

## Appendix 1

This questionnaire carefully addresses the educational needs in the field of e-learning and provides various criteria, enabling comparison based on importance and necessity. Participants can express their opinions by referencing their experiences and perspectives in the field of e-learning, and contribute to the development of educational improvements at Shahid Beheshti University of Medical Sciences. This tool allows participants to comprehensively and systematically assess educational needs and participate in improving e-learning in the university environment.

Table 1: Educational needs identified in the field of e-learning based on previous studies

<b>A</b>	familiarity with netiquette rules
<b>B</b>	familiarity with material and intellectual property
<b>C</b>	skill of working with learning management systems
<b>D</b>	skill of working with educational software
<b>E</b>	skill of using electronic resources
<b>F</b>	virtual teaching skill
<b>G</b>	skill of managing the virtual learning environment
<b>H</b>	familiarity with electronic student assessment methods
<b>I</b>	skill of providing virtual feedback
<b>J</b>	skill of conducting online training courses
<b>K</b>	familiarity with how to interact in an electronic environment
<b>L</b>	skill of producing electronic content
<b>M</b>	familiarity with how to monitor student progress

Table 2: The 9-point scale of Thomas L. Saati

Value	Priority	Description
1	Equal importance	Both factors are equal in importance.
3	Moderate importance	A factor is somewhat more important than the other according to experiences and estimations.
5	Strong importance	A factor is much more important than the other.
7	Very strong importance	A factor is preferred significantly much more than the other.
9	Extreme importance	One of the factors is absolutely more important than the others.
2,4,6,8	Intermediate values	These are the intermediate values for the values mentioned above and used when compromise is needed.

Equal importance	Intermediate	Moderate importance	Intermediate	Strong importance	Intermediate	Very strong importance	Intermediate	Extreme importance
1	2	3	4	5	6	7	8	9

Table 3: Determining the importance and necessity of educational criteria for the faculty members of Shahid Beheshti University of Medical Sciences in the field of e-learning between criteria A and B.

<i>First group</i>	The 9-point scale of Saati																<i>Second group</i>	
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>B</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>C</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>D</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>E</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>F</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>G</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>H</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>I</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>J</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>K</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>L</i>
<i>A</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>M</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>A</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>C</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>D</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>E</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>F</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>G</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>H</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>I</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>J</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>K</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>L</i>
<i>B</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>M</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>A</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>B</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>D</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>E</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>F</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>G</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>H</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>I</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>J</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>K</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>L</i>
<i>C</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>M</i>
<i>D</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>A</i>
<i>D</i>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<i>B</i>

<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>C</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>E</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>F</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>G</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>H</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>I</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>J</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>K</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>L</b>
<b>D</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>M</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>A</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>B</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>C</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>D</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>F</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>G</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>H</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>I</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>J</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>K</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>L</b>
<b>E</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>M</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>A</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>B</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>C</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>D</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>E</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>G</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>H</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>I</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>J</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>K</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>L</b>
<b>F</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>M</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>A</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>B</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>C</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>D</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>E</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>F</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>H</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>I</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>J</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>K</b>
<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>L</b>

<b>G</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>M</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>A</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>B</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>C</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>D</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>E</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>F</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>G</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>I</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>J</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>K</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>L</b>
<b>H</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>M</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>A</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>B</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>C</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>D</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>E</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>F</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>G</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>H</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>J</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>K</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>L</b>
<b>I</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>M</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>A</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>B</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>C</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>D</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>E</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>F</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>G</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>H</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>I</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>K</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>L</b>
<b>J</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>M</b>
<b>K</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>A</b>
<b>K</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>B</b>
<b>K</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>C</b>
<b>K</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>D</b>
<b>K</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>E</b>
<b>K</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>F</b>
<b>K</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>G</b>
<b>K</b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b>H</b>

<b><i>K</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>I</i></b>
<b><i>K</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>J</i></b>
<b><i>K</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>L</i></b>
<b><i>K</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>M</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>A</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>B</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>C</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>D</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>E</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>F</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>G</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>H</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>I</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>J</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>K</i></b>
<b><i>L</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>M</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>A</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>B</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>C</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>D</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>E</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>F</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>G</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>H</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>I</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>J</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>K</i></b>
<b><i>M</i></b>	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	<b><i>L</i></b>