analyse various thoughts, but also prioritise codes and ‘raise them to conceptual categories’ (p. 91). Memos are both independent pieces of writing (so preserved thoughts and ideas of a certain time in the research process) and act as analytical stepping-stones, possibly showing gaps in data or categories that need development. (This process also results in theoretical sampling, as memo-writing clarifies thought and identifies areas and issues for research.)

Theoretical sampling was distinct from other forms of sampling, as it was essentially a process which could be used to aid the development of conceptual and theoretical
thinking about developing categories, which identified variation, relationships and saturation, and could involve returning to the field, including further observation of an existing situation or indeed a new one, further questions to interviewees or identifying new participants. Charmaz (2006) is more cautious about a state of saturation and recommends that the researcher should tolerate variation (which may result in new codes) in data.

Charmaz (2006) acknowledged positivist and interpretivist elements in the development of grounded theory, so that both explanation and understanding are valid outcomes in themselves - and that theorising is an active experience. In the latter, importance is focussed on the phenomena being studied and theory is an interpretation, whilst the former identifies factors but not issues that may surround such factors. Interpretations of grounded theory were varied, so some studies have been criticised by Charmaz (2006) as being descriptive rather than theoretical, which could be avoided through sensitivity to the theorising process, not least by ‘coding for themes rather than actions’ to avoid being descriptive and by adopting a constructivist approach. A literature review in such research ‘has long been both disputed and misunderstood’ (p. 165), not least because of a preconception that grounded theory studies rely on a tabula rasa approach. In a constructivist approach, a literature review should not just summarize the field or be confined to the required dissertation chapter, but inform thinking and discussion throughout the work. By doing so, this situates and strengthens ‘grounded theories in their social, historical, local, and interactional contexts’ (p. 180).

Three approaches to grounded theory can serve to confuse rather than illuminate the essential features of grounded theory. Differences between these may be expressed as:
Few published studies in school librarianship have used various interpretations of grounded theory methodology. A review of research methods identified in published research articles in one significant journal, *School Library Media Research* (Wirkus, 2006), for instance, identified various qualitative research methodologies, though no mention of grounded theory. However, early studies were Mellon (1986) and Kuhlthau (2004) - indeed Callison (2001) noted that grounded theory informed the body of Kuhlthau’s work - whilst more recent work includes Carter (2002), Druin (2004), Filipenko (2004) and Wavell (2004). These either cited the original work and/or Strauss and Corbin’s work. McGregor and Williamson (2005) and Williamson et al. (2007), however, noted Charmaz’s use of grounded theory as an influence on their studies, which was also the case for Streatfield and Markless (1994).

Of research carried out *circa* 1980, Kuhlthau (2004) explored qualitatively to identify a full description of a phenomenon (library research) from students’ perspective. Mellon
(1986) studied students’ feelings when undertaking research in a university library for the first time, to develop a theory of library anxiety. Experiences of certain categories of users of university libraries, including those newly-arrived from high schools, were identified from interview transcripts and personal narratives. Carter (2002) studied the role of a school librarian in intranet development, with data gathered from literature review, online discussions on library listservs and networks of relevant professionals, visits to schools, a questionnaire and semi-structured interviews. Shenton and Dixon (2003) used the 1967 work in their study, which was rich in stories and used participants’ own words concerning young people’s use of other people in order to obtain information. From interviews of students and adults and from children’s drawings, Druin (2004) developed 13 open codes; data were compared until saturation point was reached, and no new findings identified. However, it was not clear from the report whether other types of coding were used. Filipenko (2004), in a study of information literacy development in kindergarten children, developed categories of children’s talk which suggested a theory. Wavell (2004) used open and in vivo coding (Strauss & Corbin, 1998) to identify librarians’ understanding of what learning took place in the school library.

Markless and Streatfield (2006) noted that

some researchers (including academic researchers in the library and information field) think of it [grounded theory] as a licence to by-pass the difficult research questions and to claim that their evidence supports whatever ideas they want to advance

whereas true use ‘offers a systematic approach based on constant comparisons, theoretical sampling and application of coding procedures’ (p. 25). The essence of the original theory is a systematic approach to analysing qualitative data.

For specific IBDP-related studies, Taylor, Pogrebin and Dodge (2002) ‘employed grounded theory techniques similar to those suggested by Glaser and Strauss (1967)’ in order to categorize data into two ‘conceptual domains’ relating to plagiarism (p. 406). Their claim was that the study was unusual in the academic dishonesty literature, because of its methodology. Categories were identified from observation and relationships sought
from interview transcriptions. Another study was of IBDP as a programme for gifted learners (variously reported as Kyburg et al., 2004, 2007; Hertberg-Davis, Callahan & Kyburg, 2006), which cited Strauss and Corbin (1998).

Data collection and analysis techniques used in this study
In this study, techniques used to collect and analyse data were observation and interviews with students and staff.

Observation
Observation technique was used in the following way:

- Observation of G11 and G12 students in the school library, at specific, timed intervals during a three-week period (November 2005)
- Observation of the same cohort of students in the school library at specific times during a three-week period (February-March 2006)
- Data from interviews were further tested by observation of G11 and G12 students in the 2007 academic year. Observation (September 2006) was necessary to identify a changed natural situation in the library that year, in order to identify any changes, and further to identify how that change had altered later in the year (May 2007).
- Observation of high school teacher use of the library for one week in April 2007.

The use of observation in this study can be justified as it enabled the researcher to undertake a focussed activity with pre-identified purposes that was scheduled, time-limited and systematically recorded (Simpson & Tuson, 2003). An unobtrusive practitioner-researcher was able to identify the natural situation, especially regarding clear identification of students of the target group for the study (Foster, 1996). A short trial was undertaken to see if observation was practical and useful. The librarian had established, for a number of years, an enquiry desk in the middle of the library, so students were used to seeing the librarian working naturally amongst them, rather than in an office. Thus observation could be made as naturally as possible, and was feasible. As the G11-12 cohort was relatively small and the practitioner-researcher knew most students through working at the school for a number of years, therefore IBDP students
could be readily identified in the library at particular periods of time. The amount of observation, i.e. a repeated time period over a week at a time, enabled ‘sequential comparison’ (Charmaz, 2006, p. 54), which was further compared with observation of the same year groups of students at a different time period.

As an internal researcher, it was possible to reduce what Foster (1996) referred to as ‘reactivity’ of participants when observed by an internal researcher who was ‘unobtrusive’ in order to increase natural behaviour (p. 30). Possible difficulties were identified, including subjectivity and a concern of Wragg (1999) that practitioner-researchers were ‘likely to view their own school … through a distorted lens, having only their own perceptions, experiences and prejudices on which to draw’ (p. 128). Memo technique in grounded theory also assisted to identify researcher bias and perceptions (Charmaz, 2006). Observation, though commonly used in school-based research generally (Foster 1996) and in grounded theory (Charmaz, 2006), was used relatively infrequently in school librarianship (Herring, 2006; McNicol & Elkin, 2003), though the researcher was aware that systematic observation provided ‘one of the best ways of finding out whether your services are really making an impact’ (Markless & Streatfield, 2006, p. 97).

Cumulative data from observation further identified areas for investigation during interviews, a helpful teaming of both techniques (Drever, 2003). Observation also enabled the researcher to identify possible students to be invited to participate in interview (Bartlett et al., 2001; Williams & Wavell, 2002), so that students could reflect a spectrum of library users, i.e. regular, occasional and those who used the library rarely or not at all. An example of the effect of ongoing comparison in grounded theory is seen through the application of techniques where comments from teacher interviews suggested observation of teacher use of the library would be helpful. As observed main library use related to space and study following by ICT and library resources, these areas informed the themes for semi-structured questions.
Interview

The use of this technique in this study was as follows:

- G12 students were also interviewed in 2006 to provide a comparison with interviews with G12 students in 2007 (i.e. those students who were in G11 in 2006) and to indicate whether question areas should change for G12 interview students in 2007.
- G12 students were interviewed at the end of their final year of IBDP (2007).
- Senior administrators (2007).

Interview questions were trialed with a student in advance, however because interview questions were based largely on observation there was little change to question areas, mostly to ways of asking questions to reflect an open-ended and semi-structured interview situation. The second year of interviews with the same students was undertaken primarily to enable further codes to be identified through any differences and changes that students may have encountered over their two years of IBDP. The second round of interviews was also a check on observations and interpretation of those observations. However, trialing of questions was not possible in the second year of interviews because of the need to follow particular students through their second interviews. Although initially undertaken as a parallel exercise, interviews with teachers produced data that prompted questions for students for 2007. Because observation of teachers was not used in the same way as that for students, interview questions needed to be trialed for effectiveness. One English language teacher who had taught IBDP but who at that time did not teach the programme provided a means of doing so. One major change was to bring out a personal reminiscence response (about their school library experiences as students) in order to produce flow, ease of situation and promote individuality of responses. Although observation of students provided some question areas, questions were adjusted from the trial, not least because there were too many questions which produced replies that were repetitive. Nevertheless, teacher experiences were more varied and broad, therefore data were less cohesive than for students. This richness and variety of experience was further identified through a second round of interviews (with different
staff, largely because of staff changes in a different academic year) and which required tolerance of ambiguity (Charmaz, 2006).

The use of interviewing can be justified as interviewing technique supported data-gathering to identify feelings, opinions, values and perspectives of individuals (Drever, 2003; Merriam, 1998; Rafste, 2003). This study used semi-structured interviews which used a ‘standard list of questions’ but enabled ‘the interviewer to follow up on leads provided by participants’ (Williamson, 2000, p. 225). This study identified selected students and as Bartlett et al. (2001) noted, ‘crucially the interviewer must determine who to interview’ (p. 50). Interview data acted as a check for both observation and interpretation of observation data, as Rafste (2003) and Given (2007) found. Interviewing the same students twice enabled further earlier views to be tested and develop a rapport with students to allow frankness (Limberg, 2005). The technique was used as there was a need for considerable contextual data and it identified connecting relationships in a social or natural setting (Hughes, 2002, p. 213). Semi-structured interviews were used in this study, as they could be effective for interviewing experts who could talk about underpinning thought, though, as Markless and Streatfield (2006) observed, interviewees may offer views on what their role should be, rather than what they did.

Data analysis
The site for the research was, as Cresswell (2003) identified, purposefully selected and was a natural environment for those being observed. The sampling was purposive and theoretical, where the criterion for observation was that students should be G11-12 students, who were automatically IBDP students. From observation, 4-6 students were identified from each grade for interview. Criteria were that they should reflect regular and occasional users of the library, together with those who used the library little, be balanced in gender and – as far as possible in a student body of many nationalities and cultural backgrounds – reflect an international and intercultural student cohort. Teachers were selected by subject specialism: one representative of each of the six subject groups of IBDP. In the second round of interviews, teachers again reflected subject areas and administration figures were identified where IBDP was part of their remit. Identification
of such criteria reflected advice of Merriam (1998), who further noted that theoretical sampling was developed in grounded theory by Glaser and Strauss (1967); interview sample was identified from data as it was generated and analysed, rather than identified in advance of a study, and was the case in the present study. As Drever (2003) identified, by restricting the selected population, purposeful sampling becomes less of an issue, as the issues that emerge and resultant theory reflect a particular, not a universal, situation. Moreover, quota sampling reflected the needs of this study and the natural situation, so that subject teachers of IBDP and their students were interviewed. For both observation and interview, these techniques were piloted; for interviews, a student and a teacher were used as pilots. Van Teijlingen and Hundley (2001) noted that pilot studies enabled flaws in a hypothesis to be identified, though in a grounded theory study (where questions and topics depended, to an extent, on previous data) the issue was not primarily one of research design. Rather, it related to collection of preliminary data, definition of the focus of this study and allowed a novice researcher practice in using techniques. Use of theoretical sampling, as identified above by Charmaz (2006) also provided focus, e.g. data from student observation and interviews suggested that data to provide comparison and point of view needed to be collected from teachers as well.

Richness of interview data was obtained from the sample, the size of which was justified by Given (2007). Given was specific about sample size as between 15-18 people would provide sufficient analysable data of value (the present study used 22 people). Whilst other such recommendations are scarce (apart from details of particular small studies), Charmaz (2006), though recognizing tensions between saturation and tolerating variety in different versions of grounded theory, suggests that 25 interviews would provide sufficient data for a small study – the present study included 26 interviews.

Data was analyzed from each stage, using observation schedules and full interview transcripts. From such data, open codes were identified. Where groupings and common patterns emerged across different data, focussed codes were identified. These were then grouped into categories, which initially had a number of sub-categories attached. These were further refined to produce three categories, with a more limited number of sub-
categories, all in line with the data analysis advice presented by Charmaz (2006). Where possible, in vivo codes were used to preserve the language of participants. There was also, as Charmaz (2006) advocated, tolerance of ambiguity, through identification of differing viewpoints and actions in the richness of responses. Memo-writing was used to identify preconceptions and issues for the researcher as they occurred and as a stage of theoretical sampling. Once codes and categories were identified from the data, these were compared and tested through theoretical sampling by interviewing a further group of the IBDP community (senior administrators) to ascertain their views on use of the library by the two main groups, students and teachers, and the role of the library/ian. Development of a narrative (Charmaz, 2006) was another means of explaining the situation and fed into emergent and conceptual final categories. Categories were then triangulated against trends and issues identified from the literature (Charmaz, 2006; Streatfield & Markless, 2002), leading to an identification and interpretation of elements that formed a grounded theory for the natural situation.

Due to the size and nature of the research, it was decided not to use computer programmes as an aid to data analysis. Whilst the researcher was aware that data collection and analysis could be aided by use of a computer programme, there is not unanimity amongst proponents of grounded theory approaches. Charmaz (2006) did not discuss use of programmes as an aid in data interpretation, though accepted that development of programmes for use with grounded theory may be due to the popularising work of Strauss and Corbin (1998), but about whose approach she had reservations. Nevertheless, programmes can assist with data analysis, specifically by coding data - traditionally, the researcher would read and analyze transcripts, but programmes could identify keywords and phrases, though not meaning (Burton & Bartlett, 2005). Whilst Markless and Streatfield (2006) were aware of benefits from using software, programmes could prevent the researcher from thoroughly understanding data which is crucial to a quality study in this method and considered that, for small-scale research, use of specific programmes is not necessary.
Outline of research process
The following is a linear representation of the research process involved in this study:

Observation (November 2005, February/March 2006)
  Analysis of observation data
  Grade 11 and 12 student interviews (2006)
  Teacher interviews (2006)
  Analysis of data, coding and identification of potential categories
Observation (September 2006, May 2007)
  Grade 12 student interviews (2007)
  Teacher interviews
  Analysis of data, coding, identification of potential categories
  Interviews with senior administrators, as theoretical sampling
  Librarian memo
  Analysis of data, coding, development of a narrative and identification of categories
  Triangulation with findings of the literature

Adopting, therefore, methodology outlined above, and utilising relevant techniques and the chronological outline indicated immediately above, the chapter of results of the present study follows. This chapter identifies data findings through treatment of members of the IBDP school community, to provide greater continuity of perspective. Therefore, findings of the study that are focused on the students are presented firstly, followed by the perspectives of teachers, senior administrators and the school librarian.
RESULTS

A qualitative, specifically grounded theory, approach to examining data focuses on people and their views, perceptions and motivation in using the school library, and has been established as the lens through which data for this study is viewed. Through the use of techniques delineated in the previous chapter, this chapter presents the findings of the research in the following way:

- Observation of IBDP student use of the school library: 2005-6
- Student interviews: grades 11-12 2006
- Observation: 2006-7
- Student interviews: grade 12 2007
- Teacher interviews 2006 and 2007
- Observation of teacher use of library: 2007
- Interviews with senior administrators: 2007
- Librarian’s perspective: 2007

Data were produced through observation of students in the school library at specific points between 2005-7 and of teacher use of the library in 2007. Interviews were undertaken with G11 and G12 students and teachers of IBDP in 2006 and 2007. These findings were compared and then triangulated with senior administrators and the perspective of the librarian, which was presented through memo technique of grounded theory (Charmaz, 2006).

Background information

All grades 11-12 (G11-12) students at the international school were IBDP candidates. Students were aged between 16-18 years, came from various countries, with different mother tongues, so English was a second or third language for some. Students started IBDP after IGCSE (International General Certificate of Secondary Education), a UK subject syllabus-based public examination. Students also enrolled at the school in G11; in 2006, 3% of G11 students did so, mostly newly-arrived in Japan. The average length of time a student remained at the school was eighteen months. Some students however
stayed for longer periods of time, including bi-cultural families, domiciled in Japan. During 2005-6 academic year, 55 students were enrolled in grade 11 (G11) and 45 students in grade 12 (G12). All took IBDP, with 3 exceptions (such as two students who enrolled during G12) and these followed relevant IBDP courses and sat examinations to obtain certificates in specific IBDP subjects. Housed in the main building (where high school students were mostly educated), the school library and information service was located on the ground floor. The ground space was 368 square metres and comprised a main and three small internal rooms, with one main entrance. Seating capacity was 60 spaces. Approximately 28,000 resources were catalogued on an automated system, available on a discrete network in the library, plus subscriptions for 50 periodical titles and several online subscription-databases. The library opened between 0745-1630 hours and served the whole school (K-12) community, including parents (900 registered patrons). Staffing comprised a qualified librarian of 28 years experience (including two other international schools), with 1.20FTE support staff. The librarian serviced the whole school, including 20 elementary class visits each week. The librarian succeeded two other librarians, thus the school experienced school library practice which emanated from various countries, specifically Australia, North America and the UK. There was a developing ICT infrastructure programme in the school, including wireless access, and, during the period of this study, the ratio of computers to students became less than 2:1.

Observation of IBDP student use of the school library: 2005-6
Observation took place over two three-week periods between November 2005 and March 2006. Several times, usually a school period (45 minutes), were identified each week, together with before school started (35 minutes), recess or break-time (15 minutes), lunch-time (60 minutes) and after school (60 minutes). The equivalent of two library-opening days were covered, enabling ‘sequential comparison’ of what happened at the same time on different days to occur (Charmaz, 2006, p. 54).

Observation context
When students were not taught, they took a ‘study hall’ or individual study period. School policy required students to sign a log, kept in the library, for each period. During
G12, students had the option of arriving later at school if they had no classes. After mock-examinations in February, this privilege was extended, e.g. students could leave school after lunch if they did not have any classes in the afternoon. The onus was on students, as school practice indicated that this prepared students for managing their time at university. Students could use the library, an adjacent ICT room, or the canteen (located in another building). Students could borrow an ‘iBook’ (laptop) computer from the library for use in the library or elsewhere for study hall. Library facilities, supervised by the librarian throughout opening hours, consisted of a main room, quiet or silent study room (Quiet Room or QR) and a library classroom (L1), all of which could be used by IBDP students. The time of year for the first observation exercise (November) was chosen because there were no major IBDP coursework deadlines, therefore regular learning/study could be expected to occur, and which could be described as the most natural environment or condition. The second observation (February-March) coincided with preparation for and sitting mock-examinations by G12 students. The librarian had a desk in the middle of the main room, affording good views of most of the library and from where observation notes were made, though the observer also moved unobtrusively around the library.

**First observation**

In the first observation, main library use was as a venue for study. The Quiet Room was used (seating being at individual desks), but not exclusively; seating in other parts of the library was often preferred. Students sat together at tables and low-level talk was observed, which was as much informal group support (e.g. explaining math problems) as social conversation, and sometimes group conversations could be heard (from the librarian’s desk) as moving seamlessly between the two. One example of such observation is

*Five G11 students used the library. Four sat at a table in the main room, using files and photocopied sheets of paper. They talked intermittently, also compared notes, talked about study strategies, assignment load, etc. One of these students worked on updating an art notebook, another used a calculator for math assignment. The fifth student sat separately at another table and worked on an assignment, with files and photocopied sheets.*
Students therefore worked individually or in groups. Students sometimes changed seating location for various reasons, such as the arrival of a booked Elementary school class visit to the main library room, necessitating study hall students to move to one of the adjacent rooms. The most popular service was loan of iBooks, both to use in the library and elsewhere. Although not ascertained overall, iBooks could be used for accessing the Internet, completing assignments (and saving on students’ individual folders on the school server) and also for playing CD/DVD/listening to music on the Internet as an aid to study (e.g. in the canteen). On occasion, borrowing iBooks was the main or only activity, both for use in study halls and to take to classrooms. The researcher noted of one occasion that was typical of this observation.

*G11 student borrowed iBook, sat in QR. Six other G11 students borrowed iBooks and took them to an IBDP Geography class. 1430: G12 student borrowed iBook and took it elsewhere.*

Students invariably brought bags, containing files, notebooks, equipment and textbooks. They therefore brought what they needed to the library to study. Students used textbooks and photocopied or printed handouts and made little use of print resources in the library. Some (library) books though were used, as were newspapers and magazines. A typical example, as noted by the researcher, was

*G12 student used L1 for maths (using textbook). G11 student visited library to consult foreign language dictionary section. Another three G11 students used QR for personal study, one of whom browsed library shelves. G12 student borrowed iBook, sat in QR.*

The library catalogue was not consulted and this was largely true for library staff. Occasionally, a question about resources or citation practice would be made to the librarian. Students borrowed few library resources, apart from iBooks. Some students visited the library for a specific purpose, and then returned elsewhere. Few students used the library outside class times. Library rooms were also used formally by subject classes. Library space was also used informally by classes and groups, sometimes to undertake regular work, without reference to library resources, and this may have been due to limited accommodation elsewhere. The library was considerably used as a meeting and
class place for CAS (Community, Action and Service, a core aspect of the IBDP which all candidates needed to complete) purposes.

Second observation

In the second observation, the most-used aspect was again seating for study hall, whether in the main library or other rooms. Unless otherwise stated, study activity was characterized by use of students’ own files, textbooks, photocopied papers and calculators, but students began to use their own revision/review notes. Other resources used by students included calculators and video cameras (for editing purposes). Students worked either individually or in small groups, with low-level conversation. There were isolated examples of students using the library as a venue for social chat (with no other observable occupation). Though compact, the library allowed for concurrent use, such as individual and small group student study, a teacher reviewing a topic with one student, recreational reading and using iBooks. A typical example may be seen from the researcher’s observation notes for one occasion

Three G12 students and one G11 student in L1, using files and textbooks. Another G11 student with history teacher, reviewing a topic, also in L1. Three G11 students and one G12 student in QR, using files and textbooks, one student using library iBook. Four G12 students at table in main room, using files, etc. (revision). One other G12 student in main room, reading daily newspaper. One other G11 student used computer catalogue to locate and borrow a book for extended essay. 1135: one other G11 student returned iBook borrowed before 1100, for use elsewhere.

The last item in the above note is an example of the next most-used aspect overall, which was iBooks, whether used in the library or elsewhere (both for study hall and class). However, for two of the three-week period, use of (print) library resources was identified more than iBooks. This included purposeful searching, using books in the library to extract specific information or ideas, recreational reading and borrowing. Recreational reading of newspapers and magazines was also observed, as was browsing amongst library resources. Overall though, use of library resources remained the third most-observed activity. Occasional use was made of the librarian, with specific enquiries about obtaining resources for extended essays and subject assignments, as in the following
example: ‘G11 student asked the librarian about obtaining articles in psychology. Discussed various databases and university libraries, librarian offered to try British Library Document Supply Service’. Isolated examples of students using the computer catalogue were noted. Some use of newspapers, both in physical format and electronically, was observed mainly as part of a class assignment. Viewing of DVD was a feature of class use and small groups in the library classroom. Little use was made before or after the formal school day, though some students visited during morning recess times. The library was used by different IBDP classes, sometimes with a teacher, and groups who had a class activity to complete in the library. Other use of the library was for CAS (Community, Action and Service, a core element of the IBDP) and venue for a mock-examination for a single student.

**Codes, conclusion and questions**

A number of focussed codes were identified from both observation periods, including:

<table>
<thead>
<tr>
<th>Potential Category</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students using the library</td>
<td>Group seating/study; used files; used textbooks;</td>
</tr>
<tr>
<td></td>
<td>Completed assignments; used iBooks; borrowed</td>
</tr>
<tr>
<td></td>
<td>iBooks and used elsewhere; used library resources;</td>
</tr>
<tr>
<td></td>
<td>Watched video/DVD; used catalogue</td>
</tr>
<tr>
<td>Teachers using the library</td>
<td>Class use (taught class)</td>
</tr>
<tr>
<td>Librarian’s role</td>
<td>Asked librarian</td>
</tr>
</tbody>
</table>

Most student library use overall was as space in which to sit and study, largely reading, writing and completing assignments. They used textbooks, materials and equipment, mostly provided by students and/or their teachers. Students used all parts of the library as they wished. The most-used resource was iBooks. Although what use students made of iBooks elsewhere could not be ascertained, in the library iBooks were used for accessing the Internet, word-processing, listening to music and e-mailing. The third most-observed use related to other library resources. This included students browsing shelves, reading books, magazines and newspapers and viewing library-stocked videos and DVD in the library classroom. Nevertheless, use of library resources did not extend to borrowing (excepting iBooks) as borrowing of non-iBook library resources was observed only twice. Disrupting talk and use as primarily a social area was not identified as a significant
observed activity, though low-level chat was noted. Students were just as likely to use more sociable seating in the library as carrel-based seating in the Quiet Room. Group use was another regular aspect. This included small class use (which was the second most observed activity for two weeks) and involved teachers with classes, such as Film, that used the library classroom as a regular teaching area, and ITGS (Information Technology in a Global Society, an IBDP subject option). The other main group use was CAS, whether class-based (e.g. a first-aid course presented by the school’s Health Educator), an after-school activity (G11 chess club, supervised by the librarian) or student consultations/meetings with CAS coordinators. Asking questions or obtaining help from the librarian was observed infrequently, though the librarian also gave a presentation about citation and referencing to G11 during observation periods (which may therefore have made potential questions unnecessary), whilst the library catalogue was rarely consulted by students. Students appeared methodical and managed their time well, though a minority could not settle, evidenced by short attention spans, alternating with chatting and moving around the library and nearby ICT area.

Observation suggested that library use related to use of space for study, followed by ICT and library resources, so these areas informed the themes for semi-structured questions in interviews:

- when and where students studied
- IBDP class use of the library
- qualities and skills gained through experiencing IBDP
- use of library resources, facilities and librarian
- main focus of any library help
- encouragement for library use
- valued information sources for IBDP needs.

