

The Fantastic Voyage Towards a Fulfilling Life

How to be happy in your life, and efficient in your studies, to tackle stress and feelings of inadequacy

Compiled by Tanja Holc

In the past few years, I've experienced frequent feelings of inadequacy, both in academic and social settings. It was only recently that I realised my feelings are shared by others, and have a name: the imposter syndrome.

It affects 70% of us at some point in our lives, and includes unfounded worrying about lacking in skills and talent, being a fraud, and being unworthy of success or just getting lucky. [3]

Additionally, I increasingly feel we forget to focus on the beautiful, important things in life – or just aren't sure what they are. This leads to living fast and superficially, feeling stressed and under pressure, and never being truly content or happy. I found these negative aspects of our lives often overlap with feelings of incompetence when it comes to studying: we simply never learned how to learn properly, for life.

In this booklet, I combine the most prominent aspects of the topics of well-being, learning to learn, and the imposter syndrome, taken from the online courses: "The Science of Well-Being" and "Learning How to Learn" on Coursera, and "Overcoming Imposter Syndrome" on FutureLearn.

By making you aware of the relevant issues and strategies to solve them, I hope to inspire you to self-reflect, as raising self-awareness is a great step towards living a more fulfilling life.

Common misconceptions, biases, and negative patterns

The biases blocking our way to happiness

MISWANTING – we mispredict what we are going to like, and how much. Intuitively, we think we want money, material things like new clothes, good grades, the perfect body, and perfect relationship to be happy. Research shows these things do not make us nearly as happy as we think, and focusing on them can even decrease our well-being. [1]

JUDGING OURSELVES – we think relative to arbitrary reference points, constantly comparing ourselves to others and our previous selves, rather than focusing on the good aspects of our lives in terms of absolutes.[1]

HEDONIC ADAPTATION – is our tendency to grow used to stimuli like the new things we buy, going to university, even winning the lottery. These things therefore make us less and less happy over time. Nevertheless, we continue to overestimate the power and duration of the effect events will have on us, both positive and negative, by employing the impact bias. [1]

To explore:
Income - happiness relationship
Focalism
Immune neglect
Dan Gilbert: The Surprising Science of Happiness (TED Talk)

Misbeliefs about learning

INEFFECTIVE STUDY HABITS – most frequently, students learn by highlighting text, or re-reading it multiple times. Research has shown these are poor study methods, and together with extensively repeating things we've already learnt (overlearning), they can lead to illusions of competence. We think we've learnt the difficult parts, while we only repeated easy concepts. [2]

PROCRASTINATION – the discomfort we experience when faced with a task or study session often leads to putting it off. This causes cramming, which is extremely ineffective as concepts do not have time to solidify in our memory. Procrastination negatively influences all aspects of our lives, not just our studies. [2]

THINKING MODES – Our brain can be either in the focused or diffuse thinking mode. When studying or solving problems, we often think the focused mode (where our thoughts are concentrated and follow familiar patterns) is all we need. In fact, to think of new approaches and ideas, and be more creative, we should more often activate the diffuse thinking mode after the focused one, by taking a break, exercising, or even going to sleep. [2]

EINSTELLUNG – refers to an existing idea we have in mind preventing a new, potentially better one from forming. That can cause a "block", preventing us from being creative or finding the best solution, and can even hinder the progress of whole disciplines.[2]

To explore:
"When Math Hurts" research paper on math anxiety

The fixed mindset, and imposter syndrome

FIXED MINDSET – according to psychologists, our self-beliefs are crucial for our personal and professional development. People with a fixed mindset about personal qualities and talents think they cannot develop overtime, while those with a growth mindset believe they can improve through effort and experience. While neuroscience confirms the growth mindset is scientifically correct, most of us tend to have at least some elements of a fixed mindset. This hinders us: it makes us think failure is permanent, take critical feedback badly, and can lead to destructive thoughts of inadequacy. [3]

IMPOSTER CYCLE – those of us who feel inadequate find ourselves in the imposter cycle when faced with accomplishment-related tasks. Self-doubt and worry lead to either procrastination or overwork, and if we succeed, we refuse to accept positive feedback. This further strengthens feelings of self-doubt and inadequacy, and is reinforced by new tasks. Imposter syndrome can be caused by stereotypes, personality traits, or different negative environments, and there are five types of "imposter": the perfectionist, the super-person, the natural genius, the expert, and the soloist. [3]

