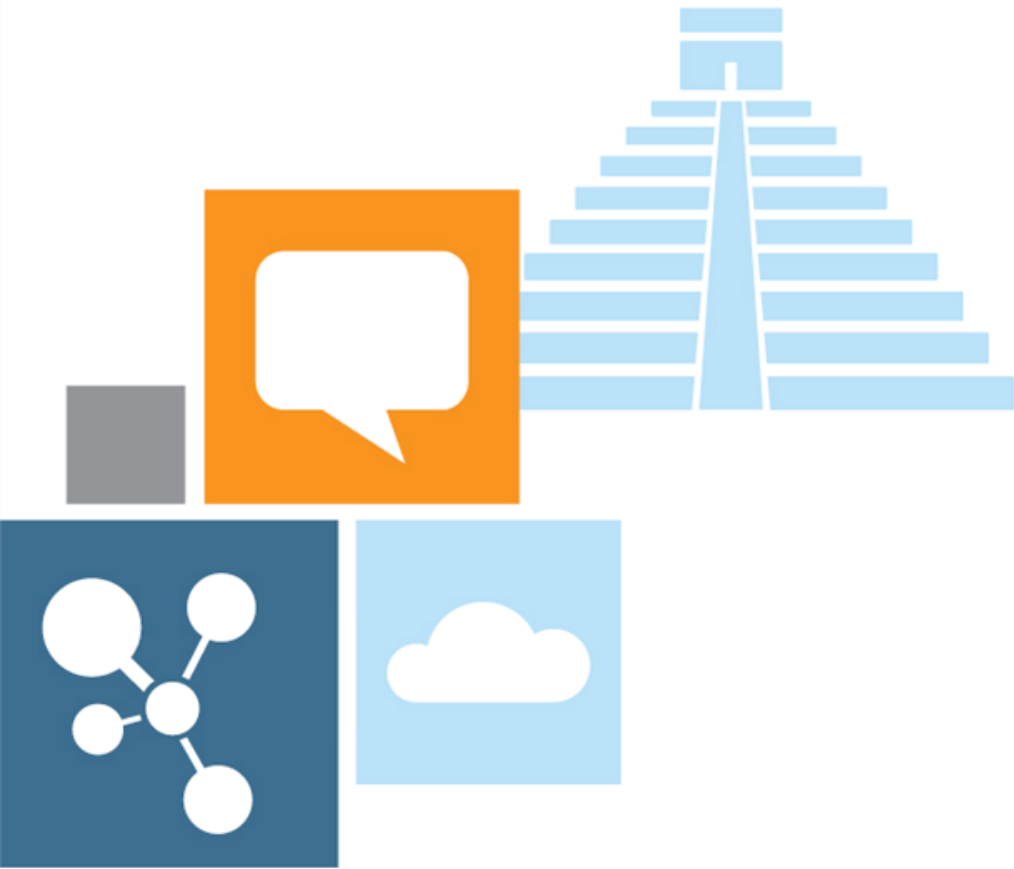


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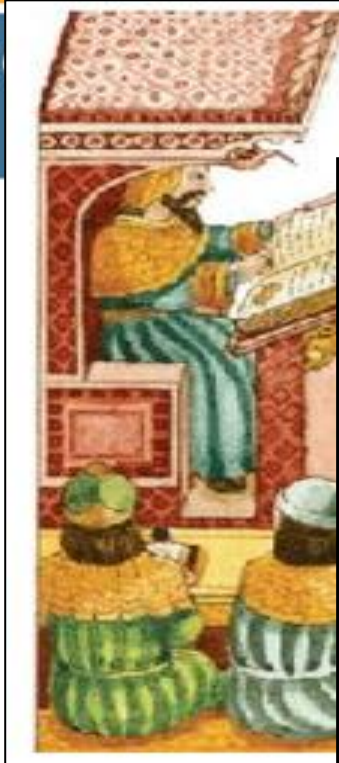
The world of Multimouse

