The Principles of Universal Design for Learning Implementation in Design Study Process

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Introduction

Starting their studies design students have different level of perception and understanding. There is a need for an instructional framework that would allow educational programming inclusive for all students. Implementation of UD principles in education offers a new approach to development of educational process, declaring the equal opportunities of education for everybody (Bowe, 2000). UDL offer to organise learning process that would provide diversity of:

- display materials,
- actions and ways of expression,
- diversity of participation options

corresponding to diversity of students’ learning strategies and previous experience (Rose, Meyer, Strangman, & Rappolt, 2002).

Methods

- In start-up phase students were tested by Santa Barbara Sense-Of- Direction Scale, Spatial Orientation Test, The Visual-Spatial/Sequential Identifier.
- Process of studies was performed according to UDL principles and guidelines (Rose, Meyer, Strangman, & Rappolt, 2002).

Results

The test results revealed that the students could conditionally be divided into three groups:

1. high level of spatial abilities, 60% of correct answers,
2. medium level of spatial abilities – 60% to 30% of correct answers,
3. low level of spatial abilities – less than 30% of correct answers.

The results of the testing indicates that the activities performed during the process have facilitated the improvement of the spatial abilities in students with various levels of spatial abilities.

<table>
<thead>
<tr>
<th>Testing</th>
<th>High spatial ability</th>
<th>Medium spatial ability</th>
<th>Low spatial ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline testing</td>
<td>34.8% n=8</td>
<td>47.8% n=11</td>
<td>17.3% n=4</td>
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<tr>
<td>End-point testing</td>
<td>56.5% n=13</td>
<td>34.8% n=8</td>
<td>8.7% n=2</td>
</tr>
</tbody>
</table>

Conclusion

In order to develop student’s spatial thinking and reasoning, as well as understanding of interconnection of knowledge and decision making skills needed for problem solving in design related tasks design study process should be organized according to guidelines and principles of Universal Design for Learning (UDL).

References


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