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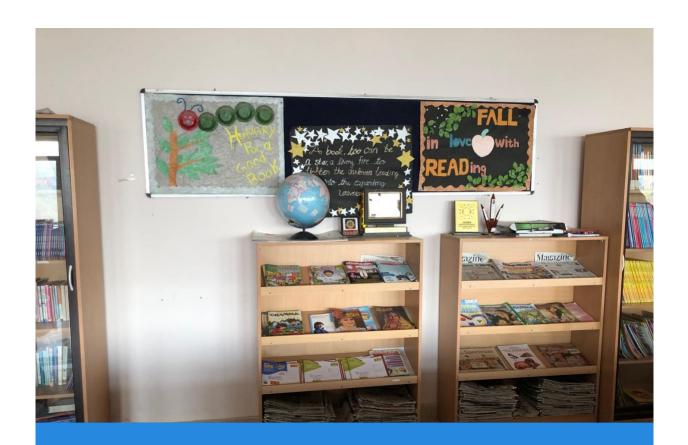
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Evaluation of the School Libraries of Himachal Pradesh

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May 1, 2019

Evaluation of the School Libraries of Himachal Pradesh

An Interactive Qualifying Project submitted to the Faculty of WORCESTER POLYTECHNIC INSTITUTE in partial fulfilment of the requirements for the degree of Bachelor of Science

by Alexander Glanville Lynne Moore Catherine Sherman Abhinandan Kumar Abinash Abhijeet Rajput

Date: 1st May 2019

Report Submitted to:

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Abstract

School libraries in Mandi District, Himachal Pradesh India have varying standards for library services. We evaluated 7 state government, 1 central government, and 3 private schools, using site visits and interviews. We found that state schools often lacked dedicated or engaging library programs. Central government and private schools promoted library services and positive student reading habits. To enhance library use, we recommend reading periods throughout the week, mobile library services, and adding comfortable reading spaces.

Executive Summary

Introduction and Background

School libraries are often considered to be the cornerstone of schools, as they are responsible for providing students with the proper resources to complete their work. Library services can facilitate independent learning programs and educate students on modern technology (Ramaiah & Pillai, 2013). Global best practices for school libraries have evolved with technology, and more efficient information platforms.

As library sciences evolve, the opportunities for advanced library resources have increased. It is important that school libraries create and strengthen reading habits in children from an early age, and support both individual, self-conduct, and formal education at all levels (Manifesto, 1994, para 10). Along with strengthening reading habits, school libraries can also provide students with important language and workforce skills.

Libraries also help students beyond the classroom on individual skills, the library can also expand teaching techniques to keep students interested in learning. Some techniques include "incorporating pauses for group discussions, questioning, and short quizzes" and using games or technology in class (Dalrymple, 2002 p. 262; Leach et al, 2005). Educational games can provide different motivations for students and can increase retention of material (Randel et al, 1992). Libraries can provide a space for struggling students to get one-on-one attention, as well as a place for students to find out more about a topic of interest. Involving students in library resources and programs allows them to further their learning.

While the library sciences have evolved to become more inclusive, many areas with other economic disparities tend to lag behind in developing library standards for students and teachers. Himachal Pradesh is a largely agricultural region located along the western Himalayas. In the heart of the state, Mandi district consists of both rural villages and the urban hub of Mandi town. These communities host a variety of public and government schools with varying resources. While it can be difficult to find literature reporting on each district's library services, there are some general statistics that hint at possible trends within the Mandi district. Urban India has been seeing great gains in literacy and education as compared with rural areas in India, which can be devoid of amenities for education. In 1961, literacy rates across India averaged approximately 20%, but by 1981 reported rates increased all the way up to 73%. The literacy rate increase in India is attributed in large part to the role of education and local public libraries (Jatana & Khosla, 2003). More recently, as of 2011 in Himachal Pradesh, the literacy rate was listed as 82% (Himachal Pradesh The Official Website, 2018).

Through our project, we aim to understand ways each library is positioned to host more learning opportunities for students, and to provide findings that will help libraries to better support their students and faculty. This project will tie directly in with UN Sustainable Development Goal #4: Quality Education, helping children in the community to read.

Methodology

Our goal is to evaluate the library services of the schools in Himachal Pradesh. Through this goal, we have identified three objectives:

- Identify best practices in setting up and managing public school libraries.
- Assess the amenities currently available in a sample of school library facilities.
- Evaluate the needs and requirements of students, faculty, librarians, and school administrators.

In order to accomplish our first objective, we conducted documentary research which consisted of looking into current legislation for school libraries in Himachal Pradesh. Next, we identified some school libraries which we believed were exhibiting the best practices. Once these libraries were identified we observed their facilities and had a focus group with a group of teachers from one of the schools.



Figure A: Library Observation and Mapping (Photo credit: Sherman, 2019)

When assessing amenities currently available in the schools we sampled, we first mapped out the facility of each school we visited. This gave us a good idea of the amount of resources each school had and also how they were using their given space. After mapping the facility our team conducted interviews with both faculty and administration that focused mainly on questions regarding the number of materials present and the process behind attaining these amenities.

Finally, in order to evaluate the needs and requirements of students, faculty, librarians, and school administrators, we interviewed both faculty and administration and also held a focus group with some students. This time we focused our questions more on how the library was used and the overall opinion of the school's library services. This helped us grasp what areas each school were thriving or struggling in. The focus group with students asked questions including, "rate your school library on a scale of 1-10" and "what you would want in an ideal library". This feedback provided student opinions on the library services at their school.

Findings

After conducting our fieldwork we found that schools with a library period reported that more students used library books. In most cases, teachers even said that students would look forward to going to the library and even go when they had free time. Programs that involved reading and book reviews further encouraged students to use their libraries. Teachers and librarians claimed that one of the biggest changes over the past five years, was increased student interest in the library.

Schools without library periods had limited student responses to the provided books. Both teachers and students reported that very few were interested in using the books. These schools also lacked other library-related programs. Because of the lack of interest, there was little support from faculty to change anything about the libraries, which further reinforced the lack of interest.

Beyond the library period, we discovered technology does not typically play a major role in the libraries we visited, as schools often have separate computer class equipment. Teachers and librarians indicated an interest in expanding their libraries to include more technology, but were faced with challenges regarding space and infrastructure.

