

3 Recently, I completed a P.E internal which involved applying motor skill learning theory in order to <sup>help</sup> improve my gymnastics performance. Gymnastics has never been my forte, to put it lightly. My technique at the beginning was horrific! ~~I found th~~ Despite this, I found that the motor skill learning theory I applied to my practice to be highly effective in helping me better my technique. However, the suggestion that "through the application of skill learning theory, unskilled people can be "fixed" is a very biomedical approach. Certainly, it can ~~assist~~ assist an individual identify areas of ~~strengths~~ and weakness, amongst other things, but there are a multitude of socio-cultural factors that likewise affect the skill acquisition and perfection of an individual.

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Motor skill learning can be defined as "a relatively permanent change in skill performance that comes about as a result of practice" (Knapp 1963). It can be used to ~~ma~~ increase an individual's awareness of which "stage of learning" they are in, be it cognitive, associative or autonomous (Fitts and Posner 1967). Having identified this, they can then determine their individual needs in terms of feedback, the type of practice best suited to them (be it massed or distributed) and which type of learning they would most benefit from (either whole, part, or whole-part learning) in an attempt



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to become more skilled. I found that mental imagery, an important element of motor skill learning, was highly useful in helping me overcome my difficulty with the straddle vault. After extended mental imagery in which I ran through all the sub-routines of the executive programme in my head, I was finally able to clear the vault after very little physical practice. In my case, it was a highly effective tool in assisting me improve my vaulting skill.

Having said that, one must also consider the ~~berry~~ of other factors involved in ~~skill~~ improving technique or performing a skill. Environmental factors such as access to proper equipment play a key role in skill acquisition, especially as "physical practice serves to concretise neuromuscular pathways and muscle memory" (Rushall and Lippman, 1997). I could not safely practice my trampolining skills anywhere but the gym club, and as I did not have easy access both transport and time-wise to these facilities, my muscle memory was perhaps not as 'concretised' and thus my skills improved as a result of infrequent practice. While the biomedical

There are <sup>others</sup> ~~cultural~~ factors to consider. Towards the end of the training period, my skills had improved somewhat but I was nonetheless very inconsistent when performing one-handed cartwheels - I often ~~fell or~~ fell over, which I knew would cause me to



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fail. I became so anxious about failing that my level of arousal became extremely high and my performance consequently became worse. Even though I had the knowledge provided by motor learning theory to show me how I, in the cognitive stages of learning, ~~needed to~~ should ideally ~~from~~ practice, my mental state played a significant role in the quality of practice and the subsequent neural pathways being strengthened.

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Socio-cultural factors including the support of family and friends ~~on alongside~~ play key roles in affecting performance. When I wanted to give up gymnastics and not bother training, my parents ~~told me to~~ were wonderful encouragers. Our family motto is 'tabu soro', Fijian for 'never give up'. This spurred me to approach practice with a new determination, and my resulting improvement in performing cartwheels and flips on the trampoline was substantial.

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Indeed, there those athletes who have techniques that are highly unorthodox but are nonetheless very effective. Susie O'Neill and Eric Liddell are two Olympic gold medallists that ~~have~~ are notorious for the terrible swimming and running techniques respectively, but ~~who have~~ for whom these techniques have brought ~~not~~ success on an international level. Through this, we are reminded of how ~~what works~~ for one individual will

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~~not necessarily work for~~ complex individuals really are; what ~~works~~ technique works for one person may not necessarily work for another, and motor learning theory won't guarantee success by any means.

On that note, it must be stated that ~~motor~~<sup>skill</sup> learning theory is just that: theory. Unlike biomechanical laws, ~~the~~ skill learning theory is not dogma, and is therefore open to ~~con~~ conjecture. ~~That~~ We can adapt the different elements of ~~the~~ skill learning theory to find what best suits us as individuals. As I carried out my gymnastics training, I alternated between using a combination of part and whole-part learning alongside distributed and occasionally massed<sup>practise</sup> to best suit my needs. Why? The complexity of the individual.