THE GAMIFICATION OF EFFECTIVE PATIENT COMMUNICATION

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BACKGROUND

Gamification is the process of incorporating games or game-like elements to something so as to encourage participation, and make something potentially tedious into a game. It is effective because it taps into the natural desire for competition and achievement. Teachers, executives, and more have used gamification to improve participation, productivity, outcomes, and make learning feel more like a game. Gamification can:

- Improve memory retention
- Engage users in an entertaining manner
- Provide a source of motivation through competition
- Provide an immersive, alternative experiential teaching method
- Provide safe, simulated realistic environments and situations
- Provide rapid, in-depth visible feedback

Gamulations are one method of implementing gamification. Gamulations are designed to integrate gamification principles with simulation. They offer a combination of the fun elements of games combined with the reality of real-world situations and challenges.

Effective patient communication is essential for all healthcare providers, and can:

- Improve transparency
- Decrease patient anxiety
- Increase patient compliance with treatment plans
- Build better healthcare provider-patient rapport
- Make patients feel more like individuals
- Improve patient perception of care
- Improve Hospital Consumer Assessment of Providers and Systems (HCAHPS) scores
- Reduce burnout in healthcare providers
- Improve overall clinical and medical outcomes

PROBLEM

Healthcare students commonly feel uncomfortable and unprepared for their first interactions communicating with real-life patients prior to, and during, their first hospital-based clinical rotations.

PURPOSE

The purpose of this study was to determine the efficacy of using a gamulation to improve healthcare student comfortability with communication skills prior to their first hospital-based clinical rotations.

METHODOLOGY

The research team collaborated with an external white-label private software as a service (SaaS) company (RedmerU.com) to design, build, host and support a cloud-based gamulation utilizing proprietary Breakthrough Learning Analytics Development Engine (B.L.A.D.E.) technology. This gamulation incorporated the AIDET® model of communication framework (Studer Group) due to its evidence-based success and use in local hospital markets. A 15 question, 10-point Likert scale survey was developed to assess 10 different aspects of comfort with patient communication, 1 aspect with familiarity of the AIDET model of communication framework, and 4 questions regarding perceived effectiveness of gamulations as an alternative method of teaching patient communication. A pre-test and post-test design method was utilized to compare the summed longitudinal data from 2 consecutive year cohorts of undergraduate Respiratory Care students (n=78). Wilcoxon Signed Rank Tests with Cohen's D Effect Sizes were used for statistical analyses to explore pre-and-post gamulation completion differences for all aspects.