To explore:
"What is imposter syndrome and how can you combat it?" (TED Ed video)
Imposter syndrome questionnaires
Types of imposters

The role of interpersonal relationships

Harmful social comparison

Most frequently, we use others as our reference point, and we evaluate our skills, possessions ... against what they have. This is the phenomenon of social comparison, and while useful in some cases, it has the potential of decreasing our happiness and self-esteem. For example, although other's possessions do not affect ours, people report lower job satisfaction when their co-workers earn more than them. [1]

Moreover, people on social media and TV seem to be leading much more awesome lives than us, or be much more competent. This is because we only get to see the better parts of their lives and thoughts, while knowing all of ours. The problem is we are usually not aware of this duality, and we do not choose comparisons reasonably. [1]

To explore:
Correlational studies between social media usage and self-esteem
Imposter syndrome (video by The School of Life)

Connecting through kindness

KINDNESS – research has shown that happy people tend to do more kind things for others, and that doing kind actions, as well as just thinking about them, can significantly increase our well-being. Interestingly, while we predict that spending money on ourselves will make us happier than spending it on others, the opposite was found by psychologists. Spending money on others, regardless of the amount, increases our happiness substantially, especially if we see the positive effect it makes. To be happier, we should develop a habit of regularly doing random acts of kindness, and rethink our money spending habits. [1]

SOCIAL CONNECTION – happier people were found to have stronger ties with others, which also had a positive impact on their health. We should be investing time in close relationships, and prioritising those over income and material things, as they have much more potential to increase our well-being. Even when the majority predicts otherwise, starting a conversation with a stranger, be it on public transport or in a café, has been shown to boost people's happiness levels immensely. Therefore, seeking out more social connection, either by building stronger bonds with your friends, or talking to strangers, either in person or virtually, is a valuable thing to do. [1]

To explore:
Research by Elizabeth Dunn
Research by Nicholas Epley

Sharing

EXPERIENCES – research has shown we take in positive experiences differently when sharing them with others: sharing increases our rating of the experience, and our happiness. Frustrating experiences like commuting to work can also be enhanced through social connection.[1]

GOALS – to achieve a well-being goal, like meditating or exercising regularly, it helps if people around you want to do it too. Therefore, to promote a fulfilling environment for yourself, it is beneficial to associate with a group of people with the same goals. [1]

STUDY GROUPS – similarly, it is beneficial to study with a group of people with the same academic goals. As long as study groups don't turn into socialising, they not only hold the members accountable and help them persist in their studies, but also allow them to learn through explaining material to others. It allows the members to explore different perspectives of the material, get new ideas, recognise Einstellung and see their own misconceptions more easily. [2]

IMPOSTER FEELINGS – to cope with imposter syndrome, it is beneficial to talk about it with peers or mentors, to see how they are dealing with similar feelings. Moreover, working together with colleagues promotes sharing knowledge and skills, and helps "impostors" avoid procrastination and overwork. [3]

To explore:
Pros and cons of taking photos of experiences (research by Kurtz & Lyubomirsky)

Strategies to help us overcome the negative aspects of our lives

Increasing our well-being

To increase our overall well-being, we should effortfully implement strategies to shift our focus towards wanting the things we don't normally prioritise.

Investing in EXPERIENCES over material things – we don't realise it, but buying experiences make us much happier than buying things, even before and after the purchase. They are also much less susceptible to hedonic adaptation and social comparison.[1]

TIME AFFLUENCE over income – prioritising having more time (enough to do what you want) over more money is linked with greater happiness, even though it seems counterintuitive to some.[1]

MEDITATION – if you're looking to add one happiness-increasing practice to your life, meditation seems to be the most beneficial one. Our minds have been found to wander away from the task at hand about half of the time, which, on average, decreases our mood. Meditation is a powerful strategy to control your own mind, as well as boost cognitive performance and strengthen social connections. [1] Additionally, practicing autogenic training can help you reduce stress substantially.

