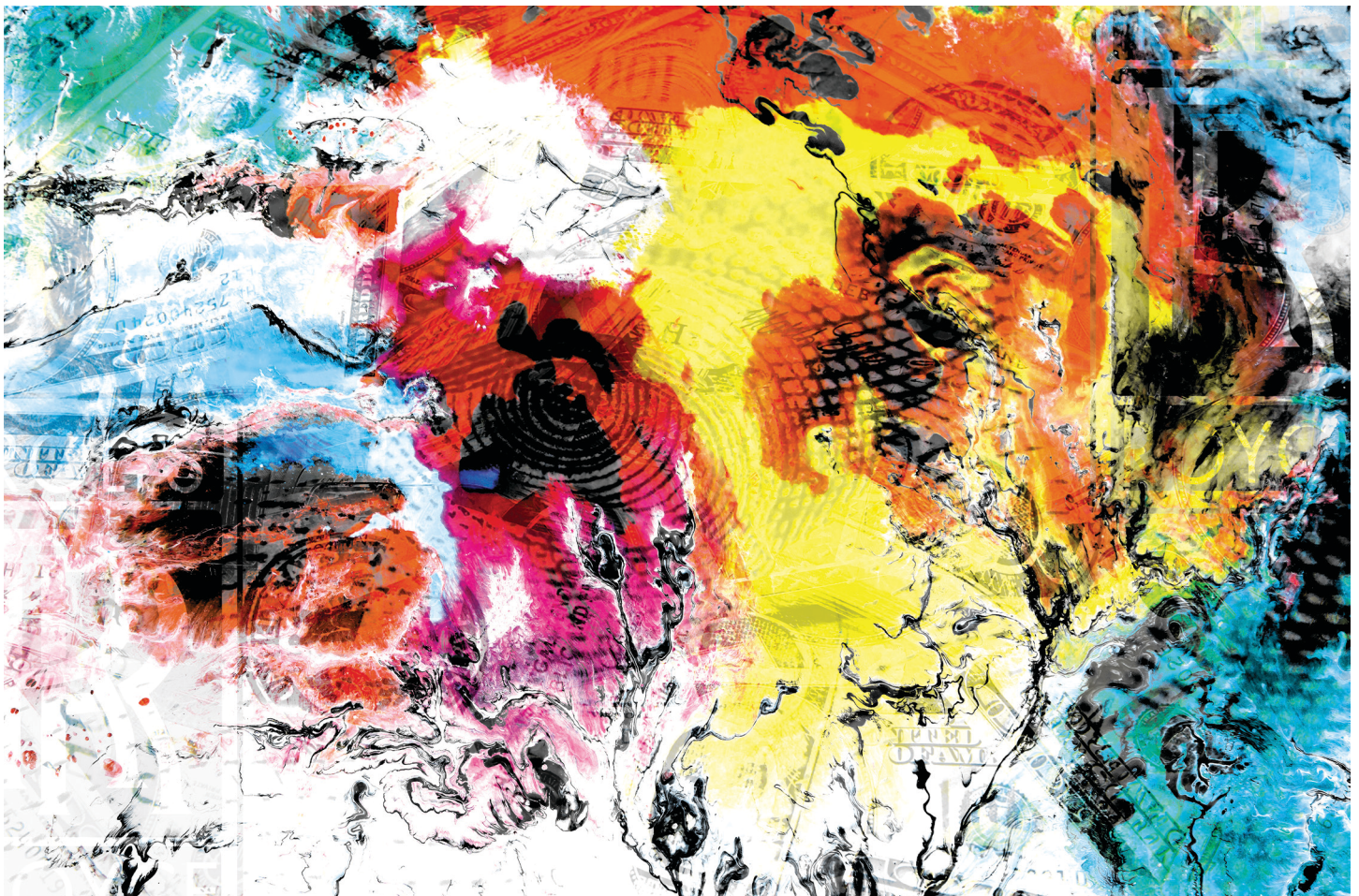


Building motivation and resilience in research



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Introduction [Editor: Text to be reworked a bit so it differs to the course description page.]

Have you ever felt stuck on a project, demotivated after setbacks, or unsure how to regain momentum? Research and knowledge work—whether in a university lab, a company, or independent study – can be unpredictable. Progress is rarely linear, and setbacks are a natural part of the journey. Challenges such as failed experiments, rejected proposals, or tight deadlines are a normal part of the journey. Resilience – the ability to adapt, recover, and grow from challenges – is a skill you can develop, not something you are born with.

