**INTRODUCTION**

- Self-regulated learning has an influence on students’ academic success.  
- This study investigated self-regulated learning strategies used in a first-year chemistry course delivered completely online due to Covid-19. 
- Self-regulated learning theory served as the theoretical framework for the study.

**AIM**

Identify learning strategies associated with success in a first-year chemistry course ran online due to Covid-19.

**RESEARCH QUESTION**

1. Which learning strategies differentiate between poorly performing (failed exam) and strongly performing (passed exam) students?

**METHODOLOGICAL APPROACH**

**Case study**

**Mixed methods approach** *(Explanatory design)*

**Data collection**

- Quantitative (MSLQ ² and OSLQ ³)
- Qualitative (Follow-up interviews)

**Sampling method** *(Non-probability convenience sampling)*

**Data analysis**

- Quant: SPSS and Rasch analysis
- Qual: Thematic analysis

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**RESULTS**

**Effective learning strategies (exam performance)**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
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<tbody>
<tr>
<td>Effort regulation</td>
<td>-3.85</td>
<td>.000</td>
<td>-0.944</td>
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<td>Goal setting</td>
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<td>.000</td>
<td>-1.180</td>
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<td>Time management</td>
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<td>-0.823</td>
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<td>Critical thinking</td>
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<td>.002</td>
<td>1.082</td>
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<td>.018</td>
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</tbody>
</table>

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**Reasons peer learning, help seeking and task strategies were under-used**

**Peer learning**

- Isolation due to lockdown restrictions
- Lack of data and internet connectivity
- Struggled to fit in and make study friends

**Help seeking**

- Confusion and inability to frame questions
- Delayed responses from instructors
- Preferred to study and sort out their own confusion

**Task strategies**

- Too confused to interact in class
- Fear of exposure to classmates and instructors

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