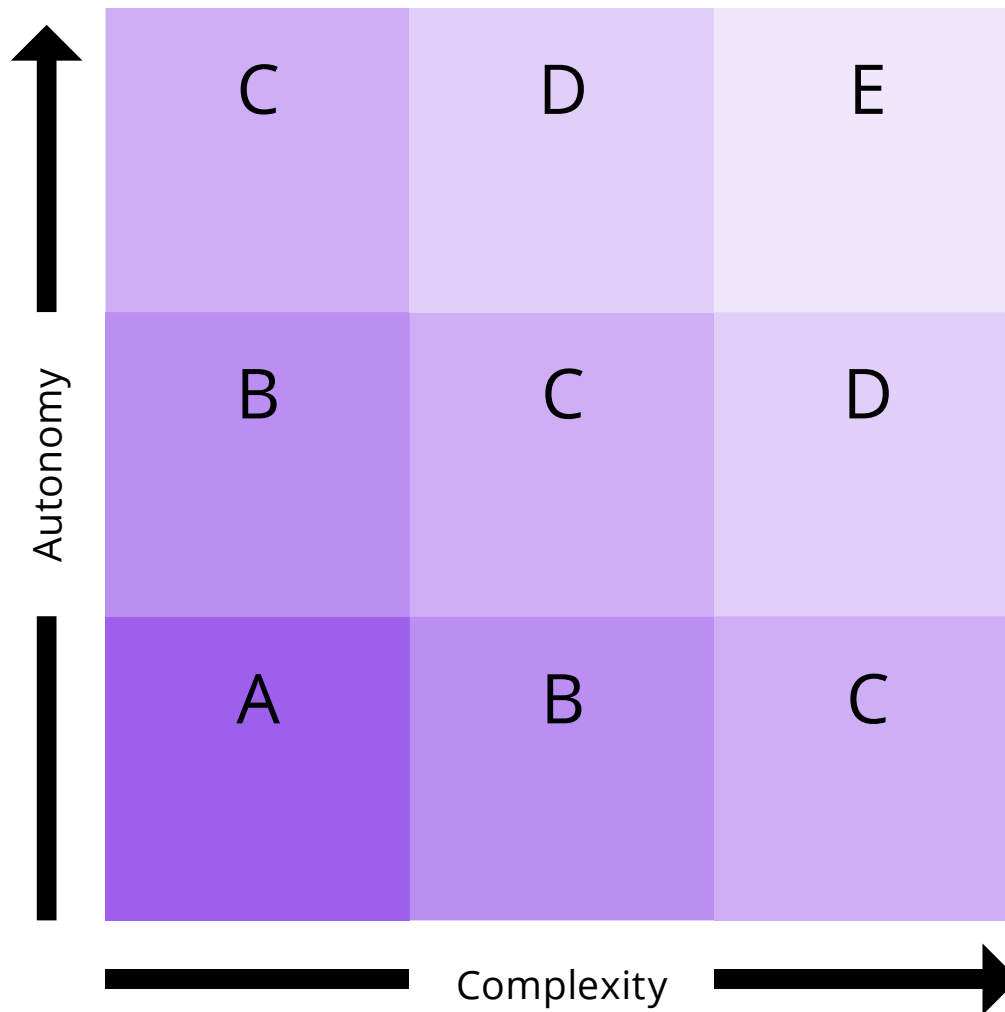


# The Research Autonomy and Complexity Tool (RAC-T)

Workshop guide



## Overview of the Research Autonomy and Complexity Tool (RAC-T)

Autonomy ↑	<p><b>Level C</b></p> <p>Complexity: low</p> <ul style="list-style-type: none"> <li>• Single element assignment, one context</li> <li>• Limited number of themes of a single order/scale level</li> <li>• Application of the student-known</li> <li>• Procedures</li> <li>• Mono-disciplinary</li> <li>• Location: within the context of the educational programme or for the student-familiar context</li> </ul> <p>Autonomy: high</p> <ul style="list-style-type: none"> <li>• A lot of self-steering, supervision upon request or at low frequency</li> <li>• A high amount of freedom to make process choices</li> <li>• Large responsibility for the end result</li> <li>• Supervises others in a team</li> <li>• Strategic role</li> </ul>	<p><b>Level D</b></p> <p>Complexity: middle</p> <ul style="list-style-type: none"> <li>• Multiple (part) assignments in a single situation, or a single element assignment in multiple situations</li> <li>• Limited number of themes of different order/scales, or multiple themes of a single order/scale</li> <li>• Assignment requests adaptation of known procedures</li> <li>• Limited interdisciplinary</li> <li>• Unfamiliar context but can be overseen in size and system complexity</li> </ul> <p>Autonomy: high</p> <ul style="list-style-type: none"> <li>• A lot of self-steering, supervision upon request or at low frequency</li> <li>• A high amount of freedom to make process choices</li> <li>• Large responsibility for the end result</li> <li>• Supervises others in a team</li> <li>• Strategic role</li> </ul>	<p><b>Level E</b></p> <p>Complexity: high</p> <ul style="list-style-type: none"> <li>• Diversity in (part) assignments in different contexts</li> <li>• Multiple themes of different order/scale</li> <li>• Unknown procedure</li> <li>• New knowledge and skills need to be developed – Multidisciplinary</li> <li>• Location: context is unknown, large and complex</li> </ul> <p>Autonomy: high</p> <ul style="list-style-type: none"> <li>• A lot of self-steering, supervision upon request or at low frequency</li> <li>• A high amount of freedom to make process choices</li> <li>• Large responsibility for the end result</li> <li>• Supervises others in a team</li> <li>• Strategic role</li> </ul>
	<p><b>Level B</b></p> <p>Complexity: low</p> <ul style="list-style-type: none"> <li>• Single element assignment, one context</li> <li>• Limited number of themes of a single order/scale level</li> <li>• Application of the student-known</li> <li>• Procedures</li> <li>• Mono-disciplinary</li> <li>• Location: within the context of the educational programme or for the student-familiar context</li> </ul> <p>Autonomy: middle</p> <ul style="list-style-type: none"> <li>• Reasonable amount of autonomy and average amount of guidance, added with supervision upon request</li> <li>• Freedom in making choices within a fixed framework</li> <li>• Final responsibility of a part of the final assignment</li> <li>• Tactical role</li> </ul>	<p><b>Level C</b></p> <p>Complexity: middle</p> <ul style="list-style-type: none"> <li>• Multiple (part) assignments in a single situation, or a single element assignment in multiple situations</li> <li>• Limited number