Striving for FLOW – generally, we think we like leisure more than work, but research shows we tend to feel apathetic during leisure activities, while feeling happier and efficient when working. We should challenge our skills more often, just enough to achieve flow – the state of being fully engrossed in the present task, focusing strongly, losing track of time, and enjoying it. [1]

HEALTHY HABITS – we usually don't prioritise sleeping and exercising enough. In addition to health benefits, these practices lead to an increase in happiness (exercise is as effective as antidepressants in major depression patients), and a significant boost in academic performance. [1]

MINDFULNESS – practicing gratitude regularly, either by expressing thanks to someone, or by journaling about things you're grateful for each day, is extremely valuable in increasing well-being. Similarly, savouring experiences by mindful appreciation of the moment boosts our mood substantially, as does a few minutes of reflecting about good past experiences. It is a good idea to keep a record of the practices you implement in a journal, to help turn them into habits. [1]

INTERRUPTIONS and VARIETY – while we intuitively don't want good experiences to stop, splitting them in smaller parts increases our happiness and helps tackle hedonic adaptation (it even works with commercials when watching TV). Similarly, we can be happier by increasing the variety of our experiences, and spacing good things out over more time. [1]

Setting GOALS – use a technique like WOOP to be successful: specifically identify your wish, think about the potential positive outcomes, identify the obstacles, and make a plan.[1]

Designing BETTER ENVIRONMENTS – to implement these strategies successfully, we should set reminders for healthy practices, and aim to eliminate harmful cues: like putting our phone in another room to avoid social media breaks, curating our social media feed for it to be more representative of reality, and saying "stop" when making social comparisons. [1]

To explore:

PERMA happiness test

Authentic happiness survey

The Happiness Lab podcast

The neuroscience behind mind wandering (the default network)

Negative visualisation

Techniques to overcome hedonic adaptation

Types of meditation (loving kindness, breathing focus...)

Autogenic training

Gabriele Oettingen and the WOOP technique

Martin Seligman: The new era of positive psychology (TED Talk; on flow)

Better, life-long learning

To focus on the learning outcomes rather than grades, and become skilled life-long learners, we should reframe our thoughts and rethink our study methods.

GROWTH MINDSET– a fixed mindset, and focusing on grades instead of learning outcomes, can undermine our intrinsic motivation to study. [1] Instead of focusing on measurable achievements, we should develop a growth mindset, by learning more about neuroplasticity, and effortfully trying to change our self-beliefs. Recognising harmful thoughts and replacing them with growth mindset thoughts and actions takes time, but one eventually learns to seek out and value learning for its own sake, rather than seek constant external validation. [3]

PROCESS over product – focus on the process of working, rather than the product. Thinking about the outcome when working will cause stress and discomfort, and might lead to procrastination. It is better to focus on doing your best in short study sessions.[2]

TACKLING PROCRASTINATION – an effective strategy is using the “pomodoro technique”, which involves setting a timer for 25 minutes and genuinely focusing during this time, before taking a short break, and completing a “pomodoro” again. This allows you to focus on the process, and start more easily with manageable study sessions – once you start, any discomfort you experience will disappear. It also helps if you eliminate distractions and cues that cause you to put off tasks, like notifications, emails, or loud noises. [2]

CHUNKING– refers to grouping ideas together with the focused thinking mode. If we truly understand the information and practice what we have learnt, a neural patter solidifies, allowing us to access all the details by only recalling the main concept. To form solid chunks, we must perform tasks ourselves: practice problem solving, not just looking at worked examples. To know where a chunk fits in with our knowledge, we must keep the bigger picture in mind when studying, for example, by skimming through a chapter before studying a concept within it. Using vivid metaphors and analogies for concepts is also extremely powerful to enhance understanding. [2]

The power of SELF-TESTING – while most students dislike tests, they are the most powerful way to gain knowledge and understanding, especially if you make mistakes and correct them. Self-testing can be employed by simply looking away from the text and trying to recall it, making index cards with a concept on one side and explanation on the other, or going through past exam papers without looking at the solutions; alone or in a study group. It also helps to practice recall in an unfamiliar environment, to be better prepared for exam conditions. [2]

More effective STUDY STRATEGIES– in addition to self-tests, distributed practice – the opposite of cramming – boosts performance significantly. To learn effectively, distribute your practice over several days, and increase the intervals between study sessions as you grow more confident in your knowledge – while learning will appear slower this way, you will retain knowledge for much longer. This can be combined with interleaving – mixing up different kinds of problems when practicing – to boost retention and performance, especially in the sciences. [2]



PLANNING– use a planner journal to set weekly goals, as well as daily to-do lists (it is best to write these the evening before). In addition to setting working times (helpful if you note down the number of “pomodoros” you will need), set a quitting time for each day, and mix academic tasks with leisure activities. Use the journal to note down the techniques that work best for you, and to complete checklists before exams (look up Richard Felder’s checklist). [2]

- To explore:
- John Dunlosky: Strengthening the student toolbox
- Dunlosky et al.: What works, what doesn't
- Carol Dweck: The power of believing that you can improve (TED Talk)
- Working memory and long-term memory
- The memory palace technique

Feeling rightfully adequate

Working on becoming more fulfilled and better life-long learners will help us tackle self-doubt. Here are further techniques to achieve this:

SELF-REFLECTION – take time to reflect on your thoughts in frustrating situations, and your mindset about your abilities and talents, and make an action plan to change them to help rather than hinder you. [3] Regularly reflecting on your development also helps – try to find a reflection framework that works for you, perhaps within the UoE's reflection toolkit (linked below).