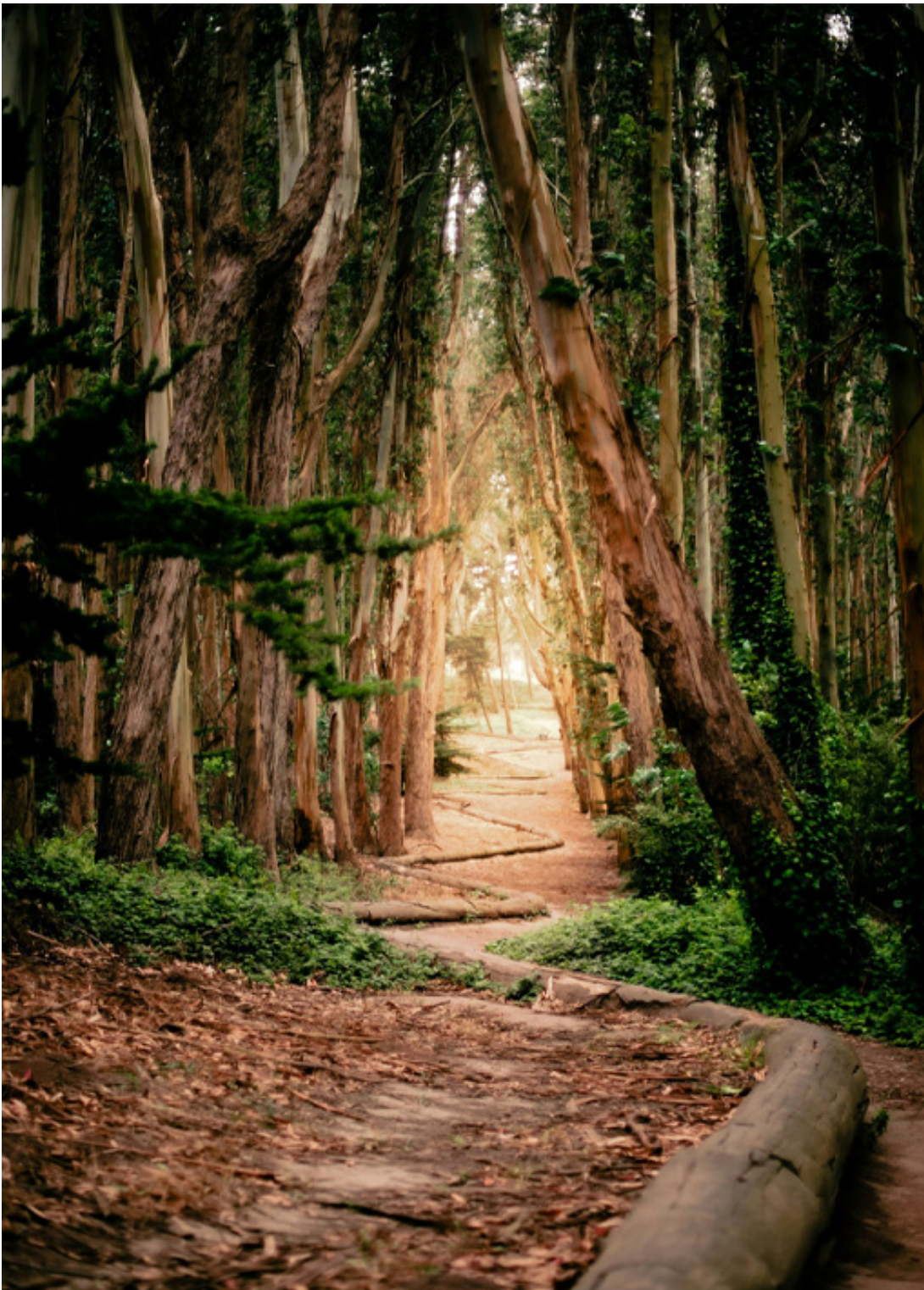
In this course, you will explore strategies to maintain motivation, handle setbacks constructively, and cultivate a growth mindset. You will engage in reflective exercises, case studies, and practical activities designed to help you turn obstacles into opportunities for learning and progress. Whether you are a student, early-career professional, or independent researcher, the strategies in this week will help you stay motivated and productive.

Learning outcomes

After studying this course, you should be able to:

- recognise the factors that influence motivation and resilience
- apply strategies to overcome setbacks and maintain focus
- develop a personal resilience plan tailored to your projects
- identify support networks and resources to sustain motivation
- adopt a growth mindset to approach challenges effectively.

1 Understanding resilience







Research and project work often feel like a marathon rather than a sprint. While moments of discovery can be exhilarating, the process is rarely straightforward. Experiments fail, papers get rejected, deadlines shift, and resources can be limited. These challenges can leave even the most motivated individuals feeling discouraged. At such times, resilience becomes a crucial skill. Resilience is not just about 'toughing it out' or passively enduring

difficulty. It is the active capacity to adapt, learn, and emerge stronger from setbacks. In the context of research, resilience helps maintain long-term motivation, manage criticism, and turn obstacles into stepping stones for growth.