of themes of different order/scales, or multiple themes of a single order/scale</li> <li>• Assignment requests adaptation of known procedures</li> <li>• Limited interdisciplinary</li> <li>• Unfamiliar context but can be overseen in size and system complexity</li> </ul> <p>Autonomy: middle</p> <ul style="list-style-type: none"> <li>• Reasonable amount of autonomy and average amount of guidance, added with supervision upon request</li> <li>• Freedom in making choices within a fixed framework</li> <li>• Final responsibility of a part of the final assignment</li> <li>• Tactical role</li> </ul>	<p><b>Level D</b></p> <p>Complexity: high</p> <ul style="list-style-type: none"> <li>• Diversity in (part) assignments in different contexts</li> <li>• Multiple themes of different order/scale</li> <li>• Unknown procedure</li> <li>• New knowledge and skills need to be developed – Multidisciplinary</li> <li>• Location: context is unknown, large and complex</li> </ul> <p>Autonomy: middle</p> <ul style="list-style-type: none"> <li>• Reasonable amount of autonomy and average amount of guidance, added with supervision upon request</li> <li>• Freedom in making choices within a fixed framework</li> <li>• Final responsibility of a part of the final assignment</li> <li>• Tactical role</li> </ul>
	<p><b>Level A</b></p> <p>Complexity: low</p> <ul style="list-style-type: none"> <li>• Single element assignment, one context</li> <li>• Limited number of themes of a single order/scale level</li> <li>• Application of the student-known</li> <li>• Procedures</li> <li>• Mono-disciplinary</li> <li>• Location: within the context of the educational programme or for the student-familiar context</li> </ul> <p>Autonomy: low</p> <ul style="list-style-type: none"> <li>• Limited autonomy and intensive guidance</li> <li>• Asks for assistance for unexpected circumstances</li> <li>• Does not make independent decisions</li> <li>• Responsibility for own actions</li> </ul>	<p><b>Level B</b></p> <p>Complexity: middle</p> <ul style="list-style-type: none"> <li>• Multiple (part) assignments in a single situation, or a single element assignment in multiple situations</li> <li>• Limited number of themes of different order/scales, or multiple themes of a single order/scale</li> <li>• Assignment requests adaptation of known procedures</li> <li>• Limited interdisciplinary</li> <li>• Unfamiliar context but can be overseen in size and system complexity</li> </ul> <p>Autonomy: low</p> <ul style="list-style-type: none"> <li>• Limited autonomy and intensive guidance</li> <li>• Asks for assistance for unexpected circumstances</li> <li>• Does not make independent decisions</li> <li>• Responsibility for own actions</li> </ul>	<p><b>Level C</b></p> <p>Complexity: high</p> <ul style="list-style-type: none"> <li>• Diversity in (part) assignments in different contexts</li> <li>• Multiple themes of different order/scale</li> <li>• Unknown procedure</li> <li>• New knowledge and skills need to be developed – Multidisciplinary</li> <li>• Location: context is unknown, large and complex</li> </ul> <p>Autonomy: low</p> <ul style="list-style-type: none"> <li>• Limited autonomy and intensive guidance</li> <li>• Asks for assistance for unexpected circumstances</li> <li>• Does not make independent decisions</li> <li>• Responsibility for own actions</li> </ul>
	Complexity →		