Recommendations

After surveying a variety of school libraries and interviewing numerous administrators, teachers, and librarians we generated some recommendations that could be applied in all school libraries throughout Himachal Pradesh. One of the realizations our team came to is that a library does not need to be defined as a room set aside for storing books. Rather, a library can be defined as something that enhances student engagement in literature. Before we go in depth on each individual recommendation, first find a list of our full list below.

- Add a mobile library to promote use and awareness of the schools available library resources
- Reconfigure available library space to accommodate comfortable reading spaces separate from study/work space
- Set aside 15-20 minute blocks for reading throughout the week
- Teachers should connect their in-class work to the library, by assigning work that requires resources from the library to complete
- Once a library is established, convert library management functions, such as book inventory and student use, to online versions

It would be unrealistic to recommend that these schools construct a library after continually hearing that many schools are lacking space, funding, and approval for

expansion. The use of a mobile library is something we believe could be incorporated into any school that lacks either a library or room for expansion. Given that many of the surveyed schools already have books, it would be feasible to move these resources from their current cabinets into a compact mobile cabinet, similar to Figure B below. Doing this would make it easier for any teacher of each grade to incorporate either weekly or daily library time within their classrooms.



Figure B: Library Cart (Wayfair, 2019)

Our fieldwork has shown us that teachers generally see students much more interested in reading when they have time incorporated in their schedule to visit the library and issue books. The mobile library can allow schools with a lack of space for a library to incorporate this time into their curriculum.

Another observation we made throughout our fieldwork is many of the schools that had a library set up their space in a very similar fashion. Many of the libraries we visited consisted of a large table surrounded by cabinets full of books. This set up helps when entire classes are in the library as it allows teachers to easily watch over all their students at once.

Studies have shown, however, that to further encourage positive reading habits and increase student use, the availability of "lounge seating" or comfortable spaces is key (Mohanty, 2002). Providing comfortable seating provides students with different options while working. Research shows that students learn in different ways, and sitting at a desk does not always help concentration. Furthermore, comfortable seating can create a more welcoming space for students to visit the library in their free time and relax with a book.

Having different types of furniture also allows for one room to have many purposes (see figure below).



Figure C: Comfortable Reading Space in a School Library (Glanville, 2019)

To address the lack of awareness of library books, we recommend that teachers set aside time for reading during their class periods, involve students in reading programs, and include library research in projects. These three points can remind students that there are books available at their school, and can facilitate healthy reading habits.

With regard to library management, expansions could include giving students library cards, or completing annual stock evaluations. These two ideas are important functions in schools with an established library. Thus, they could be implemented to create a smoother library interaction once a school has established its library as a useful resource for students. The first step, in the case of no library use, should be to involve students in reading to increase the awareness of library resources.

School libraries are a cornerstone of public-school education. It is important to note that the definition of a library is changing as education systems and technology evolve. No matter how the medium changes, the purpose behind a school library remains the same: to provide students and teachers with the resources they need to fully engage with the specified curriculum and develop critical skills. The new mentality no longer restricts a library to a physical room within a school. Students can interact with the library services through mobile library carts, classroom libraries, and online resources. It is the responsibility of the school administration and teachers to find the right combination of these mediums to best support the student body and the school's teaching philosophy.

Interactions with the students, faculty, and library facilities within Mandi District schools allowed us to develop recommendations that will enhance each school's library services. We discovered that most Mandi District schools struggle with infrastructure,

funding, and student awareness. For this reason, our recommendations expand upon the available resources in order to better accommodate the needs of the students. Because of the emphasis on the syllabus in schools, the library should support the curriculum while encouraging students to go beyond it. We reached out to our the schools in this study with a recommendation that was individualized per each schools requirement. These enhancements may take time to develop within each school, but with an individualized approach and a local champion, each school can maintain an engaging and supportive library.

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Authorship

Alexander Glanville contributed to the writing and editing of every section of the report, interview analysis and library visit photographs.

Lynne Moore contributed to the writing and editing of every section of the report, the room mockups, interview analysis and the formatting of our booklet.

Catherine Sherman contributed to the writing and editing of every section of the report, interview analysis, report formatting and the design of the poster.

Abhinandan contributed to the organization of site visits, administration, and translation of interviews.

Kumar Abinash contributed to the organization of site visits, the administration, translation and analysis of interviews, and discussion of recommendations.

Abhijeet Rajput contributed to the organization of site visits, administration, and translation of interviews.



Team Photo (Left to Right): Catherine Sherman, Alexander Glanville, Abhinandan, Abhijeet Rajput, Kumar Abinash, Lynne Moore

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I. School Libraries in Himachal Pradesh

School libraries are often considered to be the cornerstone of schools by educators, as they are responsible for providing students with the proper resources to complete their work. Library services can facilitate independent learning programs and educate students on modern technology (Ramaiah & Pillai, 2013). Global best practices for school libraries have evolved with the addition of technology and more efficient information platforms. Along with economic disparities, this rapid advancement has caused many schools to lag behind in developing library standards for students and teachers.

Himachal Pradesh is a largely rural state located along the northwestern Himalayas. In the heart of the state, Mandi District consists of both rural villages and the urban hub of Mandi town. These communities host a variety of public and government schools with varying resources. While it can be difficult to find literature reporting on each district's library services, there are some general statistics that hint at possible trends within Mandi District. Urban India has been seeing great gains in literacy and education as compared with rural areas in India, which can be devoid of amenities for education. In 1961, literacy rates across India averaged approximately 20%, but by 1981 reported rates jumped dramatically to 73%. The literacy rate increase in India is attributed in large part to the role of education and local public libraries (Jatana & Khosla, 2003). More recently, as of 2011 in

Himachal Pradesh, the literacy rate was listed as 82% (Himachal Pradesh The Official Website, 2018).

Reports indicate that many of the schools in Himachal Pradesh lack in-depth evaluations, and there is a stronger concern over the lack of information with regard to the state government schools (Inspection Report, 2018). More specifically, there is little in the way of reporting on the quality of their school libraries. As recently as 2013, the region was one of eight states that lacked a "State Library Policy and Act" that would help unify standards (Shimla, 2013). Despite yearly inspection of elementary schools in the state by the Department of Elementary Education, the reports never elaborate on the condition of the libraries, as shown in Figure 1 (Inspection Report, 2018). From a documentation point of view, very few of the schools that have libraries share images of them or make public what

resources are available to students.