**Student interviews 2006**

Four students were interviewed at the conclusion of G11 and six at the conclusion of G12 in May-June 2006. Students were asked to participate in the research following
observation, and were selected because they either used the library regularly, sometimes or very little. There was an even span of gender and various nationalities were represented, as were bi-cultural students. Focussing on the themes identified above, the standard list of questions may be found in Appendix C. Students reflected on their use of the school library and resource needs. They also considered their study habits and qualities they may have developed during the year. In order to provide a context and to aid their thinking for an abstract concept, students were initially asked to comment on study factors for IBDP students, identified by Hayden, Rancic and Thompson (2000), and which were discussed in the literature review. In order to follow the students in a chronological manner, findings for G11 students are firstly presented.

**Grade 11 students**

All G11 students considered a school library could offer a quiet environment that may be helpful to aid study. Student A preferred to use the library for study purposes as a matter of course as did student C, who noted that ‘to do serious study, I use the quiet room ... where I can really concentrate’. Students B and D did not use the library for study purposes, preferring a more social atmosphere or to study at home. All students therefore made choices about where to study and what constituted study. There also seemed a need for socializing, perhaps to ease pressure or to seek group support for the amount of work or particular assignments, as student D observed that ‘in the canteen, we can talk to each other about the work and we don’t disturb any others’.

Library use as part of required assignments was limited and teacher encouragement varied. Two students remembered using the library once for a required assignment during the year. Another could not recall being required to use the library. C had used the library most, instancing occasions for three subject areas. One student considered that ‘the majority [of teachers] encourage us to use the library’, as another student found, whilst a third student considered that ‘they don’t bother’ because the Internet was used most of the time. The fourth student felt any teacher encouragement of the library ‘was more for specific assignments’ and that ‘compared to before, we use the library less in class’ time.
Students who had used the library for assignments were unable to suggest any required assessment of use of library resources.

All students recalled use of physical library resources during the year, though variety and extent varied: books, reference and non-fiction materials, encyclopaedias, videos and fiction books were all mentioned. Most students had used the computer catalogue and occasionally asked librarians for help to find items on library shelves, though both varied. One student (A) preferred to ‘walk around and look at the sections and maybe ask’ librarians for help. C asked librarians both for locational help and advice on possible useful resources. However, students who used the catalogue needed time to think about the question and only one student used the catalogue regularly. All students had used ICT resources and facilities. This was especially true of regular use of iBooks. A and B had accessed databases, available through the library webpage, and ‘it was really useful because of the different genres of documents’ (student B). Using the Internet was more convenient for B and the main source for D. Only one student used citation/referencing information from the library page of the school web-site.

Asked to reflect on various qualities of IBDP, three students considered time management skills the most important as ‘there is a lot of work, for me being able to plan my time and work individually has been very important for getting things done on time’ (student A). One student felt that all the qualities identified were linked. Other aspects also individually cited were independent study skills and critical thinking. Students were most voluble when answering this question, as it resonated with current experiences. Students were asked whether library use could be helpful for all aspects of the IBDP – subject areas as well as core areas. At this stage of G11, students were starting the extended essay process, but otherwise had a year’s experience of subjects and core areas of CAS and TOK (Theory of Knowledge). A, B and C thought the library could support subject studies; students A and C also included core areas. Both B and D felt that of the core, the library would be most use for extended essays. Indeed, three of the students identified previous years’ examples (and this appeared to be their view of the library’s contribution to the essay process). All students regarded teachers and textbooks as most
important information sources for their IBDP needs; library, home and Internet followed, but precise order varied. One student though suggested such a hierarchical ranking was not an accurate indication of value as ‘I’ve used all of them a lot’ during the year.

Therefore, interviewing of these G11 students half-way through their diploma programme enabled a number of focussed codes to be identified from interview data, including:

<table>
<thead>
<tr>
<th>Potential Category</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students using the library</td>
<td>Has both social and individual study needs; uses Quiet Room; thinks managing time most important; uses Internet; has used specific library resources; has used IT facilities/services of library</td>
</tr>
<tr>
<td>Teachers and the library</td>
<td>Considers some teachers encourage use of library; used library once as part of IBDP subject assignment; thinks teachers and textbooks most important for student information needs</td>
</tr>
<tr>
<td>Librarian’s role</td>
<td>Asks librarian for help; thinks library can help with core and subject areas of IBDP</td>
</tr>
</tbody>
</table>

**Grade 12 students 2006**

A group of G12 students were interviewed at the same time as G11 students. The main aim of the research was to follow students through their two years of IBDP, but these six students were interviewed to provide comparison with students in the subsequent year. Questions were the same as for G11 students (Appendix C). These students were interviewed towards the conclusion of IBDP - in some cases, after final examinations (June 2006) - and reflected on their use of the library, study habits, use of resources and qualities associated with IBDP during G12; some volunteered comments that reflected experiences during the two years.

Students recognized features of a study environment in a library, though their use varied. Student A had specific requirements and worked better in a quiet atmosphere, with no distractions, as did student B, a change from G11, when he preferred a more social atmosphere. The library atmosphere helped him not only study but also ‘if I was stressed out, I’d relax for a few minutes before the next lesson’. He also enjoyed a feeling of physical personal space, as did student C, who also used the library for quiet and space
for study but did not associate the library exclusively with such qualities. Student D considered the atmosphere meant it was ‘more effective to study in the library [as] there’s more distraction in the canteen’, and used the library as needed, but also required social study facilities more regularly than other students. D balanced qualities associated with the library with a need for peer support and collegiality that resulted from a more social setting for study halls. Student F preferred this environment and background music as an aid to study. Nevertheless, F used library facilities if there was a specific need or rapidly-approaching work deadline, though such occasions were relatively few. All the students were aware of the quiet atmosphere associated with the library and used it appropriately or as needs dictated. They needed breaks from study and tended not to study during lunch times or generally after lessons ended, as students had to fit in activities and sports commitments. For student E ‘after school in the library, there are young children and they can make a noise’ which deterred her from using the library for study after school, though this factor was not mentioned by other students. Study carrels were helpful at times as an isolation tool, to aid concentration, for some students, such as student C who considered that ‘you know there’s other people in there but you never see them, it really gives you focus on your work’, but equally could be too claustrophobic, as ‘when you’re not in a lesson, you want to spread out’. Some had used the library as part of subject-based assignments during G12. Three students remembered a need to produce bibliographies as a result of researching in the library. Two students had not used the library for any subject assignment during the year. Subject use varied, but examples were among social sciences, arts and English (IBDP groups 1, 3 and 6), and coursework for history in particular.

Time management was considered the most important aspect of IBDP by all students (except F) and became more important during the G12 year, because of the amount of coursework (which was a major difference from G11), for which there were school and IBO deadlines. Comments included: ‘sometimes it’s difficult to fit everything in [as] quite often we’ve got coursework coming at the same time for a number of subjects’ and ‘because I’m involved in activities after school ... when you ... do three hours of sport, come home and you don’t feel like getting down to study, it was definitely something I
had to work on’. Research skills were important, as students indicated that all coursework required research. Students found it difficult to isolate features, so independent study, time management and research skills were grouped together. An exception occurred, however, as critical thinking was not only the most important but the only feature identified by student F.

Most students used a similar range of types of library resources: non-fiction books, current magazines and newspapers, DVD and CD and examples of previous extended essays. Several noted their library use was not all IBDP-related, though recreational use did not include fiction (and noted by students, due to time and work pressures). For two students, the only use of resources was in relation to research for extended essays, one of whom used only general encyclopaedias. This student though had searched the library for his essay but did not find anything, nor expected to find anything, so mainly used the Internet. Students who used the library as a place for study also used library resources to a certain extent, both for academic and recreational use. Of IBDP-related use, that for extended essays was common, though one increased his use of resources in G12 as ‘all coursework requires research’ and another used ‘kids books on history’ to help revise for examinations. All but one student had used library ICT facilities (especially iBooks), mainly for word-processing and Internet access. Students who used the library also used available technology (though student F considered sufficient information for IBDP was provided by teachers and/or in textbooks, so did not). Two students used subscription databases and three students consulted library-maintained information about citation (and which the student who did not otherwise use the library particularly valued) on the library webpage. Few students therefore used databases and half took advantage of a library service providing citation information. Five used the catalogue during the year, though the extent varied as did students’ ability to locate resources on library shelves, and they all asked staff for help in finding resources, including, for one student, ‘sometimes now in lazy moments’. Four students asked advice of the librarian during the year, mostly relating to bibliographies for extended and TOK essays. One student asked for help concerning identifying and obtaining resources for an extended essay.
Students had varied perceptions concerning encouragement from teachers to use the library. Of subject areas, three students remembered encouragement and one student articulated this as a perception of book-related subjects: English, History and TOK – these were the only specific subjects mentioned by any of the students. One student (E) remembered one English teacher who ‘made us come down and actually find ten books and do a bibliography of them. And that was important actually especially for the extended essay and for college’. The remaining three students thought of encouragement in terms of general exhortation, due to perceived teacher preference for book resources over the Internet. One student had a theory that teachers considered students made extensive use of the Internet, therefore recommending use of the library was a corrective measure. Another’s experience was that only one teacher had encouraged use, whilst two other students could not remember any encouragement. Of these, one felt it was due to teacher over-reliance on the Internet and textbooks, whilst the other remembered encouragement only for extended essay and TOK.

Student perception of the library’s potential to help with various aspects of IBDP varied, though all mentioned extended essays and TOK. For subject use, three students considered the Internet was sufficient or that the library was not relevant, not least because information was provided directly by teachers and through textbooks. Two students however felt the library could and did contribute to a number of subject areas, as well as extended and TOK essays. One student required ‘solid information, textbooks not enough’. Exceptions however were made for science and mathematics, whilst history was a subject where library use was helpful. For one student, main library use was in relation to individual subjects, also noting that the library collection included materials outside the subject areas offered by the school, and that these resources were of interest to students when considering what to study at university. Two students considered their choice of extended essay topics to be unusual or new and affected their perception about whether the library would be able to help, though one found useful resources. Neither asked the librarian for advice. Some students associated the image of the library with books, and preferred this because it reflected their personality-style and a belief that book-based information was more authoritative.
When asked to rank, in terms of importance to them, sources of information (specifically teachers, textbooks, Internet and library resources) commonly teachers and textbooks were regarded as most important. Students understood the term textbooks to be those given to them by teachers for various subject areas. Some textbooks were written and published expressly for IBDP, whilst others had more general application. One student voiced a common belief that textbooks were most of value ‘because they are specifically for the IB, they are written by IB examiners, so are helpful’.

As may be expected, these students were able to provide more views and in greater detail to reflect more complete experience of IBDP. Such interview data enabled a number of focussed codes to be identified, including:

<table>
<thead>
<tr>
<th>Potential Category</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students using the library</td>
<td>Has need of quiet and space for study environment; time management most important; has used library resources for IBDP studies; used iBooks; has used library catalogue and could find things; used resources for Extended Essay</td>
</tr>
<tr>
<td>Teachers and the library</td>
<td>Used library as part of IBDP assignment/class; considers teachers and textbooks most important sources of information; consider English and history teachers mainly encourage use of library</td>
</tr>
<tr>
<td>Librarian’s role</td>
<td>Has asked for help to find resources; considers library role mainly for extended essay and TOK</td>
</tr>
</tbody>
</table>

Comparison between the two groups of students

Discussion of factors common to both groups focuses on use of library facilities, resources and services, skills and support for students.

Use of library facilities, resources and services

Use of the school library for study varied amongst G11-12 students. Both groups made choices about where and what to study, though G12 had more varied reasons, such as to better facilitate concentration, desire for personal space, time management and manage stress. Students in both years remembered using library resources for assignments, but it was not a regular way of working for any student. Teacher encouragement varied, though
there was a feeling that some teachers generally encouraged library use for studying purposes. Some G12 students identified possible evidence of library use through a requirement that bibliographies were compiled. However, Internet use by both teachers and students and textbooks were identified as reasons why library use was not encouraged. G11 students did not identify subject areas where teachers had encouraged library use, but in G12 subjects were English, History and TOK. Students in both grades used library resources during the year, and the extent of that use – both in terms of frequency and variety of resources consulted – varied. Lack of use of fiction resources in both year groups was marked. In G12, use of library resources was often in relation to essay needs. Students generally found potentially-useful resources, though an exception was in line with that student’s expectations. All students used iBooks, mainly for word-processing and Internet access. There was limited use of subscription databases. More G12 students accessed citation information on the library web-page, whereas only one G11 student did, suggesting greater need in G12. Nearly all students had used the catalogue successfully, though extent of use varied. In G12, remembered use was focussed on essay needs. Nevertheless, students in both years remembered asking librarians for help in finding material (whether identified in the catalogue or not). Library staff was mostly asked to help find resources, with few instances of advice being sought regarding helpful material, though more G12 students asked advice/help relating to citation information.

Skills
Nearly all students considered time management was the most useful attribute developed as a result of their IBDP experiences. The various attributes suggested were linked for some students, who thus highlighted study/research skills and critical thinking. With greater experience, G12 students discussed factors in more detail, with not least a considerable appreciation for the need to manage time effectively, with a perception that this could reduce stress.
Support for students

G11 students thought the library could help with core aspects (extended essay and TOK) and some for subject areas. G12 students had more detailed comments, reflecting greater experience. A prime area for library support was extended essays, though two students considered their choice of essay to be unusual and affected their perception about the potential of the library to help. Another major area of support, though to a slightly lesser extent, was the TOK essay. Students were divided about IBDP groups 1-6 subjects; even those who thought the library could support subject studies mentioned some subjects for which library support was not relevant. Overall, availability of both Internet and textbooks diminished any library role. Students considered teachers and textbooks were the most important sources of information to them, though precise order varied. This was also true of Internet, library resources and home, though all these were ranked as secondary importance. One G12 exception regarded the library as most important as research was core to IBDP. Another student considered all sources of information were valuable, and all equally used.

Therefore, findings from combined interview data suggested areas for further investigation in interviews in the following year with the same G11 students, including students’ image and perceptions of the school library/ian, their patterns of studying, use of textbooks and value of the school library to them. However, further observation needed to be made to identify a changed situation for IBDP students and the library. The development was unforeseen in 2005 when the research commenced, and reflects a feature of studying a natural situation (Bartlett et al., 2001), which can change.

Observation of student use of library: 2006-7

Observation was made at several points during the 2006-7 school year: September, November, February and, most substantially, May 2007. The purpose was to see if a changed situation in the library affected codes identified from earlier observation. Elements of the change were:
• Structural changes to the library were carried out during the 2006 summer vacation. This extended study space and ICT provision, including a new Quiet Room and a separate room for ICT. As with all inner rooms in the library, partition walls (with large sliding perspex windows) were built; no rooms were therefore sound proofed. Although options to alter the library had been formulated for some time, it was not until the relevant civic planning authority approved building alteration plans (of which library changes were only part) and the school’s Board of Directors voted funding for the changes that these became firm plans, in spring 2006.

• A separate, though related, issue amongst teachers had been concern about student use of study halls, especially in the canteen. As a result of improved facilities, all G11-12 students were required to take study hall allocations in the library. Therefore, more students used the library for study hall.

Observation at the beginning of the school year found there could be up to 37 G11-12 students at any one time in the library (compared to an average of about ten in the previous year). The kinds of activity students undertook remained largely as identified. However, increased static ICT facilities resulted in slightly reduced borrowing of iBooks. To assist study and concentration span, students were allowed to use personal stereo systems with head-phones, which had previously been not allowed in school and was limited to library-use only. As more students were necessarily near to library resources, increased use of such resources was noted. At times, noise levels increased, due to larger numbers of students, though – with the partial exception of the smaller internal rooms – social use of the library initially remained somewhat limited. The introduction of school-based email and chat systems also had an impact on what occurred during study halls. As a typical example, the researcher noted on 25 September 2006:

1000 hours: G11 students in L2 – borrowed iBook, used textbooks and files, low-level chat. In library, one teacher with a student; 3 G11 students at one table (one of whom moved to an easy chair to read his textbook by himself); 2 G11 students at another table – borrowed iBooks. One G11 student studying by herself at another table; G12 student at the same table. All working with textbooks and files. Teacher working just outside L1 needed to speak to students in L1 about noise. 12 students using this room, mixture of working on files, checking Internet and
emailing – the school mail system, which is allowed, and others, but shut down when librarian came into view. Chat throughout. 22 students signed in for study hall in the library for this period.

As the year progressed, observation identified that pressure on seating space was experienced. In February 2007, the researcher noted that 55 G11-12 students were in the library. (The library had 60 chairs of various kinds, acting as de facto maximum seating.) At times, students did not appear to have a reason for visiting the library, nor any discernable activity during study halls. Students colonized areas of the library, especially those students who (because of subject options) had more study halls than others during the regular school day. Abuse of computer facilities was experienced. Behavior deteriorated, with more infringement of library/school rules, i.e. eating and drinking, sleeping, viewing inappropriate material on computers. The librarian spent considerably more time on supervision and discipline, on occasion locking one or more rooms in order to maintain supervisory levels. At times, technology facilities were not available, because of abuse and litter. The librarian was the only person who supervised students on study hall (and any other students present in the library without a teacher) throughout the regular teaching day (0830–1530 hours). Noise levels considerably increased when large numbers of G11-12 students were in the library, when typically little work was undertaken. Although one room was called ‘The Quiet Room’, during the year it became impossible to maintain the integrity of this environment, as students continued to chat to others in this room, in spite of regular reminders from the librarian.

Further observation was undertaken to document what was clearly a changed situation in May 2007. Observation of library use by G10 and G12 was undertaken on 10 May when these students did not have regular classes but attended school to sit external examinations (IBDP and IGCSE respectively) and, between examinations, visited the library. (G10 students were included in this observation as they would become G11 in the following academic year, and this would be their first experience of study hall-type library use.) Some students reviewed or revised for future examinations, studying quietly with notes and files. Some studied in small groups, with relevant conversation. Students also relaxed in small groups after examinations and conversed for both social and
revision purposes. They stayed in year groups and used different areas. The weather was hot and as the library was air-conditioned, this may have been a factor in whether students visited the library. Some students visited only to chat. Noise levels rose and the librarian repeatedly had to ask for quiet. The researcher’s notes for one ten-minute period identifies the sorts of activities and use students made of the library at this time:

- **G12 student, sleeping in L2** ... grade 10 students looked at the collection of previous exam papers ... another G12 student was visited by several other students to chat, one of whom could audibly be heard to say ‘Are you studying on a Friday, you must be mad’. Three students continued to talk loudly, ignoring a grade 11 student at the far end of the room, who was studying, though she had earphones on. Joined by two more students, who continued to chat. One student parked a collapsible scooter on a desk. ... 3 grade 12 students sat at a circular desk in the library. They got out their files, but immediately began to chat. They realized their voices were loud, and proceeded to talk more quietly.

Bags, a collapsible foot-scooter and other equipment were left whilst students went elsewhere in the school. By 1300 hours, L1 had been closed due to litter and left-over food. Students made little use of library resources, and whilst some students did study, the function changed to a social area. Throughout the day, students automatically proceeded to an area they regarded as their own. Upon finding this room locked, due to previous abuse, they had to think where to sit and what to do. They borrowed iBooks and noise levels grew in the main library room. At one point, 29 students (G10-12) chatted, used iBooks, some possibly studying, most doing more than one thing at once. About five of these students were working on their own.

Observation of G11 students on 14 May 2006 found a similar pattern, especially regarding colonization of areas of the library. Here the researcher noted that most students congregated in the room furthest away from regular supervision. Also, the ‘librarian asked students to be quiet in this room. There were 13 students, using 2 iBooks, one magazine and one book between all students, most were chatting in small groups.’ At the same time, in another room, two students shared an iBook ‘also looking at a mobile phone, chatting. One of the students sat to one side, did not have any items in front of him, and looked at the other’s iBook. From time to time, these students looked over to where the librarian sat in the main room’. Overall, although a few students used the
library for resources and more did for studying, library function for G11 had substantially changed and became a place where they had to be during study halls, or indeed a common room or student lounge. Little use was made of resources, except computers. They used the library socially and had preferred areas, usually where they felt they were not supervised.

New codes
Observation at the beginning of the school year identified little change or addition to new codes, except more G11-12 students in the library at any one time. However, by the end of the school year, new codes focussed on social use and colonization of the library by greater numbers of IBDP students, who had to be in the library for certain periods of the school day. New codes may have a bearing on G12 student interviews, which were conducted at a similar time.

Grade 12 student interviews: 2007
The four students who were interviewed at the end of their G11 year were also interviewed at the conclusion of their second and final year (April-May 2007). Findings from interview data in 2006 suggested areas to research through interviews with the same G11 students after they had experienced G12 in the following year. These were:

- Student image of the school library and whether views had changed
- How students studied and researched: importance of quiet individual study in G12 and changes in their pattern of studying; use of textbooks and ICT.
- Use of the library, prior to IBDP (validity of pre-IBDP use of the library, affecting how the library was used for study)
- Perception of main role and function of library/ian in IBDP
- Reflection on whether the library was of personal value
- Teacher encouragement of use of the library
- Improvements to the library for the benefit of IBDP students.
Although findings from observation in 2006-7 were not specifically addressed as a question area in interviews in 2007, the researcher considered that relevant issues were implicit in the question areas, and could be brought out through supplementary prompts (which was the case for some questions, though students also alluded to the changed situation of their own accord). The standard list of questions may be found in Appendix D.

*Student image of the school library*

When describing the library, students tended to use either language of a utilitarian nature or values or attributes that meant something to them. As such, comments included: ‘research’, ‘silence’, ‘study space’. Overall, students considered the library was a place of quiet, possibly silence, which aided their concentration. Two students at least felt something positive could be achieved from library use; this could be study or, slightly less often mentioned, research. Three out of four students mentioned resources, one very positively, referring to a sense of motivation and creativity from looking at and using resources, whilst another identified ICT as an important feature of available resources. However, such a positive view was not universal. For one student, it required physical and mental effort to visit the library and search out resources, as ‘the act of actually walking to the library to look for it just sort of seems more hard’, whereas the Internet was more convenient.

As a study environment, all students had preferences. They used the library as a quiet place, to aid concentration and used it more as final examinations approached, in order to review notes and other material for different subjects. One student referred to the library as providing ‘space where you can just study and focus’. Only one student referred to comfort as a factor for venue choice. Students were aware of other places in school to spend study halls and the option of studying at home; two students were able to study successfully at home. Another preferred the library environment, especially as ‘school finishes too late’ and a long journey home left her too tired to work successfully in the evenings. (Whilst students were not asked about their home environment or distances traveled each day, these may have been factors in preferring use of the library.)
Nevertheless, the three students who used the library noted it could not always offer quiet, due to pressure on space and volume of student traffic, which could threaten the environment they preferred or valued. Indeed, one student used headphones to ‘isolate myself from any interruptions or anything that is in the library’.

**How students studied and researched; use of resources**

Study was associated with ‘study halls’, 45-minute periods when students could visit the library individually. During this time, they tended to complete homework or other assignments, then reviewed or revised for final IBDP examinations, which was a considerable work activity for several students. Three students used individual, quiet study for their short and long-term needs. Students thought and planned ahead and managed their time, though only one specifically articulated this skill: ‘I feel it is more efficient to spend the time in the library’. Their aim was to be efficient. As a strategy, students blocked out interruptions in the library (and classroom) either as a mental exercise or by using headphones. Study halls spent in the library enabled students to achieve some or most of the above, whilst those spent elsewhere tended to be more social in nature, for one student ‘talking with friends’. One student preferred not to use the library, valued a more social environment for study, and had set up an informal network of group support, both in school and elsewhere. This had the advantage that ‘if you have any problems you can raise it, and they can teach you how to do it’. As interviews were held shortly before final examinations started, all students were actively revising and two students showed that they were skilled or had practice in summarising material. One student observed that her strategy had been to ‘summarise more for review purposes’.

All students used the Internet for research; some used it in conjunction with other resources, though it was not clear whether they used the Internet first, then other resources as required, or in a more mixed manner. However, one student used the Internet exclusively for all research. Several students perceived a need to be more efficient when searching the Internet, mostly because of limited time (something students were increasingly aware of during G12) and work pressures. One student’s strategy to reduce the amount of results was to use more keywords, and noted that ‘Wikipedia [has] now
come out and that’s got almost everything, so that’s quite useful, otherwise it takes me ages to find the information I want’. Students knew they could be presented with, as a search result, too many sites, some of which could be too detailed or not providing sufficient information; several felt printed resources could and did offer more tailored and quality information for their requirements. One student in particular indicated research was more common for subjects where they had not been provided with textbooks. Several students’ view of the library had changed during the course of IBDP and saw the library as both a facility in which to study and from which to obtain information. One student commented that it was ‘completely different once you start the diploma and you appreciate how much resources you actually have in the library’ and used the library as ‘more as a resource and [for] research’. Even the student who did not use library resources thought choice should be available, i.e. use of Internet or other resources, whilst another student referred to appreciating access to non-Internet resources, if necessary.

Students dealt with considerable amounts of content in their subject courses, and in more depth in G12. In terms of overall resources for IBDP, provision of subject-specific textbooks was very important. For one, views on structure of subject syllabi varied depended on whether textbooks were available, as he perceived a subject had more defined content if one was available. Another preferred ‘especially IB textbooks, they’ve got everything in them’. Their use of ICT for IBDP subjects was characterized by that of Internet, followed by word-processing/typing, then e-mail (which could include sending assignments from their school file to a home address and vice-versa). Students noted less use of ICT in class as lecture-style teaching increased during G12.

Use of the library prior to IBDP

Students who used the library changed their views about the facility during the course of IBDP, whilst one student who did not use the library, did not. Students interviewed represented several nationalities and three had lived in other countries. Their life experiences were deemed to be typical of the international nature of the student population. Students had wide and varied experience of schools, both international and
national (private and publicly-funded) and this applied to libraries. Several of the students interviewed had not experienced a library in another school. One student’s previous use of large public libraries was recalled in a way that suggested the experience was daunting. This student also reflected that ‘I’ve learnt how to navigate the library a little bit better, so I’m more focused in where I go – at the same time, I enjoy just going around and looking at the books, so in that way it is the same as before’. Students’ use of the library during IBDP was a different pattern than previously, which was more recreational in nature, i.e. used for borrowing books. One student suggested that more specialised or detailed information was available in the library than in classrooms. All students appreciated the library could be used as a quiet working space, and three valued this aspect of library provision. One specifically noted he visited the library much more during IBDP than previously, mostly due to timetabled study periods. Students considered their use of the library during IBDP was more structured and focused – on study and research. The information role of the library was a new experience for most students, except one who had used the library prior to IBDP for searching for information.

