Abstract
Due to numerous misinformation circulating about Covid-19. It was crucial to develop an interactive virtual health awareness course addressing Covid-19 and utilizing STEM learning in the content of the course. Twenty students (12 Females and 8 Males) from secondary schools inside Qatar participated in the course. The design of the course content integrated diverse tools were integrated in the course contents such as interactive quizzes, online games, videos, and PowerPoint presentations to increase student’s interest in STEM. A feedback mechanism evaluated the course content design and delivery. The results indicated student’s positive responses to the STEM learning experience and the activities implemented in course.

Introduction
Health awareness campaigns aim to raise awareness of specific diseases so that the necessary measures are executed rapidly. Due to the recent events of the Covid-19 pandemic, it is essential to raise awareness about the virus to decrease its spread. The health awareness targeting school students lack important aspects such as interactivity, engagement, and communication. Our work aims to design a virtual health awareness course following STEM curriculum standards to promote secondary student’s innovation.

Objectives
- Inspire student’s creativity and innovation to develop their capabilities.
- Integrate digital tools into the science activities of the course to address STEM learning.
- Encourage students to join and retain a three-weeks course during the pandemic outbreaks.

Methodology

1- Research Methods:

- Undergraduate Group 1
- Undergraduate Group 2
- Undergraduate Group 3

Three Facilitators

- GIIS Group 1
- Student 1
- Student 2
- Student 3

- Undergraduate Group 1
- Undergraduate Group 2
- Undergraduate Group 3

Three Facilitators

- GIIS Group 2
- Student 1
- Student 2
- Student 3

2- Course Breakdown:

- Main Sessions: Follow up session During follow up sessions the students are acquainted with numerous ICT tools to assist them in completing their assignments. Undergraduate students provide support to their group to finalize the tasks.
- Outcome: Improve students’ problem-solving capabilities, fostering peer collaboration in the teams, and increasing their innovation-based thinking and communication skills.

3- Course Assessment:

Table 1: Course assignments detailed information

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Assignment</th>
<th>Objectives</th>
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<tbody>
<tr>
<td>1</td>
<td>Make an Advertisement</td>
<td>Improve students’ ability to investigate and conduct research, and assess students’ reflections on the current event.</td>
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<tr>
<td>2</td>
<td>Create a Presentation related to the threat</td>
<td>Live discussions and debates enable the learning of crisis management skills.</td>
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<td>3</td>
<td>Develop a new prototype that reduces COVID-19 Transmission</td>
<td>Problem-solving capabilities, peer collaboration, and innovation-based thinking</td>
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<td>4</td>
<td>Writing report based on scientific research</td>
<td>Writing and oral communication skills</td>
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<tr>
<td>5</td>
<td>Document the pandemic</td>
<td>Improving competencies in documentation</td>
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<tr>
<td>6</td>
<td>Inquiries about Covid-19</td>
<td>Research and oral communication</td>
</tr>
<tr>
<td>7</td>
<td>Film Making</td>
<td>Video editing and film making</td>
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</tbody>
</table>

Figure 1: Distribution of secondary students groups under their UG mentors that were supervised by three mentors.

Figure 2: Session break down with 1 hour duration for main session, and a 30 minutes for the follow up session.

Figure 3: Course breakdown into 3 parts they are introductory session, scientific session, and concluding session.

Figure 4: Example of students project executed using ICT tools.

Figure 5: The use of digital learning tools during the session.

Figure 6: Student retention through the course.

Results and Discussion

The course succeeded in developing an engaging virtual Covid-19 health awareness course to overcome the drawbacks of conventional health awareness campaigns. It successfully evaluated the effect of integrating STEM learning, ICT tools, live discussion in the course content. Daily feedback from the participants is used to evaluate the effectiveness of the course, where participants highlighted the significance of integrating challenges and activities in the sessions.

Conclusion

We are grateful for the support given by Qatar University’s office of Vice President for Research and Graduate Studies.

Acknowledgments

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References

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