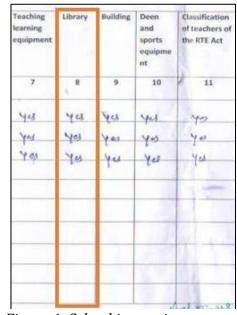


Figure 1: School inspection report (photo credit: Inspection Report, 2018)

The goal of this project is to evaluate the library services of the schools in Himachal Pradesh. Toward this goal we have identified three objectives:

- 1. Identify best practices in setting up and managing school libraries
- 2. Assess the amenities currently available in a sample of school library facilities
- 3. Evaluate the needs and requirements of students, faculty, librarians, and school administrators

We aim to understand ways each library is positioned to host more learning opportunities for students, and to provide findings that will help libraries to better support their students

and faculty. Furthermore, this project contributes to the global UN Sustainable Development Goal #4: Quality Education, helping children in the community to read.

II. A Library's Presence within Education

In order to understand the background, as well as some of the opportunities and challenges faced by school libraries, we review the impact of libraries on students and other stakeholders. Specifically, we consider the opinions on the role of the library in supporting needs within education. Finally, we present the findings and methods of case studies done at schools in Portugal and Australia.

2.1: Libraries as a Catalyst for Education

As library sciences evolve, the opportunities for advanced library resources have increased. Though evolutions are happening, the principles laid out in the 1994 UNESCO Public Library Manifesto are still followed today. They emphasize that it is important for a school library to create and strengthen reading habits in children from an early age, and support individual, self-conduct, and formal education at all levels (Manifesto, 1994, para 10). For example, a group of Australian librarians, specifically known as "teacher librarians" spoke about the power libraries could have amongst students from grades K-12 (Godfree & Nelson, 2018, p. 1). This group developed a list of the specific skills a student should master before entering the global workforce. These skills include "critical thinking." working with people, and getting the most out of technology" (Godfree & Neilson, 2018, p. 31). A library's role in facilitating workshops focusing on note taking, critical evaluation techniques, and efficient database use is important, but can vary based on the school's resources. Where feasible, there are projects being implemented in Indian schools to reach the minimum goals of libraries (Ramaiah & Pillai, 2013). For example, programs such as "Operation Blackboard" and "Shiksha Karmi" aim to improve the facilities and educational standards within remote villages (Singh, 2005, p. 9). Both of these programs involved providing proper training to educators within remote villages of India, while also improving the baseline for school facilities to include larger classrooms and provide storage for library books within the school property.

Along with helping students with useful workforce skills, school libraries can also provide students with important language skills. Requirements to learn a new language can be difficult for students (Lessow-Hurley, 2003). Constant correction can be demotivating; however, libraries can give students additional practice. Students can use interesting stories to further their understanding of sentence structure and vocabulary.

To increase interest in education, libraries can help expand teaching techniques. Some techniques include "incorporating pauses for group discussions, questioning, and short quizzes" and using games or technology in class (Dalrymple, 2002 p. 262; Leach et al, 2005). Educational games can provide different motivations for students, and increase retention of material (Randel et al, 1992). Libraries can provide a space for struggling students to get one-on-one attention, or a place for students to find out more about a topic of interest. Involving students in library resources and programs allows them to further their learning.

2.2: Building a case for the value of quality school libraries

Libraries are a resource for student learning, supporting school wide curricula, and augmenting education with other opportunities for creative engagement. Without a properly run library, teachers and students may not be able to perform to their fullest

potential. A library can improve reading culture, positively impact student work environments, and provide a connection between classroom curriculum and world literary.

Supporting Students

A good library can increase enthusiasm for education among its students. When students are provided with optimal library services, students feel that their reading and literacy standards increase. A survey conducted within Portuguese public schools evaluated schools that had previously self-assessed their library as either 'Excellent' or 'Poor.' The study indicated that students with 'Excellent' school libraries felt their reading and literacy skills improved, while the 'Poor' library students did not (Martins & Martins, 2013).

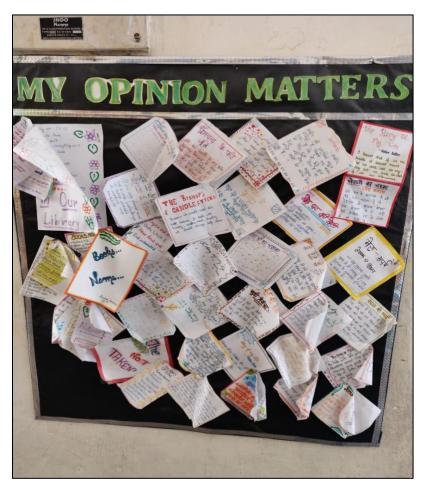


Figure 2: Student artwork in a Himachal school (Photo credit: Abhinandan, 2019)

Though the results of this study may also be impacted by the resources each individual school has, it still shows that students are reliant on their school's library. Schools rating themselves as having a 'Poor' library also saw students feeling less confident or interested in education. Schools with less library resources are more likely to rate their school library as 'Poor.' This study showed the important connection libraries can have to student education.

Without the proper resources, students can fall behind and lose interest in learning. This is why the Indian government has created a new motto for their school libraries, "Catch 'em Young," within the education departments (Mahajan, 2010, p. 1). This slogan is used to highlight the importance of creating an early love for reading. Reading rates have increased as many students within rural India fill their free time with reading (Kunhambu, 2012).

Engaging Teachers and School Administrators

When it comes to student reading culture, the school administration is a key factor in how the school library is funded and operated. The administration can provide schools with the necessary resources and incentives to improve student learning.

Just as a library can impact the students directly through its resources, it can also indirectly impact students through the curriculum teachers follow. Libraries can be used for reading and research assignments, but they can also provide teachers with essential materials and background. In the United Kingdom for example, the failure of schools and teachers to strategically integrate library activities was associated with student counterperformance (United Kingdom, 2014; Lance & Kachel, 2018). The international librarian journals highlight the importance of librarians knowing the curriculum goals in order for the library to appropriately "support the curriculum" (United Kingdom, 2014 p. 17; Lance & Kachel, 2018). Good rapport between teachers and librarians encourages the use of the library as a resource, and allows students to further their education (Dales, 1990).