Teacher encouragement of use of the library
In G12, three students noted encouragement to use the library by members of the English department only. This was the only specific subject department named. Otherwise, students thought they were not encouraged to use the library by teachers. One student articulated an assumption that G12 students would use the library and would only be mentioned by teachers if work standards deteriorated. One student thought that library use was ‘more something you have to do individually, you’re supposed to take that responsibility to go down’ to the library. She also thought that ‘I don’t feel we’re encouraged, more than the iBooks stuff’, a reference to the loan service of laptop computers for class and individual IBDP student use. Two students overall considered library use was an individual responsibility they undertook. Another was surprised that it was only from one subject department that he was encouraged to use the library: ‘I didn’t really expect it to come from English [but from subjects] like chemistry or physics because it’s the more factual things, and not all facts can be covered through class’.
Perception of main role and function of library/ian in IBDP

One student was unsure of a library role in support of IBDP, thought it may have an elevated philosophical role, but however used it as a place to study. This was true of two other students, one of whom referred to the library as an ‘informative place to study’, as it was impossible to separate the two roles of study space and resource provision. However, a student who did not use the library considered the main role was to assist with research for coursework. Of the main role of the librarian, there was some agreement that it should and did focus on guidance about use of resources; one qualified this by specifically linking it to extended essay needs. Another considered guidance was helpful as the process of selection was difficult, though such help was less required in G12 due to increased familiarity with the library, though ‘in 11th grade, we are completely lost’. For one, the most visible role of the librarian was as a TOK teacher, but who otherwise provided guidance with citation and referencing, skills the student had not needed prior to IBDP. The student who did not use the library used language to suggest the response was theoretical, but believed the librarian knew the best resources for student needs.

Reflection on whether the library was of personal value

Three students personally valued the library for the use they made of it. Comments included ‘it gained more importance to me for studying’ as a space for ‘my quiet, concentrated working’ by a student (who referred several times to pressure and how to manage it). Another student was ‘impressed by this library, I think it is very useful and I can find what I want’. The third student had a belief that ‘you can’t go about it [IBDP] without a library cause that’s really the place they need to be to do the studies’. One student nevertheless considered it was not of value to him as an IBDP student, mainly because ‘the Internet, it’s got everything now’. However, throughout their interviews, students did not mention use of subscription databases, catalogue or the library webpage, which contained citation information and access to various databases, but focused on the library as place and an environment, with physical resources, that helped them study.
Improvements to the library for the benefit of IBDP students

A question about improvements that could be made to the library specifically for IBDP students produced a variety of responses, both specific to the question and wider. Two students were broadly satisfied with provision and their use of the facility, though one recommended more specific resources, including those to support the TOK essay, and promotion of these resources at the appropriate time. This was the only response that focussed on specific resources. The other broadly-satisfied student suggested more space ‘because there were times when our whole grade had study halls ... and we didn’t have enough study space, and it turned out not to be so efficient anymore’. Another student suggested a different way of structuring lessons, allowing for more in-depth coverage and limiting class interruptions. A model was the seminar week in October (when the normal timetable was suspended for G12 students in order that they may finish their extended essay, and work on TOK and college application essays), when he noted that ‘the library was really the place to be’, and thought he achieved a considerable amount during such a dedicated time. The fourth student thought it was easier not to use the library though suggested that greater promotion amongst students may increase use. He articulated a conundrum that the library contained sufficient resources, but ‘why people don’t go to the library is because the textbooks are given in class and then we’ve got computers everywhere now and I guess everyone thinks it’s much easier to just go and get a computer and ... research’.

A number of focussed codes were identified from this interview data, including:
Teacher interviews

Another strand to the research was identifying views of the other main group of the IBDP school community. Teachers were interviewed in 2006 and 2007; those in 2007 provided a comparison with 2006. Grounded Theory suggests development of research as data emerges (Charmaz, 2006), however each group of the IBDP school community is treated separately in this results chapter in order to provide coherence to their stories and perspectives, particularly as emerging categories indicated that each group could be the focus of a category.

**Teacher interviews 2006**

A number of areas were identified from observation and the literature review to form the basis of interview questions for teachers. These comprised: pedagogical use of library as part of teacher education and IBO workshops; views on study halls, library provision for subjects; using library for IBDP subject assignments; teaching resources; qualities and skills students develop through experiencing IBDP; plagiarism; and their view of a librarian. A list of standard questions may be found in Appendix E. A representative from each of the six IBDP subject groups was interviewed, to reflect the studied curriculum and how students followed IBDP. Background information is provided, then the interview findings are discussed in relation to
Teachers’ experience of school libraries

None of the six teachers interviewed were able to recall anything about school library use as part of their teacher education experiences, with the exception of one who remembered (whilst on practicum) that he ‘used the library for a project’. One noted that education focussed on ‘teaching methodology, really, not so much resources’. Teachers were asked specifically about education or awareness in pedagogical use of a library, but a number of
respondents interpreted the question to be about resource provision, although there was some connection with and use of the terms ‘research’ and ‘study’ (and one considered that research needs for IBDP were similar to her needs and use of libraries as an undergraduate in North America). Three teachers therefore specifically commented on use, and one indicated influences from departmental colleagues who used the library as part of pedagogical practice. Similarly, none recalled mention or coverage of library use in any workshops organized by the IBO that they had attended. Comments included: ‘I attended an IB English A1 workshop and the use of the library was not mentioned’. This also applied to any workshop input about extended essay supervision. Comments however again indicated an implied relationship between the phrase ‘use of library’ and resource provision, rather than pedagogical use of the library.

**Teachers’ use of the school library**

Four teachers had used the library as part of an assignment for IBDP students, though one had only used it once in this way. Two visited the library with groups, but otherwise all four had required students to research individually, including study halls, which varied for each student. Assessment varied, though two teachers mentioned bibliography. One teacher specifically indicated a role for a librarian in assignments utilizing the library and liaised with the librarian in advance about sessions. One teacher was concerned that library opening hours were not appropriate for his subject (as the subject was taught after the regular teaching day). Another’s use of the library had developed through working in ‘six international schools and with six librarians’. Several considered their role was not to directly use library resources but rather to encourage student use; one teacher promoted the use of databases, though not the library catalogue, which he assumed students already knew how to use.

Of use of the library for studying by students, five teachers perceived studying in a library as being more serious, purposeful and conducive to studying than the main alternative for students, a canteen, where students ‘tend to socialize’. One teacher referred to an ‘affective benefit’ in using the library. Use of library resources was suggested as an optional extra feature by some, but the over-riding requirement was that a
quiet atmosphere for study should be available. A problem of space at the school was identified, as two teachers held pragmatic views about only limiting study hall location to the library, for instance ‘we have a small library, a big canteen’. Another teacher based her view on her own use of libraries as a student, where she would ‘study, and not specifically use those materials … from personal experience I love the library quiet’.

**IBDP curriculum and the school library**

Regarding development of library resources for IBDP subjects, all teachers recommended items reflecting their subject areas. One teacher noted that ‘whenever we teach a new novel … we would let the librarian know we were teaching that book and he was responsive’, also remarking that ‘because he orders the school textbooks, he would sometimes be the initiator’ in obtaining supplementary library resources. Two teachers were aware that the librarian was also (then) responsible for administering departmental orders, so would be ‘pretty much aware of what we’re doing’ (e.g. set texts and topic areas in English and History). They therefore considered it superfluous to directly inform the librarian of new course content. Departmental or ‘personal libraries of books’ of teachers were also available to students, in one case maintained because of distance and convenience, ‘otherwise we’d gladly store them [in the library] if we always had access to them’. Concern about adequate library resourcing for a group 3 subject (history) was considered common to international schools, as ‘every international school library I’ve been in has a problem with sources’ remarked one teacher, though noted that the library in this study compensated for limitations (in terms of access to various English-language resources in Japan) through use of subscription databases. However, such issues for international schools were only mentioned tangentially by one other teacher. Most teachers felt they were aware what was available in the library collection, though only three used the catalogue to identify resources; one, who did not use the catalogue, remembered where relevant library sections were. Group 1 teachers used the library ‘as a source of information generally and ... a lot for literary criticism and then also for historical background’ for specific works of literature being studied. Teachers generally cited a range of sources and specific resources for their teaching needs, though only one included the school library as a resource. (Four teachers mentioned the OCC, the Online
Curriculum Centre, which was hosted on the IBO website, as being a useful resource.)

Overall, teachers considered that the library collection should be balanced between book or print resources and database provision. A few teachers were particularly concerned that book provision should continue to be an integral function of the school library, expressing personal opinions about the value of books. Teachers for groups 1, 2 and 6 considered the library had and should have a role in the subject aspect of IBDP. For group 4, this role was limited to providing alternative textbooks as student time and need to research beyond what was available in textbooks was not possible or necessary as ‘if students get the information from sources, then we would find they would spend considerably more time than we have’. The library was perceived not to provide relevant resources for extended essays in science, but the teacher recommended that students go ‘not to the library, but to go to the librarian’ in order to obtain specific items. There was no role for the library in Group 5 subjects as there was no ‘reason to send maths studies diploma students to the library [for information] that they can’t get out of the textbook’. From a Group 5 perspective, as far as extended essays were concerned, any library usefulness was ‘quite limited’, as it depended on subject or topic area. If a student’s essay required primary sources, the library would not be able to support that student.

Information literacy

Teachers were also presented with findings from Hayden, Rancic and Thompson’s (2000) study about the most important qualities to emerge from students experiences of IBDP, and asked to comment in the light of their own experiences. Whilst exact placings varied, common responses were time management, research skills and critical thinking. One teacher considered that ‘if you don’t have that [time management], well, you’ve got a real problem. I think they should have that before they enter into the diploma’. Another reflected that IBDP ‘requires them to juggle quite a lot of different things, covering six courses, so time management skills are vital’. To combat plagiarism, teachers had different strategies, relating the issue to their subject discipline. Ongoing education starting in middle school was felt to be an effective strategy, though as students continually arrived at the school, reminders of standards and procedures needed to be made. ‘I always steer them clear of dubious websites’ was the comment of one teacher,
who stressed ‘they’ve got to have a comprehensive bibliography’ (comprising books, journal articles and Internet sources), together with a concern that students used the Internet too much. The issue of plagiarism was felt to be of special relevance to group 3 subjects (specifically history), whilst teachers for groups 2 and 5 considered it was not, due to the structure of teaching and learning in their subject areas. Only one teacher specifically identified a role for the library or librarian in this regard (and instanced working together to check citations in assessed student work), although another noted that a guide to citation and referencing, developed and maintained as part of the library webpage, was used considerably with students. Some teachers were also aware of a concept of plagiarism being a Western one, and therefore of concern in relation to Asian students, who may not necessarily culturally understand or appreciate the implications of copying.

Teachers’ views of a librarian
Teachers were surprised at being asked to define a librarian and needed time to reflect. Several initially made jocular remarks, such as ‘magician’, though answers subsequently focused on resource management, disseminating information and information literacy, one drawing on previous experience of resource development with a librarian. One teacher mentioned ‘educator in how to go about understanding resources’ and another referred to a role in ‘teacher training as well as student training’ in the use of resources. One felt that a librarian provided a service, as the latter was ‘a person to whom you go for information’, who is ‘able to efficiently direct you to the right place where you are most likely to get what you are looking for’. However, two teachers, though proffering some functions of a librarian, ended comments inconclusively, for instance ‘I dunno’. One concisely offered a definition as ‘someone who runs a library’, but indicated that was a limiting and possibly meaningless definition, in the same way his specialism was defined.

Whilst answering this question, one teacher asked if he could make a detailed comment about supervision of students, and a system he had known in another school. Identifying a role as supervisor of study halls, the teacher considered that ‘where a librarian has to do it, it drives the librarian crazy, because they are having to do two jobs’, including ‘having
to be a disciplinarian, telling people to shut up all the time and ... make sure that all the people you know act up, don’t’, concluding that it was not ‘really fair on the librarian either’. An alternative, formal system, where students had formal study halls with a person solely employed to supervise them, in which there was ‘constant movement, as they were signed out to go to the library and come back again’ was ‘really resented’ by students and did not help prepare them for university life. Such a system, the teacher observed, was in place with ‘schools that have the luxury of space, money and staff’, whereas ‘for us, it is a matter of finding the space’, hence the library was used for study halls, and the librarian to supervise them.

From these initial interviews with teachers, a number of focussed codes were identified, including:

<table>
<thead>
<tr>
<th>Potential Category</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students using the library</td>
<td>Teachers’ pragmatic views about study halls in library; saw library as a place to study for students; study halls in library could be more effective – offers study space and resources; time management most important skill for students; teachers varied perceptions and approaches to plagiarism</td>
</tr>
<tr>
<td>Teachers and the library</td>
<td>No role for library in teacher education; library not covered in IB workshops; library had limited role in IBDP subjects, except for English and History; teachers found time-pressures to teach high content courses; no time to encourage library use; used resources occasionally; teachers didn’t use term ‘information literacy’</td>
</tr>
<tr>
<td>Librarian’s role</td>
<td>Teachers advise/ask librarian about library resources for subject; teachers thought librarian had several roles; teachers unsure of librarian’s role; supervisor of students</td>
</tr>
</tbody>
</table>

Interview data indicated areas of interest centred on identifying main functions of the library in support of IBDP, any value in using the library for IBDP assignments and whether teachers assumed students could use library resources independently. Also, relevance and promotion of citation information, role of the librarian in supervising study halls, whether the school library helped IBDP students further achieve and ways in which the school library could be improved for the benefit of IBDP students and teachers.
Different teachers were interviewed in 2007, mostly due to staff changes, including maternity leave, sabbatical and resignation to teach elsewhere. Four teachers were interviewed, representing main subject areas (English, mathematics and science) together with the IBDP coordinator, who taught in two IBDP subject groups (1 and 6) and could also offer views reflecting the whole IBDP. Interviews of teachers concluded after the fourth interview, as the cumulative interview data enabled similar codes to be generated. Though teachers’ experiences and views could vary, nevertheless there was a significant degree of agreement. Findings are discussed in relation to:

- Teachers’ experience of IBDP
- Information literacy
- Student use of the Internet
- Library role in IBDP
- Study periods and the library

**Teachers’ experience of IBDP**
Two teachers had previous IBDP experience in international schools, and of an environment where IBDP was seen as inclusive, so as many students as possible would follow IBDP. Another teacher had previous experience of an environment of voluntary post-16 years education, where all students undertook the same curriculum. Therefore, the practice at the international school in this study was not a new one for teachers, though two noted implications for teaching students with wide ability ranges at IBDP level. Teachers therefore had a body of previous and present experience on which to draw in making their observations and responses to questions. A standard list of the questions used may be found at Appendix F.

**Information literacy**
Implications for library use/research were identified as all teachers perceived the need for students to have had a history of effective information-handling (preferably library) use earlier in their school careers, and could be a factor in order to successfully using a
library for IBDP. For English, ‘maybe they’re not being encouraged to come and look up their criticisms ... from an early enough age, because they don’t automatically do it when they are in grade 11 and grade 12. They have to be given it as an assignment in itself.’ Teachers brought out different facets of use: ability to use various different resources, understand how libraries were arranged and bibliography construction. One teacher brought out a need to move beyond ‘a general blob bibliography, not referenced in the text’ and recommended introducing in-text citation to G10 students. All teachers identified the need for students to have a heritage of library use and relevant information-based skills. (The term ‘information literacy’ was never used.) One teacher referred to expectations of students identified in the IB Learner Profile (IBO, 2006a), which contrasted against students being ‘spoon-fed’ information. All teachers mentioned ability to construct a bibliography (though only one specifically mentioned in-text citation) as important and applicable for all IBDP subjects and areas. Teachers were agreed that developing these particular skills needed to occur prior to students starting G11, if possible in middle school years. Two teachers mentioned the desirability of a standardized citation style, and one particularly identified the Harvard style. Concerning use of the library for subjects, teachers’ views varied: for one subject group (5), the library was not relevant, whilst another taught each lesson in a library setting (Group 6). One teacher (Group 4) had tried assignments using the library, whilst another (Group 1) thought it may be necessary in future in order to encourage students to work in a desired manner. However, limited time and the need to cover content were constraining factors for teachers. As there was regular movement of students in international schools, skills needed to be revisited and it was essential that students had sufficient skills before they started the diploma. This required a consistent, whole-school approach, which should be the responsibility of all teachers, ‘not just the responsibility of the librarian, because that is too big a job’. One limitation was a lack of a coherent approach by teachers regarding ‘research, how to reference or cite’ information.

*Student use of the Internet*

A theory that more able students used the Internet first and then supplemented with other resources, whilst less able (possibly ESL) students copied such practice, was suggested
by one teacher (who thought that the overall quality of ICT use in the library was low). However, less able students did not go to the second level, i.e. looking for other resources to supplement information found, and moreover found Internet sources difficult to understand. Two teachers had reservations about students’ own selection of websites, one teacher (Group 1: English) preferring library-recommended ‘respectable resources that could be used on the Internet’. For Group 5, students only needed to use the Internet for research, no other resources. The group 6 (Film) teacher observed students, when asked to research, used only Google and ‘spend aimless hours meandering through websites that have very little resemblance to anything useful and they don’t know that it is not useful’. The group 4 teacher noted that IBDP documentation discouraged students from only using Internet sources, though ‘there is this level of confusion about what’s required. We are told quite explicitly what’s not required but not what is required’.

**Library role in IBDP**

Teachers’ views about library use focussed to a certain extent on extended essays. The group 1 teacher identified implications for students living in non-English-speaking countries as ‘international schools are run around English as a common language’, and remembered that she ‘always made the point about the difficulty of obtaining critical resources in English’ (when writing a supervisor’s report), concluding that ‘the library is very, very important, not only for what’s on the shelves, but for what goes on here’ in terms of finding resources. The group 4 teacher noted use of the librarian to recommend and/or obtain useful print and electronic sources (though had concern about whether the effort was rewarded in terms of awarded grade). The group 5 teacher was most focussed on essay needs (specifically a ‘set-up where we can borrow things or get the journal articles from somewhere’), as he considered that this was the only role of a library for mathematics. The group 6 teacher suggested a wider role was possible as a library was ‘an indispensable part of the full diploma programme’ and could provide a wealth of resources for personal subject assignments, coursework, TOK and extended essays, enabling students to ‘take a very personal route into their study’. As the ‘strength of IBDP is that it allows for independent study and so the library has got to match that as well’. With the exception of the group 5 teacher, there was some indication that the
library could support IBDP subject groups. (The group 1 teacher noted availability of background information about writers and critical works about set texts. The group 4 teacher had set up assignments involving the library in research. The group 6 teacher taught the class in the library, using a collection of resources maintained by the library on a regular basis.)

Teachers generally assumed students could use resources independently, but as one teacher remarked, it was ‘a false assumption, but it’s an easy one for teachers to make and allow themselves to make’. The assumption being students could walk into a complex resource such as a library and select specific material at the ‘right level’, when they found it difficult to extract information from more than one textbook at a time. Another considered that ‘we get so wrapped up in our own subject, that we forget all the periphery that goes around it, things like study skills, use of the library’. So, the assumption needed to be articulated by teachers with students. One teacher however considered teachers may not use the library themselves and so be unsure of what the library contained or could offer. There was a role for teachers in making a connection between the library and their subject and should not be left to the librarian, not least because of a possible perception of vested interest. Another aspect was the short period of time that students enrolled at the school, so that skill development needed to be revisited to promote parity of opportunity.

Students required a reason to use the library, though when they perceived a use, there was a belief students would value it. Two teachers expressed such a view, though one doubted whether, if not in the library because it was the study hall venue, students would make the effort to visit. For another teacher, the library was of value, but only for more able students. Teachers were agreed that students would only value the library if ‘the teacher actually sees the library as a resource and uses it’, thus modeling use for students. However, a prevailing stereotypical view of libraries meant that such facilities were associated with ‘only the “nerds” who really go there’. [This was not necessarily a disparaging comment about specific students, but a view that was based on stereotypical media promotion of library users, both school and public, in this teacher’s view.] One
teacher expressed a need to establish a culture, value and clear expectations in the school about the library role.

Two teachers were concerned about lack of documentation or reference to the role of libraries in IBDP curricular literature, particularly in subject areas of the OCC (Online Curriculum Centre), and which one said ‘needs to be made explicit’, as the subject areas of the OCC would be the only place he had reason to consult. The other thought it was a ‘shame’ there was no mention, as the library was ‘a good resource and ... should be in the armoury for teachers to use. But I think it tends to be something which is not valued greatly ... because it’s not explicitly mentioned ... it’s not a priority’. [The two teachers were not asked about IB documentation, but identified the issue themselves, independently.] Another teacher (who, through a supplementary prompt, was asked) thought there was a reference to libraries somewhere in IB documentation, but was unsure. He thought that explicit reference to use of libraries would be helpful to validate the library role and encourage teachers to support and promote such a role.

None of the teachers referred to a library/ian role as an agent for curricular change in a school. Teachers saw the role as one of resource support, to them as well as students. Three teachers indicated the library had a role in supporting teachers with subject-based resources for IBDP, the group one teacher commenting that ‘we’re in the same boat as the students’. A distinction was made between support for subject teaching and teachers’ professional development, especially current information about pedagogy and international education. Of the latter aspect, three teachers indicated that a library role was valid and valued. As one remarked ‘one thing I like is the library getting journal articles that basically keeps you up to date’ and letting staff know the contents by email.

*Study periods and the library*

Teachers were equally divided about a value in hosting study halls in the library, though all thought it was not a librarian’s role to supervise or, as several teachers mentioned, ‘police’ students, and teachers recognized that G11 students in particular required supervising in a ‘semi-quiet working environment’. Other study systems, which they
either had experienced as students themselves or as teachers, were recommended. One teacher remembered using the library for research as a student, whilst another referred to his own school library use as an older student, and it was clear that the present situation was similar to his own school experience. This teacher noted that he did not encounter a librarian until he was an undergraduate.

The group 4 teacher particularly noted the existing system was not useful for the library nor the librarian, who was seen as exercising supervision and discipline, and theorised that students perceived no structure to study halls, but rather as free time, therefore did not study. Teachers identified lack of space in the school due to an increase in student enrolment, which had implications for the library: one referred to students being ‘herded to the library’. Due to enforced study halls in the library, perception of the library’s function was obscured, and became just ‘another room’ where students had to be. Indeed, it was not an appropriate venue for maths study halls, due to need for group discussion. However, one teacher considered independent study to be a feature of IBDP, for which the library needed to cater: if study halls did not take place in the library, students would not make the effort to visit voluntarily. Nevertheless, for another teacher, a change of system may promote a more ‘pro-active’ relationship between librarian and students, obviating a need for the librarian to exercise a disciplinary function, where the librarian concentrated on helping ‘particular students to do what they are doing’. However, one teacher considered that there was a benefit in the library being the main venue for study halls, as, if this was not the case ‘then you are divorcing the library from study and the students, to be fair to them, are not going to walk down two flights of stairs, generally, to go to a library’.

Three teachers identified space issues in the school, resulting in the library being used as the study hall venue. The library was shared between the whole school and tensions could result when different uses were occurring at the same time in a limited space. One teacher indicated that he would not consider sending students to the library to research as students may not find space or be distracted by other students who were in the library for study hall. Against rhetoric about promoting a library culture and values, a reality was
that the library had become a ‘dumping ground’. One teacher painted a word-picture to identify the situation:

*On a wet lunchtime, it gets busy, and the librarian is trying to do something, and it’s just full of rowdy kids because, you know, when it’s wet and windy, they go a bit mad in the library, which is more problematic when it is a shared library between elementary and middle and high school students, because they work on a different timetable, so one student’s lunchtime is another student’s reading time.*

This was a challenge for the library, which, as a whole-school community resource, tried to ‘ensure that everyone’s needs are met’ and was a conundrum as the library needed to ‘be all things to all people and it’s never going to be everything to everyone, is it, I don’t think’. A suggestion from another teacher was a separate library for IBDP students, as a K-12 library did not work for 16-18 years age range: ‘by the time you get into the diploma programme, you really want these kids to think beyond grade 12’.

A number of focussed codes were identified from this interview data, including:

<table>
<thead>
<tr>
<th>Potential Category</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students using the library</td>
<td>Students needed previous practice in skills to succeed in IBDP; concern that students don’t have history of using library/exercising research skills; citation skills should be useful for all IBDP subjects; value in students having study halls in library; teachers think library can help students, but students need a reason for using library; teachers had concerns about students’ use of Internet; used Internet too much</td>
</tr>
<tr>
<td>Teachers and the library</td>
<td>View of libraries influenced by their previous experience; to requirement by IBO to use libraries; used resources occasionally; teachers felt they encouraged library use</td>
</tr>
<tr>
<td>Librarian’s role</td>
<td>Librarian should help students research in the library; librarian shouldn’t spent time supervising study halls; librarian role focuses on extended essay; librarian not seen as agent of change; unclear supervisory role</td>
</tr>
</tbody>
</table>

**Observation of teacher use of library 2007**

As teacher use of the library was mentioned most directly by two teachers during interview, therefore observation of use of the library by High School faculty was undertaken for one week in April 2007 to provide data comparison in line with grounded
theory principles. (However, it should be noted that a purpose for visiting may have been other than IBDP-related as most teachers taught a broader range of students than G11-12.) Approximately 53% of faculty (29 teachers) made 61 observed visits. Some teachers visited the library more than once during the observation period. Departments or specialisms represented by these teachers were: English, Drama, Film, History, Languages (German, Japanese, Spanish), Physical Education, Science, Social sciences (Economics/Geography/History), Social and Emotional Learning Support, and Humankind, a middle-school curriculum area. Time spent in the library varied from a few minutes to complete school periods. The purpose (or purposes, as some teachers undertook more than one action per visit) of visits were in four main areas, listed in order of frequency of observation:

- Use of library resources
- Teaching classes and groups, classes using library resources, meetings
- Enquiries to library staff
- Marking, lesson preparation and space to sit to use own iBooks.

