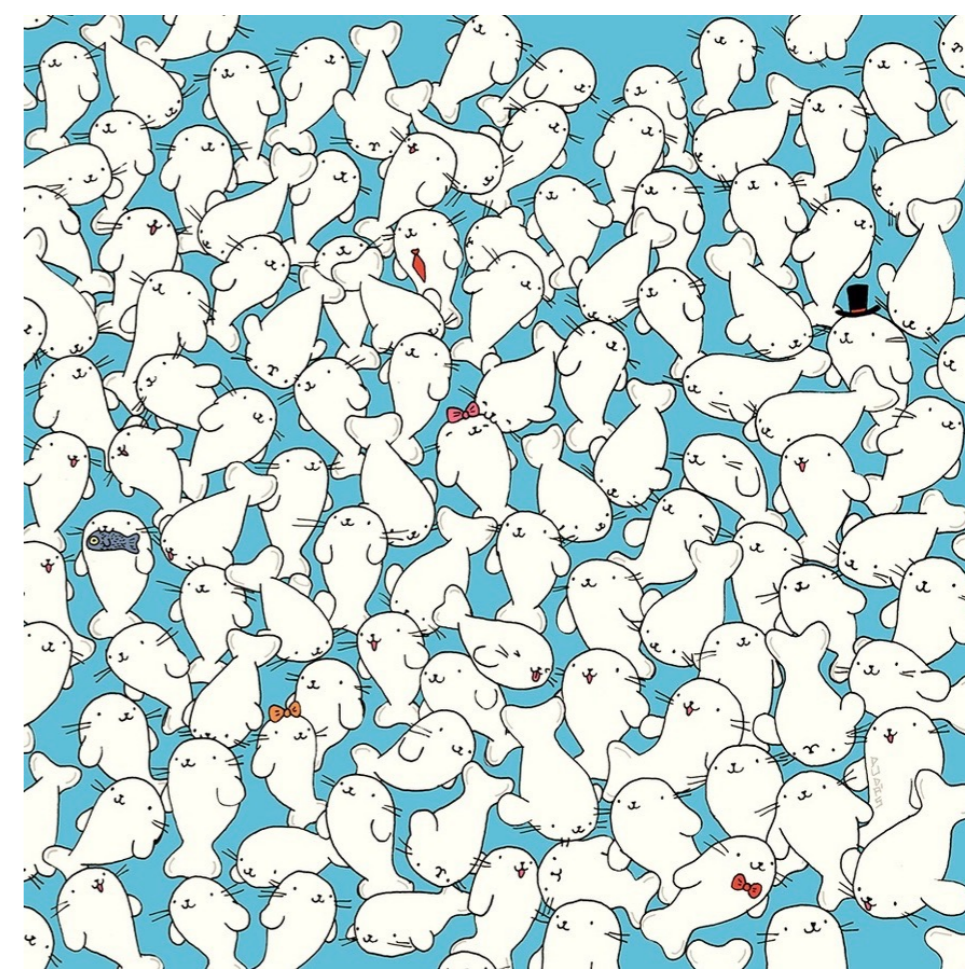


The goal of my matura thesis

To take a closer look at habit formation I conducted a behavioural study counting 132 volunteers. I asked volunteers to attempt a hidden object puzzle on a daily basis over the course of three weeks. Applying the concept of a randomised controlled trial, I divided volunteers into four intervention groups and a control group. With an evenly distributed representation of age and gender in each of the groups the population was approximately modelled. To reduce bias none of the volunteers were informed of the nature of my study. All volunteers received the same outlining conditions, the different groups had specific detailed instructions. The extra motivation groups solely deviated from the control group in the aspect of receiving positive words affirmation along with the task. I created two different habit stacking groups: one group stacked the desired behaviour onto a strong habit (brushing ones teeth) and the other onto a weak habit (going outside). The final group was instructed to use the approach of task bracketing. This approach uses a «sandwiching» method in order to accentuate on- and offset of a certain behaviour. In my study I asked said group to do a visualization exercise prior and then indigest a (preferably caffeinated) beverage after the puzzle. With the different strategies the different groups used to implement this behaviour I was able to highlight which strategies were beneficial for efficient short-term habit formation.



Can you spot the marshmallow?

Why let my volunteers attempt this specific puzzle?

