

INDIVIDUAL DIFFERENCES IS WHAT IS ALL ABOUT!

Variations in how people are scaled along some construct (intelligence, attitudes towards statistics, etc.) or how stimuli are scaled along some dimension (preference for, degree of expressed negativity, etc.) is what this course is all about in the sense that if we conceptualize a dimension or construct, and go to all the effort to develop a way to scale it with people and/or stimuli, AND find no variance across people and/or stimuli ... will leave you very frustrated and holding the bag. In fact, you may not even be able to graduate! So, Nunnally's message and comments are appropriate to the effort to build scales that will highlight the differences amongst people and stimuli.

Nunnally's Paper

DEFINITION

Mastery Learning (and similar concepts): a) initial stage of development, b) treatment , c) post assessment ... AND THEN, depending on where initially lows are compared to post highs and whether people have passed over the "criterion index" hurdle, continue instruction until hurdle is met. Implies that variance at the beginning will be "vanished" (or minimized tremendously) after treatment or treatments.

Why does Nunnally call it "criterion indexing" rather than mastery learning?

SOCIAL PHILOSOPHY

Egalitarianism = notion that all citizens should have equal political and social rights AND equal opportunities to "bloom" to one's potential. Societies responsibility to insure that such a "state" occurs. Therefore, people who end up at different points on "scale" after treatment ... are different because SYSTEM did not work ... and they are entitled to (no cost) remediation.

LAW

If differences are noted, then society is obligated ... legally ... to make up the difference.

Also, precedents have been set to "not use" certain screening mechanisms since they have been "deemed" to discriminate against certain classes of citizens who, the

SYSTEM has failed to bring up to some reasonable criterion of performance.

PSYCHOLOGY

Operant conditioning and behavioristic notions have argued that given the right set of stimulus and reinforcing conditions, that even a nerd could be turned into an Einstein. This psychology has been a dominant force in social practice ... not so today, but it did before. Taken more conservatively, the notion is that enough training can essentially maximize performance on some given behavior.

PEDAGOGY

Regardless of the above, educators and others have also entered the fray by noting that students (now versus some unspecified time, are becoming pathetic on a wide range of skills and behaviors. If only the right method of instruction or more money for resources, or whatever were available ... Johnny would be OK. Again, the SYSTEM is at fault.

PROBLEMS, ISSUES, ETC.

What about personal motivation? Even if one were able to take advantage of "mastery learning" resources, does everyone want to or is willing to make the effort?

What about societies motivation? Even if everyone were willing to, can society afford (not just financially) to invest the effort into achieving person mastery in everything?

How realistic is the criterion index? The place where it is set will have a large impact on how many can reach it, and ... perhaps more importantly, does genetics provide any limits on how far one can go? The interesting notion that the extreme environmentalist is one who thinks that variance can be reduced to 0 IF the conditions and amount of training are arranged in the right ways.

How is generalization of skills impacted by adopting a "mastery" approach? The idea that

mastery is more likely to be achieved IF the stimulus elements being presented are highly homogeneous ... thus limiting the extent to which people who master can generalize to other similar but different situations.

Can individual differences go away ... no matter how hard people try (to master) or society tries (to provide training and resources)? Experiments consistently show that within variance is larger than between group (treatment) variance ... and even more so after treatments than before!

CONCLUSIONS

1. Mastery learning is well intentioned.
2. Mastery learning is highly limited.
3. Mastery learning is very impractical.
4. Mastery learning is limited by genetic factors.
5. Mastery learning requires sufficient ceilings on tests.
6. Individual differences in research investigation AND daily life is the rule; not the exception.

Overall, the concept of mastery learning is plagued with problems like saying that we want our University to be "second to none"; show me what NONE is and then I can chart out a course to be "second to it"! In building instruments, one better pray for variance; not hope to reduce it. The extent to which mastery learning is successful, is the extent to which the need to construct instruments will vanish too. Not too promising for aspiring publishers!!!