Use of resources ranged from consulting items, selecting and borrowing resources (DVDs, cameras, books, periodicals), using photocopier and stationery equipment and consulting the computer catalogue. One library room was used to teach regular classes, individuals or small groups of students and meetings. It was possible to distinguish between classes that used library resources and used library rooms as a classroom, possibly due to shortage of space in the school. Some classes used library resources (grade 6 students for English and Science and IBDP Film), though for more it was only a venue for teaching. Teachers made enquiries of library staff, ranging from advice about appropriate resources to asking if laminating (a service provided by the library to teachers on a weekly basis) had been completed. Teachers marked work, prepared lessons and used their own iBooks (teachers did not have dedicated teaching rooms and the staff room had limited desk space).
Therefore, certain teachers did use the library, though this could be associated with direct teaching times and was a space where teachers could be when not teaching but some provided modeling for more orthodox use of a library, which was perceived to be of utility to individual teachers. However, observation could not isolate and/or identify whether teachers specifically used the library as a resource for IBDP purposes.

Categories
Observation of and interviews with two main groups in the IBDP school community produced data and codes that were compared with each other. From initial and focused coding, categories were identified that encompass curriculum, information literacy, the role of a school library, and the Internet, reflecting and identifying relationships of the IBDP school community – principally students and teachers. Charmaz (2006) recommended showing relationships between sub-categories and categories (e.g. through use of diagrams) by allowing data to enable identification of relationships, rather than trying to make data fit pre-identified procedures. Therefore, elements of categories may be reflected in other categories and is rather a reflection of relationships than simply repetition. Categories also reflect themes as well as actions that, as Charmaz (2006) identified, raised codes from a purely descriptive level. The diagram (Figure 1) that follows identifies codes and categories, together with a more detailed classification of codes, using sub-categories.
Other perspectives to test emergent categories through theoretical sampling

Whilst the two major IBDP school community groups were the focus of this study, it is also important to include narratives from other, smaller, sections: school administrators and library staff. Their individual points of view are valid in themselves, but more importantly provided theoretical sampling (Charmaz, 2006), whereby the researcher returned to the field to seek ‘pertinent data ... to develop the properties’ of categories (p. 96). Using others in the IBDP school community to provide theoretical sampling allowed another perspective to be added through a ‘quick, focused method of gathering pinpointed data’, though it takes the researcher ‘back into empirical worlds with all their ambiguities and tensions’ (Charmaz, 2006, p. 110). Administrators were used because they could comment, from another perspective, on both teachers and students, and which could strengthen the categories. (For instance, when asked to reflect on how they evaluated the library role and use by IBDP students, they were able to comment on both student and teacher use of the library); this was true for the school librarian, too. It was not possible to use the same students for theoretical sampling because they had left the
school and, in the nature of international schools, typically went to other countries to university. In practice, this is what happened with the teachers, reflecting the mobile nature of an international school workforce. Administrators then provided a viable alternative to enable data to be generated that could be used for theoretical sampling purposes.

*Interviews with senior administrators*

Two senior administrators (headteacher and deputy headteacher) commented on factors that arose from codes and categories derived from interviews, observation and literature review. Different questions to those used with teachers were developed for these interviews (questions used may be found at Appendix G), and discussion areas related to:

- evaluation of any impact of the library in general terms and on IBDP in particular
- identification of any library role in IBDP
- most important/visible role of the librarian in the school
- use of school libraries as pedagogical practice in initial teacher education and IBDP workshops
- teachers’ encouragement of students’ use of the library
- role of textbooks in IBDP
- applicability of IBDP for mixed-ability groups.

The administrators found it difficult to evaluate support services like libraries, especially when operating in support of constructivist curricula. In theory, it was easier with a more prescriptive curriculum, where one administrator considered IBDP to be a ‘modern’ rather than ‘post-modern curriculum’, whilst another referred to it as ‘an old exam now ... a brand that is used everywhere, so will be difficult to change’. This was, however, a theoretical standpoint, as no specific library evaluation in IBDP took place. For general evaluation, observation and ‘gut feeling’, mostly from informal visits, were used. This was in the context of
when I first came to this school, I used to go down and see no high school students in the library, it was a quiet place, it wasn’t a busy place and over the years I tend to evaluate the library with a gut feeling ... when I see activity, I see little kids coming up looking for stuff, I see classes in there, I see high school students ... doing a variety of different things.

This administrator reflected here that ‘libraries can’t afford to be static ... they have to respond to need, to numbers, to technology’, and that, in previous international schools he had worked in, library provision had been poor. Ideally, the library should support IBDP students in a dedicated manner, but in a K-12 school, with space for one library, this was not possible, though suggested a ‘diploma college’ environment with the library being open in the evenings, specifically for IBDP students.

Both administrators identified the most obvious role for the library/ian in IBDP was in relation to extended essays - ‘there is probably a direct connection in most people’s minds: extended essay, go to the library, you need your research’ - but regarded this as a limited perception. There may also be a hidden role or ‘indirect impact of the library and the director of the library within the individual classrooms and individual [subject] groups of the diploma’ in relation to resource provision and use, ‘but you would not see that’. The librarian should model independent learning skills for students and teachers: ‘the lead has to come from the librarian’, ideally in a diploma that provided more focus on individual research. Because extended essays currently represented the main research element of IBDP, the librarian’s main role was focussed on essays, though one administrator envisaged an updated IBDP with more research opportunities, less ‘content regurgitation’, and with a stronger role for libraries. Both identified a potential difficulty in fulfilling such a role because of the supervision – ‘it’s not [the librarian’s] job to police it’ – that needed to occur due to study halls in the library, a necessary venue due to many demands on the existing limited space in the school.

In connection with impact research, both administrators were aware that a library role may well be hidden, indeed one talked about perceived cultural values and a ‘psychological impact’ that he associated with a library. One administrator had been invited to read a report of a specific piece of research prior to interview, but remained
sceptical of findings, noting that ‘whenever you’re trying to measure something in education, isolating the variables is very, very difficult’. Furthermore, such reports were unlikely to be read outside ‘the immediate circle of the library and support staff’. However, both reflected and welcomed that the interviews gave them a rare opportunity to reflect and for them to talk about the library, without being provided with information or an agenda. One noted, with regard to international educational literature: ‘I bet there is nothing about libraries in the JRIE [Journal of Research into International Education, a major source of specialised published research], and, when you think about it, that’s a bit of a shocker. People are talking about all these different issues and a library within an international school, a real community centre, it’s a repository of Western knowledge, yet there’s nothing in the literature.’

They recognised that libraries changed with needs, people and circumstances and both perceived librarians as changing functions of a library to a certain extent, not least related to technological change and, as a physical entity, to ‘more of a space that people can use’. However, in terms of ‘the philosophies of how we might incorporate the library within the school, that’s really administration’s job’, with input from the librarian. Thus, it was administration’s role to promote conditions so policy about library use was clear, and could be used effectively, as there was a feeling that the librarian would be perceived as having a vested interest. Students would only use a library if needed, and administration should articulate that need for teachers who may not use the library, therefore identifying a teacher’s role in encouraging library use.

One administrator thought that textbooks were appropriate resources for ‘DP [which] is very much a modernist curriculum ... there is a box around it, you’ll learn it to this level’, and that such a content-rich curriculum may be an inevitable stage of education. The ‘textbook is really augmenting the teacher’, though hoped that textbooks would be used as ‘a resource, not the resource’.

Both senior administrators regarded the policy of all G11-12 cohort following IBDP as the standard course to be relatively unusual, but a concern was that students ‘are
becoming less good at managing time and organising themselves’, which was key to success in the diploma. One thought there should be a balance between content and motivation, which was a main factor for average-ability students to succeed in IBDP.

Teacher education was based on content transfer, ‘it’s not trying to work through their own enquiry’, so ‘libraries were seen as ... the place ... to get stuff to back up what you’re doing in class, it’s not seen as a process place’. A tension, therefore, could arise with regard to extended essays, and one administrator observed teacher supervision of essays had been found to be variable, possibly because teachers did not have skills or research experience themselves. The other identified that textbooks were useful in a content-rich curriculum, both for students and teachers, but there was a danger of over-reliance. These were all factors affecting the use of IBDP as a standard course for a cohort of G11-12 students.

The above reflected the perspective of the administrators interviewed and thus assisted to ‘elaborate the meaning of … categories [and] discover variation within them’ (Charmaz, 2006, p. 108). They also reflected and strongly supported the categories as follows:

**Category: Teachers and the library**

- Administrators considered that the IBDP was content-rich, with teaching and learning of considerable factual material, in which textbooks were a common resource.
- Teacher education promoted content transfer as effective pedagogy, with little or no coverage of library use as useable pedagogy.
- Teachers may not be effective library users themselves, so had limited skills and awareness.
- There was limited encouragement by teachers to students to use the library effectively, both by modeling use themselves and promoting the role of the library in the classroom, with an acknowledgement that this may be due to time pressures.

**Category: Students using the Library**
• Study for students in the library was perceived as being more focused, and offered quiet, where study could be more effective.

• Students used the library during their study halls (not necessarily for study) because they did not have anywhere else to go to, such as a common room or lounge, and there was recognition that space limitations meant that there was pressure on the library space, which was not ideal.

• Study in the library helped those students who were stressed or had heavy workloads (e.g. sports commitments), also those who travelled a lot to school or who had poor home situations, so that they could not study in the evenings.

• Time management was perceived as a major skill for students, with some concern that less-able students were not able to exercise effective levels of this skill.

• Students would be advantaged by a heritage of skills derived from library use in years prior to IBDP.

• Students’ main use of the library was focused on the extended essay.

• Student use of technology considerable, compared to print resources.

• Students used the library in a different way to previously in their school careers.

Category: Librarian’s role

• Administrators considered that school library impact in the IBDP may well be hidden, or at least more difficult to identify because it was less tangible.

• The main roles of the librarian were to promote and model independent learning for teachers and students (such as through citation-use), and to contribute to the extended essay process. The librarian was also useful for locating resources. It was not the librarian’s role to supervise study periods in the library, though accepting that in practice that was what happened.

• It was administration’s role, rather than the librarian, to promote policies that would further library use.

Librarian

The present study is practitioner research-based, focussed on library experiences of the IBDP community at one international school. As it is not unusual for one librarian to be employed in a school and as that person is the researcher for this study, an issue remains
about how to incorporate a librarian’s narrative. The problem of subjectivity has been identified (e.g. Wragg, 1999) but may not necessarily be associated with lack of rigour (Boden, Kenway & Epstein, 2005). This is because, in Grounded Theory, the technique of memo-writing (Charmaz, 2006) allows a statement or viewpoint to emerge. (Memos were also used elsewhere in the Grounded Theory process by the researcher to identify stages of understanding of perceptions of issues that emerged from the data, with topics including: the use of the library primarily as a place for study; library as an information literacy place; librarian perceptions of IBDP teachers’ views and use of the library at the school; expectations of the IBDP and IBO of a school library.) In order to recreate conditions similar to interview, that views expressed are those based on immediate reflection, a memo about the role of a librarian’s role in IBDP was created, in one session, in June 2007, at the end of the research period, and after all interviews had taken place with students and teachers. It therefore reflects a viewpoint at a specific time and was not altered, and can contribute towards the theoretical sampling process.

The librarian was concerned that ‘most time seems to be spent as supervisor of study halls’ which was ‘a de facto role’ and which he perceived to have become a main job activity, including ‘enforcing library and school rules and encouraging a work ethic’. It was not clear however whether there was any connection between this factor and a concern that students made little use, in his opinion, of library resources, though students used ‘printed sheets, textbooks and files’, ‘IT for typing assignments’ and ICT use could be ‘leisure-orientated, including e-mail’. Some subject use was noted, such as English and geography, whose teachers used library resources. History teachers encouraged ‘students to use the library for their internal assessment’, and subjects which did not use the library, including art, environmental systems, languages and sciences were identified. The librarian offered possible reasons for this, including ‘the nature of their subjects and the provision of textbooks’, plus limited ‘time and the fact that there is nothing in IBO subject documentation to promote or require use of a library’. Some cooperation appeared to exist between teachers and librarian, albeit generally of a casual nature. In terms of communication, the librarian appeared to prioritize providing information to teachers about resources, especially material of professional interest, possibly because
there was some evidence or feedback that it was helpful to teachers. Advice and help and resources selected with extended essay needs in mind suggest a *de facto* emphasis on support as a main function of both library and librarian, including running ‘an optional course about extended essays, including citation and bibliography construction’.

However, some other support to IBDP core elements was evident, through teaching TOK and supervising CAS activities, though possibly not central to a librarian’s role. The librarian was aware of the importance of technology, both promoting use and using it for communication purposes, but was concerned that his use of technology may not have been optimally productive. In particular, this was time spent ‘maintaining, adding and improving the computer catalogue’, whilst ‘use of IT in the school is definitely in a different order, i.e. Internet, word-processing, database and then catalogue use’. Lack of identification of a library role by the IBO in documentation was twice mentioned, which implied lack of validation of a library role, and debated as:

> Because there is virtually nothing in IBO documentation about the use of the library, the library tends to be immaterial to the IBDP. Where is this information/requirement that the IBO requires a good library for the IBDP. No one seems to know. Is it a myth? At best, it is probably a general expectation.

The memo included a number of questions or debated points, including a final thought: ‘on the whole, this year’s graduating class is very pleasant and they should pass the IBDP, yet their use of the library has been limited, so one wonders if the library is really relevant to them and how will it affect any future use of libraries?’

Data provided by this memo supported the categories in the following ways:

**Category: Teachers and the library**

- The librarian reflected that some liaison about resourcing for IBDP subject needs occurred with individual teachers and subject departments, but which varied.
- Communication, rather than collaboration, was individual and casual in nature.
- There was significant use of textbooks by students.
- The librarian provided information to teachers about professional resources.
- Teachers were mostly aware of the library support and expertise in supporting citation skills.
• There was a lack of reference to the role of a school library in IBDP subject documentation.

Category: Students using the library
• The librarian considered that students used the library as a place in which to work and to be, mostly during study halls.
• Study halls were characterised by use of textbooks and other materials brought by students to the library, rather than using traditional library resources.
• Students used ICT extensively.
• Students worked in groups (though also did individually), which could be an issue for library management.
• As the librarian was aware that there were limited facilities for students elsewhere, the library was used for non-study purposes, and which could result in colonisation of available space.

Category: Librarian’s role
• There was considerable time spent as de-facto supervisor of study halls in the library.
• The librarian provided resources for IBDP subjects, and for professional development of teachers.
• The librarian focused attention on supporting students’ extended essay needs, including seminars for students, promoting the use of databases and guidance in the development of citation skills.
• The librarian prioritised use of technology (e.g. library webpage) in promoting information about library support for the needs of IBDP students and teachers.
• The librarian perceived a difference between the rhetoric of LIS professional literature and reality of the specific situation, also about the lack of reference to the role of libraries in IBDP subject documentation, all of which caused the librarian some unease.
Effect of these further interviews on categories

Although the perspective of administrators was necessarily broader than that of teachers, their comments found resonance with teachers’ experiences, as identified in interviews. They were particularly aware of the need for high-content teaching in IBDP subject areas, the support that textbooks provided and the education and training of teachers that supported such a paradigm. The overt focus of research on the extended essay also became apparent. They understood the pressures on students, in particular the need to be organised and use their time wisely. They were aware too of the pressures on the library, indeed a tension, between the need to provide study hall facilities there and supervision of these students there. Ideally, the role of the librarian was accepted to be as a resource facilitator and advisor on research and the skills that went with research. There was an appreciation that the role may be a hidden one, but was most obviously predicated on the extended essay. However, they did not identify the lack of reference to libraries in IBDP subject documentation, which was a considerable concern for the librarian. The librarian’s perspective did however identify an unclear role with regard to the subject structure of the IBDP, whilst the focus and attention of the postholder was concentrated on the extended essay, together with a tension over study halls and the library. Therefore, these further interviews provided support for the categories and sub-categories identified above. Where the perspective was new, it added to the categories as identified, but did not suggest new ones.

Following this presentation of the results of the study, the following chapter provides a discussion of the categories and sub-categories and develops grounded theory in relation to the study.
DISCUSSION

Introduction

The purpose of this chapter is to discuss the findings from this study and to also relate findings to those of studies cited in the literature review to discover any trends, similarities, variations and contradictions. Discussion centres on the categories in order to test their strength or validity. In order to reflect an international focus of this study, countries where research took place are identified in this chapter, as this may have a bearing or weighting concerning relevance of those study findings to the present study. If literature findings came from more than one country, especially if that country was an English-speaking one, it may be that the feature may be more relevant to the international school, its’ students and teachers, given that teachers may be recruited from a small range of predominantly English-speaking countries (Hayden, 2006b). In this study, categories focus equally on three constituencies - older (specifically G11-12) students, teachers and librarian - of a school IBDP community, together with administration. Several other studies (e.g. Streatfield & Markless, 1994; Williams & Wavell, 2001) have incorporated such viewpoints, with regard to other curricula, but not IBDP, nor have they focused specifically on the age group in question, and not in an international school context. This chapter will therefore

- Discuss categories and sub-categories
- Relate them to existing literature
- Develop a grounded theory for the specific situation

Categories and sub-categories

Categories have been identified with, where relevant, sub-categories. These may reflect relationships and enhance meaning between and in categories and identify concepts as well as actions (Charmaz, 2006), whilst sub-categories identify aspects which may be considered more tangible. However the categories firmly concern people, that is, the
main groups in the IBDP school community, and the contention of this study is that it is their actions, views and perceptions, which may be more intangible, that substantially effects what is offered and used in the school library. Each category reflects groups in the IBDP school community, though views of one group may be reflected in a category that is focused on another group; this provides a relationship and strength for each category. Categories and sub-categories are:

- **Category: Teachers and the library**
  - Sub-category: IBDP curriculum and the library
  - Sub-category: Teachers’ use of library
  - Sub-category: Information literacy

- **Category: Students using the library**
  - Sub-category: Library as place
  - Sub-category: Using resources
  - Sub-category: Internet in students’ lives
  - Sub-category: Perceptions of school library

- **Category: Librarian’s role**

*Teachers and the library*

Farmer (2006) indicated that the impact of the school library may be more on teachers than students, so, with this in mind, discussion of the first category is the teacher perspective. However, discussion of one of the two main user groups of a school library by one group will inevitably involve reference to the other. This category focuses on the perspective of teachers (even if their views reflected student use of the library) through sub-categories concerning curriculum, use of the library and information literacy.

*IBDP curriculum and the library*

Various aspects of the specific curriculum in this study had implications for the school library/ian, such as teachers’ views about the role of the library in the IBDP, needs of all
students in following the curriculum, the role of textbooks and the need to transmit considerable subject content.

**Teaching and learning high-content courses.** In this study, how teachers taught and students learnt affected how the school library was used. Interview data indicated that students experienced more lecture-style learning situations, with more content, during the G12 year. Students needed to cope with amounts of content, relied on textbooks, whilst some students experienced tiredness and stress because of workload. Teachers also identified the need to cover considerable content, with attendant time constraints which, amongst other things, impinged on any potential use of the library in assignments. Kyburg et al. (2004) identified lecture-style teaching format and time pressures in covering content in IBDP, which Vanderbrook (2006) found was considerable. Yip (2000) in a Hong Kong international school, Paris (2003) in Australia, and Tekle (2005) in Sweden, all referred to stress as part of IBDP students’ experiences, because of workload. Williams and Wavell (2006) found similar situations in UK schools with curriculum for senior students, though it was not IBDP. Significant content-transfer teacher mode for older students was common in Spreadbury and Spiller (1999) and Stobie (2007) reflected teachers’ need to cover considerable content in IBDP in order to prepare their students for final examinations. Consequently, it is suggested content-transfer experiences may be common for 16-18 year old students and their teachers in international schools, irrespective of programme followed and this is reflected in this study. A consequence of this type of teaching is that pedagogical library use by classes may be limited, especially where textbooks were used as a teaching aid.

**Function of textbooks in IBDP.** As course content-transfer vehicles, the provision and use of textbooks could affect library use and usefulness. With regard to teaching and learning, student interviews indicated differences between the two grades. G12 students were busy with coursework, extended and TOK essays, whilst G11 students mostly completed homework assignments involving regular use of textbooks. Where provided for subjects, textbooks tended to be used considerably, even exclusively. Some students thought differently of a subject without textbook provision; some preferred and had more
faith in textbooks that were specifically aimed at the IBDP and/or approved by the IBO. Observation of library use showed that students mostly brought their own textbooks to work with in study hall sessions. Student interviews in 2006 found teachers and textbooks were the most important sources of information for students. One teacher interviewed in 2006 indicated that provision of alternative textbooks was a useful service that the library provided, possibly to the extent that it was the main or only relevant service provided. Where students obtained information on a regular basis was seen in the prevalence of, belief in and reliance on textbooks, identified from observation of and interviews with students and interviews with some teachers. Spreadbury and Spiller (1999) concluded that textbooks (the provision of which was associated more with independent schools in UK and which equates with the private status of international schools) had a negative impact on library use. Rafste (2003, 2005) found that students who used libraries as study space brought their own textbooks that provided sufficient material to obtain good grades, so students did not require more information. Therefore, provision of textbooks could result in diminution of the need for independent research and skills developed from undertaking such research.

Teachers and textbooks therefore were most important sources of information for students in this study, reflecting to a certain extent findings of Latrobe and Havenar (1999), where people, closely followed by (text)books, were the most important sources of information for students. As such, it could be suggested that a content-rich transmitted curriculum environment was prevalent in this study, rather than one of constructivism. The issue of IBDP pedagogy was addressed in an interview with a senior administrator, who saw use of textbooks as appropriate in a non-constructivist curriculum and a useful resource for both teachers and students, though there should be a limit to the importance of such a resource. The literature on this topic identified divergent practice. Whilst some citations in LIS literature acknowledged a constructivist foundation, there was either an articulated or unstated given that constructivism needed to be in place for a school library to function optimally. IBDP research literature does not identify an impact of textbooks on students, teachers and school libraries, though references to recommended use exist in IBDP secondary literature (contributors in Loo & Morley, 2004). LIS studies cited above
support a view that textbooks were valued by students and could have a negative impact on use of more orthodox library resources. In the present study, students generally highly regarded textbooks but most teachers did not articulate detailed views about textbooks, though it was accepted that they were used. However, it could be inferred from a prevailing view that it was an added benefit if students used library-stocked resources whilst using the library as a place in which to study, the supposition being that students would use school-provided textbooks there. Observation identified considerable use of textbooks and limited or occasional use of mainstream library resources. All of which leads to a suggestion that, as LIS studies have identified, provision and reliance on textbooks reduced a need to use library resources by IBDP students in this study.

**IBDP as a standard course for G11-12 students.** Given that secondary literature suggests that IBDP may be more typically offered as an option (for more able or motivated students), there may be an issue about the abilities of and opportunities for teachers and librarian to focus pedagogy that could incorporate library use in assignments for students with a broader span of abilities. Two teachers identified issues related to high-content delivery and mixed-ability students with concern about those who were less able to assimilate content quickly. However, teachers’ experiences aligned with a trend for IBDP to be more inclusive, so the international school’s policy reflected teachers’ experiences and expectations that most, if not all, G11-12 students would follow IBDP. The literature suggests that IBDP is not suitable for academically weak students (McKenzie, 2001), nor all gifted learners (Kyburg et al., 2004). Nevertheless, some schools offered it as the standard course for all students (Rataj-Worsnop, 2003), not least in international schools (McCluskey, 2006), indicating that the international school in this study may reflect a tendency for such schools to offer IBDP as the main or only option for G11-12 students. (If this is so, findings may be of interest beyond the particular context of the present study.) However, senior administrators considered the school was fairly unusual in offering IBDP as the standard option. Their view that IBDP was achievable by most students was borne out by teachers, albeit with some concern about ESL or less able students. This concern for implications about teaching styles and skill expectations and attainments, reflected (for mixed-ability students) a study in the USA that indicated a
need for considerable scaffolding support by teachers (Burris et al., 2007). This therefore suggests that there is ambivalence about this issue, though, if it applies, there may be issues of support for less able students. In particular, some students, who may be regarded as less able, may find it difficult to access or utilise libraries effectively, especially where there may be varying opinions on where the focus of library support lay.

Main focus of library support. Teachers’ views were sought concerning the optimum form of library support in IBDP. Although some teachers thought the library had a role in supporting IBDP subject groups, it depended on the subject. A library role was potentially and actually very limited for Groups 2 and 4 (languages and sciences, respectively) - although a difference was noted from interviews in different group 4 teachers, which perhaps depended on specialism or specific science - and no role for the library in Group 5 (mathematics) subjects. Overall, most teachers thought any library role really related to extended (and again this depended on subject) and TOK essays. If the extended essay is a/the focus for the school library programme, in a wider context it may be important to identify the extent of student take-up of diploma as opposed to certificate options (Bagnall, 1994, 1997; Brohier, 2004; Sjogren & Campbell, 2003 - these citations reflecting situations in Australasia and North America). This is because a more general statement about extended essay being the most important library focus in IBDP depends on an understanding of how prevalent the certificate option is at the expense of the more comprehensive diploma. If the certificate option is more prevalent, those students do not need to complete extended and TOK essays, so library support may not be relevant to or needed by such students.

The other focus for support came through appreciation of the library as a place in which to study. However, this study identified divided views that teachers had about the value of study halls held in the library. It could be useful and whilst in the library students might use resources, which broadly reflected Rafste’s (2005) study (though interviewed teachers indicated that their general comments did not apply to their particular subjects). In this study, teachers’ thinking was that, if not there for study halls, students may not otherwise make the effort to visit the library. One teacher in particular held a view that
the library may be helpful only for more able students. Another teacher thought that students would only value the library if teachers and the school as an organization did, and there was a concern that this was not altogether the case. To do so required a library culture and accepted values and expectations, and which should not be left to a librarian to establish, owing to perceptions of vested interest. With the exception of Streatfield and Markless (1994), other studies have not specifically identified teachers’ views about the value of libraries regarding study space for older students.

