

# Harnessing Gamification to Provide Meaningful Web-based Education in the COVID-19 Era

Gamification, or the application of traditional game elements, such as point-scoring and competition, is an innovative tool to strategically motivate learners to engage in educational activities. Vindico Medical Education has used these gamification elements to enhance the development and delivery of valuable, engaging education for adult learners during the era of the coronavirus disease 2019 (COVID-19) pandemic.



## Improving Learner Engagement in a Live Setting

Initially, gamification was incorporated into Vindico's continuing education (CE) programs to improve learner engagement in the live setting. Prior to the COVID-19 pandemic, Vindico had designed 2 game formats that targeted 2 different aspects of learning: knowledge-based and confidence-based education.



### Gamification in Knowledge-based Learning: The "Wheel of Knowledge"

- Designed to build on an existing knowledge base
- Promotes engagement in the live setting
- Reinforces content retention
- Promotes friendly competition
- Provides immediate feedback
- Outcomes were published at IDWeek™ 2019



### Gamification in Confidence-based Learning: "GameOn!"

- Designed to assess the correctness of a learner's knowledge as well as their confidence in that correctness
- Promotes engagement in the live setting
- Three pieces of data are revealed for each question: knowledge, confidence, and confidence when presented with discordance
- Promotes friendly competition
- Provides immediate feedback



**In live settings, more than 79% who start the game, complete it.**



**98% of learners note that gamification prompted engagement**

## Transitioning Gamification to the Web Setting

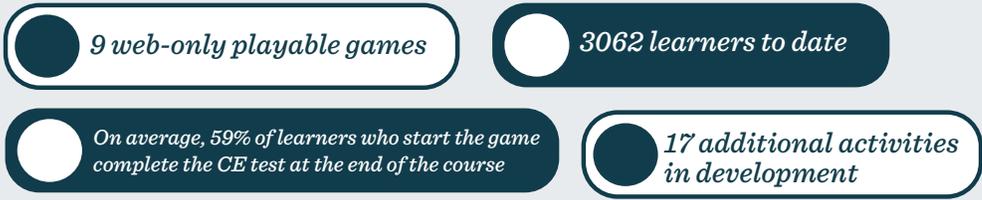
Prior to the COVID-19 pandemic, interactivity within virtual learning had mostly consisted of video capture of live events that included a gamification activity. However, the education was not necessarily created for a virtual environment but rather was adapted to fit virtual needs. In response to the pandemic, we accelerated our plans to increase the delivery of gamification learning for web-based CE activities with the following goals:

- ✓ Address the educational needs of 52% of our learners who have been more dependent on virtual learning since the COVID-19 pandemic
- ✓ Effective transferring of knowledge
- ✓ Measure learners' attitudes, knowledge, confidence, and/or concordance

Accordingly, we created a partnership with Educational Measures, LLC, to accomplish the following:

- ✓ Simplify the gaming platform for web-only activities
- ✓ Create infrastructure designed to use gamification in a primarily virtual environment
- ✓ Collect data for immediate feedback to learners, outcomes reporting, and continued enhancement of education

**Vindico's virtual gaming activity numbers**  
as of September 2020



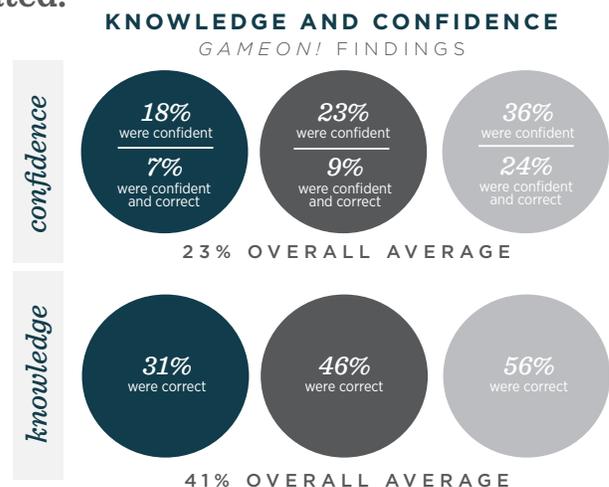
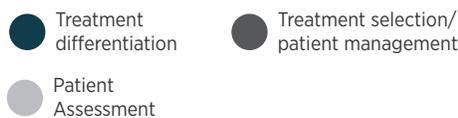
<p><b>High knowledge, high confidence</b></p> <p>Indicates mastery of the given concept</p>	<p><b>High knowledge, low confidence</b></p> <p>Further education is needed to improve skills related to the concept</p>
<p><b>Low knowledge, high confidence</b></p> <p>Further education is needed to address misconceptions</p>	<p><b>Low knowledge, low confidence</b></p> <p>Further education is needed to address deficits</p>