Scholars define resilience as the ability to recover and adapt in the face of adversity (Luthar, Cicchetti & Becker, 2000). In other words, resilience is not a fixed trait but a dynamic process that can be cultivated over time. This means that students, researchers, and professionals alike can deliberately develop strategies to strengthen their resilience. Understanding what resilience means, why it matters, and how to build it is the first step toward thriving in demanding academic and professional environments.

1.1 What is resilience?

Resilience is more than just surviving challenges – it's about adapting, learning, and coming back stronger. In research or project work, resilience helps you:

-  maintain motivation when progress is slow
-  learn from failures and adjust strategies
-  handle criticism constructively
-  persevere towards long-term goals.

Here are some examples from history:

- Marie Curie faced multiple rejections before winning Nobel Prizes. Resilience is not about avoiding setbacks but using them as fuel for persistence.
- Albert Einstein described failure as 'success in progress', a phrase that encapsulates the idea that failure is not the opposite of success but rather a stepping stone toward it.

[Editor: AP: When images are cleared, place change this into a slideshow so its more interactive on the page. Marie Curie: 577913 Albert Einstein: 577916]
[Editor: From ana done]

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Psychological theories also support this perspective. Bandura's (1997) self-efficacy theory argues that belief in one's own ability to succeed influences persistence. Researchers with high self-efficacy interpret setbacks as challenges to be mastered, while those with low self-efficacy may see the same setbacks as evidence of inadequacy. Resilience, therefore, is closely tied to how we interpret and respond to difficulties.

Activity 1: Reflecting on research challenges

 10 minutes

Take a look at the options below and drag the challenges you have experienced into the appropriate box.

[Editor: AP to build this via <https://h5p.org/drag-and-drop> (if this is accessible, need to check) Bingo card <https://mfbc.us/m/m8rzjat> with common research challenges (e.g., "paper rejected," "experiment failed," "long writing block").][Editor: From Ana: Sorry Sofia actually not understanding this one what are the options?]

Then, think about a recent challenge in your research or project work. Write down:

- What happened?
- How did you respond?
- What could you do differently next time to grow from this experience?

Provide your answer...

[Editor: Media brief: Short video (2–3 minutes) of a researcher discussing how they overcame a setback.]

1.2 Why research projects are challenging

Unlike structured tasks with clear outcomes, research and creative projects are inherently unpredictable. This unpredictability is what makes them exciting but also what makes them difficult. Experiments do not always yield usable data. Proposals may be rejected by funding bodies, sometimes repeatedly. A single change in policy or the breakdown of a crucial piece of equipment can derail months of progress. [Editor: AP: Image here, based on

<https://uxmag.com/wp-content/uploads/2022/06/Dealing-with-impostor-syndrome-as-a-user-researcher-lead-banner.png>]

Psychologists Lazarus and Folkman (1984) suggest that the way we appraise stressors – whether we see them as threats or as challenges – shapes our resilience. When we interpret a failed experiment as evidence of incompetence, it damages motivation. But when we view it as an opportunity to refine methods, it becomes part of the learning process. This process of ‘cognitive reframing’ is at the heart of resilience.

Setbacks also carry an emotional dimension. Criticism from supervisors or peers, even when constructive, can feel discouraging but is essential for growth. Many researchers also experience impostor syndrome, a persistent belief that their success is undeserved and that they will eventually be ‘found out’ as a fraud. These feelings are common but can erode confidence if left unchallenged. Recognising that impostor thoughts are part of the academic experience can help reframe them as signs of growth rather than weakness.



Tip: Reframing challenges as learning opportunities fosters resilience and helps maintain motivation.

1.3 Developing resilience

The encouraging reality is that resilience can be nurtured. According to Angela Duckworth's (2016) concept of grit, long-term success depends not just on talent but on passion and sustained perseverance. Developing resilience means equipping yourself with tools and habits that make perseverance easier when obstacles appear.

Some key strategies include:

- adaptability – the capacity to adjust methods or goals when circumstances change
- optimism – cultivating a hopeful outlook that frames challenges as temporary and solvable
- support networks – seeking advice, feedback, and encouragement from peers, mentors, or supervisors
- reflection – regularly reviewing what has worked, what has not, and what can be improved.

Activity 2: Self-assessment on handling research challenges

 10 minutes

Below are statements about how you approach challenges in research. For each one, rate yourself on a scale of 1–5.

1. rarely true
2. sometimes true
3. neutral / occasionally true
4. often true
5. always true

1. I see research setbacks as part of the learning process.

Provide your answer...

2. I believe effort and persistence are more important than talent.

Provide your answer...

3. I stay motivated even when progress is slow.

Provide your answer...

4. I view criticism as a way to improve rather than a personal attack.

Provide your answer...

5. I accept that uncertainty is a normal part of research.

Provide your answer...

6. I actively seek help from supervisors, peers, or mentors.

Provide your answer...