A number of robust factors emerged in this sub-category. By robust is meant factors that arose strongly from several specific pieces of data. Such robust factors are:

- Need to teach considerable content in IBDP
- Time limitations
- Teachers’ views of the library reflected an individual perspective and there appeared to be no collective view on the usefulness of library resources for IBDP subjects
- Teachers’ use of the library depended on the individual needs of teachers and there was a lack of any collective stance, or one developed through policy, on library use
- Significant use of textbooks
- Teachers thought that a library role focussed on the extended essay and this reflected a limited view of the library’s potential.

*Teachers’ use of library*

Whilst curricula and pedagogical factors affected library use, this study also identified how teachers used the library. This was both directly and indirectly, as some teachers saw their role as not directly using library resources with students but rather by encouraging library use by individual students. They could also structure use of the library as a teaching and learning strategy.

*Library support to complete assignments.* One way teachers could make use of the library was as part of a teaching strategy with classes. Students interviewed in 2006 remembered limited library use as part of assignments set by teachers, and such assignments were
infrequent (possibly one a year), nor were they aware of any assessment of the process or their use of the library, though content they presented was assessed. Indeed, one student reflected (of his G11 year) that the library was used less in terms of class assignments since he had been an IBDP student then he remembered previously, though he was the only student to make such a comment. However, interviews with teachers indicated that some had incorporated the library into assignments, some fairly regularly, at least initially in the two-year course (before pressures of time built-up), but others irregularly and one teacher, once ever. This both differed from and partly reflected Rafste (2003) where teachers at two schools (one of which offered IBDP) in Norway did not perceive it to be their role to include library use in their teaching styles, nor was there any indication that they encouraged its’ use. Inasmuch as class or group visits to the library and assignments that explicitly included library involvement were rare, the present study reflected findings of Rafste. However, as both teachers and students indicated that encouragement – even if only in a general sense – to use the library existed, the present study differed from the Norwegian study. Using the library in assignments could be more tangible than encouragement to do so, suggesting some discussion of how encouragement manifested itself.

*Teachers’ encouragement of students.* Teachers could also encourage rather than require students to use the library individually to supplement subject teaching. In G12 interviews, those specific students were encouraged to use the library only by the English Department – no other subjects were identified – as Hay (2006) found in an impact study of school libraries in Australia (as far as G11-12 students were concerned). Such reduction in encouragement as students progressed to higher grades was consistent with findings of Spreadbury and Spiller (1999) and McLelland and Crawford (2004) though the former noted that subject teacher encouragement of use corresponded with student subject use. Most teachers in these studies (in England and Scotland respectively) never referred students to the school library for information, though why teachers did not was not identified. However, as identified in one G12 interview in the international school study, reasons may include that teachers assumed students would use the library without
being advised. (Such a view was also promoted in at least two teacher interviews.) An unarticulated expectation therefore existed.

Streatfield and Markless (1994) found school libraries in UK were more relevant to their individual schools if they reflected pedagogies (or understandings of what a school library was) of individual teachers within a school, rather than try to develop a model of library provision predicated on one desired pedagogy, especially if it purely reflected a LIS paradigm. The present study found that teachers worked in different ways, not least reflecting their subject specialism, whereas LIS secondary literature generally indicated a desire to reflect an LIS-preferred school library model. Such a model did not necessarily reflect variations or practices of different subjects, therefore inferring that one model of a school library could relate to all subjects in the same way. A situation of tension could therefore occur and was one which Streatfield and Markless cautioned against. One effect of lack of encouragement of library use by teachers may possibly be manifested in a clear trend of library use declining by G10, which was identified in US impact studies (Callison, 2005) and in the UK (OFSTED, 2006). Whilst Hay (2005) found a slight increase of use in G11-12, this was assisted by timetabled access to the library and valued not least for access to technology production/printing facilities. However, as the present study focussed on how the library related to the IBDP specifically for G11-12 students, and not younger students, it cannot confirm such findings, though they may be probable. Teachers in the present study showed support for the library in general and it is possible that they assumed that students would use the library for assignment work without any prompting. Whilst teachers would be aware that students had various levels of academic and ICT skills, teachers primarily reflected their subject foci. This probably meant that they assumed students could use the library, irrespective of their academic and ICT skills levels, though reflecting on interview questions indicated that there was some understanding that students’ varying ability levels could result in some being able to use the library without prompting, but not all. Teachers in this study therefore reflected findings of Todd and Kuhlthau (2005b), where teachers were positive about the library - when asked to think about it - although it generally held that teachers saw the relationship
as being between students and library/ian, and not themselves, as Rafste (2003) found. This may be relevant if teachers did not use the library themselves.

*Teachers’ direct or individual library use.* Teachers could also use the library for their own information and interest. Observation of teachers’ indicated that they used the library in various ways, though such a data-collating tool could not identify if this was in support of IBDP teaching needs. In interview, however, a few teachers indicated that they used the library to provide information for their IBDP teaching needs. Boekhorst and van Veen (2001) identified that whilst most libraries provided resources for teachers in The Netherlands, teacher use of these resources was limited. In the present study, the ability of the library to provide resources for IBDP subject teaching needs was only perceived as being useful by teachers of three subjects (in IBDP Groups 1, 3 and 6). Some thought that the resources that were of interest to them were items that students would or could also use. Otherwise, there was limited perception of a library role in this regard, which however differed for teachers’ professional development needs, as a library role of providing and alerting them to current/new information about international education was valued. This study’s findings are at variance with those of Williams (2006) who found more teachers, though still a small number, used the library for their subject teaching needs, but less for professional development. Williams found that teachers’ perception of the library was that they associated the library with students’ information needs, not their own. This was broadly true of the present study, though with some exceptions. Williams recommended that librarians give attention to developing such a role, and the present study provides some support that it would be of value. However, a factor that may only relate to international schools, especially those in a non-English speaking country, is that there may have been a lack of alternative sources (Bagnall, 1994; Clark, 2006; Hessler, 2004), though such a specific cause was not ascertained from interviews in this study. Also related to the lack of other such facilities (e.g. public libraries with collections in the English language) was use of the library by teachers for personal (recreational) needs, as may be suggested from observation; by doing so, they nevertheless modeled library use for students. Providing such a positive role model resonated with the views of one teacher and an administrator in this study, but it may be considered that adults involved in this
study were not aware of attaching importance to positive role-modeling of library use for students. One reason for this may be the lack of education concerning libraries as a pedagogical tool.

*Teachers’ education in using libraries as a teaching strategy.* It is possible that teachers could use libraries pedagogically as a result of suitable input in teacher education programmes. However, no input about pedagogical use of school libraries in such programmes was identified from teacher interviews. Teachers were specifically asked about *use* but the question was, at least initially, interpreted it as one of *resources* - they thought they needed to know the resources that applied to their subject area, not how to make use of a library, and answers were focussed in that way. Similarly, there was no remembered input about library role or use in IBPD subject workshops, and again there was a trend to interpret the question to be about resources, and particular items at that. There was therefore limited awareness of skills that students needed to use school libraries effectively. Teachers’ perceptions about library use may stem from previous experience, either as school or university students or from previous teaching posts, as several teachers remembered. Teachers may have, therefore, possibly unconsciously, received education or perceptions about library use through experience. One indicated research use in school, whilst most others remembered their library use, if at all, as a place in which to work. Olen’s (1995) study suggests that, due to limited use of the library as school students, trainee teachers in South Africa would not have a model or expectations of a school library on which to base pedagogical practice. Asselin (2005) found little input about school libraries in pre-service teacher education courses in Canada, whilst Merchant and Hepworth (2002) identified a need to raise awareness of information literacy in teacher training courses in UK. Rafste (2005) too concluded that initial teacher education needed to take account of how to use libraries. Furthermore, Williams and Wavell (2006) concluded that whilst information literacy as a term was used in LIS, it was not naturally used in mainstream education, and was predicated on a constructivist approach to learning, which may not be a prevalent form of pedagogy in a particular school. That such a span of pedagogies existed may be the reality as Markless and Streatfield (1994) identified. In the present study, students’ skills (developed through
IBDP) identified by teachers were only tangentially allied with library use and teachers never used the term information literacy, a common term in an LIS paradigm. This could indicate that the preferred LIS model of school library activity and school librarian roles had limited relevance to the most appropriate method of delivering a relevant school library programme for the IBDP at the international school in this study, and teachers’ experience. In order for an LIS model of school library to be relevant in the present study, various developments would be required, some of which could be related to teachers’ education. Factors could include adoption of a continuum of school policy for K-12 about information literacy and library use, with administration support, departmental response and time allocated in school-based teachers’ professional development opportunities. Other factors include time in the student timetable, validation in IBDP subject documentation and, ideally, input about the role of the school library in teacher education, both in institutions of education and ongoing (IBDP) teacher workshops.

Hayden (2006b) identified that teachers in international schools largely came from English-speaking countries and that teacher pedagogies reflected prevalent national styles. It is reasonable to surmise that teachers in international schools reflected these in terms of education and experience of school libraries. This was borne out by the present study, as all but one of the twelve teachers interviewed came from English-speaking countries. That there is a concern to promote more internationally-focused pedagogy may be witnessed by efforts by ECIS (2006) to introduce a qualification that would do so. Where international schools had national affiliations (Joneitz, 1991), mismatch of expectations could occur where library practice reflected that of a different country. Indeed, Ferguson and O’Hare (2004) suggested that international schools with North American/Australian roots were more likely to see the librarian as part of the teaching team (unlike schools with British roots). However, the distinction was not seen in the present study, though the international school concerned did not have formal national affiliations. Two teachers in this study referred to librarians they knew as previous colleagues, one indicating a history of working with librarians in international schools. However, it was not clear whether librarians had contributed to this teacher’s use and expectation of library/ian in the school in this study, or whether this was part of the
teacher’s own preferred way of working. Overall, nothing in teachers’ education as teachers prepared them for incorporating use of libraries into their teaching styles, and it depended on an individual’s previous experience of libraries to provide an interest in using libraries as a teacher. This study reflects the literature (e.g. Asselin, 2005; Callison, 2005; Rafste, 2005) on the lack of attention to school library issues in teacher education. This may have an implication for how the library was evaluated by educators.

*Evaluation of the library.* Assessment of library use could promote further and different library uses, and embed library use in the infrastructure of a school. Discussion of evaluation of the library with senior management indicated a perception that it was difficult to evaluate support services in constructivist curricula, but easier when focussed on a more prescriptive curriculum such as IBDP. However, in practice, detailed analysis procedures were not in place, instead informal observation and ‘gut feeling’ was used for general evaluation, not specifically related to IBDP (except that the library was seen as an appropriate place in which to study). Furthermore, there was no evaluation of the library, in a formal sense, by teachers. Their perception of the library was mostly determined by their subject specialism, and any use or value of the library predicated on that, though there was no reference in IBDP subject documentation to prompt any teacher evaluation of library use. Any formal school-wide or whole programme (IBDP) evaluation was focused on requirements of the IBO and accrediting agencies. A trend to self-evaluation of libraries by schools emerged from the literature (e.g. McNicol & Elkin, 2003) and it was important that self-evaluation factors should reflect those used in formal evaluation of schools (Streatfield & Markless, 2005). Whilst self-evaluation was part of IB and ECIS accrediting procedures, administrators did not refer to self-evaluation as part of whole-school evaluation. It may be suggested that international schools’ practices may not necessarily reflect a national system of self-evaluation (though accrediting agencies had specific requirements, which included assessment of library provision and use).

A specific study of library impact was seen as an advocacy document by one senior administrator in this study, who was not convinced by the findings, indeed was sceptical. Published studies have not included perceptions of school administrators about impact
studies of school libraries. Studies of school library impact largely emanated from the LIS community, and the administrator considered that studies, such as the one he was invited to read, would only be used or read primarily by the LIS community. Lance, a leading impact studies researcher, noted the need to promote such a body of research to educational administrators which suggested that studies were largely read by the LIS community (Callison, 2005). Pratt (2004) and Montiel-Overall (2005) observed little synergy between mainstream educational literature and that of school librarianship. Though not a main strand of the present study, there may be an indication that perceptions of impact studies are as the literature suggests, and do not feed into an administrator’s evaluation process about school libraries. Indeed, Everhart (2006) found that principals used intuitive evaluation, based on casual visits, but not information (possibly including impact studies, which have assumed a role as advocacy tools) provided by a librarian. This differs from findings of studies from a LIS point of view, which promoted the importance of librarians developing good relationships with principals (Henri & Boyd, 2002), in order to further library programmes and priorities. Everhart’s study reflects more accurately practice at the international school. Studies also though identified the importance of the headteacher in any development of the school library (e.g. McNicol, 2003; OFSTED, 2006). This was reflected in interviews with senior administration, especially regarding articulating a vision of a school library that an administrator could agree with. Indeed, one administrator’s view of the library in the school was based on a personal value belief paradigm, which the librarian had not changed nor was encouraged to change. Insofar as this study is concerned with a library-focussed role for senior administration, it differs from earlier LIS studies that suggested that the librarian could influence principals to enable improvements to school library provision and functions to occur. The present study does not reflect such a premise, but rather practice identified in a more recent study (Everhart, 2006). Such a situation regarding evaluation suggests a discussion on what any library impact on teaching might be.

Library impact on teachers. Impact studies, such as Lance et al. (2000a/b) and Baughman (2000), sought to identify library impact against student achievement; similarly seeking
causal links of school library programmes, Farmer (2006) however concluded that a library may have more impact on teachers than students themselves. It could be suggested, using the present study, that such impact could be manifested in student use and encouragement of students to use the library and value the library service. In this study, observation of high school teacher use indicated that approximately half of the staff used the library, most popularly as a lending library, closely followed by that of a regular teaching area. Apart from asking questions of library staff, teachers mostly used it as a space in which to sit to mark students’ work and used their own iBooks. Observation findings differ from a US study by KRC Research (2003), which found that for higher grades, whilst valuing school libraries (more than students themselves or their parents), teachers rarely used libraries themselves. There was a belief structure, but it did not extent to modeling such belief. This was also true for Rafste (2005). At the school in this study, there was a degree of modeling through voluntary use, with supposed value attached to that. Whilst observation findings could suggest that teachers used library resources to support their teaching, what teachers borrowed could not be ascertained through observation and they might equally have selected items for personal or recreational use, though by doing so they still modeled use of the library for students. However, observation of use of the library as a teaching area indicated that regular subject teaching, with no reference to library resources, also took place. This probably occurred due to space limitations in the school and the availability of smaller rooms in the library, which suited small groups of students with a teacher (factors that were identified through interviews). Teaching which incorporated library use occurred only a few times during the observation. Although not observable, nor stated in interviews, one reason for such low use could be that teachers were insecure or felt threatened outside their own familiar environment of a classroom, as Williams and Wavell (2006) found and Clark (1995), in an IBDP context, also surmised. Teachers also mirrored student use as a study area, in a sense, as they marked student work, but any specific use of the library as a resource by IBDP teachers could not be identified through this observation. Impact of the school library on teachers varied with individuals, and factors could be a teacher’s interest and previous experience. Overall, as a library, it was as a place in which to work
and from which to borrow resources, that had the most obvious impact on teachers, otherwise impact may be indirect, or hidden, or not relevant.

Robust factors in this sub-category were:

- There was a general belief that use of the school library could help students study more effectively but specific encouragement to use the library varied amongst teachers by subject, and this implies that beliefs may not necessarily match behaviours
- Differences between teacher and LIS-preferred pedagogies could cause tension
- Use varied amongst teachers due to interest; teachers were influenced by their use of libraries as students and/or schools in which they were previously employed
- The role of a school library was not covered in initial teacher education, IBDP workshops or IBDP subject documentation
- Any school-based evaluation of the library was casual and sporadic, reflecting a lack of policy on the school library.

The above may have implications for expectations that teachers may have had from students using the library, suggesting a discussion of information literacy, which is the following sub-category.

*Information literacy*

Whilst the phrase ‘information literacy’ was not used by teachers at the international school (reflecting findings of Williams and Wavell, 2006), skills and qualities which could be associated with the term were variously mentioned by teachers and students, and some of which could be observed. Though information literacy refers to student development and achievement, it is featured here as part of a category that focuses on teachers as the balance of views and perceptions about students’ skills in this regard rested with teachers. Indeed, in an IBDP context, they could provide conditions and an environment for students to develop such skills.
Most important skills for IBDP. Whilst there are many skills that students could develop from following IBDP, there were some important ones. Teachers thought these were time management, research skills and critical thinking. These concepts were discussed and selected for relevance to and by the individuals in this study (when interviewed) from findings of Hayden, Rancic and Thompson (2000). Whereas the latter study identified a broader range of intangible and tangible factors, the present study found more focussed attention to students’ abilities to successfully pursue and manage an academic programme. These more specific attributes also reflected findings of studies related to IBDP (e.g. QCA, 2003) and especially some North American studies (Burris et al., 2007; Kyburg et al., 2004, 2007; Taylor et al., 2002) in terms of research skills and time management, though a reservation should be made about the prevalence of the certificate option in North America. If students purely undertook subject studies, arguably they did not need research skills which, as Stobie (2007) identified, were only required to complete the extended essay.

In information literacy literature, there is more emphasis on intellectual/higher-order thinking skills rather than time management, whereas literature specifically relating to plagiarism (which is discussed below) suggests that poor time management is a relevant factor, together with pressure of work-load. G12 students and teachers highlighted time management as possibly the most important skill, reflecting findings of Latrobe and Havenar (1997) and an IBDP study (Taylor & Porath, 2006). Closely allied were prioritising work and the need to memorise considerable content. Students attempted to develop various strategies to accomplish this: review or revising work was a considerable activity for G12 students, during which they used note-making skills or summarised, though often from only one source (textbook or personal notes). A compact range of skills therefore was developed by students in this study, with time management as the most important. Specifically from an IBDP perspective, research skills developed from the extended essay were regarded of most utility in tertiary education (QCA, 2003). There is though little in the literature to suggest a link between these skills and an input of a librarian or library, which relates to Lonsdale’s (2003) concern about information literacy generally. This was true of the present study, but with two reservations or
exceptions. By providing a work-friendly library environment, students (who used the library) felt they could develop or at least use time management skills more effectively (this use of space will be developed in the next category). The other exception is with regard to citation skills. One teacher specifically mentioned the *IB Learner profile* (IBO, 2006a), which was a general statement of qualities, skills and attributes that students who experienced a continuum of IB curricula should develop. More overt understanding and school adoption of this advisory document could produce an environment where the library/ian may be better placed to make a contribution and develop IBDP students’ skills base. In the present study, a library contribution focussed on citation skills.

*Bibliography and citation skills.* Students had various experiences concerning applicability of bibliography and citation skills, though more considered skills applied to coursework in all IBDP subject areas as well as core elements. A few students however only used these skills for extended and possibly also TOK essays. This reflected findings of work by Stobie, who concluded that skills were only implicit in IBDP (2005) and that research skills were required only for extended essays (2007). In this study, teachers thought the skills important for all subject areas, though administrators considered they were more applicable in core areas as there was a view that this was the main research focus of IBDP. Teachers, administrators and students referred to the librarian teaching, modeling and advising about these skills. There is some evidence then that bibliography/citation skills had wider application, but all agreed it was used more for the extended and possibly the TOK essay, and that the librarian undertook a role in developing such skills, which was possibly a leadership role. This role may reflect LIS literature (e.g. Farmer, 2005; McGregor & Streitenburger, 1998) because members of the IBDP school community saw the librarian as having strong expertise in this area. This is possibly not least because it could be regarded as tangible, concrete and discrete, thereby more easily comprehended, and was related to a product – the essay or coursework. However, there appeared to be little or no overt linkage between this skill and critical thinking, such as a student knowing when and how to cite, paraphrase and so on, the lack of which could lead to plagiarism. Teachers appeared therefore to have a limited view of the librarian’s potential in relation to information literacy skills.
Issues relating to plagiarism. Teachers were asked about their awareness and concern about plagiarism, as this was a significant element in the literature. Teachers’ views of plagiarism varied depending on subject specialism, for instance a group 2 (languages) and one of the group 4 (sciences) teachers said that because of group and class work, identifying plagiarism was straightforward or would be unlikely to occur. Strategies used by some teachers included a requirement that students should provide bibliographies and accurate citation of sources. Two teachers noted a different view of plagiarism in Asian countries, that is, different from the Western paradigm. This resonates with Jones’s (2004a) identification of an Asian view of copying to emulate and honour authority figures. However, failure to cite sources was a main problem of plagiarism and international schools should maintain a Western view of plagiarism (Ellwood, 2006), which was as practiced in the international school in this study. Additionally, plagiarism may occur inadvertently due to pressure of work (Millard, 2005), which was the case with IBDP (Taylor et al., 2002). Teachers in this study, with two exceptions, did not identify a specific role for a librarian in reducing plagiarism. Again, the division of literature is marked. LIS studies identified a role for librarians in teaching and supporting strategies to avoid plagiarism, whilst non-LIS studies did not. In a study of IBDP students, McGregor and Streitenberger (1998) identified a role for librarians in teaching skills and setting expectations related to citation practice, whilst McGregor and Williamson (2005) suggested that engagement in the topic could reduce plagiarism by students. Although an appreciation of plagiarism existed in the school, it was variable and not overall a strong factor, nor was there a strong link with the role of the library.

IBDP subject documentation and the library. As indicated above, several teachers noted the lack of an explicit statement of a role for the library in IBO subject documentation, the function or benefit of which may prompt teachers to consider and possibly include library use - and the skills that students needed to effectively do so - as teaching strategies. One teacher was very specific about subject documentation, as this was where he would (and did) look. This mirrors conclusions of Pratt (2004) that there was a dichotomy between expectations of school libraries as expressed in LIS role statements.
and the lack of meaningful reference in curricular documentation, and a lack of synergy between the literatures of education and school librarianship (Montiel-Overall, 2005). One administrator reflected specifically on the lack of reference to school libraries in a leading research journal for international education. It may be suggested that the lack of reference to school libraries in IBDP subject (and international education) literature may have contributed to lack of a defined role and variable use, which was reliant on individual teachers’ interest and enthusiasm. Where teachers and administrators are influenced by IBO documentation, this may be reflected in their limited view of the library/ian’s role and may, in part, account for a lack of policy in relation to the school library.

Motivation of students. With the absence of curricular statements about the role of a library and in the same way that teachers were individually motivated to use the school library, there may have been students who were motivated may use libraries voluntarily and use them more widely. Self-motivation by students was an articulated key concept for a senior administrator, though not emphasized by others. It was possibly hinted at by one teacher who reflected that many students did not read around the subject on their own initiative, but needed to be given it as an assignment in itself, and was counter to expectations identified in the IBO Learner Profile. One teacher noted that students could not be expected to be motivated enough to visit the library unless required to do so for study halls and/or specifically encouraged to do so by teachers.

The students may have been regarded as academic and generally organised, as Kyburg et al. (2004) found was true of IBDP students they studied, with good levels of skills (which they needed to develop before starting IBDP) and were motivated. Some students could be regarded as motivated and/or organised, though some teachers gave answers to suggest that some students (not necessarily those in this study) were more passive. Passivity could also be construed to develop from a student regard or reliance on textbooks. An LIS study (Latrobe & Havener, 1997) found that motivated students could successfully access an information-rich environment and where teachers noted that less able (and therefore possibly less motivated) students did not use a range of resources. A
decade later, Scott and Owings (2005) found a similar pattern. This, then, reflected a view of one teacher in this study who noted such occurrences, and other teachers alluded to (though did not elaborate on) such instances. It may therefore be that the library in this study, as an independent learning environment, attracted, related to and supported more able/motivated students, and who could use it more effectively. More able and motivated students, who could use libraries independently, fitted a more traditional profile of students who were IBDP candidates, but this profile did not reflect all the students who were candidates in the school in the present study, and elsewhere (Rataj-Worsnop, 2003). That students who did not fit the traditional view of IBDP students needed support was borne out by Burris et al., (2007), whilst Todd (2003c) and others noted a librarian’s role in providing scaffolding and support for some students. This may indicate a different role for the librarian in relation to less able students. In this study, students could be regarded as organised and probably motivated, yet some used the library, whilst others did not, which may suggest that using the library may have reflected personal or individual preferences for study and research.

*Skills in using a library.* Leading on from the above, students may more readily use a library if they are more comfortable and secure in using skills to do so. Some teachers were aware of the need for skills in using information efficiently, but did not always relate that to the library, though some did, and noted that students had limited skills/experience in this regard. Streatfield and Markless (1994) found that students themselves considered they could use a library effectively, as did, for a study of IBDP students in an international school, Latuputty (2005). However, Limberg and Alexandersson (2003) found students had limited awareness about how libraries and databases worked, although students again held contrary views of their own abilities. Differences of perceptions prevail therefore in both the literature and the present study.

Students may have positive views about their own abilities possibly because of little history of testing their skills against need to use them.
Equally, an LIS paradigm may be based on unrealistic expectations. Certainly, in the present study, some teachers also unrealistically assumed that (some) students could use resources independently. For whatever reason, students may not be able to carry out basic university research (Ellis & Salisbury, 2004) but, when in tertiary education, managed to find strategies to bridge the gap themselves (Fitzgerald & Galloway, 2003).

Daniel (1997) questioned whether school students were experienced enough to use a university library effectively, and Langford (1998) considered that challenging research tasks in schools would only occur if students were encouraged or required to do so. In theory, the extended essay could provide such leverage. That the extended essay provided students with research experiences, as teachers and students in this study indicated, suggests that this may be the case. A premise that analysis, formal essay presentation, evaluation and critical thinking were all skills that should be developed by senior students (Riedling, 2004) suggests that these skills could be catered for by a student’s experience of extended and TOK essays. In IBDP, good levels of confidence of individual students, who could readily transfer skills, was also important (Munro, 2003; Stobie, 2005, 2007). However, a study of final-year students at Scottish schools focussed on research skills (featuring searching databases), time management skills and motivation (Wright & Christine, 2006) suggests that these skills, which are similar to those promoted for and required in IBDP, were typically required of senior students, irrespective of curriculum followed. Nevertheless, that IBDP students required advanced levels of skills for tertiary education was borne out by expectations for IBDP students in this regard (Hayden & Wong, 1997).

