How can we Ease the Transition from Further to Higher Education?

A Pilot Study on the Use of Moodle to Welcome New Students to the Department of Chemistry

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Rationale

The literature presents many challenges that students face when moving from high school to university (Coertjens et al., 2017).

• “The more individuals used social networking sites to gather information and connect with friends, the lower they reported their academic adjustment to be.” Raacke & Bonds-Raacke, 2015

• “[We recommend the prioritisation of] open-weeks to ensure that [freshers] are knowledgeable of the degree programmes they are enrolling for.” Methebula, 2015

• “Pre-university effort and pre-university academic self-efficacy both positively [correlate] with academic success.” van Herpen et al., 2017
Research Questions

- Can we use a pre-university Moodle page to reduce students’ anxiety about university?
- Do students in certain groups feel differently about university? (How can we help them?)
  - Pre-university qualifications
  - Nationality
  - Gender
The page was designed to be in line with the UCL’s Moodle Baseline+.
Welcome video
There is lots of support in this department and there are links on this Moodle page to direct you to that.

Key Information
Below are some key links that you will find useful before and during your degree.

1. CHEMINFO
   This is the Chemistry Undergraduate Information page (commonly referred to as CHEMINFO), where technical aspects of your degree programme, such as regulations, are shown. You will be automatically enrolled on this page.

2. Department of Chemistry Safety Page

1. Practice Submission
   Use the Word document below to complete the assignment and then try submitting it to each of the two submission activities below. Make a note of any hurdles you come across! Please note: these assignments are intended to give you an opportunity to see how Moodle works. Do NOT worry about the deadlines!
   1. Save your file as a PDF.
   2. Submit it to the Moodle practice assignment. What do you notice?
   3. Submit it to the Turnitin practice assignment. What do you notice?

3. Practice Assignment Form 28.1KB Word 2007 document
   Download this file and fill in the questions on page 2 (you only need one or two sentences per question).

4. Moodle Practice Assignment
   This is a standard Moodle assignment. The settings in this assignment are reasonably standard, with the exception that you may only submit files in PDF format.

Inorganic Chemistry
Pre-reading
Use this to revise simple bonding schemes. This will help you in your CHEM1005 Chemical Foundations lectures in inorganic chemistry.
Changes in confidence and anxiety?

Responses to a questionnaire before using the page \( n = 113 \) were compared to those from a questionnaire after using the page \( n = 60 \) at the beginning of term using a Mann-Whitney U test.

“I feel confident with coping with the workload at university.”

\[ p = 0.472 \]

“I am anxious about my time at university.”

\[ p = 0.473 \]
Students’ Expectations of Feedback at University

“How soon do you expect feedback after submission?” (Choose one.)

- <1 week: 17 responses
- 1 week: 23 responses
- 2 weeks: 11 responses
- 3 weeks: 6 responses
- 4 weeks: 3 responses

“How do you expect to receive feedback?” (Choose all that apply.)

- Grade or mark: 51 responses
- Comments on work: 56 responses
- Verbal comments from staff: 45 responses
- Verbal comments from other students: 25 responses
Participants \((n = 60)\)

**Pre-University Qualifications**
- **International Baccalaureate**: 16 (26.7%)
- **A-levels**: 36 (60%)
- **Advanced Placement**: 2 (3.3%)
- **Other**: 6 (10%)

**Area of Study at University**
- **Biology**: 32 (53.3%)
- **Chemistry**: 19 (31.7%)
- **Natural Sciences**: 9 (15%)
Participants ($n = 60$)

### Gender and Age

<table>
<thead>
<tr>
<th>Age (Years)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
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<td>21</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>1</td>
</tr>
</tbody>
</table>

$n = 60$, 8 did not answer

- Male ($n = 14$)
- Female ($n = 38$)

### Nationality

- Turkey
- Spain
- Singapore
- Poland
- Malaysia
- Kenya
- Italy
- Canada
- Bulgaria
- Bangladesh
- Thailand
- South Korea
- Romania
- Lithuania
- Prefer not to say
- France
- United Kingdom
- China

<table>
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<tr>
<th>Category</th>
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<th>%</th>
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<td>UK (&quot;home&quot;)</td>
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<td>23.3</td>
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<td>EU</td>
<td>12</td>
<td>20.0</td>
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<tr>
<td>International</td>
<td>30</td>
<td>50.0</td>
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<td>Prefer not to say</td>
<td>4</td>
<td>6.7</td>
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</tbody>
</table>

$99 + 19 = 118$
"I found the following activities useful."

<table>
<thead>
<tr>
<th>Resource</th>
<th>Positive</th>
<th>Neutral</th>
<th>Negative</th>
<th>Did Not Use (N/A)</th>
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</thead>
<tbody>
<tr>
<td>Welcome video</td>
<td>37</td>
<td>8</td>
<td>3</td>
<td>52</td>
</tr>
<tr>
<td>Diagnostic quiz</td>
<td>57</td>
<td>8</td>
<td>3</td>
<td>32</td>
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<td>&quot;Key Information&quot; tab</td>
<td>52</td>
<td>10</td>
<td>0</td>
<td>38</td>
</tr>
<tr>
<td>&quot;Your First Year&quot; tab</td>
<td>47</td>
<td>13</td>
<td>5</td>
<td>35</td>
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<tr>
<td>Pre-reading</td>
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<td>13</td>
<td>0</td>
<td>27</td>
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<tr>
<td>Library simulations</td>
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<td>8</td>
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<td>Library induction videos</td>
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% Responses (n = 60)
Pre-University Qualifications \((n = 60)\) (1/2)

Independent-Samples Median Tests

“\(I\) am anxious about my time at university.” \(p = 0.030\)

- Students with A-levels and IBs were spread.
- Those with Advanced Placements and other qualifications were more anxious.

![Bar chart showing responses to the statement “I am anxious about my time at university.”](chart.png)
Independent-Samples Kruskal-Wallis Test

“I have enough information to start my modules in the Department of Chemistry.”  \( p = 0.032 \)

- Students with A-levels and IBs felt well-informed.
- Students with Advanced Placements were less sure.
- Others (e.g. Matura) were very sure.

“I feel confident about coping with the workload at university.”  \( p = 0.020 \)

- IBs and other the most positive.
- A-levels were mixed.
- Advanced placement were negative (sample of 2).
Nationality \((n = 60)\)

**Independent-Samples Median Tests (1/2)**

“I am anxious about my time at university.” \(p = 0.039\)

- Most UK students claimed not to be anxious.
- Chinese students the most anxious.
- Insufficient data for other nationalities.
Gender \( (n = 60) \)

**Independent-Samples Kruskal-Wallis Test**

“I feel confident about coping with the workload at university.” \( p = 0.029 \)

- Male students all (strongly) agreed or were neutral.
- Female students were more spread.
- The mode for both groups was 4 (“agree”).

“I am anxious about my time at university.” \( p = 0.001 \)

- Females skewed to (strongly) agree.
- Males largely neutral or disagreeing.
Research Questions

• Can we use a pre-university Moodle page to reduce students’ anxiety about university?

• Do students in certain groups feel differently about university? (How can we help them?)
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  – Nationality
  – Gender
Outlook

• A welcome page needs to encourage students to engage with the page and invest time in it before coming to university.
  – More course-like structure to help students follow through and/or more gamification.

• Careful thought needs to be put into how we can help international students understand how university works in the UK.
  – Especially those who don’t have A-levels or IBs.