School Library Media Centers: The Human Environment

[Carol A. Doll,](#) **Graduate School of Library and Information Science, University of Washington.**

In keeping with the facilities theme of this issue of SLMQ, the "Current Research" column offers an excellent review of relevant research by Carol A. Doll, Assistant Professor in the Graduate School of library and Information Science at the University of Washington. Doll is well known for her work in collection analysis and the use of print and technological resources in school library media centers and the classroom. She is the author of two recent books, Collection Analysis for the School Library Media Center: A Practical Approach (with Pamela P. Barron), American Library Assn., 1991, and Using Informational Books in the Classroom, Libraries Unlimited, 1990. In this research review, Doll focuses on aspects of human behavior in physical settings (e.g., personal space, territoriality, privacy and variety) that can be applied to create school library media centers that meet the diverse needs of student users.-Michael B. Eisenberg, Column Editor

Children and young adults come to the school library media center for a variety of reasons ranging from personal to educational. The library media center, therefore, should try to be as flexible as possible in order to meet differing student needs. Most important, the library media center should be a comfortable, welcoming place for students.

Facilities are an inevitable, and often underrated, part of any school library media program. Physical location houses the collection and provides space for some of the services. Also, students, faculty, and staff act, interact, and react within that area. Since consideration of the facilities should not be isolated from the people who spend time there, human behavior within that physical space becomes important and should be of interest to school library media specialists.

Environmental psychologists have identified several factors that can influence the way people conduct themselves in a physical location. These include personal space, territoriality, the search for privacy, and preference for a quiet or more stimulating study environment. Awareness of some of these factors and their implications can enable media specialists to take the fullest advantage of the physical facilities available and be more responsive to user needs.

Aspects of Human Behavior

The literature in environmental psychology concentrates on ways people behave in a variety of physical locations. Numerous articles in library science literature and in education literature have discussed implications of student behavior or conduct in an educational setting. Together, these writings can provide valuable insights about physical facilities and their users.

Personal Space. Two concepts of interest, personal space and territoriality, are closely related and even intertwined. Any discussion of personal space emphasizes the concept of territoriality. That is, people tend to build and maintain spaces around themselves, as extensions of themselves and their personalities. Edward T. Hall, in a discussion of social and personal space, identifies four distances for adults: intimate distance (0 to 1-1/2 feet), personal distance (1-1/2 to 4 feet), social distance (4 to 12 feet), and public distance (12 to more than 25 feet). He indicates that social distances can be used to isolate people so that they can continue to work in the presence of others without being rude. Enough distance between chairs or tables (at least 4 to 5 feet) seems to let people "ignore" others in the area. Hall also suggests a back-to-back seating arrangement.(1) Both of these ideas could be useful in the management of space.

James J. Thompson explored a number of theories concerning space and suggests applications of these theories for the classroom teacher. His work also has implications for school library media specialists. Building on Hall's theories, Thompson indicates that teachers should not indiscriminately invade a student's personal space. Adults tend to honor the personal space of others, and this courtesy should be extended to students as well. Library media specialists should also follow this advice when working with their patrons.(2) Elizabeth Huntoon also suggests it is appropriate to extend this courtesy to children and young adults. Furthermore, she believes that this type of respect could help control behavior problems in the library.(3) This is especially important with young adults, who are very aware of any differences between how they are treated and the way adults are treated. Acknowledgment of their personal space can be the basis for mutual respect.

Territoriality. Both Hall and Robert Sommer have explored the concept of territoriality. Hall indicates that territoriality in respect to seating patterns is established rapidly, and that other people do not want to infringe on space that is already claimed(4) Sommer, observing seating patterns in a college library, found that students tend to prefer end chairs at empty tables. When a student occupies a chair, his or her presence tends to protect those chairs next to and directly across from the occupied chair until all other preferred seats are taken. In addition, books or personal belongings successfully defend chairs until the occupant returns.(5) Library media specialists should consider these seating patterns when selecting or arranging furnishings. For example, large tables that seat eight would leave six empty seats, so smaller tables may provide more readily available seating.

