Typing Speed: How Fast is Average: 4,000 typing scores statistically analyzed and interpreted

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After 27 years in the Staffing Industry, I've encountered just about every misconception regarding the performance of office workers. The most frustrating of these is the belief in what constitutes "average" typing scores. I've seen people lose out on jobs or promotions because the companies they applied to had unrealistic standards for typing speeds. For example, "You can't be a legal secretary unless you type 75 WPM," or "You can't get promoted to the next level job because you don't type 65 WPM." Worse was the fact that there was no flexibility in these standards. If a person applying for a job with a typing speed requirement of 65 WPM scored 63 WPM, they usually didn't get the job. It was as if typing speed was the most important predictor of brains and ability. Complaints such as, "We can't hire her because she only types 49 words per minute. We'd like someone at least average, you know, around 65 WPM," were common. Worse, they'd have a tone in their voices that was judgmental, as if the person, having "failed" to meet their typing standards, was defective in some way no matter how glowing were their other personal capabilities, intelligence, education, and experience was. For years I tried to explain that 65 WPM is a lot faster than average, but I had no proof. After all, everybody knows what an average typist is, right? Somebody who types between 50 and 60 WPM? Well, isn't it? Well, NO, it's not!

In 1976 I had the good fortune to meet Dr. Alan Lloyd, at that time the world's foremost authority on typing. Virtually anybody who learned to type in the 1950's and 1960's learned from one of his books. I asked him, "How fast is average typing anyway?" His answer was less than definitive but pointed me in the right direction. He said, "Less than half the population of the world has the manual dexterity to wiggle their fingers at the speed of 50 words per minute or better." He went on to explain that even more important was research showing that, given the variety of tasks a secretary has to perform on a given day, no matter what her typing speed was, the average secretary about 500 typed words per day, or slightly more than one word per minute! Only if put into a typing pool where one never had to answer phones, file, or make appointments for the boss could a worker's speed impact production. And that was in 1976 when word processors were rare. Yet, in this day of computer-generated documents the understanding of word processing software is probably more important than typing speed. The abilities to edit and format, perform search-and-replace functions, and create merged documents allowing hundreds of pages to be generated with a few keystrokes make secretaries more productive than a high typing score alone. As Dr. Merton Hollister, J.D., Professor of Mathematics at Valencia Community College, Orlando, FL told me, "With boilerplate documents in the modern law firm, even I can type 4,600 words per minute. All I have to do is bring up the document, change a couple of words and print it out."
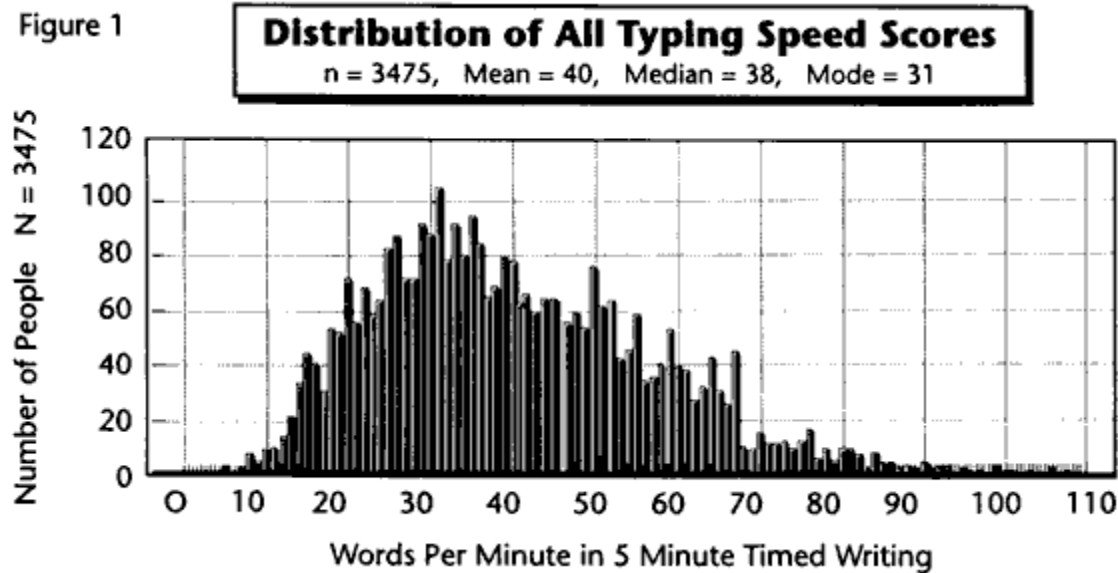
How this study came about:
In 1997, while upgrading our applicant tracking software, I realized that my company had computerized records on more than 4,000 typing tests taken over a four year period. Once upon a time, before there were computerized tracking systems, we kept our applicant information on cards in visi-files. I never considered statistical analysis since gathering the data would be time consuming, expensive, and frankly, not worth the effort. Furthermore, in the days when applicants were tested on a manual or electric typewriter and timed with a windup kitchen timer, precise scoring existed only in our dreams. Before we began using computerized tests, most applicants were tested on a non-correcting IBM Selectric typewriters. We couldn't control for people who just kept typing when the timer bell rang. Error detection was only as good as the individual correcting the test. All any of us could really say about typing tests in those days was, "This person types approximately at X speed." So how could anyone give an accurate reading of what 'average' was? Most applicants protested that the unfamiliarity of whatever keyboard they were testing on was responsible for their "disappointing" scores. Worse, no matter how high the score, they always felt that it was "low." It didn't matter whether the applicant scored 30 words per-minute-,or 100; they always were surprised at their "poor" performance. In view of what was at stake, i.e., jobs being denied on the basis of typing scores, who could blame them?