RESULTS

There was an 88% overall response rate. Statistical significance was found for every aspect pre-and-post completion. Results are presented in Table 1 below.
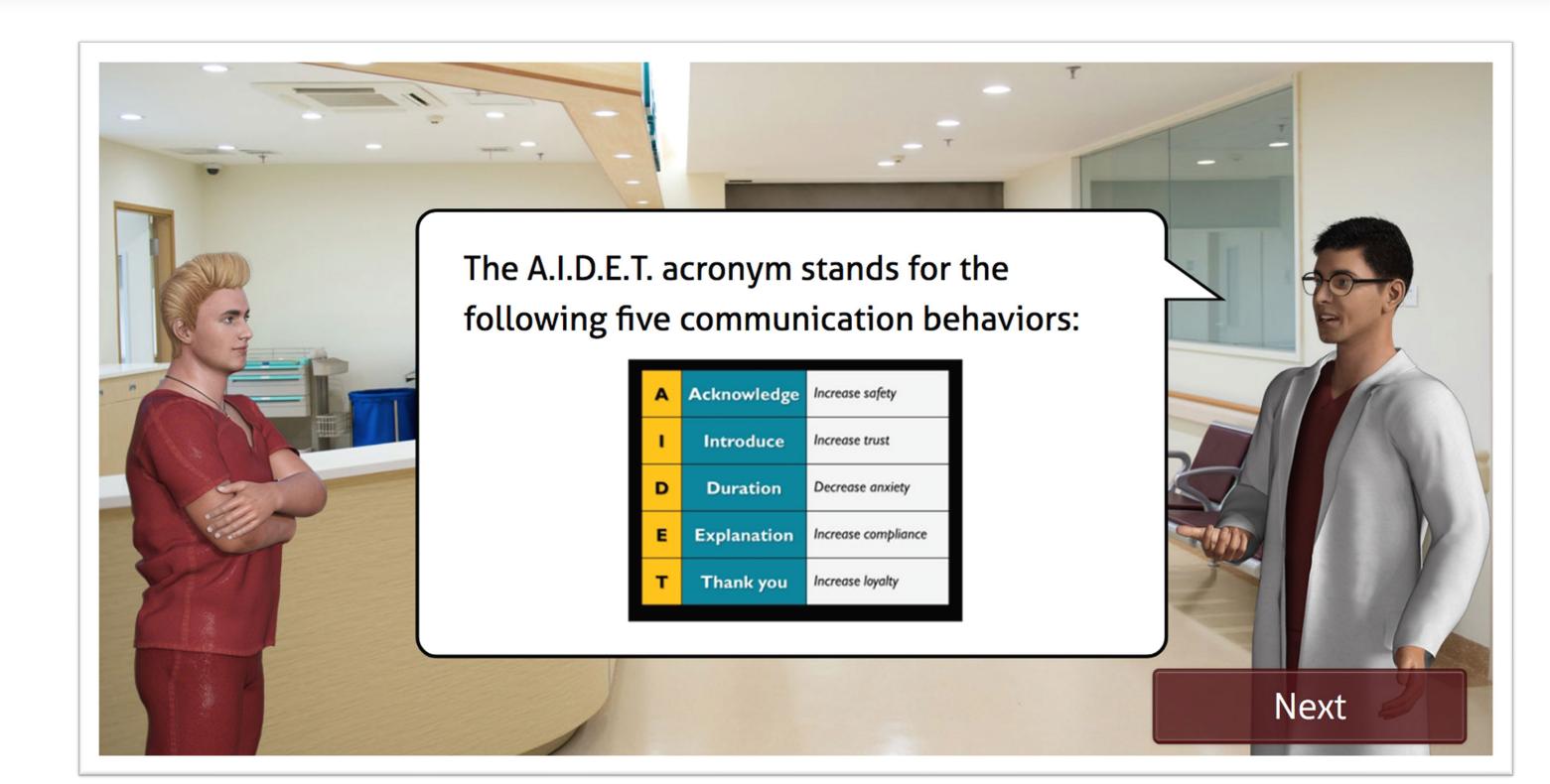
Table 1

