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*The effect of points and  
audio on concentration,  
engagement, enjoyment,  
learning, motivation, and  
classroom dynamics using  
**Kahoot!***

Siri Mykland

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enjoyment , learning , motivation , and classroom dynamics using  
Kahoot!*

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# Research goal

*“The purpose of this study was to evaluate the effect of use of audio and points in a game-based learning platform for teaching new material from the point of view of a student in the context of a lecture.”*



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# Research questions and metrics

How does the use of audio and points affect the students' ...

**RQ1:** ...concentration?

**RQ2:** ...engagement?

**RQ3:** ...enjoyment?

**RQ4:** ...motivation and effort?

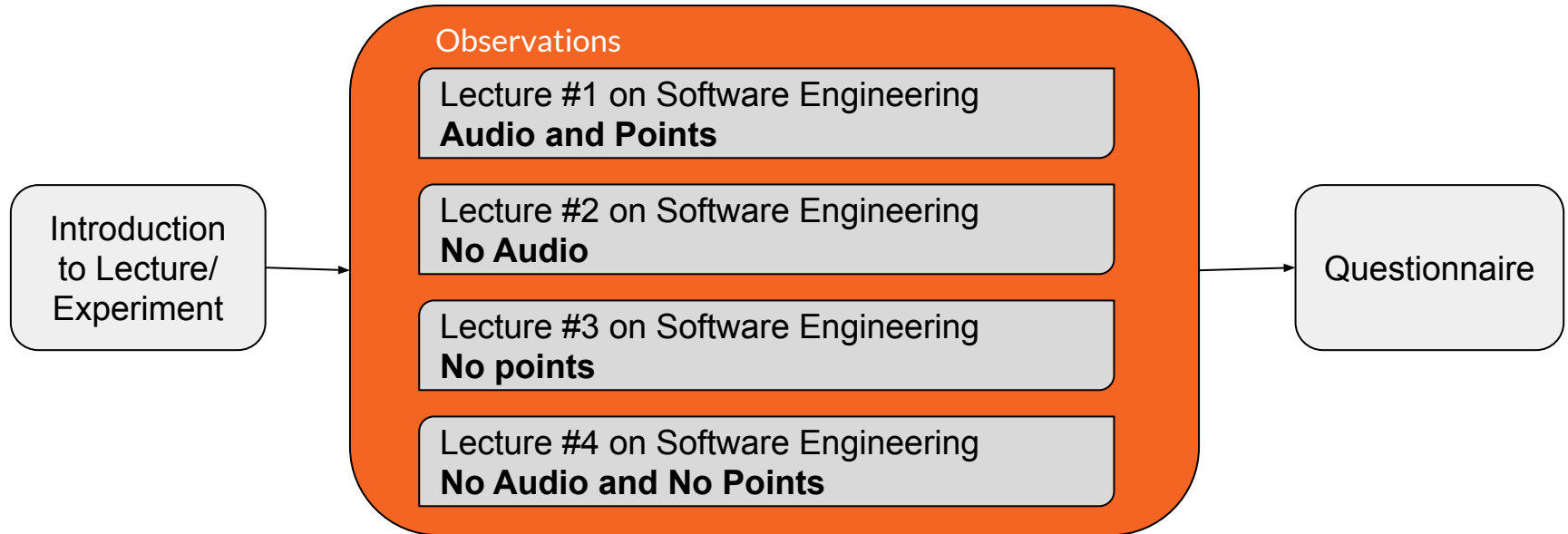
**RQ5:** ...learning outcome?

