



## *Has Technology Caused the “Dumbing Down”\* of the Cabinet Making Industry?*

\*Dumbing down is a subjective social science term defined as a perceived over-simplification of concepts, knowledge and thought processes, to allow for understanding by the widest variety of people. In addition, for the purpose of this writing, it will also be defined as an acceptance of: the reduction of physical skills, a decline in creativity and innovation, and the trivialization of cultural, artistic, and academic creations.

In order to look at this topic in a logical manner, it is first necessary to define what the cabinet making industry is and what technology is. For the sake of this discussion, the cabinet making industry is assumed to be the stereotype of a group of skilled hand craftsman from the past, and technology will be assumed to be anything involving the use of integrated circuitry.

Many of the members of the CMA are not “certified” or have not gone through a national based apprenticeship program. This is most likely because there are no mandatory requirements or standards for this in the United States. Canada, however, has put together a national definition of what a “cabinetmaker” is, and the corresponding skills or knowledge necessary to be one. While that document is 50 pages long and beyond the scope of this writing, we should look at some of the major topics addressed within that document and compare them to the skills of past cabinetmakers and perhaps our own skills. The items in red are tasks that can be accomplished or aided today with the use of integrated circuitry.

**Document Use:** 1) Reading and understanding instructions, specifications, MSDS sheets, OSHA requirements, **contracts, trade magazines, operation manuals, reference and research materials, angle charts, architectural blueprints, cutting lists, tables, graphs, charts, schematic drawings and labels.** 2) **Creating cutlists and sketches.** 3) Writing task lists, making notations on sketches, **scheduling appointments, making notes from the job site, cutlists, job quotations, job specifications, and contracts, keeping track of clients, contacts and suppliers in an orderly fashion.**

**Numeric Use:** **The preparing of invoices, job scheduling, completion time and cost estimates, budgeting, measuring all needed conditions and materials, measuring angles and miters, calculating materials needed, measuring of parts for an exacting fit, laying out curves, using a compass, estimating materials needed and the number of hardware pieces to order, estimate time and labor costs.**

**Math Skills:** Number concepts involving whole numbers, fractions, decimals, percentages, and **conversions between them.** Understanding equations and formulas to solve problems using algebraic techniques. Use rate, ratios and proportions to solve problems, **calculate averages** and the ability to **create** and use scale drawings. Have a working knowledge of **measurement conversions, calculations of areas, perimeters, volumes, trigonometry and standard angles.** The ability to make calculations in their head, with pen and paper, with **calculators.** Be able to measure **time, weight, distance, plumb, square, volume, temperature, pressure, and angles using both imperial and metric measuring systems.**

**Oral Communication:** The ability to talk with suppliers to order goods and receive deliveries at the shop, talk to colleagues and apprentices to coordinate tasks, interact with clients and explain construction details, instruct apprentices, discuss shop drawings with draftsmen, interact with other trades to sequence tasks, participate in safety meetings, communicate with project managers and designers discussing details and possible changes. The ability to effectively use face to face and telephone communication making others understand the concepts you are presenting as well as understanding what others are relating to you.

**Thinking Skills:** 1) Problem solving techniques, such as deciding what to do when a tool breaks down, or what steps to take to reproduce a piece of furniture from a **photograph,** or what to do if a batch of material comes in damaged, weighing the time frame to replace it verses the possible substituting of a different material. 2) Decision making skills such as how long glued pieces will stay in the press, which tool will work best to complete a detail, which procedures are the most effective to build a piece using available tools, make design decisions such as which type of leg to use on a table, decide on priorities for the delivery schedule. 3) **Job task planning and organization as it applies to scheduling with other trades and dealing with disruptions from rush jobs and a multitude of jobs being done simultaneously all with different materials and specifications.** 4) To have the ability to remember formulas and standard measurements along with standard allowances, common stock numbers and hardware types and customers names, faces, and details of

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## *Technical Solutions continued*

their past orders. 5) **The ability to find information such as information from a supplier as to the use of their product, to find expert guidance as far as chemical reactions for finishing, to find a specific piece of specialty hardware for an application and the corresponding tolerances,** to know how to refer to a manual to carry out specific procedures.

**Working with others:** The ability to work with others in the shop such as other cabinetmakers, apprentices, and supervisors. In addition, being able to participate in formal discussions about work processes or product improvement, monitor the work performance of others, demonstrate how tasks are to be performed, orient new workers, select contractors and suppliers, assign routine tasks to others and identify specific training that would be best for a particular individual.

**Computer Use:** **The knowledge and ability to use word processing, spreadsheets and CAD/CAM software.**

**Continuous Learning:** The ability and desire to learn from on-the-job training, formalized courses, manufacturers open houses, professional seminars regarding new techniques, machinery, materials, and methods, **videotapes**, regular work activity, co-workers, and workplace training. In addition to reading or self study at work, on your own time, using materials from your own initiative, from a professional organization or union as well as off site courses both paid for by yourself or others.