To date, only one study, by Irene Sever, has specifically examined the territorial behavior of young users. In this study, students were brought to the Laboratory for Children's Librarianship in Haifa, Israel, where there were about 81 square meters of empty floor space and no clearly delineated seating. The children's behavior as they found and used various areas for reading was closely observed by Sever and her associates, who found that children had to: "(a) find a personal space for themselves, (b) signify to others that this was THEIR place, (c) keep 'trespassers' and 'intruders' out of that territory, and (d) recognize the territory of others and not intrude.(6) There is then some evidence to indicate that children also seek to define and defend a territory for themselves.

Thompson extended Sommer's research on seating patterns in libraries. In schools, Thompson states, students seated at tables probably will interact with each other more than those using desk

chairs or another form of individual seating. In addition, students may tend to avoid round tables, because it is more difficult to partition and define their work space there than when using a square or rectangular table.(7) Perhaps the type of seating provided in library media centers could reinforce the purpose of the area, e.g., carrels for the quiet area and tables where talking is allowed.

Walter T. Dziura advocates that library media center facilities provide an opportunity for students to identify an area for personal use. However, he makes the additional point that territoriality does not imply total isolation. Many of the current arrangements in library media centers, such as carrels, conference rooms, or smaller, more private reading spaces, can help fulfill student needs for territoriality. Dziura further suggests that, for continuing projects, an area be temporarily assigned to a student or group.(8)

Privacy. One aspect affecting user behavior that is closely associated with tenitoriality is the quest for privacy. Sometimes students, especially elementary students, want to feel like they are alone or removed from the activity around them. Sommer feels it is important for the library media specialist to know the architectural and design characteristics that favor privacy, in order to provide for privacy when it is desired.(9)

Children, especially, seem to need to create "private spaces." (10) Ahrentzen et al. discuss the importance of secluded study space in the classroom. Sixty percent of the students they interviewed said they preferred such space when they need to concentrate.(11) As Cohen and Cohen noticed, ". . . In some elementary school libraries it is not uncommon to open a closet and find a child working happily away."(12)

Thompson explored the concept of privacy as well. "If educators think of student privacy at all, the usually think of it in negative terms."(13) He suggests that privacy can be provided by using carrels, bookcases, shelves, and portable panels as screening. There is no reason that these methods would not also work in library media centers. Students can be very skillful about devising their own areas for private thought, if they are allowed to do so.

Margaret Bush recommends the imaginative division of space into alcoves so that children can find the "private space" they sometimes need. She cautions library media specialists to make sure, however, that these divisions don't hamper traffic flow or cause visibility problems.(14)

Variety in Environments. While an individual user may want privacy sometimes, there is also a need for different types of environments in the library media center. In addition to his observation of behavior in an academic library, Sommer determined student preferences about study areas. He found that some patrons prefer public study areas, such as the reference room, and other patrons prefer semiprivate study areas, such as carrels. Furthermore, students complained of both visual and auditory distractions. Sommer concludes, "The ideal library would not be one with all individual study rooms or all open areas, but, instead, would contain a diversity of spaces that would meet the needs of introverts and extroverts, lone studiers and group studiers, browsers and day-long researchers."(15)

Albert Mehrabian also advocates variety in library spaces and suggests three types of environments. The first is a quiet place for those working with complex and difficult matters that allows users to concentrate on tasks that require their full attention, such as math problems, physics, or creative writing. The second area should provide a place for light, pleasant reading, with background music, and allow quiet conversation. Finally, Mehrabian recommends there be a third area for those working on repetitious or boring tasks or taking a break from other activities. Here snacks would be available, and there would be room for people to walk around or socialize.(16)

In discussing the environment in schools, Mehrabian states that the teacher, in trying to cope with a roomful of children, attempts to keep the environment as neutral, controlled, and unexciting as possible. This causes the children to feel confined and bored, so that they try to generate excitement ("arousal" and "pleasure" in Mehrabian's terminology). For this reason, there should be a variety of environments created in the school, each matched with an appropriate subject and classroom situation, and changed frequently. This variety would include quiet study environments; areas for subjects or teaching strategies that encourage calm, productive group work, and times and places for more active, noisy study activity.