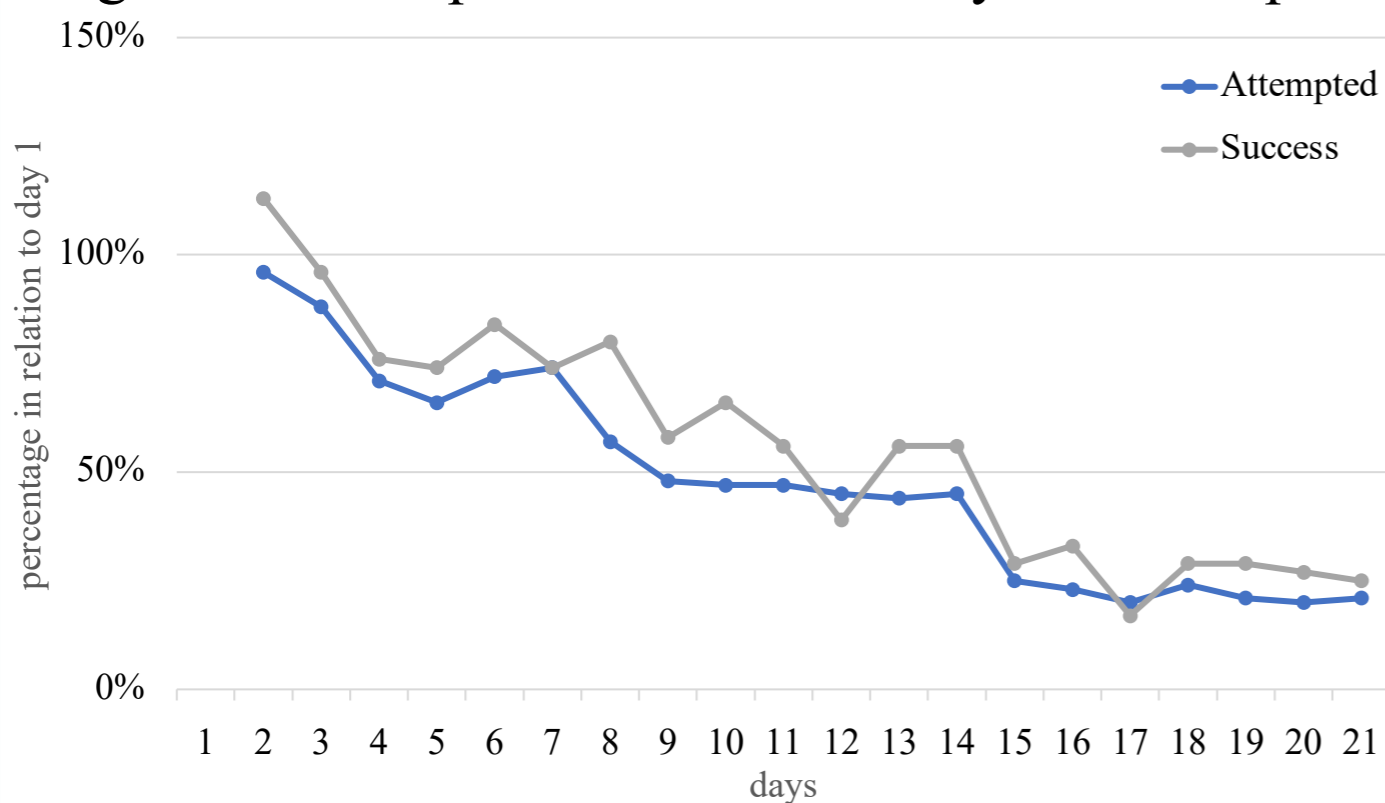
The puzzle is a simple task and therefore does not need detailed explanation. Completion of these puzzles generates a notable feeling of satisfaction and a sufficient feeling of failure when the puzzle is not solved or attempted. It is an engaging but short task, which additionally works well to be tracked.

A habit is a frequent, non-consciously performed behaviour that reoccurs under the same circumstances - it is a reliable solution to turn to when the same issue reoccurs.

Applicable findings

The findings of my study that can have an impact on our lifestyle and on how we can seemingly become shapeshifters are very clearly the two successful implementation strategies. These two strategies can be merged together in order for a maximized effect on successful habit formation and sustenance. A volitional approach would also tackle the problem revolving around identity, as willpower has its seed in our identity. Long-term habit formation should best be approached with enhanced habit stacking connecting extra motivation with specific planning. The temporal anchor has to be a regular and positively associated behaviour.

