## **Writing Clearly**

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A major impediment to converting research to practical use is our ability to write so at least 75% of the literate population can understand what we are writing. Following is a document taken from a public forum concerning housing for the poor and written by a college professor. Can you understand what he is saying? I have inserted the number of words in each sentence and highlighted them with Yellow.

"It seems that one of the larger obstacles to outreach based in innovation in materials and design for construction, outreach to housing needs that are not entirely profit based, is the absence of usable, science based research that should be customized for use by these needs. (46 words) We lack a foundation in usable research based, objective science because ACI papers, housing technology research and such do what they are supposed to; they tend to support the industry's need, but like with the problems revealed so clearly by Mark Heath, where supports provided for those in dire need often fall short and create new problems because the designers lacked an understanding connection to the situation, so it also seems true with current research information based supports. (78 words) We should be able to access scientific information that caters to us; those working to provide durable, and solid solutions to a global housing crisis. (25 words) Wouldn't it be nice to access a research paper that explores the viability of pig piss adobe stabilizer in a certain region, or compares the thermal performance of two insulation approaches for earth based homes where one insulates the foundation and slab only and the other has no insulation to reveal the effect of thermal for specific designs and locals, or one that measures and compares the probable durability of earth based composites designs, or evaluates the viability of importing certain materials into Chad; or... (85 words) We cannot expect that our glazing over of these topics, experts though we may be, can substitute for careful evaluation in a legitimized and structured scientific format so it can be used by others and us in way that counts most. (41) words) I propose that we collaborate to identify and refine the exact goal of these needed research projects, and use our collective clout to help get funding. (26 words) This research and system evaluations need not be dry technical presentations that are useful only to academia nested deep with in special interest research, the research can be designed to include use by special interest academia, like software developers that evaluate thin concrete shell performance, but also includes use by designers, developers, villagers and laymen in the field. (58 words) This can be achieved by using a language that is of broader utility, while not compromising the science itself, and by designing the research in such a way that it recognizes the larger context in which it will be used. (40 words) A small-scale construction project can be the research base for many of these evaluations. (14 words) It will allow these separate research evaluations to be incorporated into a larger whole so that their overall effectiveness in addressing the needs for a whole, real situation can also be evaluated and designated as part of the goal for each individual project. (43 words) If these technologies are tied up as secrets waiting for big treasure returns for investment capital, and investment capital based research, it will be a sad disservice to the whole of humanity. (32 words) Besides, this research can well function, simultaneously, for profitbased initiatives that would like to get in and help for sake of how profit interests may benefit too. (27 words) Profit, not through deal making for exclusive right ownerships for innovations, but through being apart of solutions based in the free exchange of information. (24 words) I would like to do this and probably will, with or without any help, but the expertise I am seeing in this group reveals that it can be an effective shaping environment for the best research design." (37 words)

14 sentences and 634 words – that is over 45 words per sentence.

## **Translation:**

We need research and access to research in developing appropriate housing systems for the poor of the world. We need to take into account social, cultural, environmental, and economic factors. We need to cooperate and make it happen. 3 sentences and 38 words – that is less than 13 words per sentence.

Until we learn to write clearly, academic research will have little impact on practical solutions.