2.3: Evaluation of school libraries

Properly evaluating school libraries to see if they are implementing the main topics within the Library Manifesto first presented in Section 2.1 is a challenge. A proper library evaluation must take into account multiple qualitative and quantitative measures. According to one metric, a rubric for library evaluation should include a minimum of the following questions:

- 1. How are the everyday functions of the library completed?
- 2. How does the library deliver services to its stakeholders?
- 3. Is the library impacting student and school success? (Mahajan, 2010).



Figure 3: Himachal Pradesh school library (Photo credit: Glanville, 2019)

For example, a 2013 review of Portuguese school libraries looked at the results of a self-assessment tool within primary schools regarding the libraries impact on reading and literacy improvement (Martins & Martins, 2013). The report featured a variety of charts portraying the results from questionnaires filled out by both students and teachers. These questionnaires focused on how the literacy rates were impacted by the schools personalized rating of their libraries (Martins & Martins, 2013). The School Library Evaluation Method (SLEM) uses three core domains, supporting curriculum development, reading and literacy, or school library management, to evaluate libraries.

The SLEM technique looks at a single domain each year to make sure each section is being properly evaluated. This then allows the Portuguese School Library Network (SLN) to make further recommendations for both improvements within existing libraries and developments of new libraries. Over time, the self-assessment tools allow the outside evaluators a closer, more personal look into the everyday use of the libraries (Martins & Martins, 2013).

The SLEM evaluation, similar to other studies, emphasized the fact that the number of "print volumes" did not directly correlate with student learning (Shenton, 2011, p. 39). Ahmad supported this claim by saying, "even in school libraries claiming to exercise an open access system, libraries were found deserted with students hardly venturing in due to shortage of relevant and up-to-date reading materials" (Ahmad, 2011, Access to resource section para. 3). Library evaluations should take into account all aspects of the library; the

physical attributes within the libraries as well as the educational impact the library has on its stakeholders.

In summary, our research into library literature revealed the roles libraries can play in education as well as the standards they should be held to. We observed the impact a school library has on its stakeholders. However, we found that library evaluation processes can be difficult to design because the needs of the stakeholders, current resources, and operational standards need to be considered equally.

III. Reaching Our Goal

As the goal of this project was to evaluate the library services of schools in Himachal Pradesh, we completed the following three objectives:

- Identify best practices in setting up and managing school libraries
- Assess the amenities currently available in a sample of school library facilities
- Evaluate the needs and requirements of students, faculty, librarians, and school administrators.

The figure below summarizes how we accomplished these objectives in order to meet our final goal. We also detail the methodological strategies used to complete data collection.

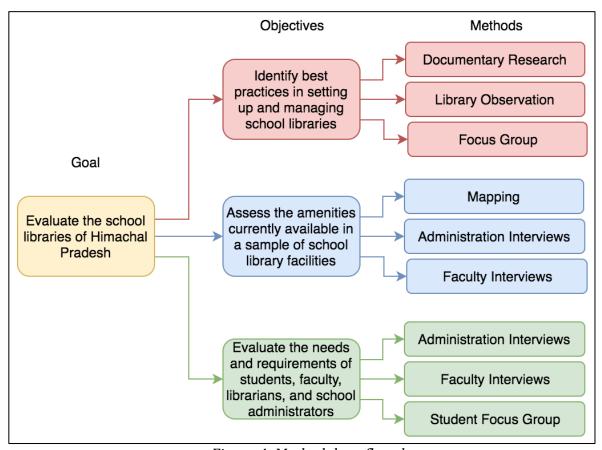


Figure 4: Methodology flowchart

3.1: Identify best practices in setting up and managing public school libraries

In order to identify the best practices in maintaining and managing public school libraries, we conducted extensive research using documentary research and focus groups. Documentary research provided us with the background to effectively complete our other objectives. We reviewed legislation requirements for school libraries in Mandi District and Himachal Pradesh. This included their staffing, and equipment. We used it to determine whether schools were able to follow the current baseline.

Next, we identified innovative library models through online research and communicating with community members, interacted with favorite local libraries, and

learned more about how libraries optimally support students and teachers. After identifying a well-funded, and university supported public school library, we organized a focus group with the school's teachers. Through this focus group, we were able to identify the best practices for local school libraries in Mandi District. We also observed some library models to learn about optimal school design.

3.2: Assess the amenities currently available in a sample of school library facilities

In order to document the amenities currently available in public school libraries, we conducted site assessments. We used a sample of convenience of schools in Mandi District to observe the everyday activities of school libraries in the area. The assessment included mapping, and interviews with faculty and administration to identify school library resources and how patrons use and appreciate them. We used notes and photos to map each library. We were able to document how the space, resources, and furniture were generally used. Other helpful documents included noting software that contained the number of books in the library, how many times they had been checked out, and questions regarding stock checks of the libraries.

Finally, in order to document the amenities available in a sample of school library facilities, we conducted interviews with librarians, teachers, and school officials. We started with standard questions similar to a survey. We chose to use standardized questions to initiate our interviews for two reasons: they ensure each school is evaluated equally, and they help start a conversation about the properties of each library. Asking these questions in person provided more feedback than surveys. The questions were useful for comparing amenities, tools, and technology among schools. This interview process was continued to aid in completion of our last goal. Along with these interviews, if a school principal required further explanation of our project goals and standards, we supplied the letter, shown in Appendix A, when requested. Our full interview guides can be found in Appendices A-F attached at the end of this document.

These interview questions apply to schools with a library. When the visited school did not have library facilities, we followed the instructions on our questionnaires and adapted accordingly. This situation led us to ask questions based on what the interviewees would desire in a future library, and what was preventing them from having a library.

3.3: Evaluate the needs and requirements of students, faculty, librarians, and school administrators

To evaluate the needs and requirements of the stakeholders, we engaged with school administrators, librarians, teachers, and students. To maintain balance between candid responses and key points we collected, we conducted semi standardized interviews with stakeholders (Berg, 2006). Our team interviewed one principal, one librarian or teacher placed in charge of the library, and 2 teachers from each school.

Our interviews with school administrators provided insight into how they support and contribute to the library. We learned about how the schools measure the needs of students and obtain the funding for books, resources, and technology. See Appendix B for the interview guide.