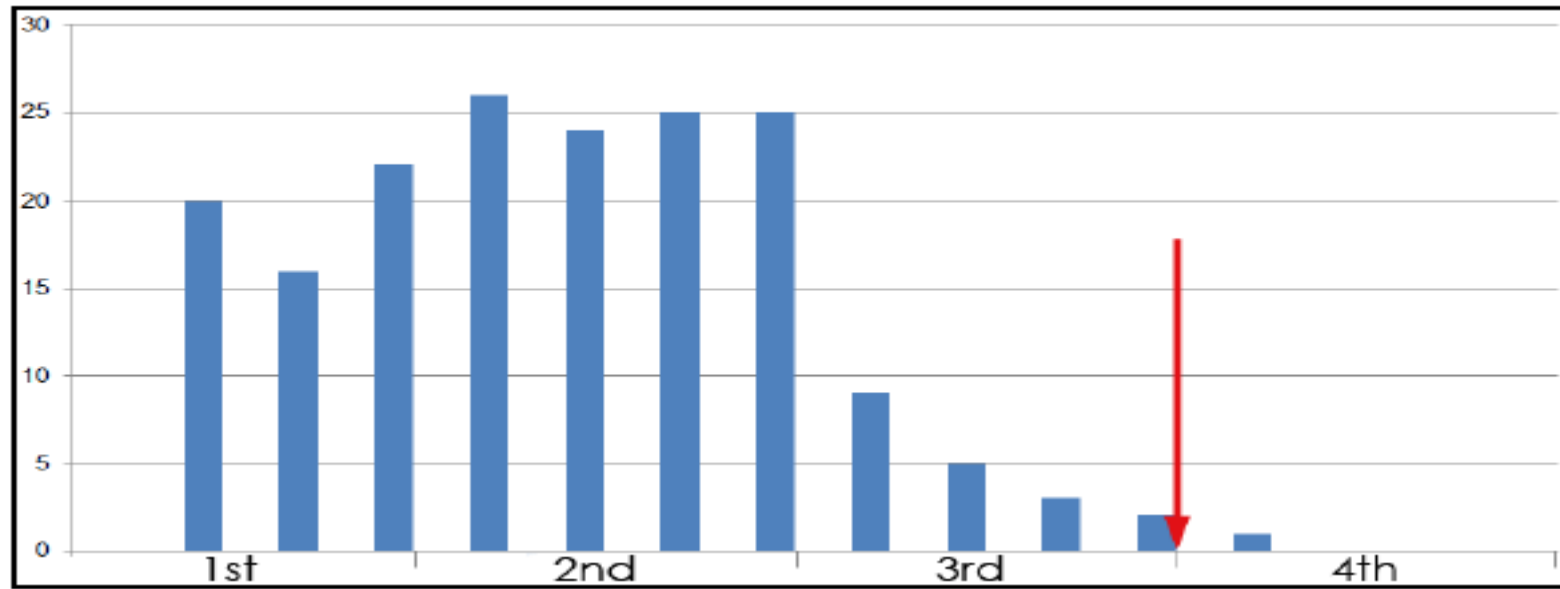
Miguel Nussbaum
Pontificia Universidad Católica de Chile

mn@ing.puc.cl



The problem





5 schools, 172 kids, 3^{ro}





Education in Peru

Error message

A disappointing return from an investment in computing

Apr 7th 2012 | LIMA | from the print edition

Like 1k

Tweet 469



GIVING a child a computer does not seem to turn him or her into a future Bill Gates—indeed it does not accomplish anything in particular. That is the conclusion from Peru, site of the largest single programme involving One Laptop per Child, an American charity with backers from the computer industry and which is active in more than 30 developing countries around the world.



Microsoft Research India

| | | | | | | | |
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|----------------------|---------------------------|-----------------------|-----------------------------|-------------------------|--------------------------------|---------------------------|---------------------|