As desktop computers became common in offices the complaints changed to, "Well, I work on a computer all day, and that's why I didn't score well on your typewriter." We began to allow each applicant to take the test on both the electric typewriter and on the computer. We noticed three things:

1) There was little difference between the two scores.
2) Those on a computer who corrected as they typed got lower scores, but were not error-free.
3) They believed the results more when allowed to use the computers.

When computerized standardized tests came onto the market, it became possible to have precise and consistent evaluations. Applicants had to stop typing when the time was up simply because the computer program shut off. Speed and error reports were spit out by the program making comparisons between one set of scores and another much more reliable. There I was, downloading the data from our older applicant tracking system to a newer version, and the realization burned over my head like one of those cartoon light bulbs. Over a four year period we had used the same test in our office under the same conditions day after day, and recorded those results into our database. I had usable raw data to analyze!

Figure 1

Distribution of All Typing Speed Scores
n = 3475, Mean = 40, Median = 38, Mode = 31

Words Per Minute in 5 Minute Timed Writing

Some background on the tests and procedure:
Between April 1993 and April 1997, of the 4,000+ clerical candidates who applied at Five Star Temporaries for either temporary or permanent jobs in the Greater Orlando, FL area, 3,475 claimed to know how to type and took the computerized five minute timed typing test. The backspace on this test was deactivated to prevent error correction during the test. The results printed out automatically giving words per minute and total errors. Each applicant was required to take the test twice and turn in both sets of results. This was to help lessen their frustration and their tendency to claim, 'Well I usually do better than that." We told them, 'We want your best score." And their "best" score was entered into the database while the applicant watched. As with the typewriter vs. the computer, there was seldom a difference in the first and second test results. Occasionally someone would beg to take the test a third, fourth, or fifth time to prove that they could do better, but it never mattered. Without retraining or instructional intervention, repeated attempts at the test did not produce noticeably better results. However, if an applicant, over time made the effort to train and practice to improve their speed, they were free to retest and to have the new scores replace the old ones in their record. When you read the results and note the actual averages of typing speeds, keep in mind that this is their best! If you're surprised at how "low" the scores are, remember, we only kept their best scores. This might indicate that "average" typing speed could even be lower than what was revealed in our study. When you see that the "mode" - the great majority of the scores fall around 30 WPM, remember, we recorded their best effort, not their average effort.