7. I adjust my approach when faced with unexpected obstacles.

Provide your answer...

8. I take breaks and set boundaries to avoid burnout.

Provide your answer...

9. I celebrate small achievements to stay motivated.

Provide your answer...

10. I reflect on past challenges and how I overcame them.

Provide your answer...

11. When faced with a rejected paper, I see it as an opportunity to improve.

Provide your answer...

12. I adapt my plans when experiments don't go as expected.

Provide your answer...

13. I maintain a healthy work-life balance during stressful periods.

Provide your answer...

14. I remind myself that setbacks are normal in research.

Provide your answer...

.....

Discussion

15. Tally your total score (out of 70).

- **56–70 (Mostly 4s & 5s):** You already use strong resilience strategies. Keep reinforcing them.

- **35–55 (Mixed scores):** You're developing resilience but may benefit from strengthening certain areas.
- **14–34 (Mostly 1s & 2s):** Consider experimenting with new coping techniques and strategies to broaden your toolkit.

Take some reflection and/or action notes in the box below, based on your score.

Provide your answer...

Infographic Idea: 'Resilience in Action: Traits and Strategies'

- Traits: Adaptability, Optimism, Self-efficacy, Growth mindset.
- Strategies: Reflection, Seeking feedback, Support networks, SMART goals.

[Editor: AP, please do an Image redraw, using the text above, similar to <https://humanperformance.ie/wp-content/uploads/2024/03/Build-Resilience-Instagram-Post-1024-x-768-px.png>]

So, to wrap up this section: resilience isn't something only a few 'extraordinary' scientists have. It's actually a set of skills and attitudes that anyone can build with practice, reflection, and the right support. Keeping this in mind will set you up perfectly for the next part of the course, where we'll dive into the most common research setbacks and how to handle them in a constructive way.

For a more comprehensive assessment, you might find the [Resiliency Quiz by Al Siebert](#) insightful.

2 Common setbacks and how to overcome them

Understanding the types of setbacks you might encounter – and learning strategies to navigate them – is essential for cultivating resilience and sustaining motivation.



2.1 Examples of setbacks

Research setbacks take many forms. Recognising them and developing constructive responses can transform obstacles into opportunities for growth. You may encounter challenges such as: [Editor: AP to build: <https://h5p.org/accordion>] [Editor: from Ana : done]

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- Paper or grant rejections – use reviewer feedback to improve.
 - Setbacks in research take many forms. Paper or grant rejections are among the most common challenges. Months of work can be disrupted by reviewer feedback, but these moments are opportunities rather than failures. Resilient researchers use feedback constructively to improve the quality of their work (Nature, 2020).
- Critical feedback from supervisors or peers – Learn to separate constructive criticism from personal feelings.
 - Similarly, critical feedback from supervisors or peers may initially feel discouraging. Lazarus and Folkman's (1984) cognitive appraisal theory suggests that the way we interpret stressors shapes our response; viewing critique as a developmental tool rather than a threat enhances resilience.
- Failed experiments or data collection – analyse what went wrong and adjust methods.
 - Failed experiments and unexpected results are also part of the research process. Rather than seeing failure as wasted effort, resilient researchers use these moments to refine methods and generate new insights. Thomas Edison's perspective on experimentation – 'I have not failed. I've just found 10,000 ways that won't work' – exemplifies this mindset.
- Impostor syndrome – recognise self-doubt as normal and focus on achievements.
 - Impostor syndrome, the persistent feeling that one's achievements are undeserved, can exacerbate stress and demotivation. Awareness and reflection, coupled with peer support, help mitigate its effects (Physiological Society, 2020).

- Time management struggles – breaking tasks into manageable milestones, setting realistic timelines, and using delegation when possible, can restore structure and momentum.
- Ethical dilemmas – follow guidelines, seek advice, and document decisions.
- Limited resources – explore alternative funding, open-access materials, or collaborative approaches.

Activity 3: Setback stories

 15 minutes

Write down a recent challenge you faced. Then, reframe it positively and outline the next steps you could take. Use the examples below for inspiration. [Editor: The following examples can be turned into an interesting activity. For example, drag-and-drop or text entry scenario where learners match setbacks → reframe → next steps.] [Editor: from Ana : done]

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- **Setback:** My journal paper was rejected after months of work.
- **Reframe:** This is an opportunity to strengthen the paper with valuable feedback before resubmitting.
- **Next steps:** Revise based on reviewer comments, target a different journal, or seek mentorship for improvements.
- **Setback:** My supervisor gave critical feedback that felt discouraging.
- **Reframe:** Constructive criticism is meant to push my work to a higher standard.
- **Next steps:** Identify key areas for improvement, clarify feedback with the supervisor if needed, and apply changes step by step.
- **Setback:** My experiment failed, and I have no useful results.
- **Reframe:** Failure provides insights into what doesn't work, helping refine the methodology.
- **Next steps:** Analyse possible errors, adjust variables, and repeat the experiment with modifications.
- **Setback:** I struggle with time management and always feel behind.
- **Reframe:** Recognising this issue is the first step toward better planning and balance.
- **Next steps:** Use time-blocking techniques, set achievable goals, and break large tasks into smaller, manageable steps.
- **Setback:** I feel like I'm not good enough (impostor syndrome).
- **Reframe:** Everyone experiences self-doubt, but my achievements and progress show I belong here.
- **Next steps:** Keep track of accomplishments, seek support from peers, and challenge negative thoughts with facts.
- **Setback:** I faced delays in collecting data and missed my planned deadline.