**Four Scenarios**

Four possible scenarios arise from each *GameOn!* question. Of importance, all but the first scenario require further education to address educational gaps.

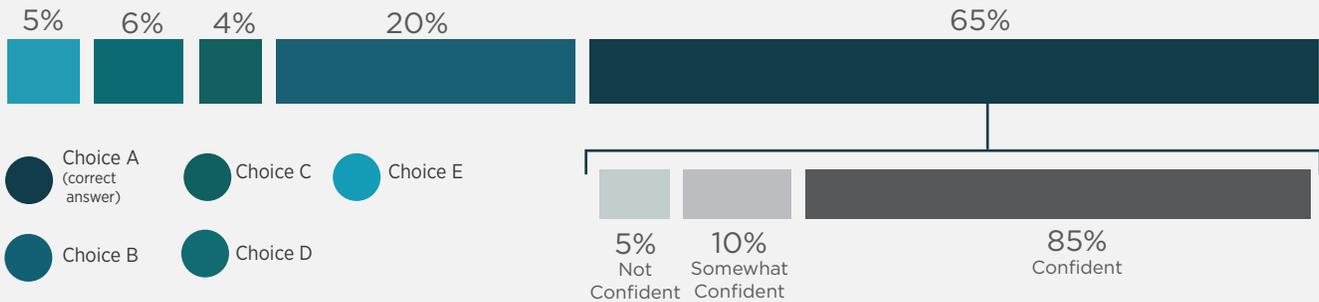
By grouping *GameOn!* questions by topic or learning objective, a deeper understanding of additional educational needs can be elucidated.

- Attendees scored highest on questions regarding patient assessment.
- Knowledge and confidence was most lacking around treatment differentiation and selection.
- Overall confidence was low (23%) and, on average, 89% of those who were confident were incorrect, suggesting the need for continued education.



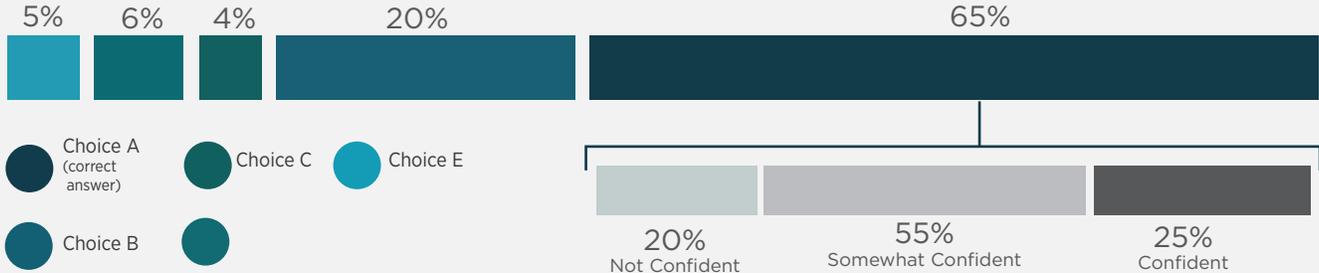
## CONCORDANT KNOWLEDGE AND CONFIDENCE

HOW CONFIDENT ARE YOU?



## DISCORDANT KNOWLEDGE AND CONFIDENCE

HOW CONFIDENT ARE YOU?



## Conclusion

Introducing gamification into live- or web-based CE activities can:

- ✓ Identify persisting knowledge gaps
- ✓ Increase engagement
- ✓ Promote knowledge transfer
- ✓ Assess provider confidence and concordance with knowledge

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