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## From Hanging Out to Homework: Teens In the Library

*John Sexton* Young Adult Librarian, Jackson County Library ts just past three o'clock and here they come clomping into the library, calling loudly to one another over the bassthumping of their headphones, tossing backpacks across tables, and colonizing computers in clusters. The teens have arrived and whether they settle down to address the day's homework or simply hang out waiting for a ride home, the library is suddenly host to the energy unique to adolescence.

How librarians acknowledge, understand, and accommodate that energy can help shape the quality of the library experience for teens, other patrons, and staff.



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But is it really possible to understand this species that emerges like mutants from the sweetness of late childhood? Or is it simply easier to wait out the turbulence caused by hormonal floods and watch the clock, trusting in two certainties: that the teens will eventually go home, and that someday they will mature into adults? Fortunately, recent research has opened new avenues of understanding about adolescent brain development that provide those who live or work with teens an opportunity to reconsider our perception of teen behaviors.

#### **Brain Development**

An assumption of brain development theory has been that human brain growth is more or less completed by the onset of puberty. Recent research (Geidd 1999) however suggests that not only is such development not finished, but that adolescence is a time of growth as explosive for the brain as during the first few years of life when neuron connections increase tremendously. Using functional magnetic resonance imaging (fMRI), researchers have been able to observe brain activity and determine which parts of the brain use energy when performing certain tasks. Comparing brain activity of adults and adolescents suggests that the behavior of teens has as much to do with brain development as it does with hormones.

In one study researchers scanned the brain activity of teens and adults who were asked to identify the emotion displayed in photographs of facial expressions. All of the adults were able to correctly identify the emotion of a fearful woman. But less than half the teens, and none under fourteen, were able to correctly identify fear as the emotion they perceived. Instead, teens saw confusion, anger, and sadness. Researchers conclude that teens process information differently than adults and can easily arrive at different perceptions. What adults think is obvious teens may not recognize at all. Consequently, a librarian's frown in the direction of a table of rowdy teens may be a meaningless gesture for its intended audience.

When adults were naming the emotion in the photographs, two regions of the brain were involved: the limbic system and the frontal cortex. The limbic system is the brain's more primitive component and is associated with gut reactions like anger, fear and aggression. The frontal cortex is associated with more complex functions such as judgement, insight, self-awareness and goal-oriented behavior and organizing skills. When teens studied the photographs, only the amygdala, the core of the limbic system, was active among the younger teens. Activity began to gradually increase in the frontal cortex among older teens, suggesting that development was ongoing there through the teenage years.

10



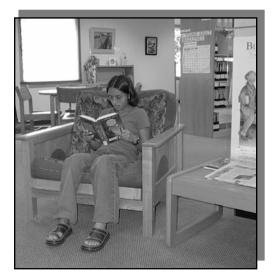
Since libraries are often ruledriven environments, librarians can put teens at ease by developing spaces, attitudes, and policies that are more flexible and supportive of this phase of adolescent growth.

The lack of a fully developed frontal cortex in teens has many implications. Consider the list of chores a parent gives a thirteen-year old: clean your room, empty the dishwasher, fold the wash and sweep the porch. Ten minutes after grudgingly agreeing to do the work, the same thirteen year-old is sprawled on her bed lost in music and a magazine. This behavior is neither churlish nor rude if viewed from the perspective of brain development because the same lack of frontal cortex development that prevents her from identifying facial expressions also precludes her from organizing information, especially if that information is multi-layered. In the library, these same teens may have difficulty when given multiple resources for their homework projects. They may simply not be able to process the information we provide them about these resources and how each one may help them complete the assignment. Perhaps it would be better to give them a single source to get them started and then provide them with another some time later.

#### **Cognitive Development**

One of the more interesting aspects of cognitive development is the concept of adolescent egocentrism whose two types of thought are apparent to observers of teens in the library on any given day. One type is the imaginary audience which describes the teenager's belief that everyone is as interested in them as they are in themselves. That is one reason why teens are so loud—they simply want to be sure that no one needs to strain to hear what their life is like today. Another type is personal fable which refers to the teen's belief that they are unique and no one else can understand them. Because of personal fable, a teenager will believe himself to be the exception to any rule. Since libraries are often ruledriven environments, librarians can put teens at ease by developing spaces, attitudes, and policies that are more flexible and supportive of this phase of adolescent growth.

During adolescence a transition occurs from concrete to abstract thought. Until about age fourteen, teens deal with what "is" rather than grasping the concept of what "could be." This developmental stage underlies the all-knowing attitudes of many younger teens who insist they know everything about searching the Web because they can get to "Ask Jeeves." These teens need concrete examples and visual demonstration in order to solve problems, which is why teaching information literacy skills during middle school years is so challenging: the



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Perhaps a reason librarians experience frustration with the lack of information literacy among students is that, like algebra and logic, it requires a mature brain to process the complexities of an information search strategy.

process demands one-on-one instruction in order to be successful.

From age fourteen, teens grow more logical, abstract, and idealistic in their thinking and less reliant on concrete examples as they become more facile at creating hypothetical solutions to problems. This growth seems fundamental in order to develop essential internet research skills such as evaluating search tools and hit lists, author credentials and content. Because younger teen brains are not yet wired for such tasks, it may be futile to try to teach more than the most simple search strategies and evaluation skills until they are ready. Perhaps a reason librarians experience frustration with the lack of information literacy among students is that, like algebra and logic, it requires a mature brain to process the complexities of an information search strategy. And, not surprisingly, teens don't get that they don't get it. Just because they may look mature does not mean that their brains have matured.

#### **The Physical Space**

Perhaps nothing is as obvious about teenagers as their physical growth. Teenagers take up a lot of space. They often come into libraries in groups, but frequently they come in alone. It is important for libraries to provide teens with space that can accommodate their need to be in a group and socialize (usually loudly) as well as a place where an individual teen can curl up in a small secluded area to read or study.

Providing them with supportive environments and attitudes becomes critical when considered in terms of brain development. Dr. Richard Geidd of the National Mental Health Institute believes that during adolescence the brain "hardwires" the activities learned and repeated during the teen years into lifelong skills (Geidd 1999). In other words, sports, music, and academics engaged in repeatedly during these years become part of the brain's repertoire, whereas parts of the brain not engaged by frequent activitiy are pruned away. Geidd refers to this as the "use it or lose it" hypothesis (Geidd 1999).

If libraries are to play a role in "hardwiring" reading, information literacy and even library use in the teen brain, then librarians will want to do all they can to understand what's going on inside the growing adolescent brain.

See Hanging Out to Homework page 19



Children model the actions of their parents.



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#### Hanging Out to Homework Continued from page 12

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#### **How Storytimes** Continued from page 14

from the additional effort to incorporate early literacy information into age-specific storytimes, but the changes will not be "directive" or "instructional"—just

more fun! 🎸

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Libraries and parents are working together to give children a love of libraries and reading.