- **Reframe:** This highlights the importance of contingency planning and flexibility in research.
- **Next steps:** Conduct a pilot study, strengthen recruitment strategies, or seek advice from peers who faced similar challenges.

Provide your answer...


Discussion

Every setback is a learning experience. Normalising challenges helps build resilience and encourages constructive problem-solving.

2.2 Reflecting on setbacks

Now take some time to reflect on your own setbacks.

Activity 4: Reflective journaling

 10 minutes

Identify three setbacks you've experienced in any learning or work context. For each, write one lesson learned and one action to take next time.

- How did you respond to your challenge?
- Which strategies helped you stay motivated?
- Could a growth mindset approach improve your response next time?

Table 1 Common setbacks and strategies to overcome them

Setback	Reframe	Action Step	Resource
I faced delays in collecting data and missed my planned deadline.	This highlights the importance of contingency planning and flexibility in research.	Conduct a pilot study, strengthen recruitment strategies, or seek advice from peers who faced similar	
Provide your answer...	Provide your answer...	Provide your answer...	Provide your answer...
Provide your answer...	Provide your answer...	Provide your answer...	Provide your answer...
Provide your answer...	Provide your answer...	Provide your answer...	Provide your answer...

[Editor: Media brief: Audio clip: Expert researcher shares three examples of common setbacks and recovery strategies.]

3 Developing a growth mindset

Research and project work are rarely smooth. Even the most talented researchers encounter setbacks, periods of slow progress, and moments of self-doubt. Maintaining motivation and a constructive mindset is therefore crucial. A growth mindset, as proposed by Carol Dweck (2006), provides a foundation for resilience by framing challenges as opportunities for learning rather than threats to self-worth. In this section, we explore how to develop a growth mindset, implement strategies to sustain motivation, and leverage support networks to thrive in research.



3.1 What is a growth mindset?

A growth mindset is the belief that abilities and intelligence can develop through effort and learning. With this mindset, failures become opportunities to improve, and setbacks are seen as part of the learning process.

Activity 5: Exploring your mindset

 10 minutes

Complete a short self-assessment to determine whether you tend towards a fixed or growth mindset. Reflect on how this influences your response to setbacks. Consider one area where adopting a growth mindset could change how you approach research setbacks.

Example:

- Fixed mindset: 'I failed, so I'm not good at this.'
- Growth mindset: 'I failed, but I can learn and improve.'

Below are a few options, pick the one that works best for you.

- [Psychology Today: Growth Mindset Test](#) This one is quick to do and helps you to see where you fall on the mindset scale.
- [IDRIlabs Growth Mindset / Fixed Mindset Test](#) This is based on Carol Dweck's work and offers a more detailed self-assessment.
- [UNC Mindset Quiz \(PDF\)](#) A printable worksheet version; useful if you would like a paper version to work through instead.

3.2 Psychological strategies for resilience

Maintaining motivation requires both internal strategies and environmental support. Several evidence-based approaches are particularly effective: [Editor: AP to build: <https://h5p.org/image-hotspots>]

Infographic idea: ‘Daily habits for resilience’

- Cognitive reframing
- Mindfulness
- Self-reflection
- Self-determination theory (SDT)
- Grit and perseverance
- Cognitive reframing: Interpret challenges as opportunities.
 - As Lazarus and Folkman (1984) describe, reframing challenges as opportunities reduces stress and fosters problem-solving. For example, a failed experiment can be viewed as insight into methods that do not work, guiding future research design.
- Mindfulness: Stay present and reduce stress during setbacks.
 - Mindfulness practices – such as focused breathing or brief meditative pauses – help manage stress and maintain presence during high-pressure periods. Regular self-reflection allows researchers to track progress, identify learning points, and celebrate small wins, which reinforce motivation.
- Self-reflection: Regularly review progress and learning points.
- Self-determination theory (SDT): Deci and Ryan’s SDT suggests that motivation thrives when individuals experience autonomy, competence, and relatedness. In research, autonomy arises from controlling your work plan, competence from skill development, and relatedness from collaboration and mentoring. These elements create intrinsic motivation that sustains effort through challenges.
- Grit and perseverance: Angela Duckworth’s (2016) concept of grit emphasises sustained passion and perseverance toward long-term goals. Combining grit with a growth mindset enables researchers to navigate slow progress, repeated setbacks, or demanding projects while maintaining engagement and focus.