For research skills in particular, there is some evidence (Stobie, 2007) to suggest that this focuses on the extended essay and some support (QCA, 2003) that it does so. However, apart from a study by a librarian (Latuputty, 2005), there are no studies to link any library involvement and contribution to the process. One senior administrator noted a role for the librarian by modeling research skills for the school community and teachers and students saw a librarian’s expertise as being related to research skills (not least bibliography/citation). Apart from LIS literature (which identifies and promotes a
librarian’s role in this regard) there is little or no identification of a librarian’s role in IBDP literature, except that promoted largely by librarians themselves. Skill expectations are not unique to IBDP, and motivated students may succeed whatever the curriculum followed (Buchanan et al., 2005a). However, the extended essay may provide a virtually unique vehicle (QCA, 2003) for practicing and developing relevant skills. Therefore, whilst claims for IBDP indicate development of higher-order thinking skills, and some of these were brought out in this study (e.g. one student thought that critical thinking was the main skill developed through his IBDP course), the main skills needed by students were time management, prioritization, strategies to cope with significant amounts of content (especially in the G12 year) and citation skills. Questions concerning preparedness of IBDP students for using libraries in tertiary education (Clark, 1995) - not least library anxiety (Van Scoyoc, 2003) - remain unresolved, though with a small reservation regarding research skills. As Stobie (2007) identified, these were largely developed through extended essay experiences, and these skills were most often noted, in teacher interviews, in relation to the extended essay (and some coursework, though varied with the subject). Therefore, this possibly limited experience may help prepare students for research at tertiary level.

In the present study, teachers considered students needed a history of skill development and practice in using those skills - and in library use - before commencing IBDP. This was especially true of bibliography and in-text citation skills, and some teachers recommended a standardised style as being helpful for mixed-ability groups. Whilst not specifically identifying citation skills, Kyburg et al. (2004, 2007) similarly found that students needed a heritage of study and information-handling skills in order to meet the demands of IBDP. An additional factor for international schools, as identified by several teachers, could be the short time students typically spent at such a school, which could affect their skill development, and needed to be allowed for, a feature that has not appeared in the literature. Student interviews also generally supported a view that students did not have a heritage of skills prior to commencing the programme, and some noted the librarian’s role in providing tuition and support for such specific skills. A divergence of views (and actions) occurred with research and library-related skills.
Teachers assumed students could use resources independently, although some teachers realised that, on reflection, this was not the case. One teacher indicated that some students found it difficult to extract information from a limited number of textbooks, leave alone a large collection of different resources, and suggested a role for teachers in making connection between their subject and the library. Equally, students indicated that teachers assumed they could, would and did use the library, though because of textbook provision and Internet access, this was not always the case. Several teachers noted lack of an explicit statement about a role for the school library in IBO subject documentation.

Teachers had general views about the skills that were needed and used by students. These views appeared to be individual rather than collective, and perhaps based more on assumptions than on any knowledge of skills actually taught or learnt in the library or the curriculum. The compartmentalised nature of the school subjects may have influenced teachers’ views of skills needed and the absence of school policy on information literacy skills may also have contributed to the teachers’ limited knowledge of a wider range of skills.

*Internet skills*. Given considerable student use of the Internet, skills to successfully access Internet sources could be very useful for students. Although the Internet is discussed more fully in the next category, a discussion about information literacy needs to acknowledge the importance of skills in relation to the Internet, as students’ use of the Internet was commented upon with concern by a number of teachers. An expectation that older students had adequate skills for searching the Internet were not borne out in studies by Barranoik (2001) in Canada nor, for a similar age group, by Combes and Sekulla (2002) and Scott and Owings (2005), in Australia and USA respectively. Whilst McLelland and Crawford (2004) found that Scottish students were proficient in Internet searching and discerning in their use of particular sites, methodology employed (focus groups and questionnaires) meant that students’ own assessments were accepted. In the present study, both teachers and students noted that the latter’s Internet-searching skills were limited, thus reflecting the literature to a certain extent. Student awareness of their limitations (and identifying strategies to improve the situation) is however a difference
with the literature, with the exception of a relatively early study by Fidel et al. (1999). As with most studies though, students in the present study made considerable use of the Internet for all aspects of their daily lives. While teachers expressed concern about students’ Internet skills, they did not appear to view the teaching of these skills to be the responsibility of teachers, nor did they suggest that the librarian might be responsible. Teachers then had a general concern about Internet skills but proposed no solutions.

Robust factors in this sub-category were:

- Time management was considered the most important skill by teachers and this may reflect a utilitarian approach to the skills students required
- Students developed a smaller range of skills than those promoted in the literature and this may be due to teachers’ attitudes to information literacy skills
- Some teachers expected or hoped that students would have various skills before starting IBDP
- Skills associated with the Extended Essay may make IBDP unique
- Students had limited skills for using the Internet but, while teachers were concerned about this, the latter did not suggest ways to change such situations
- Role of library/ian was not mentioned in IBDP subject documents with regard to skills and this may have influenced teachers’ and administrators’ views about this role
- There was a weak link of library/ian with skills (including plagiarism) overall, but strong role for the librarian in specifically teaching, modeling and reinforcing citation and bibliography skills, which may reflect stereotypical views about the librarian’s role in the school.

Overall, teachers could provide conditions and expectations concerning a library role in the IBDP, which were focussed on an environment for students. The next category to be discussed is therefore related to students.

Students using the library

As with the teachers’ perspective in the previous category, a discussion of student use of the library involves reference to teachers, though the view is primarily that of students.
Discussion is treated through sub-categories: library as a place for students; students’ use of library resources; the role of the Internet in students’ lives; and students’ changing perceptions of the school library.

*Library as place*

In this study, students could use the library as a place in which to work. In interviews, students and teachers thought of the library mainly as a space where private study could take place. Observation and student interviews confirmed this factor, as a number of students referred to library environment/atmosphere as one of quiet. This resonates strongly with the literature. For the UK, Streatfield & Markless (1994), Shakeshaft (1998), Frew (2006) and others identified school libraries as being commonly used as places for study, especially by older students. This was true elsewhere, such as Holland (Boekhurst & van Veen, 2001) and an international (IBDP) school in Indonesia (Latuputty, 2005); indeed the IBO (2006c) indicated that study facilities were expected to be provided in the school library for IBDP students. Some studies identified that the use of space was the most valued aspect for older students (Hay, 2005; Kenney, 2006), who had the most opportunity due to timetabled study periods (Hay, 2005). Provision of timetabled periods in the library is a factor reflected by Spreadbury and Spiller (1999), and was true for the present study. Haycock (2003) noted a specific quality of quiet, which was a common comment by students in the present study. Therefore, the present study confirms a role identified by a body of LIS literature, featuring qualitative impact and ethnological studies: it was as a suitable environment for effective study that the library was valued by students, and was the main use of the library by students in this study.

*Use for study periods.* It is helpful to identify when students used this space, which generally focused on study periods (halls). The term firmly used is ‘study halls’, as it was mainly at such timetabled periods that students visited the library, as also found by Hay (2005). In this study, students tended not to use the library outside allotted study times. However, some students did not perceive a structure to study halls, had little study ethos, caused disruption and thereby spoilt the library atmosphere for others (though some
students thought that it was younger students that caused disruption to the library atmosphere).

Studies have concentrated on information literacy or student perspectives, where convenience, quiet atmosphere, comfort and socialising were factors (Limberg & Alexandersson, 2003; Shoham & Shemer-Shalman, 2003). Indeed, building on Shilling and Cousins (1990), Rafste (2003, 2005) identified that older students could colonise libraries, set tone for what libraries were used for and who also preferred to use libraries for social purposes, because libraries were both comfortable and a different environment from classrooms. These findings are consistent with the present study. Frew (2006) identified a tension through use of the library by younger students, threatening an environment the older students valued, again consistent with the present study, where some students (and one teacher in particular) held such views. G12 student comments suggested a different sense of purpose (or urgency) in their final year. There is a possible corollary, though not so marked, with Rafste (2003), who found that students (including IBDP students) in the penultimate year of school used the library least, whilst those in the final grade used it most. In this study, it was the provision or allocation of study periods that enabled opportunities for students to use the library.

*Reasons why students used the library for study.* Given that students used the library for their study periods, it is helpful to identify reasons why they did so. Reasons why older students used school libraries have not been fully explored in the literature, as choice may not be entirely up to students alone. In the present study, there was pressure on space in the school, for a variety of functions, and one result was the need for more space for study halls. Rafste (2005) found that how school libraries were used partly depended on what facilities were generally available in a school, and resonates with the present study, and with that of Shenton (2007). From 2006, students were required to use the library for study halls in G11; although characterized as individual study times, students may not have had a choice of venue. The character of study halls therefore changed, together with student perceptions of the role and function of the library, and how they behaved in and related to it. However, as far as G12 students were concerned, they had other options and
it can be suggested that students who voluntarily chose to use the library were more motivated to do so. One administrator was aware of issues of space that meant conditions for studying in the library was less than ideal, and was sympathetic to students in this regard. Observation indicated that there were also some students who could not effectively manage independent study and research. Therefore, activity could occur in the library that changed the environment.

Students’ motivation was a factor in why or if they used the library, as motivation may be what two students meant when remarking that they considered their use of the library was their own responsibility. Some students who found the Internet easier to use than the library indicated that they could be motivated to use the latter when required or encouraged to do so by teachers. One G12 student in 2006 gave answers which suggested that the library was not relevant to his studies or the way he studied, and relevance may be a pre-condition for motivation. One G12 student in 2007 noted that it took more effort to use the library because it was easier to use textbooks and computers in the school, as they were readily available in classrooms.

Quantitative impact studies (e.g. Lance et al., 2000a, 2000b, 2005) suggested that use of school libraries diminished as students progressed through high school grades or studies did not include data for older students. However, from this study, it may be suggested that students use the library differently in G11-12, but especially G12 (where they may be more focussed or motivated). Perhaps reflecting this difference, one teacher specifically recommended separate library provision for IBDP students, with the aim of better preparing students for university life; a similar idea was also promoted by an administrator. A different use partly occurred because students were allocated independent study periods (as also indicated by Hay, 2005; Streatfield & Markless, 1994), which itself is generally a change in the way students work and operate during school hours. Students and teachers therefore held values and perceptions (both negative and positive) attached to such library use. Some students’ views on and use of the library appeared to have been influenced by their imposed use of the library while other students, whose use was voluntary, had a more positive view.
Opening hours of the library. The ability to remain open to older students outside regular teaching hours was a factor in studies about the impact of the school library (Baughman, 2000; Smith, 2001) and which was valued by students (Hay, 2005, 2006). However, observation during the present study indicated that few G11-12 students used the library after school, and this feature was little commented upon in student interviews. One teacher found the library opening hours inconvenient as his subject was timetabled outside regular school hours, otherwise the factor was not commented upon by teachers. Opening hours was referred to by an administrator in the context of suggesting a new model for delivering IBDP, and was a theoretical or idealised suggestion (which involved the library being open in the evenings, exclusively for IBDP students). Nevertheless, students’ actual use of the library after the formal school day ended was negligible. Although the library was open to students for one hour after the school day, it could not be said to be a factor in impact of the library on IBDP at the international school, and does not therefore support findings of the above studies. Reasons may not be lack of interest but rather due to a demanding programme of after-school activities and sports, distance to travel home and tiredness on the part of students, all of which were indicated in student interviews. One student only specifically referred to the presence of elementary school children in the library at the end of the school day as a deterrent to use, and this may be an issue for a library that caters for K-12 students.

Robust factors in this sub-category were:

- The library was perceived as an appropriate place for study periods, and this reflected an imposed, rather than voluntary use of the library for some students
- The library was especially valued by some more motivated and able students, whose use was voluntary
- Students mainly did not use the library outside allotted study periods, partly because of their work commitments, distance travelled to school, but also their views of the library and the availability of resources elsewhere
- Once in IBDP, students used the library differently than previously
• The library was used for study halls because there were little or no facilities elsewhere in the school for such a purpose.

Using resources
That the library stored and made available resources was nevertheless axiomatic to participants in this study, suggesting attention be given to how resources were used. From interview data, it was clear that use of physical library resources varied amongst both G11 and G12, but students could all recall using resources at least once during the year. However, for many students, use of traditional library resources was occasional rather than regular, and was a secondary factor in their use of the library. Observation and interviews firmly indicated that the most popular use of library resources overall by students was iBooks or laptop computers. Olen (1995) found few older students used the library as a resource, though those that did used it for information, however that study took place before Internet access became common in schools. Hay (2005, 2006) found that older Australian students used a variety of library resources, but technological ones were often cited, as Frew (2006) also found in UK. The extent and regularity of student use of library resources was not identified, and this was true of qualitative studies in Ohio (Todd & Kuhlthau, 2004, 2005a) and Australia (Hay, 2005), where students were asked to think how but not how often the library helped them, whereas quantitative impact studies tended not to report library use by older students.

Other implications on use or non-use of library resources were departmental collections (the prevalence of which was noted by Markless and Streatfield, 1994), personal libraries of teachers, which were available to individual students, and the location of some teaching areas at a distance from the school library. These factors were identified by teachers, but not specifically by students. Students though considered that teachers provided one of their main sources of information, so could, by implication, include sources of information available to teachers – and may have included library resources (previously borrowed by teachers, and, as such could contribute to a hidden impact of the library). With regard to this specific age group of students, the literature is unclear about the role of teachers in recommending resources and encouraging use. Exceptions were
where students were encouraged or required to use library resources for specific, timed projects, whereas there is otherwise little identification of ongoing, natural use of resources by the 16-18 years age group, as provided by this study. Additionally, a number of students experienced finding information digitally much easier than in traditional resources; several students were quite honest or forthright in suggesting that this was the case, again reflecting the literature, as the sub-category on the Internet will identify.

Overall, in the context of the present study, students showed a realistic appraisal of their skills in using the library. For instance, one student used several strategies, including serendipity and remembering where relevant sections of library resources were located. However, some students felt they knew how to find information in the library, but, equally, students asked library staff for locational help. That it was not a strong factor may be because students used the library as a place and their regular information sources were teachers and textbooks. In terms of Internet searching, several students noted that their skills improved in a trial-and-error way, and this inferred that the terms they used were initially limited, which in itself indicated little use of critical thinking, at any rate, as far as research and information-finding skills were concerned. This may also be inferred from their limited use of the catalogue and the need to conceptualise search terms. Another factor why these students did not reflect the literature in terms of student assessment of their information-finding skills may be because the researcher was also their librarian, and would be assumed to know their level of skills, so they may have been more realistic in their assessment.

Libraries in international schools. Another main factor in the use of resources may be the ability of international school libraries to provide suitable resources for IBDP students. Issues for student library use in international schools emerged mainly from interviews with teachers. Two referred to previous experience to identify issues – related to coursework and the extended essay – where the onus was on an international school library to resource specific needs, especially in the absence of a developed local library infrastructure (for English language materials). Two other teachers suggested that, due to regular movement of students amongst international schools – and given variable
standards of provision of libraries in such schools – student education and practice in researching may be limited. One administrator also observed that library provision had been poor in previous international schools he had worked in, which resonated with Bagnall’s (1994) concern, though the latter went further and suggested that international schools would not have libraries. Several participants identified the K-12 nature of the school as reflected by library provision (and which may not have been untypical for smaller international schools); this proved an extra challenge for students to find the right level of resource. There was also an implication for library management by enabling class visits to the library by younger students whilst maintaining a quiet atmosphere for studying for older students. Indeed, older students perceived it was younger children, rather than their peers, who made noise that affected a peaceful environment. As one teacher indicated, elementary and high schools operated different timetables, which could exacerbate this issue. For one teacher, a K-12 library did not work and advocated a separate library for IBDP students that could better prepare them for university life. It was therefore a library that catered for all age groups in the international school that was a factor in use of library resources by IBDP students, rather than any other specific attribute of international schools.

How students found resources. The ability of students to find resources in the library is a factor in successful use of resources. Consulting the catalogue could indicate use of or interest in library resources, therefore catalogue use was a question to students in 2006, and which indicated evidence of some use. However, such a situation was not confirmed as further (observation) data showed that the computer catalogue was little used and was not mentioned by students in interviews in 2007. Limited catalogue use by students resonated with findings of Spreadbury and Spiller (1999) and Frew (2006). Carter (2002) indicated that few schools had a catalogue available on the Internet, though the extent of use was not a focus of her study. Nevertheless, use of the catalogue in the present study may have been higher if available on the Internet, so it could be accessed from both campus and home by students in this study. Limited use of the catalogue and use of the librarian to help find specific resources was common to both the present and these other studies. Some students tried to remember where relevant sections were in the library,
though also asked library staff for help. Some students in this study were aware they needed skills to use the library. For instance, one student referred to being ‘lost’ in the G11 year, because she did not know how to use it and where materials were. Others assumed they could, though answers suggested that they had limited experience of doing so (e.g. using the catalogue) and most students relied on library staff to find resources for them, when required. Students may have positive views about their own abilities possibly because of little history of testing their skills against need to use them.

Students therefore had limited skills in locating resources, which could have implications for what was regarded as the major research element of the IBDP, the extended essay.

*Using libraries for extended essays.* By focusing on students’ experiences of the extended essay, Latuputty (2005) indicated that this was the main support of the library in IBDP. In the present study, both students and teachers considerably articulated views about library support for extended essays. Some teachers noted the desirability and need for specialized items that could be obtained from elsewhere and/or through specialized subscription databases. This resonates with secondary IBDP literature, especially that related to extended essay needs, though a library role was not identified (e.g. Hessler, 2004), indeed Clark (2006) was concerned that a library role with regard to extended essays could be overlooked. Nearly all students in this study thought of researching in the library for extended essay needs, even if they did not think the library could help. Teachers and administrators too all discussed a relationship between the essay and the library. The relationship was not however exclusively associated with the essay, as subject teachers were aware of research needs for subject-based coursework (which some students reflected), but their views on whether the library could help depended on their subject and the requirements of IBDP. The present study found that supporting the extended essay process was a significant role for the library, though it was also able to impact on other aspects of IBDP, but which varied for different students and teachers. As such, support for the extended essay was essentially the only common link with the library for all teachers and students. Each student needed to complete an extended essay as part of the requirement of IBDP, and needed a teacher to act as a supervisor. Research
was a required stage or process in the extended essay. Teachers, administrators and students psychologically equated the research element with the library, even if this did not always happen in practice, and this could be due to subject and topic, limited student heritage of using the library, teacher (supervisor) awareness, and very limited indication in IBDP documentation that the library could help.

*Using ICT resources.* As iBooks were the most borrowed resources, an indication of which aspects of ICT students used would be useful. This study found limited use of databases, which varied from recommendations of professional literature (Dando, 2004) and a study where a project was set up to encourage use of databases (Wright & Christine, 2006). However, these studies reflected an LIS paradigm. Students preferred the freedom of the (free) Internet, as they did not like the confines of subscription databases (Levin & Arafah, 2002). One impact study in particular (Smith, 2001) noted provision of databases, but not their use, which is an important distinction. (Indeed, Smith was careful not to ascribe causal effect to library inputs.) Reasons for limited use may include the structure of subscription databases, for which students need training and good levels of skills and critical thinking; also, students were more familiar with the free Internet (Barranoik, 2001; Combes & Sekulla, 2002). This was reflected in the present study, specifically use of Google, as identified by one teacher, and Wikipedia, as highlighted by one student, together with comments that indicated trial-and-error means of finding relevant information on the Internet. One teacher thought the overall quality of ICT use in the library was low and other teachers observed limited skills of students who searched the Internet. Students noted use of ICT most commonly for Internet, word-processing and emailing, as broadly reflected by Frew (2006) and could be social in nature (Rafste, 2003, 2005), though findings of other studies varied. Several studies noted a trend that students used what was familiar to them and which they considered convenient or the easiest option – the Internet (e.g. Levin & Arafah, 2002). Limberg and Alexandersson (2003) found that students did not use libraries for ICT, and was a secondary factor, whereas Hay (2005) found that G11-12 students used technology facilities - not least for access and printing - extensively when using school libraries. In the present study, the use of a wireless environment, where iBooks could be used
anywhere in the school, further obfuscated identification of the library with ICT. The iBooks were borrowed by students and used as much, if not more, elsewhere as in the library. Equally, iBooks could have been checked out from another facility (e.g. the ICT department), though this could also be seen as part of the regular function of lending resources by a school library. As such, it is difficult to exactly compare quality of ICT-library use by students as a strong trend does not exist, though there may be a suggestion that quality of use was overall not high, or merely utilitarian and/or social, as was consistent with the present study.

Robust factors in this sub-category were:

- Students used traditional library resources only occasionally, which reflected their own and possibly their teachers’ limited views of the school library
- Students may have used resources elsewhere (e.g. departmental libraries) and/or their textbooks, which may have made the school library seem less useful to them
- Students asked library staff to help them locate resources rather than use the catalogue, which reflects a positive view of library staff but a negative view of the library catalogue
- The extended essay and some coursework were main reasons for using library resources and where the library had most impact
- Most popular resource amongst students was laptop computers (iBooks), reflecting students’ reliance on online resources
- All students used the Internet, but few used databases, which may indicate student reluctance to use library resources or their lack of knowledge of how to use databases
- A K-12 library was not the best model for the needs of G11-12 students, but this model was chosen by the school in relation to all students
- Few implications specifically for libraries in international schools were identified.

One resource that students could and did use was the Internet, which has not formed a significant part of discussion of this sub-category, as it is a sub-category in itself.
Internet in students’ lives

This sub-category is so termed because it raises it from a descriptive to an active term to reflect a relationship between the Internet and a generation who have known the Internet for as long as they can remember, and who are popularly referred to as digital natives. In this study, students’ use of the Internet was extensive, as KRC Research (2003) and other studies found. Regular use of the Internet was indicated in each student and teacher interview in this study. Students thought of the Internet as distinct from the library because they could access the Internet elsewhere (through provision of a wireless environment in the school, and at home). Levin and Arafeh (2002) found that high school students used the Internet extensively, indeed was seen by students as a natural part of their lives, but school libraries were not mentioned in the report, and this was largely as students in this study saw it. The relationship between ICT and the library was not necessarily perceived as symbiotic.

In this study, whilst Internet-searching was the most common form of research, some students perceived that print resources may be more accurate or valuable than those obtained from the Internet. This did not deter students from using the Internet, but they reflected that they needed to improve their Internet searching skills, mostly as a result of pressure of limited time. Teachers considered students’ ability to search the Internet was limited, and gave some indication that students had not thought out strategies and search terms, nor used critical thinking skills when using the Internet; there were reservations about student abilities to navigate the Internet and assess suitability or quality of sites. Barranoik (2001) took an assumption that students would be competent Internet users, but found otherwise, as they used a limited range of search terms and were unable to analyse or evaluate the authority of websites, and failed to cite sources. This led to a conclusion that a librarian could have a role mediating the Internet process (as also supported by Combes & Sekulla, 2002; Fidel et al., 1999; Herring, 1997; Woolls, 2004) but, in this study, students rarely asked the librarian for advice about Internet-based resources. Some students in the present study said they used the Internet together with other resources. One student, in particular, exclusively used the Internet (plus textbooks) and although articulated some critical appreciation of some Internet site content, had
considerable faith in the comprehensiveness (and convenience and ease of use) of the Internet. He specifically valued Wikipedia as the first and possibly only source of his information. (As identified above, a few students noted use of online databases, but it was not a regular aspect of their ICT use.) One teacher developed a theory concerning the ability of less-able students to use more than the Internet: these students may copy able students in Internet-searching, but not have the skills or aptitudes for independent study to search in other resources, nor could they understand content of some sites. Teachers’ views on the use of the Internet in IBDP also depended on subject. In mathematics, research on the Internet was seen as sufficient, whilst teachers of English and Film had concerns about the quality and relevance of some Internet content vis-a-vis other resources that were available to students. McLelland and Crawford’s (2004) study of students aged 16-17 years found that all used the Internet for all subject studies. Whilst their project encouraged students to look beyond material provided directly by their teachers, Frew (2006) indicated that students who looked for information beyond that provided by teachers found sufficient material on the Internet. Students in the present study used ICT naturally in very similar ways and students mixed social or recreational and academic use, sometimes at the same time.

Limited skills and reliance upon the Internet by students who were shortly to commence tertiary education may be a concern (Daniel, 1997) though not possibly untypical (Fitzgerald & Galloway, 2003; Irving, 2006), and it could be suggested that this study is not an exception. Familiarity and convenience were found to be powerful determinants in students’ choice of use of the Internet in this study. Ellis and Salisbury (2004) found that students at an Australian university knew that the Internet had some questionable sources but they continued to use it because they considered that they knew how to use the Internet, unlike other ways of researching. However, whether students from the international school experienced such a phenomenon in tertiary education is outside the scope of this study, though may well be probable.

Therefore, considerably reflecting the literature about how students used the Internet, robust factors in this sub-category were:
Students used the Internet for academic and recreational purposes on a daily basis, reflecting the use of online information by this generation of students.

Students did not necessarily associate the library with Internet access, though many students borrowed iBooks from the library, which suggests that students took a holistic view of Internet access.

Students had limited skills in using the Internet, though many students appeared to rely on Internet-based information, a contradiction noted by teachers but not acted upon.

Students considered that using the Internet was familiar, natural and easy, though some may have been unaware of their lack of searching strategy skills.

Whilst students did not necessarily perceive a relationship between the library and ICT, as manifested by the Internet, there were some student perceptions about the school library overall.

Perceptions of school library
G11-12 students’ perceptions of the school library changed during this study. Perceptions are important as they allow values to be identified and expressed (Usherwood, 1999), and largely governed how students related to and used the school library, indicating that the issue is more than purely descriptive, valuable as that may be.

Social and emotional use. Using the library as a social area, as observation data found, during enforced study halls meant that students tried to use the library to make up for lack of facilities they felt they needed and were entitled to, and which could be social in nature, as Shenton (2007) and Shoham and Shemer-Shalman (2003) found. A factor was the limited availability of space and other facilities for older students in the school (which was identified through comments from teachers), as Rafste (2005) also found. The present study found (as did Streatfield and Markless, 1994) that students valued the choice of using a library for study or going elsewhere, though when choice was taken away, value decreased, so students may be denied choice of a unique quiet atmosphere (a
feature identified by Spreadbury and Spiller, 1999). Limberg and Alexandersson (2003) found that students used the library to achieve freedom from the classroom, but that freedom could be reduced when students were required to be in the school library. Although not extensively articulated, some students in the present study reflected such features and values from these two studies. It is therefore possible that choice and freedom were valued by students, especially as these students had few choices in an environment that was largely organised by others, as could be inferred from a response from an administrator in this study.