“ADEQUACY FOLDER” – keep a folder with all your achievements and all positive feedback you’ve received, and record those regularly. When experiencing self-doubt, looking at this folder will assure you of your abilities, and help you move forward.[3]

SIGNATURE STRENGTHS – take a character strengths survey (linked below) to identify your signature strengths, and try to use them intently, and in different ways, in your studies and beyond. Knowing what your strengths are can not only raise your self-awareness, but also allow you to present as your authentic self. Studies show people who use more of their core strengths at work are happier. [1]

SWOT ANALYSIS – undertake a SWOT analysis, by identifying your strengths, weaknesses, opportunities for your career and potential threats. This will raise your self-awareness, help you identify areas for improvement, and provide you with a valuable basis for an action plan for personal and professional development. [3]

To explore:

VIA character strengths survey
"Reflection toolkit" and "Graduate attributes"
websites (by The University of Edinburgh)
Institute for Academic Development
Personal SWOT Analysis (video by Kreative
Leadership)

The role of emotion and emotion regulation in job
stress and well being (book by Perrewé et al.)

Mike Cannon-Brookes: How you can use impostor
syndrome to your benefit (TED Talk)

People's experiences to learn from

Barbara Oakley – the instructor of the "Learning How to Learn" course and a professor of engineering, she strongly disliked science and math throughout high school. She studied languages until challenging herself at 26 to study what was most foreign to her, and become an engineer. She encourages learners to think outside of what they might naturally be good at, and try to challenge themselves to adopt academic mindsets in areas most foreign to them – with persistence and practice, anyone can succeed. [2]

Well known people experience self-doubt too – people like Albert Einstein, Agatha Christie, Michelle Obama, and David Tennant have all mentioned having feelings akin to imposter syndrome. [3]

Learning for life – Benny Lewis and Scott Young have both learnt numerous foreign languages in a matter of months, and they list curiosity and perseverance as the starting points for such life-long learning. Having specific goals, like engaging with computer science for a month, will make the topic interesting, while creating vivid analogies will help you learn more effectively. [2]
Meanwhile, Daphne Gray-Grant's tips for becoming a better writer are making mind-maps, and avoiding editing while writing - for more tips, look up her website, "Publication Coach". [2]

If you would like to learn more about the topics covered, I highly recommend taking part in the free online courses listed on the right, as well as looking up the resources I mention throughout the booklet.
Good luck on your journey to becoming a fulfilled and confident life-long learner!

This booklet was designed in Adobe Spark.

Recommendations, resources, and further reading

Unless otherwise stated, the information in this booklet was adapted from the following online courses, and further resources linked within them:

[1] Santos, L. (n.d.). The Science of Well-Being [MOOC]. Coursera.
<https://www.coursera.org/learn/the-science-of-well-being>

[2] Oakley, B., Sejnowski, T. (n.d.) Learning How to Learn: Powerful mental tools to help you master tough subjects [MOOC]. Coursera.
<https://www.coursera.org/learn/learning-how-to-learn>

[3] University of Southern Queensland. (2020). Overcoming Imposter Syndrome: Identify the Patterns Undermining Your Confidence [MOOC]. FutureLearn.
<https://www.futurelearn.com/courses/overcoming-imposter-syndrome>

Books recommended in these courses include:

Sonja Lyubomirsky, The How of Happiness: A Scientific Approach to Getting the Life You Want

Daniel Gilbert, Stumbling on Happiness

Martin Seligman, Authentic Happiness

Carol Dweck, Mindset: The New Psychology of Success

Elizabeth Dunn & Michael Norton, Happy Money: The Science of Happier Spending

Gabriele Oettingen, Rethinking Positive Thinking: Inside the New Science of Motivation

Barbara Oakley: A Mind for Numbers: How to Excel at Math and Science (Even If You Flunked Algebra)