U.N. Sede Medellín

Una universidad con criterio nacional y presencia regional
A Board Game to Simulate the Software Development Process Based on the SEMAT Essence Standard

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First International Workshop on Essence in Education & Training
WEE&T
November, 2020
Agenda

1. Introduction
2. Related work
3. The SEMAT Essence game
4. Results
5. Conclusions
SEMAT Essence

Introduced to newcomers by using:
- Courses and Workshops
- Several kind of games

(Jacobson et al., 2013)
SEMAT Essence

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- Courses and Workshops
- Several kind of games

(Jacobson et al., 2013)
SEMAT Essence kernel way of teaching

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![SEMAT Essence kernel elements included](image)

Alphas (30%)  
States (26%)  
Areas of concern (19%)  
Activity spaces (7%)  
Activities (5%)  
Competencies (7%)  
Practices (2%)  
Patterns (2%)  
Work Products (2%)

(The authors)
SEMAT Essence kernel way of teaching

Classification

- Workshop: 36%
- Board game: 22%
- Card game: 14%
- Trivia game: 14%
- Video game: 7%
- Collaborative game: 7%

Purpose

- Simulation: 71%
- Concept memorization: 29%
The SEMAT Essence game

- Simulation-oriented game
- Based on the game Life®, (Rome and Hussey, 2013)
- Simulated elements:
  - Alphas
  - States
  - Areas of concern
  - Activities
  - Work products
  - Competencies
  - Practices
  - Patterns

(The authors)
The SEMAT Essence game
The SEMAT Essence game

Pattern <role>

Competency card

(The authors)
The SEMAT Essence game

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(The authors)
The SEMAT Essence game

Practice card

Situation card

Based on luck!

(The authors)
Testers

33 university students
4 universities

• “It is an effective way to learn about the elements, symbols, and relationships related to the SEMAT Essence”

• “The SEMAT Essence game may turn into a very competitive but still funny game”
What features would you improve in the game?

- Startup instructions: 21%
- Differentiating the structure for making it more intuitive: 15%
- More challenges in order to increase competitiveness: 9%
- Graphic Control: 12%
- Nothing: 43%

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Conclusions

• The SEMAT Essence game: a board game as a mechanism to simulate the main elements of the SEMAT Essence standard

• Based on a state-of-the-art review about the way to teach the standard

• We created a new element called “Situation” in order to provide realism to the game

• “The SEMAT game is a little complex, but it is funny and close to reality”
Future work

• New control mechanisms
• Creating a virtual version
• Collecting larger samples of game plays
References


References


Thank You!!!

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