We also interviewed the librarians and teachers to better understand the impact of the library on the student body, and to receive feedback on what resources the library is providing in support of the curriculum. Based on whether or not a school had a designated librarian, we spoke with the teacher in charge of the library's daily operations. See Appendix C and D for the interview guides.

Because our project was completed during an exam session, interaction with students was limited. This meant students were not present at some of the earlier schools visited. With this said, we were able to hold two group interviews with 5 to 10 students about their current library use and what their ideal library experience would be. We did not interview students individually, as they are a more sensitive stakeholder and most students would not enjoy being singled out for their opinion (Berg, 2006). Appendix E lists questions for the student interviews.

IV. Results and Discussion

This section outlines and discusses the findings from our fieldwork. We categorized our data based on the objective it fulfilled. To maintain anonymity for schools, we use the school variables system described in Appendix G. We do not mention any school by name, nor do we tie any faculty member or student to their respective schools without consent.

4.1: Best practices in setting up and managing public school libraries

We divided this objective into three main parts, library management, library design, and library services.

Library Management

Much of our documentary research was conducted online. We reviewed The Guidelines for School Library and Procedure Manual provided by the Kendriya Vidyalaya Sangathan (KVS) school protocol, as well as Central Board of School Education (CBSE) and the Himachal Pradesh Board of School Education (HPBOSE) school library policies.

While the State did not have a separate library legislation, there are over 100 pages set aside by the CBSE for library regulations. Their detailed instructions talk about the number of books required per student, and outline rules everyone should follow in the library. Beyond this, they also require schools to have up to 4 library staff members and 3 individual rooms for different library activities. Some of these policies are well beyond the capacity of some the schools in Himachal Pradesh, but as student enrollment increases, these rules are becoming a goal for schools to reach (Central Board of School Education Library Guidelines, 2018).

Beyond the legislation, we saw schools with larger libraries shifting to an online management system. Currently, many schools use a register book where the inventory and student book transactions are recorded by hand. Schools with an established library are moving towards a more efficient online management system as their library increases in size; some schools had already moved to this system. The online register included more accurate book inventories, as well as student portals for student transaction records.

Library Design

Local interpretations of public library standards can exemplify how school libraries can be flexible in response to their users. We visited one local school library in the US and observed a public library from Delhi in order to understand how library's priorities differ. The first library we visited was in a Massachusetts public elementary school. The school library provided separate areas for personal reading, technology, and studying.



Figure 5: Massachusetts public school library (Photo credit: Glanville, 2019)

The next library we observed was the Delhi Public Library. While we were unable to visit the physical library, our team used online resources to gather information. The Delhi Public Library provides a special section for children in order to promote literature at a young age (Delhi Public Library, 2009). Given that the Delhi Public Library is ranked highly in India, it is a great source to grasp what libraries in India prioritize (Pal, 2017).

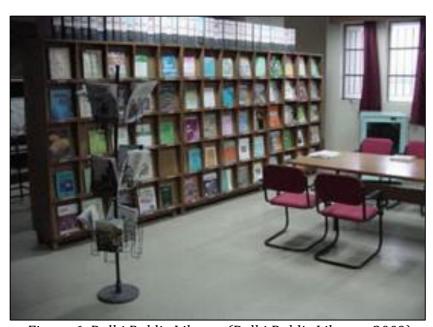


Figure 6: Delhi Public Library (Delhi Public Library, 2009)

The first sample library has areas sectioned off for comfortable reading, while the second library has a more formal arrangement of desks surrounded by large cabinets. Using a mix of both spaces in a library can provide an optimal space for student and teacher learning.

Library Services

Our team identified the Mindtree School as an example for library services in Mandi District because of robust funding and ties to higher education. Through a focus group with fifteen teachers, we learned about how their library is run and organized. Through this focus group we deduced that the additional services the library at Mindtree was providing had a big impact on the students' reading habits. Providing these additional services, such as a one-hour library period and the Reading Rocket program has led to a steady increase of student interest in their school's library. The Reading Rocket program had fifth through eighth grade students take a book home to read over the course of a week and review it in front of their class (March 2019). It was apparent when visiting Mindtree that their school made an effort to instill reading in their student's everyday lives, and from our focus group, we deduced that the Mindtree School's library was very well received by its teachers.

4.2: Current amenities of school library facilities

After surveying 11 schools (7 state government, 1 central government, and 3 public), we gained valuable information regarding library facilities, resources and funding, as well as events and programs run by each school's library. We also discovered that the state government schools consistently had minimal funding for a library. Infrastructure issues were a main complaint by all schools that took part in our survey.

While all schools had funds set aside for library books, the amount provided for state government schools was much less. In particular, one school indicated they received a maximum of 10,000 rupees per school year for books, while a second said they received no funding from the state government. Private and central government schools have on average more books per students than state schools. Figure 7 (below) shows the books per student at each school, with an average of 3 for state schools compared to 8 for central government and private schools.

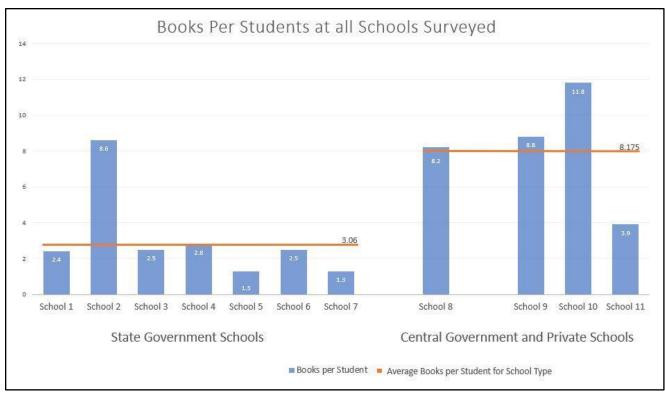


Figure 7: Books per student at all schools surveyed

The state schools also had less variation in both genre and languages of the books. Three out of the seven of the state schools saw 95% of the books in only Hindi, while the central government and private schools had closer to a 50-50 split between English and Hindi books.

In addition to funding requests, school administration also often expressed a need for expanding the current space allocated for the library. While the privately funded schools could generally expand their campus with ease, there was evidence of one central government school being held back from expanding due to land leasing contracts with the Himachal Pradesh School Board of Education. State government schools were even more restricted. One commented that they only had 3 classrooms for 5 classes, nevermind space available for a library.