Other studies, including Streatfield and Markless (1994) and Rafste (2003), found that libraries could be colonised by older students; such a phenomenon occurred in the present study. This not only affected perceptions of those particular students about functions and uses of the library, but may also have affected those of other students and teachers. Indeed, potential use of the library may have become limited or even negated, as one teacher strongly indicated. Perhaps accepting that colonization had or would happen, another teacher suggested a specific IBDP library should be created and an administrator advocated different opening hours for the library (offering potentially exclusive use) for IBDP students. Therefore, students could substantially, though perhaps indirectly, affect how the library was used and, more importantly, perceived. Nevertheless, the image of the library was largely that of a book-dominated area, with an associated atmosphere of quiet, and which may have contributed to a sense of uniqueness. In this respect the present study reflected ethnographic studies but differed from KRC Research (2003), where the presence of ICT substantially changed the image of school libraries. Students in the present study perceived the library as a book environment, even though they were aware that it contained ICT. (However, this book-dominated image may have contributed to a feeling of quiet and peace, and which helped to relieve stress.) As identified above, because students could use ICT elsewhere, this was not a factor in the present study; indeed, a wireless environment, with the availability of laptop computers, may reduce a link between ICT and libraries. It was clear too that students’ views differed depending on whether they were required to use the library for study halls or, as with G12 students, they had a choice.
Changing views of students. Students’ perceptions of the library changed as they were interviewed as they proceeded from G11 to G12; they gradually saw that the library had an information role as well as offering study space, and which they chose to use or not. Previously they had mostly used a library recreationally (almost exclusively for borrowing materials) on short visits as directed by a teacher (or possibly privately at breaks or lunchtimes). KRC Research (2003) however found students’ perception of the value of the school library lessened in higher grades. As the present study focused on views of students in higher grades, not lower ones, a comparison could not be established. However, students in these higher grades had different views of the library than before. Some G12 students felt there was a value and benefit in using the library as it helped them to use their time efficiently, complete required work and prepare for examinations. Even those who did not value the library valued having a choice of venue and resources available to them. The library was also valued as being available to them during the day, as students felt they got home too late and were too tired to study in the evenings, so appreciated opportunities available during the school day, and which may have assisted with time management skills. It was as a place of study that students most perceived and valued the library, though provision/availability of resources could not be entirely divorced from such a perception; indeed, one student referred to this relationship when thinking of the library as ‘an informative place to study’. Factors for a change in perception by G12 students included not only choice. Some experienced pressure, because of the amount of work and studying involved in IBDP, with a number of deadlines, not only internal ones, but others set by the IBO (involving work being sent elsewhere for assessment). They also had more freedom, in terms of when they attended school. This was particularly so half-way through the G12 year, when students had the option of arriving for lessons (they did not have to be in school for study halls). Such a concession assumed that students had sufficient skills to manage their time. Finally, there was the need to revise for external examinations, set by the IBO. All these factors meant that the G12 year was different from their previous experience, and some students were able to benefit from use of the library as part of their strategies in managing this change.
Robust factors in this sub-category were:

- Student perceptions changed during IBDP and they were able to articulate values they associated with the library
- The library was perceived by G12 students as somewhere that was not a classroom, and offered a quiet atmosphere which, in this context, meant a positive impact of the school library on students
- The school library had a positive social function for older students, and this may be in contrast with a more-generally perceived negative social function (such as social chatting) for the library
- The library could be colonised and perceptions changed as a result, both for those students and others.

The perspectives of both teachers and students have been identified through two categories. A third category has been identified, and focuses on how the librarian related to and with the IBDP school community.

_Librarian’s role_

Whilst the librarian’s voice, as a member of the IBDP school community, was included through use of memo technique, it is the perceptions and views of others – students, teachers and administrators – that substantially narrates and informs this category.

Teachers and students were asked to comment on the role of the librarian they knew. Furthermore, that librarian was the researcher-practitioner who asked them questions. It is therefore possible that those interviewed may have felt uncomfortable about being totally frank in their views. Such a possibility needs to be borne in mind in the discussion of factors relating to the librarian’s role in this study.

_Librarian in an international school._ A library/ian in an international school was a focus of this study. Although an international school was the natural setting, perhaps surprisingly the type of school did not arise as a category or strong feature. Some elements were identified within categories as appropriate, but it may not have arisen as a
category itself because of few distinguishing features. The literature for international schools identified that there was ambiguity concerning a definition of an international school and that, in reality, schools varied considerably. However, international schools were invariably private or independent rather than state-funded. In LIS literature, there were some indications of difference between libraries in private and state-funded sectors (Henri & Boyd, 2002). In USA, KFC Research (2003) identified some differences in school library provision and use between private and public sectors, although, in the UK, Shakeshaft (1998) found that school library provision varied within the sector. Markuson (1999) identified levels of library provision and services in guidelines for international schools, possibly recognising that international schools were very varied in terms of size, funding and situation, so that advocating one level of library provision and programme would not be helpful. Only Bagnall (1994) was concerned that international school libraries could not support resource needs of IBDP. The focus of his study was not school libraries per se and the issue has not arisen elsewhere, except that international schools in non-English speaking countries may find it a challenge to support specific extended essay needs (Hessler, 2004). This specific point arose in some interviews in the present study, though not in a study that focussed on extended essay needs of students in an international school in Indonesia (Latuputty, 2005). Buchanan et al. (2005a) identified an issue concerning resourcing the IBDP, but that study was not specifically related to international schools nor school libraries. Therefore, whilst international school libraries may find some challenges in resourcing specific needs associated with IBDP, this study did not identify international school libraries as being significantly different to other types of school libraries that offer the IBDP. Moreover, the review of literature about international schools did not identify a radically different modus operandi from that of other types of schools, which suggests that broader literature findings apply to this study as may be appropriate. Situations and roles of librarians in international schools and specifically for IBDP (as indeed suggested by Clark, 2006), then, differ little from those in other types of schools, though may have more relationship with private sector school libraries. The library/ian in this study reflected the literature and was therefore not untypical. A real issue though concerned the ability of one library/ian to provide for needs of K-12 students, especially in an environment where space was at a premium.
Students and teachers noted tensions arising from this situation. Teachers in this study included those with previous experiences in international schools, yet how they related to the library depended more on their subject focus and previous experience of libraries, whether as students or teachers. It may be suggested then that the IBDP school community could have had defined views of a librarian.

*How the IBDP school community defined a librarian here.* Identifying whether there was a common understanding about a librarian could assist in analysing comments and perceptions from members of the IBDP school community. Teachers in this study were initially surprised and embarrassed at being asked to define a librarian and had some general though somewhat inconclusive ideas about what a librarian did. Further reflection enabled more specific views to emerge, such as what librarians should not do and some indication of job activities. Students, however, had more definite or concise, though limited, views (reflecting stereotypical views by students in KRC Research, 2003). No respondent in the present study identified a specific qualification or professional background or status for a librarian, but rather articulated individual characteristics and qualities that were appropriate for a member of the faculty. A suggestion may be made therefore that personal qualities, matched to pedagogies that faculty employed, may be more relevant than a precise qualification or experience base (whether teacher or librarian), at least as regards an IBDP school community, especially as such a community was not guided by information in curricular material issued by the IBO. In spite of recommendations in role statements, LIS secondary literature is not agreed on the best model of a school librarian (Turner, 2007). However, there is some indication that personal characteristics and generic skills may be of considerable utility to a school librarian (Roys & Brown, 2004), such as a positive attitude and pro-active stance (Henri & Boyd, 2002; Oberg, 1994). In LIS (especially secondary) literature, librarians provided definitions of what they should do, though teacher and student views were less prevalent – except for Williams and Wavell (2002). Such ambiguity about the role of a librarian in this study suggests that teachers’ previous experience of librarians in schools in which they formerly taught or were students themselves, may be a relevant factor. Definitions
too could also pre-influence how the librarian interacted with individuals, or more rarely, where they observed the librarian working with others (students and teachers).

*Teachers’ previous experience of school libraries/ians.* As teachers’ views of the librarian reflected their experience, this may have formed expectations of the librarian. It was found that teachers had limited previous experiences of librarians; only one teacher drew on previous experience of working with a librarian to inform a view. A few teachers based their views of libraries/ians on ones they had known when students themselves – where this was the case, only one teacher referred to the act of researching and using resources in the library, as others remembered it only or mainly as a place in which to study. Views of teachers therefore reflected their own individual experiences and preconceptions. For teachers, perceptions about the library being separate from teaching may be reinforced by the fact that non-LIS educational literature tended not to feature or indeed mention school libraries/ians (Montiel-Overall, 2005; Pratt, 1994). This was true of IBDP subject documentation; even in an area – the extended essay – where, as this study identified, a librarian made a contribution, there was no identification of a role in the literature (with the singular exception, in the secondary literature, of Jones, 2004b). Especially perhaps in an international school context, if ongoing professional development of teachers is significantly informed by literature and documentation (rather than the necessarily rarer courses or conferences in such locations), such a lack of inclusion may further contribute to a hidden or unclear role for libraries/ians in the perceptions of teachers and administrators.

Teachers’ views about librarians that were largely based on their previous experience (Williams, 2006), were true of the present study, though only three of the ten teachers interviewed specifically mentioned previous librarians at all. Of these three teachers, one only referred to a supervisory role, and another noted that he had no experience of a librarian until university. However, the third teacher referred to previous experience of working with librarians in other international schools regarding resources and on strategies to develop citation skills and reduce plagiarism, but this was the only instance of a teacher citing an example of previously working with a librarian. It may therefore be
suggested that teachers in this study had little or no previous experience of working with a librarian or being aware or appreciating relevant skills/experience of a librarian that may assist the quality of learning of students, and thus was a factor in how teachers used the library/ian. As far as a low or undeveloped opinion of skills of librarians is concerned, this reflects findings of Rafste (2003, 2005) and McLelland and Crawford (2004), studies that particularly looked at the older age groups. (Students’ views about other school libraries/ians were extremely limited, indeed virtually non-existent, and therefore cannot support this feature.)

The literature has identified a proactive role for school librarians (such as, in an IBDP context, Clark, 2006). A question therefore remains as to whether teachers in this study were unaware of the role of the librarian, due to lack of attention to this role by the latter. A memo, written by the librarian in this study, indicates some action on this role, though when relating subject links, it is not clear whether the impetus came from the librarian or teachers. From the memo, it is possible to infer that the librarian was more reactive than proactive, though communication and promotion existed, not least through use of technology. Interview responses from some teachers indicated that there were proactive elements, and observation notes show that the librarian held classes on researching for the extended essay. However, it could be inferred from student interviews that the librarian’s role was more reactive than otherwise, as, for instance, the librarian responded to enquiries from students, rather than the other way around. It is possible that the librarian therefore did not meet an advocated proactive role of librarians. The librarian seemed to prioritise promoting information and resources for teachers’ needs, which reflected recommendations of Williams (2006), and in line with Farmer’s (2006) view that the library may impact more on teachers than students. If this was the case, possibly this strategy evolved due to several factors, including teachers’ limited previous experiences of librarians, so the librarian needed to focus on providing a service to teachers and, by doing, provided some education and experience about the support that a library/ian could offer. It is possible that the librarian considered that experienced subject teachers were primarily focused on their subject and possibly followed a traditional (even stereotyped) view that the library/ian was seen as a support more for humanities and social sciences,
rather than human sciences and mathematics. Therefore, the librarian may have felt constrained to work thus in such a paradigm. Another factor may be related to the IBDP itself: a proscribed curriculum, with time constraints and a trend for teachers to provide lectures, transmitting content quickly, and lack of reference to the role of school librarians. Yet another factor could be because there was only one librarian in the school, and there were necessarily implications for priorities for where time and expertise should be directed. Energy on promoting the library may have been directed elsewhere, e.g. in the elementary school, where enquiry-based curriculums (which included the IBO Primary Years Programme [PYP]) were offered. (Such an approach would reflect a focus of impact studies, not least those in the quantitative manner.) Possibly, therefore, some IBDP teachers may not have been fully aware of LIS-advocated roles of the library/ian. It is a moot point, however, as to whether it would have made a difference to how teachers taught, as their pedagogical styles were somewhat constrained by the required curriculum. The librarian may have simply reflected a reality, and tailored library provision, services and direction accordingly, as Clark (2006) noted in working with English and Science IBDP teachers.

*Views about the main role of the school librarian.* Although initially views about a librarian were ambivalent or unclear, with reflection, students and teachers were able to comment on the main role of the school librarian, as they saw it. Many students and teachers firmly saw a main role of the librarian as providing help and assistance to locate and identify resources (mostly in the library but also electronically). For some G12 students, this was the main function of the librarian. In the literature, even motivated and confident students considerably asked the librarian for help in finding resources in the library (Latrobe & Havenar, 1997) and was true for older students (Spreadbury & Spiller, 1999); such a feature was reflected in this study, as the students could be regarded as being confident. Some teachers indicated a librarian’s role in finding information (irrespective of format) as a service for users and also in relation to IBDP subject resourcing but nearly all primarily saw the librarian’s role as focussing on the extended essay. Senior administration perceived the librarian’s role primarily in connection with the essay too, with the rider that this was the most obvious role, and there could be other
hidden, and therefore unknown, aspects. Both teachers and students also described the librarian’s role in advising about citation and bibliography skills, but this again was especially (though not exclusively) related to the extended essay. However, mainstream IBDP literature makes no mention of a librarian’s role in the extended essay process, except Jones (2004b) and in passing or briefly in IBO documentation (IBO, 2007a). This situation prompts several suggestions: that a librarian’s role may exist but is hidden or unperceived or not valued, or that librarians are in fact little involved in the extended essay process. Such views however were contradicted by this study, as there was some indication that the librarian’s role was acknowledged and regarded by teachers, administrators and students. (Furthermore, such a locational role may suggest a deeper resource support role, where advice and offers of help may be subsequently suggested to students.) Nevertheless, hidden or unperceived roles, whether in practice or in the literature, all contributed to an environment where an IBDP school community was unaware of what a library/ian does and could contribute to the programme. This may be the case, irrespective of the person or type of librarian in this particular international school. Factors could include the lack of identification of a role for the library/ian in IBDP curricular literature, teachers’ limited experience of librarians, disparate national experiences of teachers, the turnover in staff, and a school culture that had a traditional or unformed view of the role of the library. Streatfield and Markless (1994) identified several types of schools, pedagogically, indeed, pedagogy could change with subject departments and individual teachers, and that a school library needed to reflect this. Given these factors (and that librarians at the international school had come from Australia, North America and the UK), it is probable that other librarians would face similar experiences to that of the present practitioner-researcher.

**Librarian as a supervisor of students.** Another role, a *de facto* supervisory role, for the librarian in this study was, in practice, a significant one. When asked, most teachers thought it was not the librarian’s role to supervise study halls, though some accepted that it would and had happened and could result in tension with roles and relationships with students. The role, though, is one relatively little documented in the literature, except directly by Gildersleeves (2006) and Turner (2007), though advice about legal and safety
issues were given in guidelines (Barrett & Douglas, 2004), which suggests that supervision was a common job activity for librarians. Streatfield and Markless (1994) showed that a library atmosphere was different when not supervised for study periods of older students. These all related to UK, but in USA, KRC Research (2003) recognized that librarians had a supervisory role through perceptions and comments made by students. In Sweden, Limberg and Alexandersson (2003) noted that a librarian spent time maintaining quiet in the library. These studies too suggest that supervision of students in the library was a common job activity for librarians. However, an alternative (in the UK) was identified by Frew (2006), where supervision of older students was focussed on a person who was specifically employed for such a role, freeing the librarian from such unproductive tasks. Any tension between roles of a librarian was thus removed. In the present study, it was tension between roles that was identified by teachers in interviews. Students, in interview, did not refer to this role, possibly because they were motivated (especially G12 students), indeed such a manifestation of maturity may have occurred specifically from following IBDP (Goodban, 2004b). Alternatively, being supervised did not apply to them, or they may have felt uncomfortable about mentioning such a role to the practitioner-researcher (their librarian). In the second round of interviews, when specifically asked to think about it, teachers and administrators considered the role of supervising students was not a librarian’s role, nor the best use of a librarian’s time or expertise, as noted by several teachers. Yet, unless prompted (i.e. in the first round of interviews), teachers (with one exception) did not question this role, suggesting that teachers may have experienced or seen librarians undertaking this role in the past and assumed it was a standard job activity for librarians, as it was in this study. Another reason could be the scarcity of space in the school, which meant that students had limited facilities elsewhere, such as no student lounge and only the canteen to use to socialise and relax – apart from the library (which reflects Rafste (2005) and Shilling & Cousins (1990)). On this point, some teachers’ responses were pragmatic, in that the school had a space problem, there was no other space for study hall, so it needed to take place in the library (and the librarian assumed a supervisory role by default), but was not ideal. Using supervision as an instance, LIS literature may not accurately reflect practical issues affecting school librarians, resulting in a dichotomy between ideal and actual roles. In
terms of this study, supervising students may have taken time away from developing a proactive library role in support of students’ achievement in IBDP. It is moreover a visible role and again contributes to a perception, which is at variance with that presented by LIS (secondary) literature. It was clear, therefore, that while teachers had a theoretical view that supervision should not be a key role for the school librarian, this was countered by a pragmatic view which accepted that supervision would be a key role.

*Librarian as change agent.* Also reflecting an LIS paradigm is the idea of the librarian acting as a curriculum change-agent in the school, not least, as the literature review indicated, in relation to information literacy. However, administrators in this study felt it was their role to promote conditions and set expectations for teachers and students regarding library use and functions, rather than the librarian (but who would be considered to have a day-to-day role in this regard). This was suggested because of a possible perception of vested or self-interest on the part of the librarian. At any rate, no teachers or administrators articulated a view that librarians could change or improve teaching and learning practices in the school or indicated a role for a librarian as a change agent (and this was true for students). This is at variance with much professional, secondary or advocacy literature (e.g. Asselin (2005) and, specifically for international schools, Ferguson and O’Hare (2004)), a trend in the literature that was specifically noted by Limberg and Alexandersson (2003).

Both Streatfield and Markless (1994) and Nimon (2004) identified how difficult it was for the librarian to change such macro aspects of school life. Yet secondary LIS literature, such as professional journals and conference speeches, continues to extol such possibilities. An example of such change would be collaboration. However, in this study, little formal liaison existed between the librarian and teachers. For IBDP specifically, such liaison as existed mostly related to subject resourcing in the library, for instance regarding new library resources that would be helpful because of changes in syllabi (and even then some teachers knew that the librarian then managed subject departmental stock orders, so did not see the need to inform him of changes – they assumed he would know). Some teachers thought the role of collection development was exclusively the librarian’s
and that it was not their role to suggest additions to the library stock. Some teachers had, over the years, developed their own resource collections. A few teachers indicated that departmental collections were maintained, which could indicate less need to use the school library/ian, as they already had access to resources that they and students used. Therefore, whilst there was some evidence of communication and liaison between teachers and librarian in this study (and was focussed on resources rather than skills), there was none of collaboration as defined by Montiel-Overall (2005). Although much is made of the need to collaborate in LIS secondary literature, there is limited evidence that it is useful or that it exists, specifically with regard to teachers of older students (Montiel-Overall, 2008) nor indeed whether teachers accepted such a role (Todd & Kuhlthau, 2005b). Farmer (2005) acknowledged that constructivism, as a prevailing pedagogy, was required in order to make collaboration relevant; collaboration was relevant in a social constructivist learning environment, which may not be a dominant learning environment in a school; this was also true for the IBDP. Todd observed, from qualitative impact studies in USA, that collaboration existed at a low level (Kenney, 2006), as was consistent with this study. However, liaison and communication were more likely to occur; teachers in this study indicated that both took place. Furthermore, this fitted with how teachers wished to work in relation to the library/ian and how they perceived a librarian.

Robust features of this category were:

- Personal attributes and qualities may be more relevant for a librarian to be effective in support of IBDP
- There was limited understanding by the school IBDP community of what a library/ian did and what existed was informed by teachers’ previous experience of libraries/ians, both as students and teachers.
- There may be a hidden role for library/ian in IBDP, but was commonly understood to focus on the extended essay, not least, citation and bibliography skills
- There were little distinguishing features for a library/ian in international schools
- International school libraries may have difficulties resourcing extended essays
• Supervision of students was a major job activity for the librarian
• Liaison and cooperation, rather than collaboration, existed with teachers.

These categories feature factors relating to members of the IBDP school community, how they perceive, define, value and use the school library. These categories therefore conceptualise a grounded theory for the impact of the school library in an international school on the IBDP.

Grounded theory of impact of an international school library on IBDP

Charmaz (2006) noted that identification of a grounded theory in a study provided both explanation and understanding, representing both positivist and interpretivist roots, in which a constructivist grounded theory was a continuum. Theory is ‘rhetorical’ (p. 128) and an interpretation or ‘analysis [which] is contextually situated in time, place, culture, and situation’ and in which ‘constructivists see facts and values as linked’ (p. 130). Therefore, elements of theory are prefaced by words such as if, how, and because. The following elements represent concepts that arose from the categories. Not all categories are of equal weight. Charmaz explained that ‘theoretical concepts subsume lesser categories and by comparison hold more significance, account for more data and often are more evident’ (p. 140). It is through comparing categories and sub-categories, and looking for relationships, that the researcher makes a judgement about organizing and presenting data, in this case, raising categories to concepts, represented by the following theory.

The following elements provide the theory:

• *If a proscribed curriculum exists, it may require limited use of a school library.*
This is because there may be issues of significant content transfer for both teachers and students and limited time for these individuals to accomplish their goals.
• If teachers’ pedagogical use of a library is mainly affected by their own experiences of school libraries (both as school and tertiary education students and from schools where they have previously taught) there are implications for a school librarian. This is because the librarian needs to relate to teachers in different ways, and not necessarily advocate an LIS-preferred model, because this could cause tension.

• If students need a range of information literacy skills to succeed in IBDP, they may need to have these skills before they commence IBDP.

Students should develop skills earlier in their school careers. Indeed, student use of and benefit from the school library during IBDP is predicated on a heritage of information use and independent study, prior to embarking on IBDP.

• If various skills are required, the range may be smaller than commentators believe. In this smaller range, time management and research skills may be most important.

This is particularly true of some research skills, such as bibliography construction and in-text citation.

• Because there is a lack of inclusion or explicit statement linking library use and development of skills in IBO/IBDP subject documentation, this may be a limiting factor in teacher and student use of school libraries.

This is because teachers may not be aware of the utility of the library through their education and training, and also because teachers may not prioritise its’ use, given limited time to teach significant content.

• Students may use and value the school library mainly as a space in which to study and when and how they want to study, because it reflects the often unarticulated expectations of teachers, which is likely to be based on personal experiences of the latter.

This is because teachers’ experiences of libraries may be based on their own experiences of libraries as students, where libraries were mainly places of study.

• Where the use of library resources is a secondary concern for students, this may be due to the content-transfer nature of the specific curriculum.

Where teachers and textbooks provide all or most of the information students need and perceive they needed, there may be little use for library resources.
• Where students have other information needs, they tend to use the Internet as their main alternative information source.

This is because students are used to using the Internet, and rely on it, as their skills and experience of using other kinds of resources, such as those typically found in libraries, may be limited.

• If students use traditional library resources and the skills and advice of librarians mostly for their individual extended essay, this is because the extended essay is regarded as the main research element of IBDP.

Interview data identified that the extended essay was mentioned most by students and teachers as the main research experience in IBDP.

• Because students’ perceptions and values of the school library changes during the course of their IBDP studies, it may be because they have more opportunities to use the library.

Previously, students saw the library mostly as a recreational place or somewhere from which to borrow resources to take away for use elsewhere, but this changed to being also a place of work and study, with values related to library environment and atmosphere.

• If personal attributes rather than a particular type enable a librarian to be valued, this is because there is a limited understanding of the role of the library/ian.

This may be due to teachers’ previous experiences, lack of inclusion of libraries in teacher education, and overall a lack of reference in educational literature.

• If supporting students’ extended essay needs is perceived as a main function for a library/ian in support of IBDP, this is because there is a lack of definition of a role of the library in IBO/IBDP documentation.

This is because curricular documentation did not identify a role for the library/ian, save for passing references in extended essay documentation.

• If supervision of study periods is viewed as a considerable job activity for a school librarian, then this is because of space problems and lack of a common understanding in the school about the role of the library.

Study periods were held in the library mainly because there was no other space in the school; teachers had different views about such activity in the venue and imprecise views
about the role of a librarian, suggesting that there was little common understanding about the role of the library in the school.

To provide a succinct statement of the theory:

The impact of an international school library on IBDP depended on a number of factors. The influence of teachers was important, and their awareness and enthusiasm for school libraries and encouraging their students to use such facilities was vital. Teachers’ perceptions and values of school libraries were significantly influenced by their previous experiences, including those as school students. Teachers did not become aware of the utility of a school library through initial or in-service teacher education programmes, nor was it highlighted in IBDP curricular literature, therefore the onus was on individual teachers. Students used the library, often as directed by teachers and/or accepted the values associated with school libraries by teachers. Reliance on the use of textbooks and wide access to the Internet were strong deterrents to potential use of the school library as a relevant resource of information. Students used the school library primarily as a place of study. The librarian in this study tried to relate the school library to various perceptions and values of individual teachers and students, rather than advocated roles in an LIS paradigm. The most articulated and perceived use of the school library as a resource was in relation to the extended essay.
CONCLUSION

The main research question for this study focused on identifying to what extent the impact of a library in an international school had on the IBDP. Supplementary questions were related to expectations, needs and demands of members of the IBDP school community of their school library, with specific reference to the programme. The study was also conceived to identify what interpretations of school library impact could be identified from relevant IBO documentation. Further questions sought to relate any identified trends in the literature about the role of the library to any role for the school library that could be identified from IBO documentation, and, finally, whether the school library in the present study met or matched any stated roles, requirements or expectations about library support for the IBDP.

A study of this nature offers an interpretation of a particular situation. It is possible that a different interpretation may have resulted with different participants. This is true also of a different natural situation and practitioner-researcher. Nevertheless, because of the methodology involved, some theories could be offered and relate to those who comprise an IBDP school community, as this study identifies what is of value to students, teachers and administrators about a school library. Through use of observation and interview, data was produced and compared, in which members of the IBDP community – students, teachers, administrators and librarian – provided perspectives.