Mehrabian presents an example of an elementary school with traditional, selfcontained classrooms. In the library media center, the media specialist used a red shag carpet and a number of throw pillows. According to Mehrabian, this environment is arousing because it is novel and colorful and pleasant. ". . . It also elicited less submissiveness, because children were not constrained by the unyielding spatial arrangements of tables and chairs and could lie on their back, sit up, or stretch out on their stomachs or sides to read.(17) Furthermore, children were allowed to "affiliate" (i.e., talk), thus increasing both arousal and pleasure. And, because whispering was allowed, it was not distracting to others.

Mehrabian is concerned with creating a varied and stimulating environment in schools by using decor, furnishings, windows, music, student participation, and the arrangement of furniture. The school media center is included in the plan. At the same time, Stephen R. Hildrich cautions against the use of too much open space in libraries. He states that "the arrangement of space seems to affect people's attitudes"(18) and believes that too much open space causes a feeling of irresponsibility. This makes it harder for the library media specialist both to maintain the necessary discipline and to make contact with patrons to serve them.

Color. Another significant aspect of the media center environment is its color. Thompson says, ". . . People react to color as much as to form or function."(19) Color is important in school, and Thompson believes that special care should be taken so that color doesn't work against students. Most important, the environment should be attractive and comfortable. In addition to the emotional aspects of color covered by Thompson, Katherine Habley considers ways in which color can be used to emphasize or deemphasize physical featuresofthelibrm. Skillful useofcolorcan define form; change the apparent size, shape, or proportions of the room; bring out scale; or lighten or darken the entire atmosphere. Overall, the skillful use of color can have the subtle effect of changing the library media center's appearance and affecting its atmosphere as Well.(20) Extensive remodeling may not be needed to mitigate the effect of design flaws and create a more welcoming library media center.

In her discussion of color, Bush indicates that red, orange, and yellow can work well as accent colors, but tend to be too powerful if they dominate the environment. Instead, blues and greens are suggested as main colors. Especially important, Bush found evidence that an environment can be too stimulating. Young users in a new children's area (brightly decorated with red, orange, and yellow) were quite active physically. It was reported that the children were not as interested in selecting books to check out as they had been in more subdued surroundings.(21)

In general, the library media center should be a warm, welcoming color. Warm yellows, peaches, and pinks can work well for children, while young adults tend to respond'better to blues and greens. Too many bright, vivid colors seem to be overly stimulating, and many respond negatively to the familiar "institutional green." Also, it is possible to use paint to create a variety of structural illusions, a subject Habley explores briefly.

Applications for Media Specialists

Based on a better understanding of the aspects of human behaviordiscussed in the previous section, some specific strategies can be applied in the school library media center. Some of these are appropriate changes to the physical facility; others are marked by the attitude of media center staff. Whether the changes are physical or mental, the intent is to create a library media center that both welcomes and accommodates student users.

Color. One of the most obvious physical aspects of the library media center is its color. Information from Thompson, Habley, Bush, and Cohen and Cohen can help in determining whether the color scheme is suitable. If it is not, it may be possible to build a case for repainting the library media center by using the literature to cite the potential benefits. Ideally, the media specialist will be allowed to help select a color. Repainting has the added benefit of creating a crisp, clean look and, in turn, helps to create a positive atmosphere and a more attractive area.

Color is also important for the floor covering, window treatments, furnishings, and accessories used throughout the library media center. All of these elements, in addition to the walls and ceiling, should be considered when evaluating the effect of color. When repainting is unnecessary or too expensive, much can be accomplished through the use of accent colors throughout the room. Posters can be inexpensively framed and hung. Background paper and displays on bulletin boards can be changed. Selected pieces of furniture can be repainted or reupholstered. Often, older children or young adults can be very helpful in accomplishing a facelift.

Carpeting. In the library literature, many writers discuss the potential value of carpeting, especially as a factor in noise control. More important for the human environment, some authors identify carpeting as one design element that appeals to children. Rod lmholte recommends carpeting as a natural seating for children that can be more economical than purchasing chairs.(22) Sever observed that while establishing territoriality, children were quite comfortable sitting or lying on the carpeted floor.(23)

If carpeting is available, young users should feel free to lounge on the floor if they wish. Wall-to-wall carpeting is preferable. This can, however, be quite expensive, and it is not absolutely

necessary. According to Mehrabian, one or two area rugs or large carpet remnants, strategically placed, can also be quite effective.