Activity 6: Daily resilience habits

 15 minutes

- Choose 3 daily habits to support your resilience (e.g., journaling, mindful pauses, celebrating small wins).
 - Track your practice for one week and reflect on its impact.
1. Complete Angela Duckworth’s *Grit Scale* online: [Take the Grit Scale](#)
 2. Record your overall grit score.
 3. Reflect on the results using the prompts below.
- Were you surprised by your score? Why or why not?
 - Think about a recent research setback you faced. How did your perseverance (grit) influence your response?

- Where could developing more grit help you stay motivated when progress feels slow?

Provide your answer...

4 Practical strategies to stay motivated

Motivation is most effective when paired with clear planning and tangible actions. The next sections explore several practical approaches. [Editor: AP please redraw, based on these ideas:

<https://previews.123rf.com/images/bandit2523/bandit25231604/bandit2523160400164/57945534-choosing-between-goal-plan-action-success.jpg>

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<https://previews.123rf.com/images/nialowwa/nialowwa2203/nialowwa220314128/183839181-conceptual-display-new-year-goal-plan-action-concept-meaning-business-solution-and-planning-with.jpg>]

4.1 SMART Goal setting

- **Specific:** Clearly define what you want to achieve.
- **Measurable:** Identify how success will be measured.
- **Achievable:** Ensure the goal is realistic given your resources.
- **Relevant:** Align with your broader objectives.
- **Time-bound:** Set a deadline for completion.

Breaking large projects into smaller milestones allows for regular progress checks, creating a sense of accomplishment and reinforcing momentum.

Activity 7: SMART goal exercise

 15 minutes

Set a SMART goal for your current project. Break your goal into smaller milestones that will help you track your progress.

Submit your goal and milestones in the free response box provided. Reflect on how these steps will help you achieve your overall goal.

Provide your answer...

4.2 Time management [Editor: AP please redraw an image based on these ideas:

<https://previews.123rf.com/images/sergeyvasutin/sergeyvasutin1702/sergeyvasutin170200057/70794351-vector-line-art-concept-of-time-management-clock-with-points-different-office-and-personal-items.jpg>

<https://cdn.vectorstock.com/i/1000v/79/35/clock-concept-time-management-vector-9527935.jpg>

Effective time management is essential for maintaining focus and meeting your deadlines. To achieve this, it is important to **prioritise tasks** and **avoid procrastination**. Start by identifying the most urgent and important tasks, and tackle these first to ensure progress on key objectives.

Using **time-blocking and task categorisation** can further help you **maximise focus**. Allocate specific blocks of time to different activities, and group similar tasks together to reduce context-switching. This approach can help you maintain momentum and make steady progress toward your goals.



Tip: Even short, intentional pauses improve focus and productivity.

To practice planning your day effectively, use the Eisenhower Matrix to categorise tasks based on urgency and importance.

- Quadrant 1: Urgent and important – tasks you should do immediately.
- Quadrant 2: Important but not urgent – tasks to schedule for later.
- Quadrant 3: Urgent but not important – tasks to delegate if possible.
- Quadrant 4: Not Urgent and not important – tasks you can minimise or eliminate.

Use the table below to list your tasks. Try to think of tasks from your current work or study schedule.

Table 2 High and low priority categories

	Urgent	Not urgent
Important	For example: Submit project draft.	For example: Plan research outline.
Not important	For example: Respond to routine emails.	For example: Check social media.

4.3 Maintaining work-life balance

Sustained motivation requires managing energy, not just time. Engaging in hobbies, exercise, mindfulness, or meditation helps recharge mentally and physically. Setting boundaries between research and personal life prevents burnout and ensures consistent productivity.



Tip: Even short, intentional pauses improve focus and productivity.

5 Building support networks

Accountability Partners and Support Networks: Regular check-ins with peers, mentors, or writing groups provide encouragement, feedback, and a sense of community. Sharing challenges and solutions reduces isolation and fosters a collaborative culture, reinforcing resilience.

Resilience in research is not just an individual skill; it is nurtured through social connections, supportive environments, and intentional planning. While cognitive strategies, motivation, and mindset form the foundation of resilience, building a robust support system and creating a personal action plan ensures that these skills are sustained over time. This section explores practical ways to leverage networks, engage with communities, and formalise resilience strategies into a personalised plan.

5.1 Networking and Mentoring

Research can feel isolating, especially during challenging periods such as writing up results, waiting for funding decisions, or troubleshooting experiments. Studies show that social support significantly contributes to psychological resilience (Cohen & Wills, 1985). Engaging with peers, mentors, and collaborators provides encouragement, feedback, and practical guidance that buffer against stress and setbacks.

