

How Much Practise Makes “Perfect”, Or Should We Say “Functional”, It All Depends Upon Context

Recently I was involved in a discussion with a martial arts practitioner who asked me:

Do your students practice what you teach relentlessly for thousands of repetitions over a period of months and years, striving for technical perfection?

This is a not an uncommon question that I field; because time and time again I hear people who train others in martial arts, combatives, and self protection say that studies have shown that it takes thousands of repetitions over a period of years to attain technical perfection. As a person who takes the study of motor skill performance very seriously, please show me the academically peer reviewed research that supports this belief, because guess what there is none, zero, zip, ziltch, nota.

On my journey to research this topic, and wanting to give credit where credit is due, I came across a fellow self protection teacher by the name of Hock Hochheim who wrote an excellent article on this topic which can be located at:

<http://www.hockscqc.com/articles/howmanyreps/?index.htm>

Hock reports from his research that when it comes to motor skill performance and the repetition question, the industry standard comes from a book called Motor Learning by Doctors Richard Schmidt with Craig A. Wrisberg, followed by Schmidt's updated editions called Performance and Motor Control And Learning with Dr. Timothy D. Lee. I would also direct you to a very recent book that I just read on this very issue called "The Brain That Changes Itself" by Dr Norman Doidge.

So what have these motor skill researchers discovered up to this point in time in our history..... it takes "300-500" repetitions and not the thousands upon thousands that you hear many an instructor regurgitate. That's right 300-500 reps. As one of my university instructors stated, who was also a martial artist, "it doesn't take me thousands of kicks to the nuts to know not to stand in front of an attacker in a horse stance."

It has been my empirical and anecdotal experience at the school with my students, that these numbers are very consistent with what I have seen in my 23yrs of teaching combatives. Yes some students may take a little longer, and some learn a lot quicker, but thousands of reps, and years of training, absolutely not. Much like the numbers in the Fairburn blood loss chart that many believed as gospel when it came to death associated to knife wounds that spawned these two threads:

[viewtopic.php?f=1&t=6546&p=62314#p62314](#)

[viewtopic.php?f=1&t=6619&p=62764#p62764](#)

it is absolutely amazing to me that relatively few have challenged this common belief that it takes thousands upon thousands of reps to be unconsciously competent from a functionality stand point (Hock was the first in our field to challenge this belief).

The question to me on the issue of repetition is one of "functionality of technique" vs "Perfection of technique" or apples vs oranges. I would agree that in the martial arts, forms or kata may take thousands of repetitions to meet the technical perfection of technique required for grading. This is especially true when you look at some of the fine complex intricacies of higher level kata, which is usually conducted in the close mode training environment of the dojo. However, in the open mode environment of the street where survival stress reaction is always omnipresent, fine complex motor skill intricacies often go for a shit, but functional gross motor movement reigns supreme. It is these functional gross motor movements that can easily be learned in a short amount of time, and become unconsciously competent in hundreds of repetitions (when combined with appropriate state training) and not the thousands that many in this field continue to promote. So from a combatives standpoint, it is important to separate the purpose (functionality vs perfection) of skills taught and the context (street survival vs dojo art), and language used by us as teachers, coaches, instructors while teaching these new motor skills.

For the record I am not saying that repetition in training is not important, as I too use repetition here at the school, but from a street survival combatives standpoint, it is my belief (which is also supported in motor skill research) that gross motor skill based technique combined with realistic state training can often only take a student 300-500 repetitions (sometimes a little less and yes sometimes a little more depending upon the student) to become unconsciously competent from a street "functionality" standpoint. To emphasize my point on this specific issue you may want to re-read this thread:

[viewtopic.php?f=1&t=5404&p=52073#p52073](http://www.viewtopic.php?f=1&t=5404&p=52073#p52073)

Get the books that I have mentioned in this article and have a read, they destroy many a myth surrounding motor skill performance learning that continues to be promulgated in our industry.

Respectfully

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