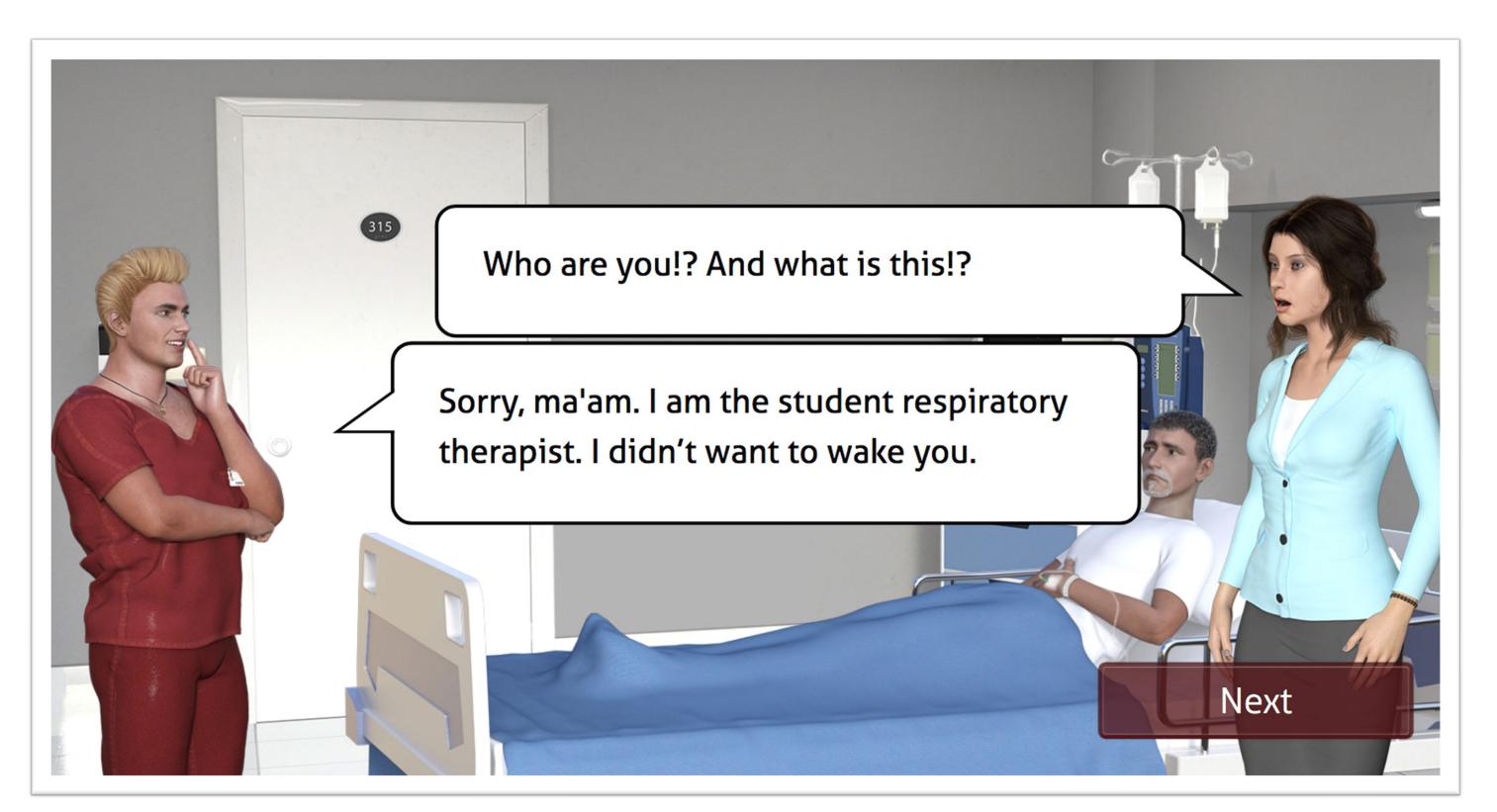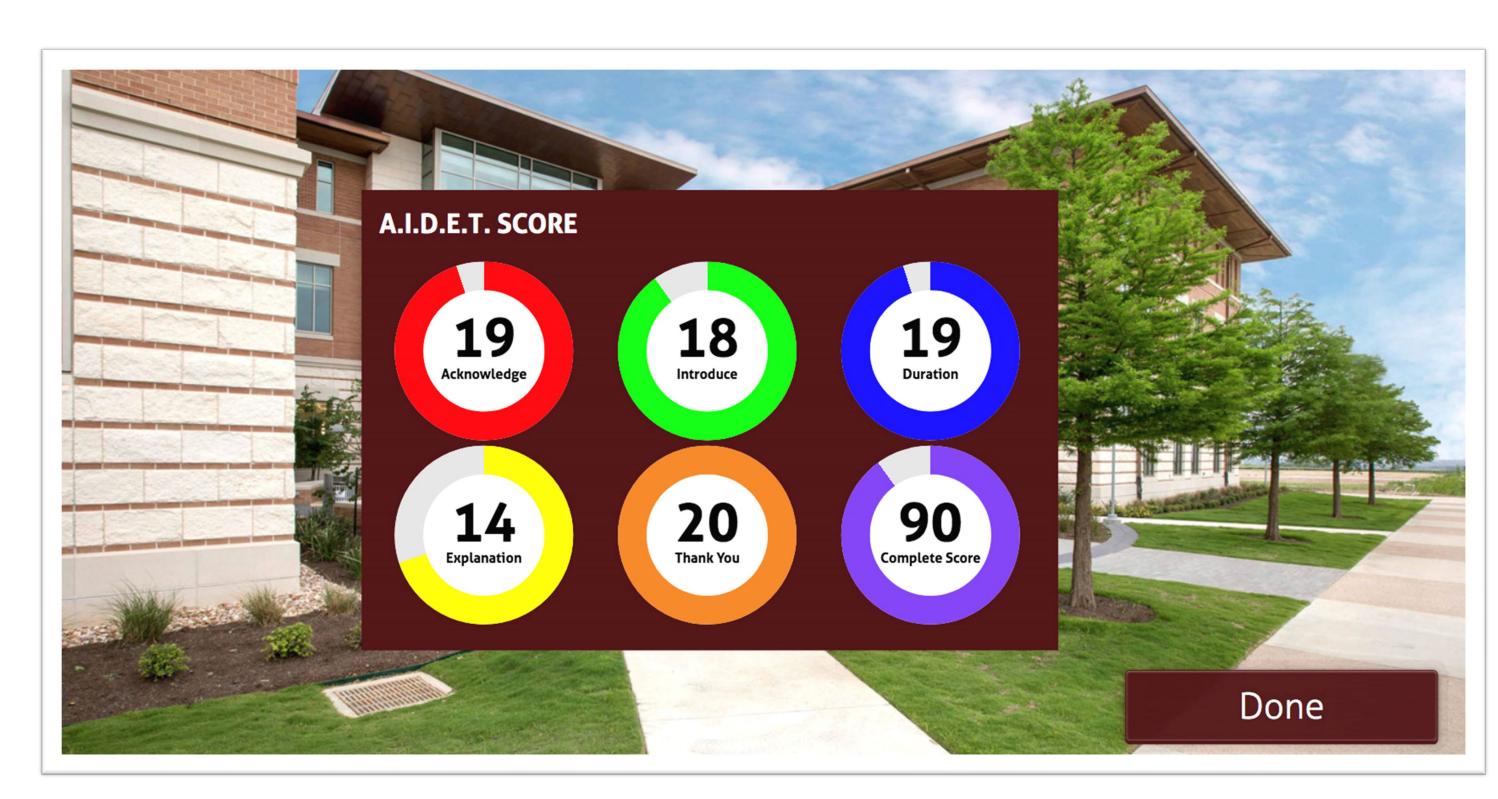| ASPECTS	n	PRE-TEST Mean ± SD	Mode	POST TEST Mean ± S D	Mode	SIGNIFICANCE p-value	Cohen's D
Speaking	78	7.05 ± 2.28	8	8.27 ± 1.49	9	< 0.1	1.95
Explaining	78	4.4 ± 2.57	1	7.26 ± 2.13	9	< 0.1	2.67
Coaching	78	5.67 ± 2.72	5	7.55 ± 2.18	9	< 0.1	2.67
Approaching	78	6.99 ± 2.45	9	8.6 ± 1.5	9	< 0.1	2.3
Introducing	78	8.23 ± 2.04	10	8.99 ± 1.23	10	< 0.1	1.65
Gaining Trust	78	6.9 ± 8.14	7	8.14 ± 1.59	9	< 0.1	2.09
Showing Gratitude	78	8.14 ± 2.07	10	8.94 ± 1.27	10	< 0.1	1.7
Communicating by Name	78	7.73 ± 2.27	10	8.8 ± 1.44	10	< 0.1	1.9
Estimating Time of Therapy	78	4.82 ± 2.69	1	7.38 ± 2.05	9	< 0.1	2.84
Managing Refusals	78	4.76 ± 2.42	3	7.36 ± 1.85	8	< 0.1	2.21
Familiarity with AIDET	78	4.09 ± 2.92	1	8.44 ± 1.75	9	< 0.1	3.43
Familiarity with Gamulation	78	4.47 ± 3.06	1	8.87 ± 1.68	10	< 0.1	3.28
Effectiveness of Gamulation for Communication	78	7.19 ± 2.21	8	8.99 ± 1.49	10	< 0.1	2.1
Effectiveness of Gamulation to Develop Clinical Skills	78	7.56 ± 2.07	9	8.85 ± 1.6	10	< 0.1	1.72
Effectiveness of Gamulation as a Teaching Modality	78	7.51 ± 2.09	10	8.78 ± 1.87	10	< 0.1	1.9

DISCUSSION POINTS

- Exploratory pilot study
- Results show astounding promise and potential
- Effective alternative experiential teaching/learning method
- Better preparation of healthcare students and providers
- Improved patient care interactions
- Where do we go from here?
- Adaptability – medical procedures
- Transferability, advancement, collaboration between universities, programs, etc.
- Future obligations – next generation(s) of healthcare providers?

CONCLUSIONS

Results of this study suggest high efficacy of gamulation use for improving healthcare student comfortability with communication skills. Gamification and gamulations may provide a viable, immersive, simulated and encouraging alternative teaching and learning methodology for the healthcare professions. Further research is warranted.

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