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[Editor: from Ana : done] [Editor: AP: From below onwards, please build convert to <https://h5p.org/accordion>]

Mentoring relationships: Mentors offer wisdom, perspective, and encouragement. Regular meetings help track progress, clarify goals, and discuss strategies for overcoming challenges. Mentoring is also an avenue to normalise setbacks: hearing how experienced researchers navigated rejection or failure reinforces that challenges are part of the academic journey.

Tips for engaging mentors

- Be specific: when you approach a mentor, explain clearly what you'd like advice on (e.g., feedback on a draft, guidance on career steps).
- Respect their time: ask for short, focused meetings rather than open-ended chats.
- Follow up: show appreciation and let them know how you've applied their advice.

Think of one person who could act as a mentor in your research journey. How might you approach them for support?


Peer networks: Connecting with peers through writing groups, online forums, or research seminars fosters relatedness, an essential component of Self-Determination Theory (Deci & Ryan, 2000). Peer support encourages collaboration, shared problem-solving, and accountability, reducing feelings of isolation and impostor syndrome.

Tips for connecting with peers

- Start small: join a study group, writing circle, or informal coffee chat.
- Share experiences: talking about your own challenges often encourages others to open up.
- Collaborate: offer to review a peer's work or co-organise a practice presentation.

[Editor: AP: Accordion text ends here]

Activity 8: Support network map

 10 minutes

List one way you could strengthen connections with your peers this month (e.g., joining a study group, organising a joint task).

Provide your answer...

Create a visual map (offline, on some paper or in a notebook) of your support system. Include mentors, peers, collaborators, family, or professional support services. Identify gaps and consider steps to strengthen connections. [Editor: AP: please redraw image, based on these https://kidshelpphone.ca/wp-content/uploads/Community-of-support-ovals-V3_Page_2-new-1110x858.jpg or https://kidshelpphone.ca/wp-content/uploads/Community-of-support-pod-V3_Page_2-new-1110x858.jpg or <https://www.researchgate.net/profile/Ingrid-Waldron/publication/295093511/figure/fig3/AS:704610993975298@1545003760372/Support-network-for-Sheila.png>]

5.2 Community and culture

Participation in conferences, webinars, and journal clubs not only updates knowledge but also provides social and professional reinforcement. Collaborative learning environments promote resilience by making setbacks a shared experience rather than a solitary challenge.

- Participate in online and offline research communities.
- Engage with peer feedback and collaborative learning.

For a quick guide to building a research support community, the following resources should be helpful:

- UCSF Clinical & Translational Science Institute (2010) *Community-Engaged Research: A Quick-Start Guide for Researchers*, San Francisco: UCSF CTSI. Available at: accelerate.ucsf.edu
- McMaster University / SFU etc. (2024) *A Guide to Community-Engaged Research: Community Resource Handbook* Available at: [Community Engagement](#)



Tips for building online communities:

- Choose wisely: look for forums, webinars, or social media groups that are active and well-moderated.
- Engage actively: don't just observe. Ask questions, comment on posts, or share useful resources.
- Protect your time: set boundaries to avoid spending too long online.

Find one online group, webinar, or community you could join this week. How could it help support your research resilience?

Provide your answer...

6 Personal resilience plan

A personal resilience plan translates knowledge of resilience into actionable strategies tailored to individual research contexts. Such a plan combines mindset, motivation, coping strategies, and support networks into a coherent framework that can guide daily and long-term practices. [Editor: AP: redraw based on

<https://i.pinimg.com/736x/f1/39/2b/f1392bc282cf5f277e7b055889d1f51d.jpg>

https://quietspacecoaching.co.uk/wp-content/uploads/2018/07/sprout-1147803_960_720.png]

6.1 Action Planning

Developing a personal resilience plan is about turning insight into action.

- Combine insights from previous sections to create a personalised plan.
- Include strategies, SMART goals, and support systems.

[Editor: from Ana: done] [Editor: AP: can this text be made into <https://h5p.org/accordion>]

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Step 1: Reflect on past challenges Begin by considering previous setbacks, how you responded, and what strategies worked. Reflective journaling can help identify patterns, strengths, and areas for improvement.

Step 2: Set smart resilience goals Incorporate specific, measurable, achievable, relevant, and time-bound goals that strengthen your ability to cope with challenges. For example:


- 'I will practice mindfulness for 10 minutes every day for the next month to manage stress.'
- 'I will schedule weekly check-ins with my mentor to discuss project progress and challenges.'

Step 3: Identify daily habits and coping strategies

- Select routines that reinforce resilience, such as journaling, mindful pauses, or celebrating small achievements.
- Use trackers or reminders to embed these habits into daily practice.

Step 4: Leverage support networks Map out the people, communities, and resources that will support you. Determine how to engage regularly with these networks, whether through peer discussions, mentoring, or collaborative activities.