We found that state schools had cabinets provided for library books that had to be placed in corners of classrooms, as shown in Figure 8, or kept in storage rooms along with sports equipment. The lack of space was most prominent at the state government schools because many lacked designated library rooms. Central government and private schools were more focused on expanding their libraries.

Looking at amenities beyond books, we found that computer or AV rooms were rarely connected to the library. Thus, the library was not the source for audio or visual learning aids. This was a common practice, but three of the eleven of schools we surveyed wanted to connect the two in the future.



Figure 8: Library in back corner of classroom (Photo credit: Moore, 2019)

The final aspect of the findings concerning library facilities was in the design. Many library spaces consisted of a large conference table centrally placed in the library with large metal cabinets organized by category along the perimeter. A sample blueprint can be seen in later in this document, in Figure 11. This layout allowed the librarian to watch all students while providing students with a comfortable workspace. The walls of the libraries varied in color, with the common presence of motivational sayings painted on the walls in or around the library, as shown in Figure 9.



Figure 9: Motivational quotes near library (Photo credits: Moore, 2019; Glanville, 2019)

All of these conditions of the libraries we assessed clearly impacted how well the students and faculty could utilize their library services.

4.3: Needs and requirements of students, faculty, librarians, and school administrators

We encountered a wide variety of schools with many different levels of funding and available resources. Therefore, the needs and requirements of each school we visited tended to vary drastically. To start, 43% of the state schools we visited required more infrastructure to have a library facility. Students and teachers at schools with no designated library space reported limited library use. At one of these schools, the children explained to us that they never used any of the school's provided books and the only students who did were those who borrowed textbooks from it. Furthermore, a teacher at a school that did not have an established library explained to us that a student hadn't issued a book from the school in several years.

With this said, responses like "a student hasn't checked out a library book in the three years I've been here" and "students just aren't interested in the library" were common responses in schools that did not offer a library period. In schools with library periods, teachers voiced how a library period sparked reading interest in their students. One librarian said that "the biggest change the library has seen over the past five years is more student use." They saw that the library period led to more books being issued and students using the library in their free time. In general, the library period was a forced interaction between students and the library, which increased awareness of the library. Students that had no interaction with their library on a regular basis had little or no interest in reading.

While schools that did have libraries generally saw students being more interested in reading and issuing books, most of our interviewees still voiced that there was room for improvement in their libraries. 85% of the state schools that had books available for students did not have a post for the librarian and this led to the responsibility of the library being put on a single teacher. This generally made it difficult for the teacher to be fully invested in the library. However, we noticed that schools with a full-time librarian generally provided additional services like book review programs, book clubs, and book fairs to their students.

4.4: Discussion

Through our findings in our fieldwork we identified best practices in library management, assessed the amenities of local school libraries, and identified many needs and requirements. After completing our objectives, it became clear that the real problem in the schools was lack of engagement with the books that the schools already had. There were funding and infrastructure barriers, but in most cases, they were not dramatic enough to prevent interactive reading programs.

In our analysis, the practice of library periods in schools promotes better use of library resources. Schools with a library period reported that more students used library books. In most cases, teachers said that students would look forward to going to the library and even go when they had free time. Programs that involved reading and book reviews further encouraged students to use their libraries. Teachers and librarians claimed that one of the biggest changes over the past five years, was increased student interest in the library. On the other hand, schools without library periods had limited student responses

to the provided books. Both teachers and students reported that very few were interested in using the books. These schools also lacked other library-related programs. Because of the lack of interest, there was little support from faculty to change anything about the libraries, which further reinforced the lack of interest.

It was clear from our findings that building capacity for library services needs to focus on techniques that would integrate school resources into the daily lives of students. We realized that telling schools that did not have the funding or infrastructure for a library facility to build a library and integrate it into the curriculum would be pointless. However, schools could incorporate library services into the classroom without extra funding or infrastructure.

Once these library services are implemented, it would then be necessary to maintain a proper evaluation of these libraries beyond what is currently in place. After speaking with the Deputy Director of Education in Mandi Town, our team discovered the inspection process specific to libraries is minimal. Along with this, we learned the Deputy Director is designated as the messenger to the main board office in Shimla and little is done through the Mandi Town office. This makes it easy for the struggles of a remote school to go unrecognized. The principal of a school we visited located in a remote part of the state explained to us how in his three years at the school he has received virtually no assistance from the government despite consistent efforts to reach out.

Thus, techniques such as SLEM, discussed earlier, could be implemented on an annual or semi-annual basis to provide more in-depth evaluations on the library services. This more focused self-assessment evaluation technique would be a valuable asset in Himachal Pradesh, as the sheer quantity of schools is not conducive to in-person evaluations, and the faculty are willing to be critical of their school.

V. Project Outcomes

After surveying a variety of school libraries and interviewing numerous administrators, teachers, and librarians we generated some recommendations that could be applied in all school libraries throughout Himachal Pradesh. One of the realizations our team came to is that a library does not need to be defined as a room set aside for storing books. Rather, a library can be defined as something that enhances student engagement in literature. Before we go in depth on each individual recommendation, first find a list of our full list below.

- Add a mobile library to promote use and awareness of the schools available library resources
- Reconfigure available library space to accommodate comfortable reading spaces separate from study/work space
- Set aside 15-20 minute blocks for reading throughout the week
- Teachers should connect their in-class work to the library, by assigning work that requires resources from the library to complete
- Once a library is established, convert library management functions, such as book inventory and student use, to online versions

5.1: Redefining what it means to have a library

Through our fieldwork our team has come to the conclusion that a library does not need to be defined as a room set aside for storing books. Rather, a library can be defined as something that builds student engagement in literature. It would be unrealistic to recommend that schools construct a library after continually hearing that many schools are lacking space for expansion, so our group took some inspiration from Libraries Without Borders. Libraries Without Borders is a non-profit organization that works to give people around the world access to libraries. They bring their "Ideas Box," or mobile library, to communities around the world (Libraries Without Borders, Impact). Because all of the schools we visited, even those that lacked infrastructure for expansion, had books, we felt that the incorporation of a mobile library was feasible. A simple and affordable library cart is presented in Figure 10 below.