**Other Information:** In addition to the physical skills needed by today's cabinetmaker, there are also other personality traits that are very helpful. These are as follows; patient, meticulous, pride in workmanship, a positive attitude, enjoy the challenges of problem solving, flexible in the face of changes to building methods and materials, organized, self-motivated and able to work in a methodical sequence. **The future of cabinetry is utilizing the computer more and more. This being the case, future cabinetmakers will need to be able to use CAD programs, CNC machines, word processors, accounting programs, database management programs, internet browsers to locate suppliers and equipment as well as become proficient at effective use of e-mail as an effective communication tool.**

One no longer needs to know all of the aspects of cabinetry, only what is relevant to their specialty. **Knowledge and skills may have been lost** over time due to the use of newer tools and techniques, as well as the increased specialty in the field. Lost skills could include: hand drafting/rendering/sketching, knowledge of lumber properties, joinery and checking angles, using hand saws, using hand planes, knowledge of saw tooth geometry and applications of each, knowledge of grinding angles for knives and chisels, knowledge of sound design for templates, jigs and fixtures, the ability to work with other related materials such as metals, fabrics and glass, knowledge of proper lumber storage, knowledge of sub trades and common codes for them, the use of level, plumb bob, and chalk line, all aspects of solid lumber production techniques, designing with solid lumber, using a floating panel construction technique, grain orientation with respect to machining, the ability to grain and color match, techniques for bending solid lumber, knowledge of making curved products, knowledge of laying up veneer, knowledge of all aspects of woodworking regardless of whether those techniques are used in your everyday production or not, traditional joinery methods (i.e. dovetails, etc.), hand carving legs, finishing, repair and restoration, bleaching, effects of temperature and humidity on finishing procedures, and the knowledge of styles and periods as they pertain to design and woodworking.

**Tools that are not used as frequently;** back saws, compasses, dividers, dovetail saws, jack planes, block planes, marking gauges, plumb bobs, rabbet planes, router planes, scrapers, scratch awls, trammel points, wood files, wood rasps, French curves, auger bits, bench hooks, burnishers, cold chisels, coping saws, draw knives, honing stones, keyhole saws, and spoke shaves.

Think of a **work environment** like this: reliance on physical strength and physical skills, sharpening your own tools, using all hand tools, no power, no power tools, scraping wood, no sand paper, self reliance, no network of specialists, learning through an apprenticeship, everything was done in house, no outsourcing, no moisture meters, no calculators, no sharpening services, raw material suppliers only, making your own finish, few hardware manufacturers, no metal drawer slides, no inlay suppliers, no plywood or melamine, no or limited optics, no workers compensation insurance, no insurance in case of fire or injury, designing, engineering and fabricating your own products.

**In addition to the required skills** of the "cabinetmaker past", come the rigors of the "cabinetmaker present". One can choose to embrace technology or use it as needed. Should one choose to embrace it, there is a tremendous amount of learning to be done to learn how to operate a computer, learning CAD systems, CAM systems, and other skills that are necessary to achieve the maximum benefit from the cabinetmaker's new "tools". The problem, as I see it, is that the skills and knowledge of the past gets left behind and becomes lost, as one bathes in the luxury of technology. Thus, technology may have caused a loss of physical skills, the loss of knowledge of how to use certain tools and "to be one with the wood". This allows for, and creates the acceptance of "dumbing down" as a matter-of-course. The products created by the cabinetmaker today reflect the use of the new technology tools. Many of the old creations using old methods have gone by the wayside.

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## Technical Solutions continued

Why have many made the move to use **more technology in their businesses**?

Time/scheduling constraints, the desire for higher income, the need for increased accuracy, the lack of skilled workers (as woodworking is not a valued profession in many public schools), and rising insurance costs. This is a situation of a dog chasing its tail; lower skilled workers creating the need for more technology because workers don't have to know as much to do their jobs. This causes workers to need even fewer skills as technology makes their lives easier.

In my opinion, technology has not caused a "dumbing down" of the industry if it has not put out the individuals' internal fire to search out and try new things regarding the advancement of their physical and mental skills, and the profession as a whole. Certainly cabinetmakers today must learn many computer skills that were not needed in the past. However, if in fact it has caused individual complacency by allowing a third party to dictate the individuals' thought processes, making them no more than a rote factory worker in their own shop, then indeed it is providing a great disservice. Technology would then be aiding and may even be causing the "dumbing down" of the profession as a whole.

—Jim Falk is the president of Progressive Woodwork, Inc. and a very active CMA member. Check out Jim's website at: [progressivewoodworks.com](http://progressivewoodworks.com).



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