Figure 2 breaks the data down by deciles. Note that only half the scores were 38 WPM or higher. characteristics of the top decile, it breaks down as follows:

Figure 2

Decile (10%) Typing Scores

1 Top 10%	64 - 108 WPM
2nd 10%	56 - 63 WPM
3rd 10%	49 - 55 WPM
4th 10%	44 - 48 WPM
5th 10%	38 - 43 WPM
6th 10%	34 - 37 WPM
7th 10%	30 - 33 WPM
8th 10%	26 - 29 WPM
9th 10%	21 - 25 WPM
Bottom 10%	4 - 20 WPM

Scores are rounded to the nearest whole number. The horizontal line separates the upper half from the lower half of the scores.

TABULATION OF SCORES

For the compilation of data, all the scores were downloaded from the database at one time into a Lotus spreadsheet. Statistical analysis was done using the Lotus program. Scores were sorted with the lowest-score/ highest-error first proceeding to highest-score/lowest-error last. For example, a score of 53 words per minute with 15 errors would be lower on the list than a score of 53 words per minute with 2 errors.

THE RESULTS

Figure 1 shows the distribution of all typing speed scores. Since our Mean was 40 and our Median 38, our statistically "average" typist is between 38 and 40 WPM. Someone who typed 56 is in the top 20% of all typists in the sample. A score of 65 is in the top 10% of the sample. Differences in scores of 2 points or less should not be assumed to indicate significantly different performance. The candidate mentioned in the beginning of this article who typed 49 WPM would be in the top 30% of this sample. The 65-WPM typist requested at the beginning of this article is actually in the top 8% of typists.

ERRORS

Computers and spell checkers, have made errors not as critical as they used to be in the days when copies were made with carbon paper and each mistyped character had to be individually erased on four or five pages. Nonetheless, the fewer errors a person makes, the fewer have to be corrected by any means, so errors are still a factor. We did not subtract errors from the speed scores. Errors were not subtracted from the speed scores but were linked to them. This means that if someone scored 51 WPM with 5 errors, it was recorded just that way, not 51 - 5 = 46. Theories about how many words to subtract per error are not standardized, and our experience has shown that the net typing score (total minus errors) is a less reliable predictor of typing performance than the ratio of errors to the total score.

When analyzing statistics it's safer to work with raw scores. The errors were analyzed both separately and in conjunction with typing speeds. The range of all errors was from zero through 71 during the five minute timed writing. Since typists in the top percentiles typed many more words during the test period, we had to consider errors as a percent of total words in addition to total number of errors. Consider that a 25-WPM typist completes 125 words in five minutes while a 75-WPM typist completes 375 words. If they both get 10 errors in that time, then the 75 WPM typist has a much lower error ratio than the 25WPM one. Results show that when the percent of errors were tabulated, faster typists scored a lower percentage of errors than slower typists. In other words, the faster typists were more accurate, percentage wise, than the slower ones.

Figure 3

Within The Top Decile

WPM Score	% All Scores
100-WPM & up	<2/10 of 1%*
90 & up	<7/10 of 1%
86 & up	top 1%
80 & up	top 2%
76 & up	top 3%
73 & up	top 4%
70 & up	top 5%
67 & up	top 6%
66 & up	top 7%
65 & up	top 8%
64 & up	top 9%
63 & up	top 10%

*the decimal is .0017266

CONCLUSIONS
I hope you will use the results of this study to begin changing beliefs out there in the business world and to help both employers and candidates understand that what they consider 'average typing" is actually far better than average. Perhaps together we can make it possible for more good candidates to get jobs this way based more on their intelligence, experience, and their understanding of modern computer software, and less on typing a specific number of words per minute.

Want to know what your typing speed as well as the average speed of typists today? visit www.rankmytyping.com. And yes, the average typing speed today is still 39 words per minute.