**RQ6:** How use of audio and points affect the classroom dynamics?

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# Experiment: Research Context and Method



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# RQ1: Effect on Concentration

Statement	Group	Disagree	Agree	H	P
1. Playing the quiz did not hold my attention	Full Kahoot!	85%	15%	0.23	0.9726
	No audio	84%	16%		
	No points	84%	16%		
	No audio/points	82%	17%		
2. The quiz kept my concentration during the lecture	Full Kahoot!	18%	82%	60.25	<b>&lt;0.0001</b>
	No audio	16%	84%		
	No points	16%	84%		
	No audio/points	<b>28%</b>	<b>72%</b>		

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## RQ2: Effect on Engagement

Statement	Group	Disagree	Agree	H	P
3. I thought playing the quiz was boring	Full Kahoot!	93%	7%	2.42	0.4899
	No audio	96%	4%		
	No points	91%	9%		
	No audio/points	84%	16%		
4. I felt increased pulse when answering questions	Full Kahoot!	31%	69%	50.56	<0.0001
	No audio	32%	68%		
	No points	<b>61%</b>	<b>39%</b>		
	No audio/points	<b>68%</b>	<b>32%</b>		

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## RQ3: Effect on Enjoyment

Statement	Group	Disagree	Agree	H	P
5. Playing the quiz was fun	Full Kahoot!	8%	92%	9.68	<b>0.0215</b>
	No audio	6%	94%		
	No points	9%	91%		
	No audio/points	<b>25%</b>	<b>75%</b>		

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# RQ4: Effect on Perceived Learning

Statement	Group	Disagree	Agree	H	P
5. I learned something from playing the quiz	Full Kahoot!	5%	95%	1.17	0.7602
	No audio	10%	90%		
	No points	2%	98%		
	No audio/points	2%	98%		

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## RQ5: Effect on Subjective Motivation and Effort

Statement	Group	Disagree	Agree	H	P
6. It was important to do well on the quiz	Full Kahoot!	28%	72%	2.8	0.4235
	No audio	22%	78%		
	No points	34%	66%		
	No audio/points	34%	66%		
7. Playing the quiz could be of some value to me	Full Kahoot!	7%	93%	0.78	0.8542
	No audio	7%	93%		
	No points	6%	94%		
	No audio/points	11%	89%		
8. I did not try very hard to do well on the quiz	Full Kahoot!	77%	23%	11.74	<b>0.0083</b>
	No audio	<b>93%</b>	<b>7%</b>		
	No points	74%	26%		
	No audio/points	<b>64%</b>	<b>36%</b>		
9. Playing the quiz made me less motivated about the subject	Full Kahoot!	93%	7%	0.25	0.9691
	No audio	91%	9%		
	No points	90%	10%		
	No audio/points	90%	10%		

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# RQ6: Effect on Classroom Dynamics

	No Points	Points
No Audio	<p>No audio, no points</p> <p>Low Energy      Quiet</p> <p>Low response      No cheering</p> <p>                         No questions</p>	<p>No audio</p> <p>Quiet      Concentrated</p> <p>No cheering      No questions</p> <p>                         No discussions</p>
Audio	<p>No Points</p> <p>                         High spirit</p> <p>Some dancing</p> <p>Laughter      Open questions</p> <p>                         Some discussions</p>	<p>Full Kahoot!</p> <p>                         High spirit</p> <p>Some dancing</p> <p>Laughter      Open questions</p> <p>                         Loud discussions      Focus</p>

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# RQ6: Effect on Classroom Dynamics

	No Points	Points
No Audio	<p>No audio, no points</p> <p>Low Energy      Quiet</p> <p>Low response      No cheering</p> <p>                         No questions</p>	<p>No audio</p> <p>Quiet      Concentrated</p> <p>No cheering      No questions</p> <p>                         No discussions</p>
Audio	<p>No Points</p> <p>                         High spirit</p> <p>Some dancing</p> <p>Laughter      Open questions</p> <p>                         Some discussions</p>	<p>Full Kahoot!</p> <p>                         High spirit</p> <p>Some dancing</p> <p>Laughter      Open questions</p> <p>                         Loud discussions      Focus</p>

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# RQ6: Effect on Classroom Dynamics

	No Points	Points
No Audio	No audio, no points Low Energy      Quiet Low response      No cheering No questions	No audio Quiet      Concentrated No cheering      No questions No discussions
Audio	No Points Some dancing      High spirit Laughter      Open questions Some discussions	Full Kahoot! Some dancing      High spirit Laughter      Open questions Loud discussions      Focus

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# Conclusion

Based on observations:

- Audio had the largest impact on classroom dynamics
- Best effect from combining audio and points

