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HEADS UP

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Many have seen a pianist adjust and readjust a piano stool before beginning a performance, or, perhaps, have received instruction as to how to hold a golf club prior to the involved act of swinging at the golf ball. Any complicated skill, it seems, requires proper position if optimum results are to be attained. But few of us realize that proper position is just as essential when engaged in the complicated act of reading as it is when playing a piano or driving a golf ball.

Research by Tinker (1965) has shown that visibility of printed material and reading speed are greatest when copy is held at a right angle to the line of sight. To attain this position when the reader is seated, material should be slanted down at about a 45 degree angle from the vertical or, to put it another way, slanted up 45 degrees from the horizontal. In an unpublished study, Tinker (1965) found that as copy was sloped downward by 15 degree amounts from the 45 degree position, adverse effects quickly became evident.

Harmon (1945, p. 15) reported that fatigue, postural stress, skeletal and even dental problems "show a positive relationship with deviations of balanced posture into which children are forced because of inadequacies of their school seating." Harmon (1945, p. 45) recommended horizontal desk tops for three-dimensional construction activities; a 20 degree incline from the horizontal for reading (this contrasts with Tinker's recommendation of 45 degrees); and an intermediate angle for writing.

Another area of interest that may reflect the adverse effects of reading position centers around myopia. There

is much speculation as to the causes of myopia. One explanation is that the increase in intra-ocular pressure which accompanies nearpoint accommodation activity brings about a gradual lengthening of the eyeball.

Improper body position could accentuate the intra-ocular pressure resulting from nearpoint tasks. According to Harmon (1949, p. 11) nearpoint working surfaces (horizontal) in schools force children to lean forward so that they can "bring the plane of their face into a parallel relationship with the plane of the task." Holding the head in this position can increase intra-ocular pressure. In this connection, Young (1975) reports that gravitational pull raised intra-ocular pressure by 50% when he positioned a monkey into an approximate angle of 30 degrees with its head down. Earlier experiments by Lavinsohn (1914) showed that improper position can cause myopia in monkeys whose eyes are similar to human eyes. Lavinsohn used restraining boxes to position monkeys with the anterior-posterior axis of their eyes in a vertical position, requiring them to look straight down. Without exception, every one of the animals put in this position for six hours daily, six days a week, over a period of a year, developed myopia. Some showed as much as seven diopters of myopia!

Now let us consider the body position of primary grade children during reading circle activity. Very often they are bent over books that are flat on their laps, and in many instances, the books slip between their knees and they read virtually standing on their heads! As children move into junior and senior high school, hundreds upon hundreds of hours are spent bent over books lying flat on the desk or table surfaces.

In light of the evidence, it would seem to be of utmost importance for teachers to recommend a heads-up position when reading. Children should be discouraged from viewing books and other reading material that lie on a horizontal surface. Instead, reading material should be raised from the horizontal position to an angle of 20 to 45 degrees. At 20 degrees (Harmon's recommendation), children can comfortably view what is being read by slightly bending the body and head forward while sitting in an upright position. At 45 degrees (Tinker's recommendation), little or no bending of the body or tilting of the head is re-

quired. In either case, the deleterious effects or dangers inherent in reading while hunched over would be eliminated or at least minimized.

The most sensible solution in bringing about a change in book and body position of children would be to equip schools with desks that have adjustable tops. For a number of years, American Seating of Grand Rapids, Michigan, manufactured desks with adjustable tops that met Harmon standards. These were discontinued and have been replaced by desks that are either level or slanted a mere six degrees. Correspondence with furniture manufacturers reveals that schools are not interested in purchasing desks that have adjustable tops because they are more expensive. The result, as one manufacturer states it, "is that sight-saving features have disappeared from product lines of companies that manufacture classroom furniture."

Since desks with adjustable tops are no longer available, attention must be given to other solutions to the problem. Hoyle Products sells a lap desk consisting of a hard-surface board that is attached to a wedge-shaped cushion which helps maintain the 20 degree slope recommended by Harmon. This "posture-rite desk" can be held on students' laps while they are seated in chairs or on the floor. In addition, it serves as a slanted writing or reading surface when placed on a table or flat desk.

Bookholders are also helpful. These inexpensive devices usually support books at an angle of 45 degrees and are available at most stationery shops. For those who cannot locate or afford commercial bookholders, a homemade variety (see Figure 1) can do the job. Simple directions

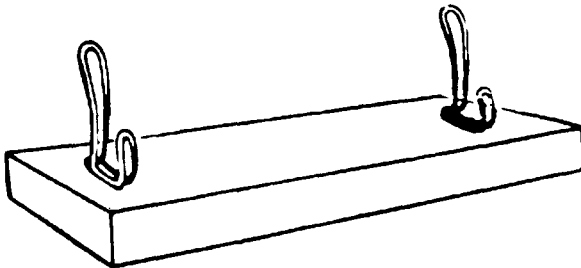


Figure 1

for making a bookholder are as follows: Acquire two coat hooks and a piece of plywood $\frac{3}{4}$ of an inch thick and 6 x 12 inches in width and length. Smooth the corners with sandpaper and apply a coat of varnish. When dry, screw in the coat hooks with the straight back serving as a brace. The book-holder can be made in an hour, not counting the time for the varnish to dry.

If none of the foregoing suggestions proves feasible, teachers should encourage students who don't maintain proper book position to prop up their books with anything available. Slipping another book, a box of crayons, a purse, etc., directly under the back end of the book being read can help considerably in improving a student's body-book position.

In conclusion, we see that although early research has highlighted the undesirable and often deleterious effects of improper body-book position, today's teachers continue to be completely unaware of the problem. Current professional books dealing with the reading process don't mention it, and classes in the teaching of reading fail to devote time to it. Something must be done to correct this flagrant lag between practice and research. It's time for all teachers to initiate a heads-up approach to reading!

REFERENCES

- Harmon, D. B. The Co-ordinated Classroom. Grand Rapids, MI: American Seating, 1949
- Levinsohn, Georg, "Ueber den histologischchen Befund Kurzsichtig gemachter Affenaugen und die Entstehung der Kurzsichtigkeit," Arch. f. Opth.: Vol. 88 (August 1914), pp. 452-72.
- Tinker, Miles A., cited in Bases for Effective Reading. Minneapolis, Minn.: Univ. of MN Press, 1965, p. 189.
- , "Effect of Sloped Text Upon the Readability of Print," American Journal of Optometry and Archives of American Academy of Optometry: vol. 33 (April 1956) pp. 189-95.
- Young, Francis A. "The Development and Control of Myopia in Human and Subhuman Primates," Contacto: vol. 19 (November 1975) pp. 16-31.
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