Activity 9: Resilience plan worksheet

 15 minutes

Complete the downloadable worksheet and commit to one concrete action for the coming week.

[Activity 9 Resilience plan worksheet](#)

Tip: Keep all your worksheets from the course so that at the end, you can compile them into your personal resilience journal.

6.2 Motivational letter to yourself

Write a short letter to your future self to revisit when facing challenges. Include:

- What inspires you about your project or research?
- Key goals you hope to achieve. What achievements are you excited about?
- What encouragement would you give yourself for tough times?

You can use the free response box below to draft your letter.

Provide your answer...

Choose how to receive the letter. Delivery options: email it to yourself with a future delivery date, submit it to your network or save it for personal reflection.

Conclusion

This course has explored resilience, motivation, and practical strategies to overcome setbacks. You reflected on personal challenges, engaged with real-world examples, and created a personal action plan to maintain motivation. [Editor: from Ana: done] [Editor: AP: Please can we change this into an <https://h5p.org/accordion>]

Interactive content is not available in this format.



Resilience is a dynamic skill, not a fixed trait. As Luthar, Cicchetti, and Becker (2000) explain, resilience emerges through adaptive processes in response to stress, setbacks, and challenges. In research, this means learning to respond constructively to failed experiments, paper or grant rejections, and critical feedback, rather than being discouraged or disengaged.

Setbacks are normal and useful. The examples shared during activities, such as failed experiments, time management struggles, and impostor syndrome, illustrate that challenges are part of the research journey. Through reflective exercises and cognitive reframing, you learned to reinterpret setbacks as learning opportunities, aligning with Lazarus and Folkman's (1984) Stress and Coping framework. Normalising these experiences reduces self-blame, strengthens perseverance, and fosters a proactive approach to problem-solving.




A growth mindset supports sustained learning and motivation. By adopting a growth mindset (Dweck, 2006), you are encouraged to view abilities as developable and setbacks as opportunities to improve. When paired with grit (Duckworth, 2016), a growth mindset enables you to persist through periods of slow progress, long-term projects, and complex challenges. Interactive quizzes and reflections this week helped you identify areas where mindset adjustments could enhance resilience.

Motivation requires planning, self-care, and accountability. Effective motivation strategies—such as setting SMART goals, celebrating small wins, maintaining work-life balance, and practising daily resilience habits—equip you to navigate high-pressure environments. Self-Determination Theory (Deci & Ryan, 2000) highlights that intrinsic motivation thrives when your research allows for autonomy, competence, and relatedness, all of which were reinforced through peer discussions, support networks, and mentoring activities.

Support networks amplify resilience. This course emphasised that resilience is not developed in isolation. Mapping your support system, engaging with peers, and seeking guidance from mentors or writing groups strengthens coping mechanisms and reduces isolation. Peer discussions and collaborative exercises demonstrate that sharing setbacks and solutions fosters a supportive research culture and reinforces collective learning.

Personal resilience plans make strategies actionable. Combining reflection, goal-setting, and social support into a personal resilience plan allows you to operationalise theory. Exercises like the 'Letter to Future Self' and the 'Commit to One Action' activity provide tangible methods for embedding resilience into your daily practice, creating a sustainable approach to overcoming challenges and maintaining motivation. [Editor: AP: End of accordion text]

Table 3 Suggested next steps – Commit to resilience

	Implement your personal resilience plan	Regularly review and update your goals, habits, and support strategies to reflect new challenges or learning experiences.
	Engage with your support network consistently	Schedule mentoring sessions, join writing groups, and participate in research communities to reinforce accountability and collaboration.
	Reflect periodically	Use journaling, self-quizzes, and your 'Letter to Future Self' to track progress, celebrate achievements, and recalibrate strategies.
	Apply cognitive reframing	Actively reinterpret setbacks in real time, transforming obstacles into opportunities for skill development and knowledge gain.
	Sustain motivation	Celebrate small wins, maintain work-life balance, and revisit intrinsic motivations to keep engagement high.

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Additional resources

Books:

- Grit – Angela Duckworth

Podcasts:

- 'The Hidden Brain'
- 'The Struggling Scientists'

Articles:

- **'Here's how to deal with failure, say senior scientists'** – *Nature*: This article discusses strategies for coping with rejection and failure in academic research. [Nature](#)
- **'6 ways to deal with rejection'** – *Nature Index*: This piece offers advice on managing rejection in the research field. [Nature](#)
- **'Mental health in academia – an invisible crisis'** – *The Physiological Society*: This article explores the challenges of mental health among academics. [The Physiological Society](#)
- **'Special Issue: Mental Health in Academia – Breaking the silence from top-down'** – *Marie Curie Alumni Association*: This publication addresses mental health issues in academia and emphasises the importance of open discussions. mariecuriealumni.eu

Acknowledgements

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