Multimedia Instructional Design in Aeronautical And Electronic Engineering Program

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2D or 3D?
Web-based Instructional Design

- Analysis
- Design
- Development
- Implementation
- Evaluation
Instructional material
Instructional material
Instructional material
Instructional material
How students like the program?

• A survey was developed to evaluate students’ perception toward the instructional design.

• Example item:

  1. 數位課程有趣並且能吸引我的注意力
  1. 數位課程能結合我的興趣
  1. 數位課程提高我學習本科目的信心
  1. 數位課程令我覺得滿意
Reliability and Validity

<table>
<thead>
<tr>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>變數 Alpha</td>
</tr>
<tr>
<td>原始 0.957904</td>
</tr>
<tr>
<td>標準化 0.957947</td>
</tr>
</tbody>
</table>

Around 60% of variability can be explained by only one factor. Scree plot suggests to include one factor.

Around 60% can be explained by one factor.
## Students Reaction

<table>
<thead>
<tr>
<th>課程反應</th>
<th>不贊成</th>
<th>贊成</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 數位課程有趣並且能吸引我的注意力</td>
<td>7.24</td>
<td>92.76</td>
</tr>
<tr>
<td>2. 數位課程能結合我的興趣</td>
<td>7.24</td>
<td>92.76</td>
</tr>
<tr>
<td>3. 數位課程提高我學習本科目的信心</td>
<td>9.28</td>
<td>90.72</td>
</tr>
<tr>
<td>4. 數位課程令我覺得滿意</td>
<td>7.47</td>
<td>92.53</td>
</tr>
<tr>
<td>5. 數位課程之教材難易度適中</td>
<td>9.05</td>
<td>90.95</td>
</tr>
<tr>
<td>6. 數位課程內容帶給我足夠的知識</td>
<td>6.79</td>
<td>93.21</td>
</tr>
<tr>
<td>7. 數位課程內容呈現方式清楚</td>
<td>7.69</td>
<td>92.31</td>
</tr>
<tr>
<td>8. 數位課程有助我對課程的理解與學習</td>
<td>13.35</td>
<td>92.08</td>
</tr>
<tr>
<td>9. 數位課程內容資訊太少，對我的學習幫助不大</td>
<td>74.21</td>
<td>25.79</td>
</tr>
<tr>
<td>課程反應</td>
<td>不贊成</td>
<td>贊成</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>10. 數位課程內容資訊太多，造成學習負擔</td>
<td>75.34</td>
<td>24.36</td>
</tr>
<tr>
<td>11. 數位課程的內容有助於我連結相關先備課程與知識</td>
<td>5.88</td>
<td>94.12</td>
</tr>
<tr>
<td>12. 我覺得數位課程有助於往後相關科目之學習</td>
<td>7.47</td>
<td>92.31</td>
</tr>
<tr>
<td>13. 對於數位課程上的學習效果感到滿意</td>
<td>8.14</td>
<td>91.86</td>
</tr>
<tr>
<td>14. 數位課程的學習對我而言很有收穫</td>
<td>8.14</td>
<td>91.86</td>
</tr>
<tr>
<td>15. 數位課程輔助學習對我而言有效用(效益上)</td>
<td>7.69</td>
<td>92.31</td>
</tr>
<tr>
<td>16. 數位課程輔助學習對我而言有效率(時間上)</td>
<td>8.6</td>
<td>91.4</td>
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<tr>
<td>17. 我以後會想再選擇有數位教材輔助學習的課程</td>
<td>8.14</td>
<td>91.86</td>
</tr>
<tr>
<td>18. 數位教材值得推薦給未使用過的班級或科系</td>
<td>8.14</td>
<td>91.86</td>
</tr>
</tbody>
</table>
Satisfaction by Grade
Satisfaction by Department
How different department reacts?

<table>
<thead>
<tr>
<th>Statement</th>
<th>航電</th>
<th>航機</th>
<th>显著性</th>
</tr>
</thead>
<tbody>
<tr>
<td>數位課程令我覺得満意</td>
<td>3.23</td>
<td>3.39</td>
<td>0.033*</td>
</tr>
<tr>
<td>數位課程有助我对課程的解與學習</td>
<td>3.27</td>
<td>3.40</td>
<td>0.060</td>
</tr>
<tr>
<td>數位課程內容資訊太少，對我的學習幫助大</td>
<td>3.09</td>
<td>3.22</td>
<td>0.063</td>
</tr>
<tr>
<td>我覺得數位課程有助於往後相關科目之學習</td>
<td>3.22</td>
<td>3.40</td>
<td>0.013*</td>
</tr>
<tr>
<td>對於數位課程上的學習效果感到滿意</td>
<td>3.20</td>
<td>3.33</td>
<td>0.058</td>
</tr>
<tr>
<td>數位課程的學習對我而言很有收穫</td>
<td>3.24</td>
<td>3.38</td>
<td>0.058</td>
</tr>
</tbody>
</table>
Thanks for your listening!