Figure 10: Library cart (Wayfair, 2019)

This kind of a cart has bins that could indicate different reading levels. These levels are based on the particular reading skills students should have mastered in their respective age group. This idea is mostly seen within elementary schools as students are just starting to interact with reading. With that said, for the higher levels of education, the bins could be categorized based on subject or genre. Given that the education system in India revolves around the syllabus, the library should support the needs of its students. Thus, the mobile library should encourage student learning by providing resource books for their classwork.

In all schools surveyed, there was either a teacher or librarian in charge of the library. The mobile library could then become the responsibility of this person. We are encouraging weekly interaction with the library, which means the mobile library could be accessible in every classroom at least once a week. This period could be conducted within another subject either at the end of the class, or the beginning based on the teacher's preference. This weekly mobile library visit would encourage students and staff to utilize the resources already available within the school.

5.2: Setting Aside Space for Reading

Another observation we made throughout our fieldwork is many of the schools that had a library set up their space in a very similar fashion. Many of the libraries we visited consisted of a large table surrounded by cabinets full of books, similar to the drawing shown in Figure 11. This set up helps when entire classes are in the library as it allows teachers to easily watch over all their students at once.

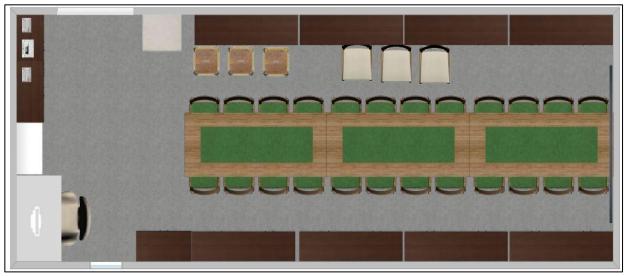


Figure 11: Reconstructed blueprint of typical library layout (Photo credit: Moore, 2019)

Studies have shown, however, that to further encourage positive reading habits and increase student use, the availability of "lounge seating" or comfortable spaces is key (Mohanty, 2002). Providing comfortable seating provides students with different options while working. Research shows that students learn in different ways, and sitting at a desk does not always help concentration. Furthermore, comfortable seating can create a more welcoming space for students to visit the library in their free time and relax with a book. Having different types of furniture also allows for one room to have many purposes. Figure 12 provides a small example of how the conference room like setup could transform to provide students with a workspace as well as a place to enjoy their library. This image was based on the principles first observed in the public-school library referenced in Figure 5.



Figure 12: Reconstructed blueprint of library layout with comfortable reading spaces (Photo credit: Moore, 2019)

The CBSE guidelines specify that a library should consist of a reading room, conference room and a "stack or volume" room (Central Board of School Education Library Guidelines, 2018). Most schools did not have the capacity to allot three separate rooms for these spaces, but different furniture and decor would allow the schools to accomplish these baselines. Adding specific areas for informal and comfortable reading, as shown above and previously in Figure 5, can be an easy change for an established library and can have a great effect on student engagement of all ages.

5.3: Expanding engagement with information

To address the lack of awareness of library books, we recommend that teachers set aside time for reading during their class periods, involve students in reading programs, and include library research in projects. These three points can remind students that there are books available at their school, and can facilitate healthy reading habits.

Within class, we suggest having mandatory reading sessions once a week. English classes could conduct monthly book reviews using the library books. The reviews could consist of students reading a book of their choice, and either writing a report on the book or giving an oral presentation in class.

Additionally, students could be given assignments which require them to issue a book from library. These projects would be selected by the teacher and student based on the availability of books in the library. This would maintain the syllabus-based curriculum by showing students how the library can connect to their studies without deterring them from the highly competitive Indian school system.

With regard to library management, expansions could include giving students library cards, or completing annual stock evaluations. These two ideas are important functions in schools with an established library. Thus, they could be implemented to create a smoother library interaction once a school has established its library as a useful resource for students. The first step, in the case of no library use, should be to involve students in reading to increase the awareness of library resources.

VI. Conclusion

School libraries are a cornerstone of public-school education. It is important to note that the definition of a library is changing as education systems and technology evolve. No matter how the medium changes, the purpose behind a school library remains the same: to provide students and teachers with the resources they need to fully engage with the specified curriculum and develop critical skills. The new mentality no longer restricts a library to a physical room within a school. Students can interact with the library services through mobile library carts, classroom libraries, and online resources. It is the responsibility of the school administration and teachers to find the right combination of these mediums to best support the student body and the school's teaching philosophy.

Interactions with the students, faculty, and library facilities within Mandi District schools allowed us to develop recommendations that will enhance each school's library services. We discovered that most Mandi District schools struggle with infrastructure, funding, and awareness of library resources by students. For this reason, our recommendations expand upon the available resources in order to better accommodate the needs of the students. Because of the emphasis on the syllabus in schools, the library should support the curriculum while encouraging students to go beyond it. We reached out to our the schools in this study with a recommendation that was individualized per each schools' requirement. These enhancements may take time to develop within each school, but with an individualized approach and a local champion, each school can maintain an engaging and supportive library.

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Supplemental Materials

Appendix A: Explanation of Interview Purpose and Request for Consent To Whom it May Concern,

We are writing to you with a request.

We are a group students from both Worcester Polytechnic Institute (WPI) and the Indian Institute of Technology in Mandi (IIT Mandi), working on a project to evaluate school libraries within Mandi School District.

Our project is only an evaluation tool, and we will not be providing funds or resources to any school that takes part in our survey. We are an outside source working on a project in fieldwork studies. Any findings we take from your school will not impact your funding from your governing body. We will be creating a list of recommendations for Mandi District school libraries as a whole, but will not be identifying any school based on their weaknesses.

We request an interview with faculty members at your school to further our understanding of the current status of school libraries as a whole in Mandi District. We request interviews with the Principal, school teachers, librarian, and students within your school.

Your identity as a respondent will remain anonymous if you wish it to stay as such. The school in which you are affiliated may be named directly in our final report, but your connection to the school will not be described.

Any information you provide to us indicates your consent to take part in our evaluation interviews. Further consent can be given if interviewee wishes to be named/quoted in the final report published by Worcester Polytechnic Institute.

Thank you for your cooperation through this interview process.