## Aim

Discuss the level of autonomy and complexity of research (assignments, module or curriculum) within your team.



## Equipment

- RAC-T tool



## Preparation

- Set diagram on table
- Read through the instrument explanations for the RAC-T.



## Workshop

- 1. Discuss the autonomy and complexity of assignments:** for your given context, use the RAC-T tool to assign a letter from A-E based on the level of autonomy and complexity:
  - How much autonomy does the student have in completing a research assignment? (is it high, medium or low)
  - What is the complexity level of the research assignment? (is it high, medium or low)
  - Examples: Can you explain what you mean for each letter you assign? What exactly is expected from the student in the assignment?
  - Are these qualities adequately described in learning material to the student?
- 2. Reflection:**
  - Are there any key areas where research skills need to be more clearly described? This might involve changes to the curriculum, or making skills more explicit during teaching.
  - Are there any missing research skills that your team needs to focus on?



### Adapting the workshop

You can adapt the discussion for your target group, for example for discussions at the module level, curriculum level or at an organisational level. Below are three examples of how you can adapt the tool for your team.

#### At the single module level

The RAC-T tool can be used when developing individual modules. For learning materials such as the student study guide, or presentations during lessons, you can use the information from the table to make learning goals more explicit.

You could consider the following questions:

- Is the level of autonomy and complexity of assignments made explicit during this module?
- Are the aspects of research that the students will learn made explicit during this

#### At the curriculum or department level

These tools can be used during a curriculum mapping exercise to get an overview of the research skills being taught across modules. This can be used to determine the overall required performance level of students, what they need for graduation and their future careers.

Questions for discussion might include:

- Are students acquiring the desired level of autonomy, with the desired level of complexity in assignments?
- Are all of the priority aspects of research being taught to students? How are these assessed?

#### For your organisation (university or wider policy level)

The combination of the tools can be used to compare study programmes over time, or even across an entire organisation. This can be used to evaluate strategy changes, for example the increased emphasis on building research into higher education.

- Are students acquiring the desired level of autonomy, with the desired level of complexity in assignments?