Seating. For the library media center to be a warm, welcoming place, more than a good color scheme and carpeting are needed. Comfortable furniture is also an important factor in the environment. Diana Young mentions the need for cushions, inviting furniture, tables and chairs sized to fit students, and a circulation desk that is not intimidating.(24) Stools, beanbag chairs, stuffed armchairs, or rocking chairs can be used effectively. If it is inconvenient to buy these items new, they could be donated, made by students or parents, or purchased secondhand. If there is opposition to having such "frivolous" items in a library media center, many of the writings in the bibliography of this paper can be used to defend their function in creating an inviting atmosphere for students.

Private Spaces. It is also important for library users, especially children, to be able to use or establish private areas for work or reading. Sever observed children creating and using places for reading.(25) Many library media specialists report that children find hidden comers, nooks, and crannies for quiet reading when allowed to do so. Some media specialists have carpeted antique bathtubs, built lofts, or used contact paper on appliance boxes to create such spaces. This search for private places seems to be very important to young users. Media specialists who do not actively create such spaces for students are at least urged to allow children freedom to create their own areas.

Variety in Spaces. Given that children and young adults use the library media center for a variety of reasons, there should also be variety in the facilities to accommodate them. Mehrabian and Sommer both found that individuals require differing atmospheres for study and reading. Carrels offer opportunity for quiet, secluded concentration. Conference rooms allow groups to work together without disturbing, or being disturbed by, others. (In one library media center that has no conference room, students used the work room or office for group work.) Students at tables tend to talk with one another. Table size subtly affects the number of users who sit there, and so helps to control the amount of interaction. Casual furniture invites relaxation and, often, friendly talking. Chairs placed back-to-back tend to allow students more privacy. Media specialists should examine the arrangement of their furniture. Based on this discussion of human environment, it should be possible to identify ways to rearrange tables, chairs, and other movable objects within the space available to create areas for relaxation, quiet, and group work.

Ownership. Students appreciate a library media center where professionals and staff welcome them and allow them some "ownership" privileges. Mehrabian discussed the way teachers often dominate a classroom situation and the success in the library media center when students were allowed some freedom to interact.(26) Sever found that children who were reading often preferred to move around the room or, in a more restricted area, at least shift positions.(27) Nolan Lushington states, "For a child to enjoy and be active in the library, he must feel he can affect the space and its contents."(28)

Allowing children to seek or create private spaces is one example of providing such ownership. When reasonable, students should be allowed to move chairs, tables, or cushions to enhance reading or group work. Library media specialists can work with students to achieve maximum

use of facilities and can often bend or overrule traditional customs. For example, one high school student who often came to the library media center would sometimes sit at a table with friends to work quietly and visit. Other days, he would sit on a stool against the wall behind the circulation desk and read silently. While the second activity was not customary, there was no logical reason to object, and other students respected his choice. Sometimes students who are not comfortable in a setting will attempt to change the facility to meet their needs. Staff should accept and encourage such student initiative whenever possible, and so extend the freedom and flexibility of the library media center.

Control. Encouraging student initiative does not imply that students should be in charge of the library media center. Indeed, some of their wishes would conflict with the greater need to maintain control. Without some behavior restrictions, an appealing, effective atmosphere is impossible. For example, the staff need for visual Supervision of various areas could conflict with the student need for privacy. In this case, the need for control and security of patrons supersedes an individual's search for solitude.

At the same time, library media specialists should try to identify any physical elements that send mixed messages. For example, Huntoon suggests that tables jammed closely together encourage interaction.(29) Hidden corners tempt graffiti artists. Tree houses and lofts seem to invite active play. If, at the same time, the staff is trying to maintain a quiet, subdued atmosphere, then students can be understandably confused. Students do seem to have realistic expectations about school library media centers. Jane Anne Hannigan and Kay E. Vandergrift tried to design some investigative tools to explore the reactions of students in grades one through twelve to their library media center.(30) Questionnaire results indicate that both primary and secondary students prefer a quiet environment, that primary students do distinguish between sitting on the floor and sitting on a rug, and that secondary students prefer open spaces to a close clustering of furniture.(31) The authors conclude that students as a rule ". . . seem to be somewhat conservative in their views of behavioral expectations and the need for adherence to rules. Almost every respondent . . . expressed the need for multiple spaces with provisions for both privacy and group activities."(32) According to this research report, students and adults do seem to be in agreement on several issues important to library media center facilities.