Regards,

Lynne Moore, Catherine Sherman, Alexander Glanville, Abhijeet Rajput, Kumar Abinash, and Abhinandan

Appendix B: Interview Guide for School Administrators

- 1. Does your school have a library?
 - a. If "Yes" continue with questions
 - b. If "No" go to Appendix F
- 2. Which board of education does your school report to?
- 3. How are you involved with your school's library?
- 4. What services does the library provide for students?
- 5. Are there any programs run by the library?
 - a. Do students influence program offerings?
 - b. Are there any new programs?
 - c. Are there any other programs you wish you could implement?
- 6. What do you see as the biggest challenge facing the library?
- 7. Are there problems and or complaints about the school library?
- 8. What resources are provided to support the library?
 - a. Do any outside sources provide resources or volunteers for the school library?
- 9. Is your school inspected by the school board?
 - a. How often?
 - b. Does the inspection include your library?

Appendix C: Interview Guide for Librarians

- 1. Does your school have a library?
 - a. If "Yes" continue with questions
 - b. If "No" go to Appendix F
- 2. How long have you worked here?
- 3. What are the libraries hours?
- 4. What kinds of things can students issue from the library?
- 5. Does your library have a website?
 - a. What resources are available on the website?
 - b. How do you promote the library resources to students and teachers?
- 6. How many books does the library have?
- 7. What kind of books does the library have?
 - a. What are the different genres of the books in the library?
 - b. How many books are there in each genre?
- 8. Does your library provide support or programs for students?
- 9. What age group/ability/accessibility range is reflected in the library offerings?
- 10. Is there a library period for students?
 - a. How often are students in the library?
 - b. How long do students usually stay in the library?
 - c. Are students excited to go to the library?
 - d. Do you meet with teachers and/or administrators about classroom curriculum?
- 11. What seems to be the most popular aspect of the library?
- 12. What is the least popular aspect of the library?
- 13. Has anything been changed or renovated in the library within the last 5 years?
- 14. How many staff members work in the library?
 - a. Are there any volunteers?
- 15. Are there computers/what technology does your library offer?
- 16. How do you think the library could be improved?

Appendix D: Interview Guide for Teachers

- 1. Does your school have a library?
 - a. If "Yes" continue with questions
 - b. If "No" go to Appendix F
- 2. What do you teach? Subject? Age group?
- 3. Do you have any other positions or responsibilities in the school?
- 4. How often do you use your school's library? For what?
- 5. What resources do you use in the library?
- 6. Do your students go to the library?
 - a. Library period?
 - b. Do you ever assign students to go the library?
- 7. Does your library organize programs?
- 8. Do you have any suggestions for how the library could improve?
- 9. Do you speak with the school librarian about connecting the classroom and library?
- 10. Do your students have access to computers or other technology for school work? In the library?

Appendix E: Interview Guide for Students

- 1. Does your school have a library?
 - a. If "Yes" continue with questions
 - b. If "No" go to Appendix F
- 2. Where is the library located?
- 3. Who is in charge of the library?
- 4. What does your library do?
- 5. When was the last time you visited the library?
 - a. How often?
 - b. For how long?
 - c. For what?
- 6. What do you use the library for?
 - a. Do you issue books?
 - b. How convenient is issuing books from library?
- 7. What is your most favorite thing to do in the library? Least Favorite?
- 8. Do you find books of your interest in the library?
 - a. If yes, are they academic or personal interest?
- 9. Does your library have any special programming? Do you go to any library programs?

Appendix F: Guide for Lack of Library or Library Interest

No Library:

- 1. What are some of the barriers preventing your school from having a library?
- 2. Is your school currently taking steps to add a library?
 - a. If "Yes" What steps?
 - b. If "No" Is this because of the previously discussed barriers?
- 3. Have you enquired about getting funding/help for a potential library?
- 4. Is there a public library that the students could use?
- 5. Is another part of the school providing students with research materials or other educational support? Are there other programs?
- 6. Students: Have you ever used a public library?

Lack of Interest:

- 1. Why don't you/the students use the library?
- 2. Have any steps been taken to encourage students to use the library?
 - a. If "Yes" what steps have been taken?
 - b. If "No" would you want teachers/administration to encourage library use?
- 3. What would you change about your library to make it more interesting?
 - a. Add different books/topics? A library class period? Have a librarian? Places to sit/read?
- 4. If your library had _____ would you use it?
 - a. Places to sit and read or do homework?
 - b. Computers?
 - c. Tutoring center?
- 5. Students (age dependent): did you lose interest in library because of a previous schools lack of library?

Appendix G: List of Schools for Citation Purposes

These schools were selected on a basis of convenience sampling. Travel timing along with school hours of operation allowed our team to sample schools within Mandi District only. We also use stratified sampling ideas to allow for proper proportions within Himachal Pradesh.

State Government Schools:

- School 1: Remote Government Sen. Sec School within Mandi District
- School 2: Government High School within Mandi District
- **School 3:** Remote Government Sen. Sec. School within Mandi District
- School 4: Government Sen. Sec. School within Mandi District
- **School 5:** Government Sen. Sec. School within Mandi District
- **School 6:** Government Sen. Sec. School within Mandi District; School library was also the Villages Public Library
- **School 7:** Remote Government Sen. Sec. School within Mandi District

Central Government Schools:

School 8: Central Government Primacy through Sen. Sec. School found in Mandi Town, under the jurisdiction of Kendriya Vidyalaya Sangathan

Public Schools:

- **School 9:** Sen. Sec. School found in Mandi Town, under the jurisdiction of the Central Board of School Education (CBSE)
- **School 10:** Primary through Sen. Sec. School found in Mandi Town
- **School 11:** MindTree School affiliated with IIT Mandi

Other Schools:

School 12: Public Elementary School located in Western Massachusetts, USA

Appendix H: Email to Schools about Recommendations

Dear [RECIPIENT NAME],

We would like to thank you again for speaking to us about your school's library. Since our visit, we have come up with some recommendations based on our findings. These recommendations aim to help improve library use and wanted to share them with you. This information can be found in the attached recommendations section of our report.

Thank you for your time and we hope you will find our recommendations useful.

Best,

Alex Glanville, Catherine Sherman, Lynne Moore, Kumar Abinash, Abhijeet Rajput, Abhinandan

Appendix I: Poster

