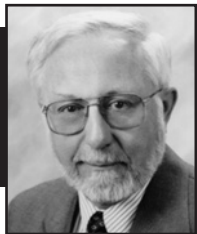


## 'Tinkering' in childhood an important acquired skill

Jim Uphoff Ed. D.



Two weeks ago in a Letter to Editor I asked for reader input on their own elementary-years use of various games/toys such as Tinker-Toys, erector sets, Gilbert puzzles, Legos, Lincoln Logs, etc. The few replies I received did seem to confirm the main points of a Nov. 11, 2009 in *Education Week* newspaper. The headline read, "Teaching Girls to Tinker" and was written by education expert Lisa Damour.

Damour made her key point immediately when she wrote, "Girls now surpass boys in nearly every measure of academic success...Even in high school mathematics - a subject where boys have consistently held an edge - the playing field seems, somehow, to have leveled." She then points out that 77 percent of degrees in engineering and 85 percent in computer science are earned by males! WHY is this still true is the main

question.

Among the more common answers are the lack of female role models for the girls; girls prefer those sciences that are more connected to helping others; and the 'isolated geek' stereotype that is associated with engineering and computer science is a turn-off for girls. Damour offers another possible explanation. "GIRLS DON'T TINKER!"

A major 2000 report, *Tech-Savy*, by the AAUW cited clear gender factors. It claimed that boys see computers as toys interesting in their own right while girls see them as tools for accomplishing tasks. Thus by approaching computers and mechanical devices as "toys" boys are able to "play" with them and learn how they function from the inside out.

When "tinkering" with programming, they develop an intuitive understanding in how they work.

Move back two or three generations and ask yourself whether males or females were the most likely to "take apart" or "disassemble" a radio, a blender, a lawn mover, etc. etc. Which gender was more likely to "tinker" with mechanical things? Several of

those who responded to my request were males and they said they had not done these kind of things because they were (and are) not "mechanically inclined." (Me, too, by the way!)

Damour asks, "Why don't girls tinker?" One key answer is that few adults encourage them to do so. For example even us teachers unknowingly expect boys to help us with such semi-mechanical tasks as using a stapler, the VCR, etc. When we encourage a child to TINKER, we show confidence in his/her ability to "figure it out." We thus say that this is of value but to girls we tend to emphasize that an answer is of more importance than the process for finding an answer.

Tinkering takes time! Our "test-happy" education system does not value such 'time-taking' tinkering since it much emphasizes the shorter answer given quickly. How can we, as adults, help our children, especially girls, to find the time to learn by tinkering? How can we fight the types of learning which seem to discourage girls from the fields of engineering and computer science? I would like to hear from you with your ideas!

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