Research Needs

To understand further how to design and use physical facilities best, more research is needed. So far, little of the study and writing in this area deals directly with school library media centers. Sommer and Hall concentrate primarily on adult behavior. Mehrabian and Thompson are generally concerned with classroom activities. Further investigation could try to answer such questions as: Do the theories on personal space, territoriality, and privacy hold true for primary and secondary school students? What value do these theories have for school library media centers? Which parts of these theories are applicable in a library media center? For example, does carrel seating encourage individuals to work quietly? Does sitting at tables encourage talking? Do students use private spaces effectively? Is reading more enjoyable when students are allowed to move around? Library media specialists and researchers could try several arrangements of the facilities and observe student behavior. Which seem more effective? In what way? What are student and teacher responses?

Sommer and Hall indicate that personal space and territoriality are learned behaviors.(33) Hall explores adult behavior in terms of space in a number of different cultures. Cohen and Cohen state that a person's reaction to or need for personal space changes with age.(34) Are children still learning the "accepted" rules of territoriality? Do children follow the patterns observed by Sommer? Do high school students behave more like adults in academic settings than younger children do? Sommer studied the territorial behavior of college students in an academic library. Primary and secondary students spend about 180 days a year in school. It becomes very familiar territory-not home, but not exactly a "public" place either. Is this school environment more personal than the academic setting studied by Sommer? If the school library media center is a more familiar area, how does this affect student behavior? Do children or young adults standardize their behavior in the library media center, maybe by always sitting in the same chair? Or does behavior vary? What effect does the purpose of the student's visit (e.g., for preparing a report or for recreational reading) or companions (e.g., friend or group project partner) have on student use of the facilities? Which environments stimulate students to work either individually or in groups? Which environments encourage recreational reading? Often students are taken to the library media center by a teacher, although this is less common at the college level. How does this involuntary attendance affect student attitudes toward the library media center facilities? How does youth behavior in a public library differ from youth behavior in a school library media center?

School library media specialists are successfully applying some of these theories now. Too often, environments are the product of trial and error or intuition. Research can help direct efforts for more effective use of facilities. It would undoubtedly be beneficial to gather data directly from the users. This research should be conducted in two ways. First, observation of student behavior in the library media center is necessary. Sommer states, "Much of our work is based on the premise that spatial behavior is largely unconscious and unverbalized.... It therefore would be more profitable to observe space usage directly rather than to ask people what sorts of arrangements they prefer."(35) This is the technique used by Sever to gather data on children and territoriality.

The second method proposed for gathering information is the use of interviews and questionnaires. This method was used by Hannigan and Vandergrift. Their instruments have already been tested and could provide valuable models in constructing questionnaires. Hannigan and Vandergrift caution that the interviewer should avoid asking leading questions, because such questions can cause bias in the results. Also, the interviewer should avoid adhering rigidly to the question schedule when this rigidity would cut off student discussion of an interesting but tangential point.(36) Through observation and interviewing, it is possible to collect data with which to answer some of the questions posed in this section and to identify other questions that need to be investigated.

Conclusion

Human beings are the focal point of a school library media center. The physical facilities are an inescapable part of that same media center. Inevitably, the people and the physical space interact and affect each other. A better understanding of the forces and influences of that interaction can lead to better, more efficient service to users. It is time for library media specialists to exploit the

experience of environmental psychologists and educators in order to enhance the effectiveness of the library media program.