These perspectives, or stories, were identified separately in the results chapter, and subsequently combined to provide categories. These categories then provided the focus for the discussion chapter. A narrative is important in a grounded theory approach (Charmaz, 2006) and it may provide a holistic view if these could be blended to provide a community narrative. Therefore, to conclude, such a narrative may be expressed as follows.

Narrative of the IBDP school community

Teachers at the international school may have had experience of another international school and/or schools in national systems, most probably in schools in an English-
speaking country in which they were born and educated. The secondary school they attended as students may not have had a developed library, nor anyone to manage it. It may have been called a library, but its main function would have been as a study area for older students. At university, a library may have been used as a place of study, with some research involved. Initial teacher education courses attended would not include use of the library, that is, as a facility that teachers could use pedagogically. Teachers rarely referred to libraries in previous international or other schools they worked in, which means they may not have experienced good practice (from an LIS perspective). For IBDP teachers at the international school, the balance of teaching was with older students and time pressures on covering considerable content were experienced. As teachers came from different countries, pedagogical practice varied, often with an individual teacher.

Some subject teachers used the library as individuals. They borrowed resources for teaching purposes, though this varied between subjects (and could depend on the existence of departmental and/or personal libraries). Some used the library for subject-specific periodicals (including titles of a professional development nature), borrowed subject-based resources and others for personal, recreational use, and/or used a personal iBook and marked work in the library. However, teachers tended not to take students to the library, though occasionally, in class, encouraged them to use library resources for their coursework. Some specifically requested students to ask the librarian about queries concerning citation and bibliography.

Students included those who moved from country to country, some with previous experience of international schools. Students may also be abroad for the first time, so have prior experience of a national system. English may not be the mother tongue of all students. Their previous library experience would be varied, and it may be that overall their library experience and information skill development was limited.

At the beginning of the [IBDP] programme, students were informed they had individual study periods (called study halls), rather than lessons with teachers, that they were required to spend in the library. Students invariably completed homework in the library.
of the international school, bringing textbooks and everything needed with them. They
had little experience of using a library in G11, were unsure of where things were and how
to find things, tended not to ask for help and relied on textbooks. As they generally
received good grades, they saw no relevance or benefit in reading wider than textbooks.
Completing homework tasks was standard for G11 students, though in G12, students
completed coursework for subjects and undertook an individual extended essay. Some
students used the library for research for this essay, and asked the librarian about citation
and referencing conventions. All students used the Internet for information. Towards the
end of G12, students began to review for final examinations, some using the library to
secure a quiet environment in which to do so. Some experienced pressure and nearly all
found that time management skills were most important.

Pressure on space in the school – and the library – arose in part as students did not have a
student lounge or common room. The only regular place they could go to, when they
were not taught, was the library. The only partial exception was the canteen, though some
teachers – and students – had reservations about this being an appropriate venue for study
halls. A regulation change in 2006 meant that G11 students could not use the canteen for
study hall. This put pressure on the library to accommodate larger number of older
students. Appropriate behaviour deteriorated as students did not perceive the function of
the library, and used it as a lounge. Teachers perceived that the library was mainly used
for study hall, peopled by larger numbers of students, and were reluctant to allow other
students (or bring groups) to the library for research.

Nevertheless, some students used the library for information, though all students used the
Internet. Some students used databases, for which subscriptions were made through the
library budget, and which the librarian promoted. Few students used the library catalogue
and borrowed library resources infrequently, with the exception of iBooks (laptop
computers) which were used regularly.

The library was staffed throughout and beyond the formal school day. There was a
professional librarian, who encouraged library use, liaised with teachers about
development of the library collection in support of IBDP needs and informed staff of library additions and developments. The librarian was also the only supervisor of IBDP students in the library and may have been perceived as representing authority and enforcing rules. Few students asked library staff for help, though when it happened, it was usually to help them find resources in the library. The librarian may have been influenced by LIS secondary literature that promoted collaboration, which was focused on information literacy as a major activity of the library/ian. However, this did not reflect reality.

Perceptions of members of the IBDP school community groups, who were involved in the research, could determine how the library was used. The main focus of possible library use was the extended essay, which was perceived as being the case by teachers, administrators and students. In terms of value and evaluation, the library was well-regarded by administration and faculty as being a useful facility, but little specific evaluation was evident. A focus on the role and expectations of a library were not identified in IBO/IBDP literature, but which could have focused thinking and expectations of faculty. Whilst brief reference was made to library support in extended essay documentation, there was little or no reference to library use in IBDP curricular documentation, which was the only place subject teachers would normally look.

In the absence of any specific curricular/pedagogical encouragement that teachers should use a library, curricular use varied between individual teachers, possibly according to their own education and previous experience of libraries. There was little or no pedagogical underpinning of library use. Little concrete encouragement to use the library for ongoing needs was given to students. Teachers saw the library in a limited manner (as far as LIS-advocated models of school libraries were concerned), thus the librarian seemed to aim for a school library model that was not in line with the expectations or practices of prevailing pedagogies within the school.

Those involved in this study (who were interviewed) reflected on their use of libraries – something that was unusual for them. One student did not value the library, suggesting
that it was irrelevant as information needs could be totally met by use of the Internet and textbooks. Most students and some teachers who were interviewed were satisfied with library provision and their use of it. Some students felt they were helped by and valued the library service. Some teachers felt that this was the case, though more teachers had views about how the library could be improved and be more relevant to IBDP, at least as far as study (halls) was concerned. Some teachers saw no role for the library as far as their subject was concerned. All teachers, administrators and most students, however, thought that a library impacted (or could impact) on the extended essay. This was the most often and commonly-mentioned element of IBDP in relation to the school library.

Although this narrative brings together the collective perspectives of a community, for a school library/ian it is not a comprehensive picture. Unlike students, who naturally focus on their own concerns, and possibly teachers, who will typically focus on their subject and the age-ranges of students they may teach, one librarian may well support the needs of a whole school, not just G11-12. In an international school, this may be ‘K-12’. As identified in the background information in the Results chapter, in this study, what the library/ian did for IBDP was extrapolated from the general picture, and, in reality, various functions of both library and librarian would have occurred simultaneously. The library, nor the librarian, catered exclusively for the needs of IBDP but for the continuum of students, and their teachers, within an age range of 3 to 18 years.

Concluding factors for specific elements of the IBDP school community
This study and consequent theory suggest various factors for members of the IBDP school community.

- Students: this study cannot establish causal links on student achievement but rather suggests a link with motivation and developing maturity of students as they progress through IBDP. Library support contributes to a skills experience, especially through a research process (which may be advanced) and time management. The library also provides an environment where students can develop stamina and motivation needed to sustain independent study of the style deemed relevant to tertiary education.
Students may use the library differently, not necessarily less, than earlier in their school careers.

- Teachers: this study shows the library can contribute to or support IBDP subject teaching and learning experiences, but which varies with subject. It can provide support to a teacher who is an extended essay supervisor. However, any library contribution relies on a teacher’s previous experience of school libraries, rather than initial teacher education, on-going professional development through IBDP workshops or IBDP subject documentation. In these circumstances, if the present experience is deemed to provide an example of good practice, then a teacher may go to another school to meet with other good practice, and perhaps help provide a pattern. However, this is a piecemeal approach, and reflects an LIS paradigm.

- School administrators: accept that a library has a hidden role, but develop strategies to evaluate school libraries by administrators in order to identify value. Administrators should give thought to ways that the library role can be inclusive to the curricular infrastructure of the school. With regard to the particular skills that are considered an important foundation for IBDP, it should be noted that there is little or no time for students to develop these during the programme. Consequently, skills need to be part of a foundation of school years before starting IBDP.

- IBO: accept that the library has a hidden or unidentified role. It would be helpful to identify that role in IBDP curriculum documents. As a result, there would be inclusive reference to school libraries/ians in curricular literature. Also to ensure that input about the role and pedagogical use of school libraries is included in IBDP subject workshops.

- Librarians may need to recognize that constructivism may not be a dominant pedagogy in a school and that an LIS model of school libraries is largely predicated on a constructivist view of learning. Furthermore, school librarians need to be realistic about their ability to bring about LIS-desired change, especially if this
change is isolated from developments in the rest of the school, as this could cause tension. For a librarian in an international school (and was true for the present study), a single librarian – and library – may have to cater for the whole school, with consequent implications for management, and the level of support that can be provided.

**Role of practitioner-researcher**

It is important to note the position of the practitioner-researcher, a factor that was identified in the literature review, where it was found that it was difficult to identify the extent of practitioner-research, whether impact/EBR or otherwise. Where it was identified, there was concern about the rigour of the methodology. This issue was also identified in the method chapter, in terms of recognizing this issue and how grounded theory could be used to safeguard against such a scenario.

**Recommendations**

A number of recommendations may be offered, to improve the situation and to develop further research. Recommendations include:

**Key recommendations**

1. The role of the school library/ian should be included in teacher education programmes.
2. The role of the school library/ian should be included in IBDP curricular literature.
3. Student awareness of the role of the library should be identified at the beginning of their IBDP candidature.
4. School librarians should be aware of prevailing pedagogy in schools where they implement library programmes, relating to specific curricula for older students.

**Secondary recommendations**

- School library impact studies can benefit from having a qualitative foundation, common identifiers and using methodologies such as grounded theory.
• Qualitative methods should be seen as valid means of identification of what students and teachers think and value about the school library.

• A study should be undertaken of how teachers evaluate school library usefulness and their own pedagogical approach to using international school libraries.

• A longitudinal study should be undertaken to identify whether there is any benefit from school library-based information literacy for IBDP students in tertiary education.

• Schools and librarians may need to accept that libraries will have a social function, especially in the absence or scarcity of other facilities for older students in a school. However, G11-12 students need social accommodation provision for valid reasons and therefore should not need to attempt to utilise the school library as de-facto student lounge accommodation.

• Studies should be undertaken in different types of school that offer the IBDP, to see if factors and features identified in the present study are particular to the individual institution in this study or the type of school involved.
Reference List


annual conference of the International Association of School Librarianship and the Sixth International Forum on Research in School Librarianship (pp. 355-375). Seattle, WA: International Association of School Librarianship.


Herrin, J. E. (1997). The school librarian as internet mediator: a case study and evaluation. In L. Lightall & K. Haycock (Eds.), Information rich but knowledge


International Baccalaureate Organization (2002b). *A continuum of international education: the Primary Years Programme, the Middle Years Programme and the Diploma Programme*. Geneva, Switzerland: IBO.


Lincoln, Y. S. (2002). Insights into library services and users from qualitative research. Library & Information Science Research, 24, 1, 3-16.

Loertscher, D. V. (1998). Reinvent your school’s library in the age of technology: a


McKenzie, C. M. (2001). The Victorian Certificate of Education, the Monash University Foundation Year Program and the International Baccalaureate: choosing a course as


Miller, M. L., & Shontz, M. L. (1998, May). More services, more staff, more money: a


literate school community. In J. Henri & M. Asselin (Eds.), *The information literate school community: issues of leadership*, (pp. 79-91). Wagga Wagga, New South Wales, Australia: Centre for Information Studies, Charles Sturt University.


Shannon, D. (2002). The education and competencies of school library media specialists:


Todd, R. J. (2001). Transitions for preferred futures of school libraries: knowledge space, not information place; connections, not collections; actions, not positions;


Williams, D., Coles L., & Wavell, C. (2002). Impact of school library services on achievement and learning in primary schools: critical literature review of the impact of school library provision on achievement and learning in primary level students.
Aberdeen, Scotland: The Robert Gordon University.


APPENDIX A

IBDP subject groups

Students chose one subject from each of six groupings. Nearly all subject syllabi required two years for completion (IBO, 2002a). Subject groups (retaining IBO terminology) were:

- Group 1, Language A1: first language, including study of selections of world literature
- Group 2, Language A2, B, ab initio: second modern language courses for various levels of proficiency [including beginner]
- Group 3, Individuals and societies, including: history, geography, economics, philosophy, psychology, business and management, information technology in a global society [ITGS]
- Group 4, Experimental sciences: biology, chemistry, physics, environmental systems, design technology
- Group 5, Mathematics, computer science
- Group 6, The Arts: visual arts, music, theatre arts, film, dance.

(IBO, 2002c, p. 5-6)
APPENDIX B
Examples of titles of extended essays

The literature provided instances of extended essays in various subject areas, as did an analysis of the extended library collection at the school in this study. It was considered good practice to provide good examples (Wallace, 2003) so that students could see the standard to be aimed for and what was involved. This appendix shows the range of topics and questions that students selected, with implications for their skills in obtaining supporting material and a librarian’s ability in resourcing very specific topic questions.

Examples of extended essays found in the literature

The specialized nature of an essay was seen from the title of an essay completed by an international school student in the USA: To what extent did the alliance of Ibn Sa’ud and the Ikhwan during the 1920s lead to the achievement of their respective goals (Elwan, 1989). This was included in a special IB issue (published in 1991) of The Concord Review, a quarterly journal that published outstanding essays written by mostly US high school students studying history. This specialized journal also published other essays, such as that by a student at an international school in Japan, entitled Who became Kamikaze pilots, and how did they feel towards their suicide mission? (Sasaki, 1996). The Review published twenty-nine essays in a five-year period to 1993 (Fitzhugh, 1993). IB World previously published essays to celebrate achievement and to provide exemplars. One such essay was Spoken Canadian English: regional variations and national characteristics (Hardman, 1994). Excerpts from several, with comments from examiners were also published in the issue [15, 1997]. Dickinson (1997) commented of one that ‘the bibliography … and the thoroughness of the argument provide clear evidence of the extensive research and careful reflection underpinning this essay’. Although the essay relied on two sources in particular, overall the standard of critical thinking and writing was judged excellent (p. 27).
Essays in experimental sciences provided students with an opportunity to undertake a significant investigation. Examples of topic areas and questions that students had chosen at one UK school included: behaviour in woodlice; abiotic index, abiotic factors and the water quality of the River Cam; comparison of methods to analyse the vitamin C content of fruit drinks. (Dunkley, Banham & Macfarlane, 2006)

The IBO curriculum-support web-site (OCC) included a list of essay titles from one European international school. Held as a resource on the database, this was a response to an enquiry (in December 2005) on the librarians’ forum (listserv) for examples of titles. Titles and relevant subject areas included:

*Is KL International Airport an example of a form following function or function following form?* (Art and Design); *The breeding behaviour of Great Tits* (Parus Major) (Biology); *Macdonalds in Vienna: a monopoly?* (Economics); *Living in a virtual, 3D world?* (ITGS); *How does the increase of reinforcement material affect the strength of a composite material?* (Physics); *Instrumental music in the sema ritual (Melevi)* (Music); *Is method acting the ultimate technique for actors or can other contrasting methods be used?* (Theatre Arts). (IBO, 2005a)

Specifically for Language A1, successful examples of titles were:

*An exploration of Aristotle’s tragic form in ‘Oedipus Rex’ by Sophocles and ‘Death of a Salesman’ by Arthur Miller; The Metaphor of Music: the use of music to express the paradox of love and war in the text and film versions of ‘Captain Corelli’s Mandolin’.* (Morley, Beverley & Ruhil, 2004, p. 246).

For Group 4 subjects, Hunter, Payne and Hobman (2004), who agreed with a general view that choice of title was essential for success, provided relative examples, such as ‘How effective are different golf ball designs in increasing spin?’ rather than *The physics of golf*; ‘The effect of banana peel on seed germination’ rather than *Factors that affect the germination of seeds*; ‘Can polarimetry be used to analyse the purity of sugars?’ rather than *Analysis of fruit juice* (p. 405).

An analysis was made of titles of extended essays, which were held in the library collection of the school in this study, details of which follows.
Identification of titles of extended essays, written between 2003-2005, that were awarded grades A and B

Academic year 2004-2005

Water pollution management techniques and their impact on [names of rivers] of [the city in which the school was located]
Subject: Geography Grade A

Why doesn’t the Japanese horse race world breed pure domestic blood strain horses?
(Title translated from Japanese)
Subject: Japanese Grade A

Did the USA impose its legal system on Japan? A case study of the law of child custody
Subject: History Grade B

In what ways do Japanese boys comics show a different approach to those of the USA?
Subject: Visual Arts Grade B

To what extent was the Third Reich influenced by Heinrich Himmler’s occult ideas?
Subject: History Grade B

To what extent was Mao, and not Stalin, the leader of the world communist movement from 1949 to 1953?
Subject: History Grade B

The reasons why mystery stories are loved by readers (translated from Japanese)
Subject: Japanese Grade B

Academic year 2003-2004
A comparative investigation, using graph theory, of the efficiency of two Metropolitan railway systems (comparing Sydney and Tokyo)
Subject: Mathematics Grade A

Wonderful code switching
Subject: Japanese Grade A

Was the atomic bomb employed against Japan by the Americans in 1945 justified?
Subject: History Grade A

Subject: History Grade A

What are the historical reasons for the controversy that surrounds the Yasukuni Shrine in Tokyo?
Subject: History Grade A

Why is *Genji monogatari* by Murasaki Shikibu popular now amongst mainly women? (Title translated from Japanese)
Subject: Japanese Grade B

What are the factors affecting the flight of Ornithopters?
Subject: Physics Grade B

Ageing problem in Japan and other countries: a comparison of policy (Translated title, from Japanese)
Subject: Japanese Grade B

To what extent did 2.26 Incident in 1936 contribute to the establishment of the military rule in Japan?
Subject: History Grade B

What is the significance and influence of yohaku in Japanese traditional byobu paintings?

Subject: Visual Arts Grade B

What is the role of school at the present day (translated from Japanese)

Subject: Japanese Grade B
APPENDIX C

Standard questions for students interviewed in 2006

Preamble:
Thank you for agreeing to take part in this research by being interviewed. All the details of the research and the process are detailed in the letter/information page you previously received. This interview will help with research on the role of the school library here at ... [name of school] in relation to the IB Diploma Programme. Please be assured that your contribution will be anonymous. Do you have any objection to the interview being recorded? I will also take notes. Thank you.

Questions
• Where do you do study during
  study halls
  lunch-time and/or recess
  after school
Why do you prefer this location?

• Have you used the library, either individually or with a group/class, with an IB subject during the last semester? (If a G12 student, can you remember if you used the library in this way, during your G11 year.) Were the visits of relevance? Was there any one occasion you regard as being useful/successful? If so, can you say why? In general terms in relation to the IBDP, do you perceive a benefit from using the library? Was there any follow-up evaluation of any resources used as a result of your visit in class? Please explain, etc.

• Which of the following do you think is more important for the IBDP:
  Critical thinking
  Time management skills
  Independent study skills
  Research skills
Group work
Understanding of internationalism
Subject areas
Please rank them 1-7, 1 being the most important and can you say why.

- Have you used any of the following resources in the library during the last semester:
  - Book resources in the reference section
  - Non-fiction resources in the lending section
  - Fiction books in the lending section
  - Current magazines and newspapers
  - Previous issues of magazines
  - Videos
  - DVDs
  - Compact discs (music recordings)
  - Examples of IBDP extended essays from previous years

If you have, can you say if you mostly used the items for IBDP requirements, personal information, recreation, etc. If a G12 student, did you use any of the above list during your gr. 11 year? If you use any of these resources, but do not get them from the library, where do you get them from?

- Have you used any of the following ICT resources available from and in the library during the last semester:
  - iBook for study hall (did you use the iBook in the library or take it elsewhere?)
  - iBook from the library for an IBDP subject class
  - PCs in the library for Internet access and/or word-processing
  - library webpage on the school website
  - citation information page on the library webpage
  - Theory of Knowledge resource list on the library webpage
  - EBSCO database available through the library webpage
  - Photocopier
• If you have, can you say if you mostly used the items for IBDP requirements, personal information, recreation, etc.
  If a G12 student, did you use any of the above list during your G11 year?

• Have you used the library computer catalogue to research for information in the library during either G11 or G12? If so, did you find the keyword, author, title or subject search facility of most use? Were you able to locate items in the library as a result of using the catalogue?

• Do you ask the librarians for any of the following:
  Help to use the catalogue
  Help to find specific items on the library shelves
  Help to find any relevant items in the library
  Help with IT held/used in the library
  Advice on relevant/potentially helpful resources
  Advice about citation/referencing

• Do you use the quiet room/study centre in the library? If so, why? If not, why not?
  What do you think about using the carels in the quiet room? If you use other areas of the library (e.g. library classroom), can you say why you prefer the location, etc?

• Do you feel that your IBDP teachers
  Encourage students to use the library generally
  Advocate/require use of the library for specific assignments
Can you identify whether either of the above applies to each group subject and the central core, but please do not name any teachers.

• Do you consider that the library is (mainly) of help for
  Individual IBDP subjects
  Extended Essay
Theory of Knowledge
None of these.
Please explain.

- Generally speaking – but specifically to the IBDP – please rank the following in terms of importance for your information needs for the IBDP:
  - Teachers
  - Textbooks
  - Library resources
  - Internet
  - Home

- For Grade 12 students, has any reference to skills and qualities developed as a result of following IBDP arisen in any interview for university?
APPENDIX D

Questions for G12 students interviewed in 2007

Preamble
Thank you for agreeing to take part in this research by being interviewed. All the details of the research and the process are detailed in the letter/information page you previously received. This interview will help with research on the role of the school library here at [name of school] in relation to the IB Diploma Programme. Please be assured that your contribution will be anonymous. Do you have any objection to the interview being recorded? I will also take notes. Thank you.

Interview questions
• If asked to describe a school library, what words would you use?

• (How) has use of the library helped you in your IBDP studies?

• What is the most important/visible role of the librarian?

• What is the main function for the library for IBDP students?

• What is the most useful aspect of the library for you as IBDP students?

• Have your views of the library changed whilst you have been on the IBDP?

• Is the library of value to you? Why?

• How many times have you been encouraged to use the library by teachers? Can you say if they were for specific assignments. When/teachers ask you to go to the library – what is the purpose?

• How could the library be improved for the benefit of IBDP students?
Questions to six teachers, representing the six subject groups of IBDP in 2006

Preamble
Thank you for agreeing to take part in this research by being interviewed. All the details of the research and the process are detailed in the letter/information page you previously received. This interview will help with research on the role of the school library here at "[name of school]" in relation to the IB Diploma Programme. Please be assured that your contribution will be anonymous. Do you have any objection to the interview being recorded? I will also take notes. Thank you.

Interview questions

- Do you feel your teacher education gave you expectations/strategies for including and promoting use of a school library into you teaching styles? Please explain, and please mention the country in which your training took place.

- Do you consider IBO subject training gave you any expectations of the role of the library in the IB diploma programme in general and in your subject area in particular?

- For extended essay supervisors, do you consider IBO subject training gave you any expectations of the role of the library with regard to EE?

- Do you see any benefit in study halls being held in the library, as opposed to the canteen or IT drop-in area?

- Have you used the library as a resource for any assignment for your IBDP students. If so, was this

By requiring students to complete the assignment in study halls
Visiting the library with your group to undertake research during class time, either on a pre-booked visit or as need arose
Sending your group to the library to undertake research during class time, either on a pre-booked visit or as need arose
For any of the above, did you liaise with the librarian about arrangements/content/purpose of the assignment?

- Do you ask for specific resources to be placed in the library to support IBDP courses? Do you advise the librarian of any changes/new requirements in your IBDP courses that may have implications for library stock development?

- Do you refer to the monthly update of additions to library collections? If so, do you look specifically for items that may be relevant to IBDP courses/students?

- Do you consider that the library is (mainly) of help for
  - Individual IBDP subjects
  - Extended Essay
  - Theory of Knowledge
  - None of these.
  Please explain.

- Have you used any of the following during the last year:
  - citation information page on the library webpage
  - Theory of Knowledge resource list on the library webpage
  - EBSCO database available through the library webpage
  - Library catalogue

- In order to best support IBDP subject areas, do you think that the library should concentrate in future on buying book resources, other media (e.g. DVD), databases and other ICT products? Please explain.
• Which of the following do you think is more important for the IBDP:
  
  Critical thinking
  Time management skills
  Independent study skills
  Research skills
  Group work
  Understanding of internationalism
  Subject areas

Please rank them 1-7, 1 being the most important and can you say why.

• Where do you get teaching materials to help you with your IBDP subject teaching?

• How do you identify/combat/stop plagiarism in your class/students?
APPENDIX F

Questions to teachers, interviewed in 2007

Preamble
Thank you for agreeing to take part in this research by being interviewed. All the details of the research and the process are detailed in the letter/information page you previously received. This interview will help with research on the role of the school library here at ... [name of school] in relation to the IB Diploma Programme. Please be assured that your contribution will be anonymous. Do you have any objection to the interview being recorded? I will also take notes. Thank you.

Interview questions
• How long have you been involved with teaching the diploma programme?

• What do you think are the main functions of the library in support of IBDP?

• Is there a value in using the library for DP assignments?

• Do you think that teachers assume that students can use library resources independently?

• Does the library have a role in providing teacher resources for the diploma programme?

• As you know, the library webpage contains citation information for DP students. Should it be promoted more, and is it relevant to all subjects?

• Is the main role of the librarian in the diploma programme to supervise study halls?
• Does the library help diploma students to achieve more or better in the diploma programme?

• How could the library at this school be improved for the benefit of diploma students and teachers?
APPENDIX G

Questions for senior administrators, interviewed in 2007

Preamble

Thank you for agreeing to take part in this research by being interviewed. All the details of the research and the process are detailed in the letter/information page you previously received. This interview will help with research on the role of the school library here at ... [name of school] in relation to the IB Diploma Programme. Please be assured that your contribution will be anonymous. Do you have any objection to the interview being recorded? I will also take notes. Thank you.

Interview questions

- Have school libraries changed since you have been working in international schools?

- How do you evaluate any impact of the library on the school in general terms?

- ... and on the IBDP in particular?

- What do think the main role of the library in relation to IBDP would be?

- What is the most important/visible role of the librarian?

- Research so far has found – from teacher interviews – that the role of the library – that is, how teachers may best use the school library – has not been covered in teacher education or in IB workshops. Does this surprise you?

- Students have been asked if teachers encourage use of the library. Whilst there are differences of opinion, how would you envisage what form ‘encouragement’ should take?
• Research and professional literature, especially from North America, suggests that IBDP to be a programme for gifted students. At this school, the IBDP is for all students. Do you think or know whether this school is unusual in that regard?

• Is any library contribution to learning necessarily a hidden one?