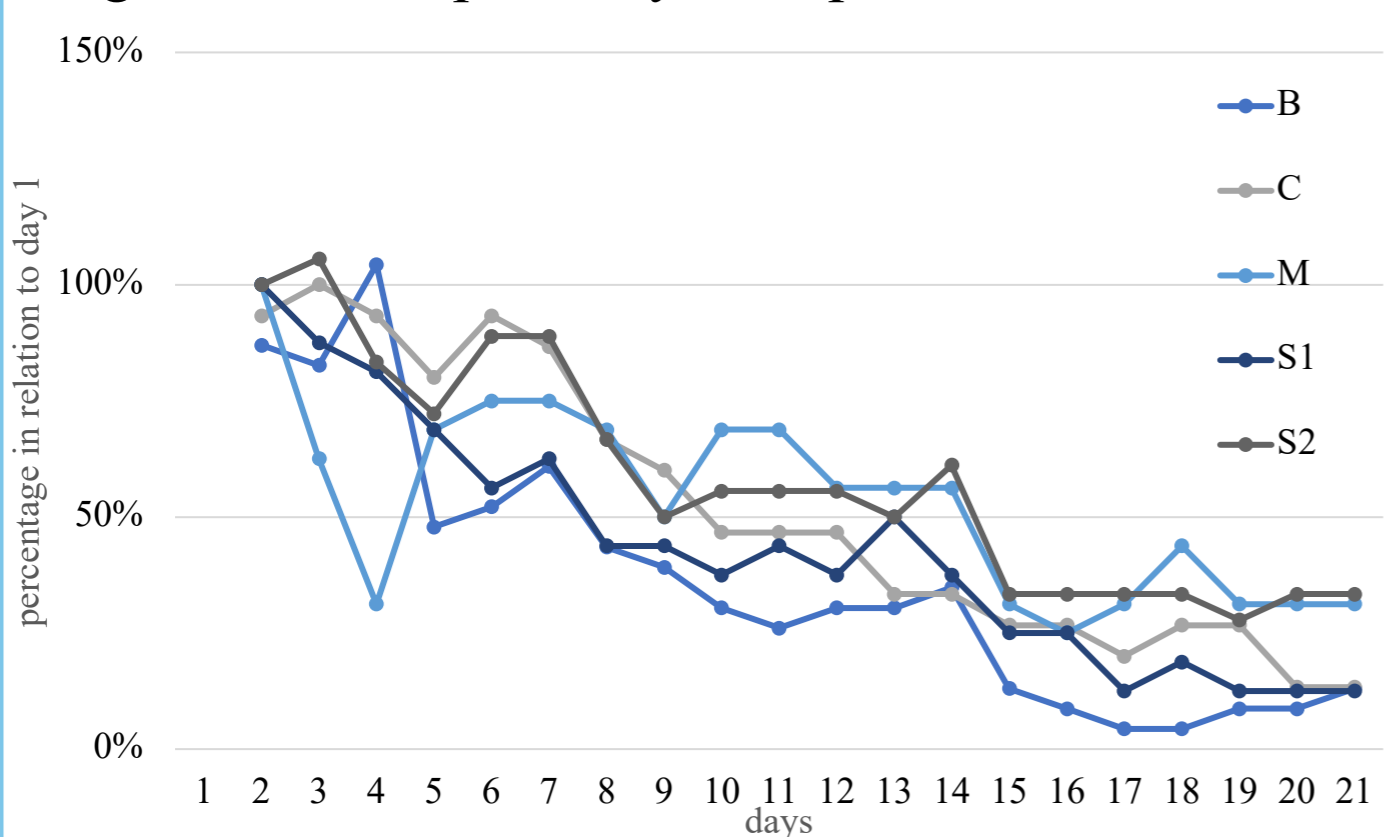
Figure 1: Attempted and Success - by all Participants



Struggling to form new habits

Figure 1 shows the progression of all attempts and success over the duration of my study with a percentage linked to the amount of participants, who attempted their task on the first day. What cannot be seen in this graph is that a third of all volunteers failed to participate whatsoever in the uptake of this behaviour. I refer to those who produced measurable data as participants. In the progression over the course of the study we can see a general decline with transitional drops after the passing of each week. The relative last day attempts lays at 21 percent. I measured success based on the answers of yes and not really. This subjective measurement acts as an indicator of the motivation level of the participants. The progression of successes generally rests above the daily attempts but follows the steady decline of the attempts.

Figure 2: Attempted - by Group



Happy stacking

In figure 2 we can see the individual progression of the attempts of each implementation strategy over the duration of the study. There are two clusters of final day attempts, one being at around a third of the first day attempts and the second one is located far lower at 13 percent. The skimmed legend of the different approaches is as follows: task bracketing, control, extra motivation, strong habit stacking (S1) and weak habit stacking group (S2). I did expect the task bracketing group to do especially well but the slightly complicated instructions seemed to have had an overwhelming effect on the participants leading to negatively affected habit formation. The two implementation strategies that outperform the other groups in short-term habit formation are the extra motivation and the weak habit stacking group.

The bottom line – if you want a new habit to stick – try happy stacking ...