References

1. Edward T. Hall, *The Hidden Dimension* (Garden City, N.Y.: Doubleday, 1966).
2. James J. Thompson, *Beyond Words: Nonverbal Communication in the Classroom* (New York: Citation Pr., 1973).
3. Elizabeth Huntoon, "What to Do When It Seems the Kids Are Taking Over," in *Behavior Management in theSchoolLibraryMedia Center,* ed. T. L. Hart (Chicago: American Library Assn., 1985), p. 1 19-24.
4. Hall, *The Hidden Dimension.*
5. Robert Sommer, "The Ecology of Privacy," *Library Quarterly* 36:23448 (July 1966).
6. Irene Sever, "Children and Territory in a Library Setting," *Library and Information Science Research* (I987), p.99.
7. Thompson, *Beyond Words: Nonverbal Communication in the Classroom,* p.40.
8. Walter T. Dziura, "Media Center Aesthetics," in *Media Center Facilities Design,* eds. J. A. Hannigan and G. Estes (Chicago: American Library Assn., 1978), p.57-60.
9. Sommer, "The Ecology of Privacy."
10. Thompson, *Beyond Words: Nonverbal Communication in the Classroom,* p.40.
11. Sherry Ahrentzen and others, "School Environments and Stress," in *Environmental Stress,* ed. G. Evans (New York: Cambridge Univ. Pr., 1982), p.224-55.
12. Aaron Cohen and Elaine Cohen, *Designing and Space Planning for Libraries: A Behavioral Guide* (New York: Bowker, 1979), p. 17.
13. Thompson, *Beyond Words: Nonverbal Communication in the Classroom,* p.40.
14. Margaret Bush, "Library Facilities for Children, or the Candy-Colored Polyurethane 10-Speed Learning Environment," in *Children's Services in Public Libraries,* Allerton Park Institute no. 23, ed. S. Richardson (Urbana-Champaign, Ill.: Univ. of Illinois Graduate School of Library Science, 1978), p. 109-17.
15. Sommer, "The Ecology of Privacy," p.246.
16. Albert Mehrabian, *Public Places and Private Spaces: The Psychology of Work, Play, and Living Environments* (New York: Basic Books, 1976).
17. Ibid., p. 155.
18. Stephen R. Hildrich, "Problems of the Open Space Library," *School Library Journal* 25:35 (Feb. 197 9).
19. Thompson, *Beyond Words: Nonverbal Communication in the Classroom,* p.59.
20. Katherine Habley, "'Me Many Uses of Color in Library Rooms Serving Children," *Illinois Libraries* 60:89195 (Dec. 1978).
21. Bush, "Library Facilities for Children."
22. Rod Imholte, "Planning a Children's Area," *Wisconsin Library Bulletin* 74:61-4 (Mar./Apr. 1978).
23. Sever, "Children and Territory in a Library Setting."
24. Diana Young, "Library Facilities for Children," *Public Libraries* 18:71-3 (Fall 1979).
25. Sever, "Children and Territory in a Library Setting."
26. Mehrabian, *Public Places and Private Spaces.*

27. Irene Sever, "A Laboratory for Children's Librarianship-an Anftopologist's View of Children, Books, and Libraries," *Libri* 26:7483 (Mar. 1986).
28. Nolan Lushington, "Designed for Users," *Wilson Library Bulletin* 58:424-26 (Feb. 1984).
29. Huntoon, "What to Do When It Seems the Kids Are Taking Over."
30. Jane Anne Hannigan and Kay E. Vandergrift, "Student Views: An Exploratory Design," in *Media Center Facilities Design,* eds. J. A. Hannigan and G. Estes (Chicago: American Library Assn., 1978), p. 14-18.
31. Jane Anne Hannigan and Kay E. Vandergfift, "A Report of Research on Student Views," in *Media Center Facilities Design,* eds. J. A. Hannigan and G. Estes (Chicago: American Library Assn., 1978), p.18-25.
32. Hannigan and Vandergrift, "A Report of Research on Student Views," p.25.
33. Hall, *The Hidden Dimension;* Robert Sommer, *Personal Space: The Behavioral Basis of Design* (Englewood Cliffs, N.J.: Prentice-Hall, 1969).
34. Cohen and Cohen, *Designing and Space Planning for Libraries.*
35. Sommer, "The Ecology of Privacy," p.235.
36. Hannigan and Vandergrift, "A Report of Research on Student Views."