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1:3





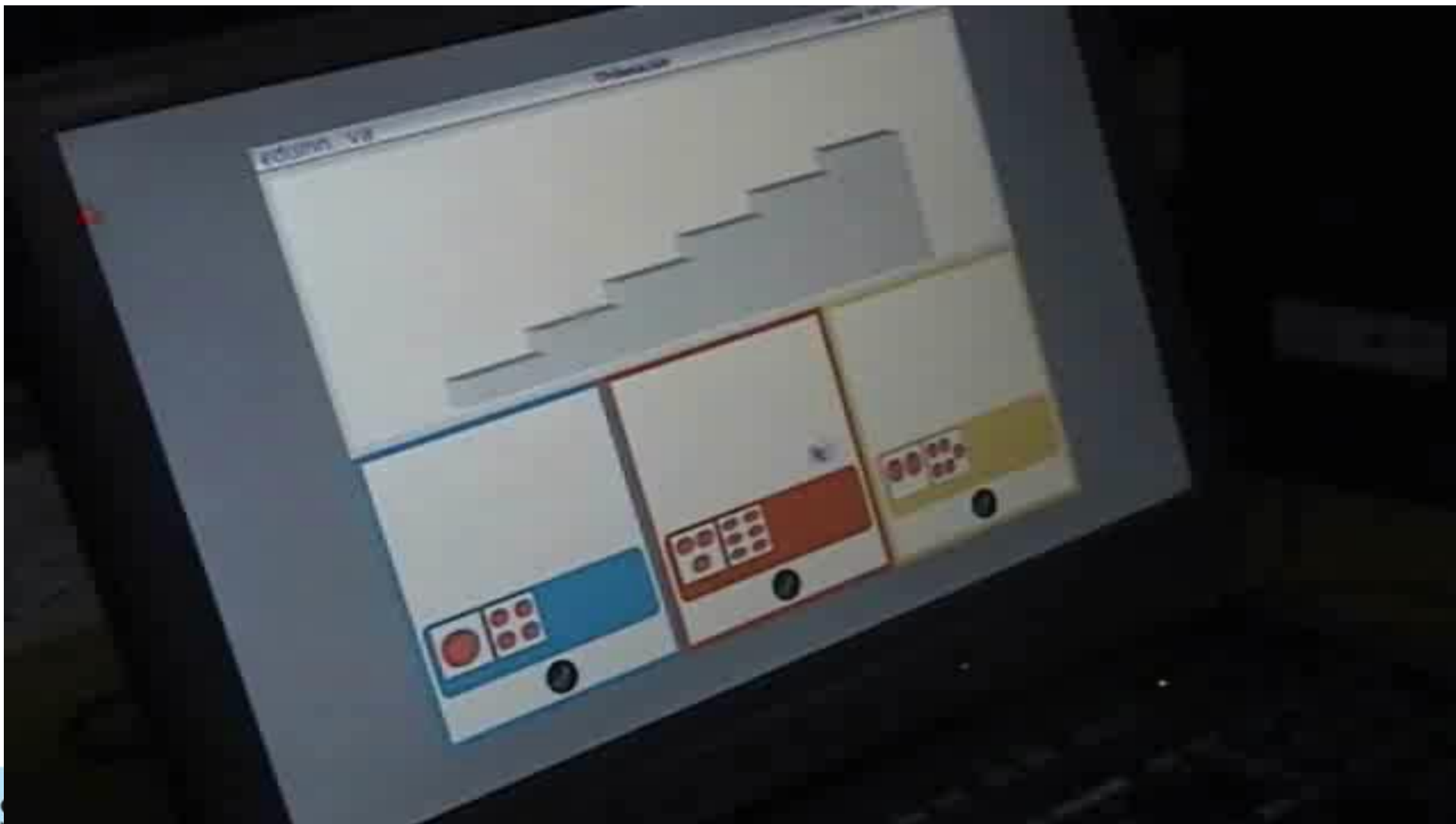


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Guatemala

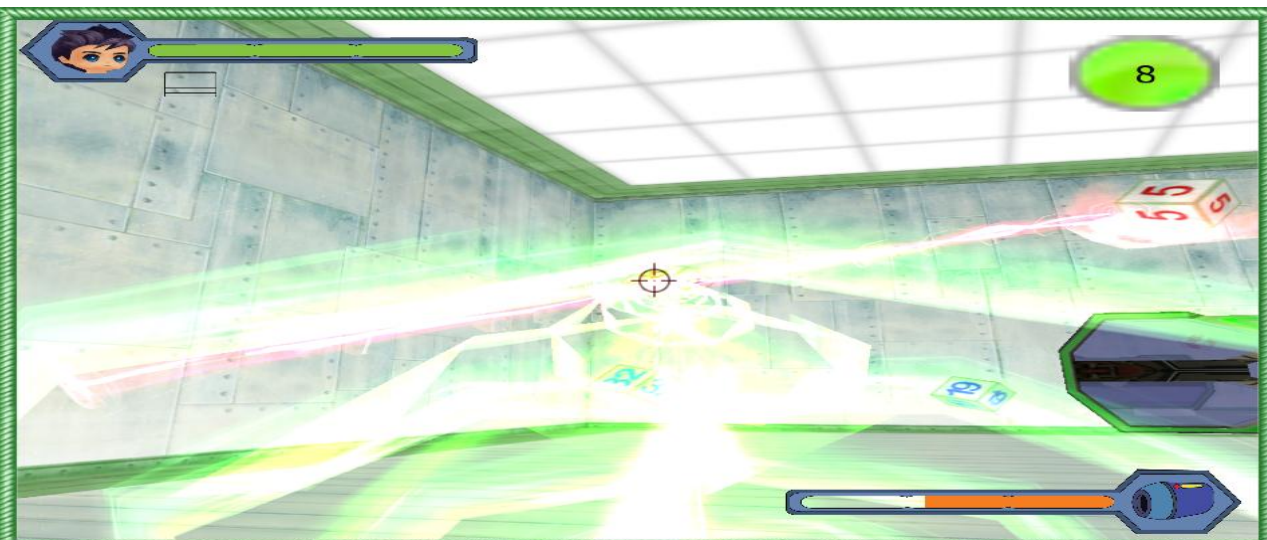




1:3
FPS



| | | | | | | | |
|-------------------|----------------------|------------------------|--|--------------------|------------------------------|------------|------------------------|
| 42 AMMO | 61% HEALTH | 2 1 1 5 5 7 ARMS | | 0% ARMOR | BULL RUSH ROKT CELL | 42 0000 | 200 50 50 300 |
|-------------------|----------------------|------------------------|--|--------------------|------------------------------|------------|------------------------|



Ordenen los cubos con numeros ROJOS en orden CRECIENTE.







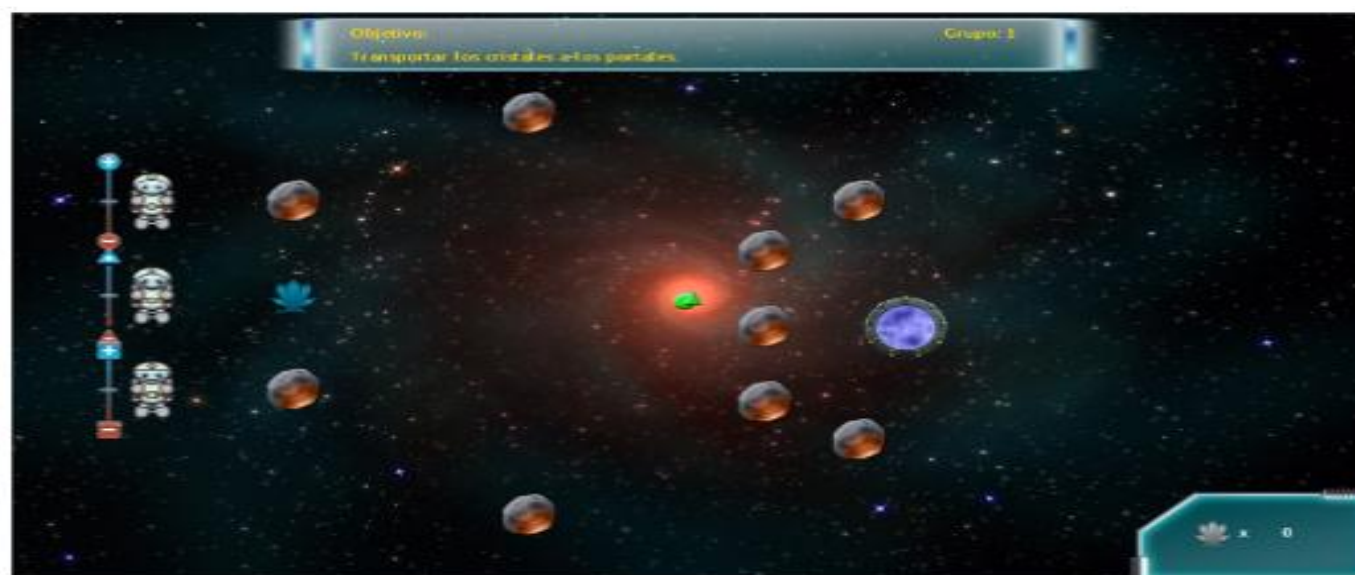
1:3

Science teaching



$$\begin{aligned}\vec{F}_{12} &= k \frac{q_1 q_2}{r^2} \hat{r} \\ \vec{F}_j &= \sum_i \vec{F}_{ij} \\ \vec{F}_{12} &= -\vec{F}_{21}\end{aligned}$$

Coulomb







1:3

+

Phones



1:3



Put the words in the correct order

They

are

at

a

birthday

party

"are"

"they"





| Significative Differences | | | | |
|----------------------------------|-------------------|----------------|------------------|----------------------|
| | Vocabulary | Grammar | Listening | Pronunciation |
| Collab. v/s Control | 0,112665996 | 0,1829928 | 0,02305323 | 0,017253781 |
| Collab. v/s Individual | 0,277533575 | 0,76241493 | 0,89588648 | 0,027312902 |
| Individual v/s Control | 0,719930611 | 0,29909564 | 0,07720547 | 0,951301084 |

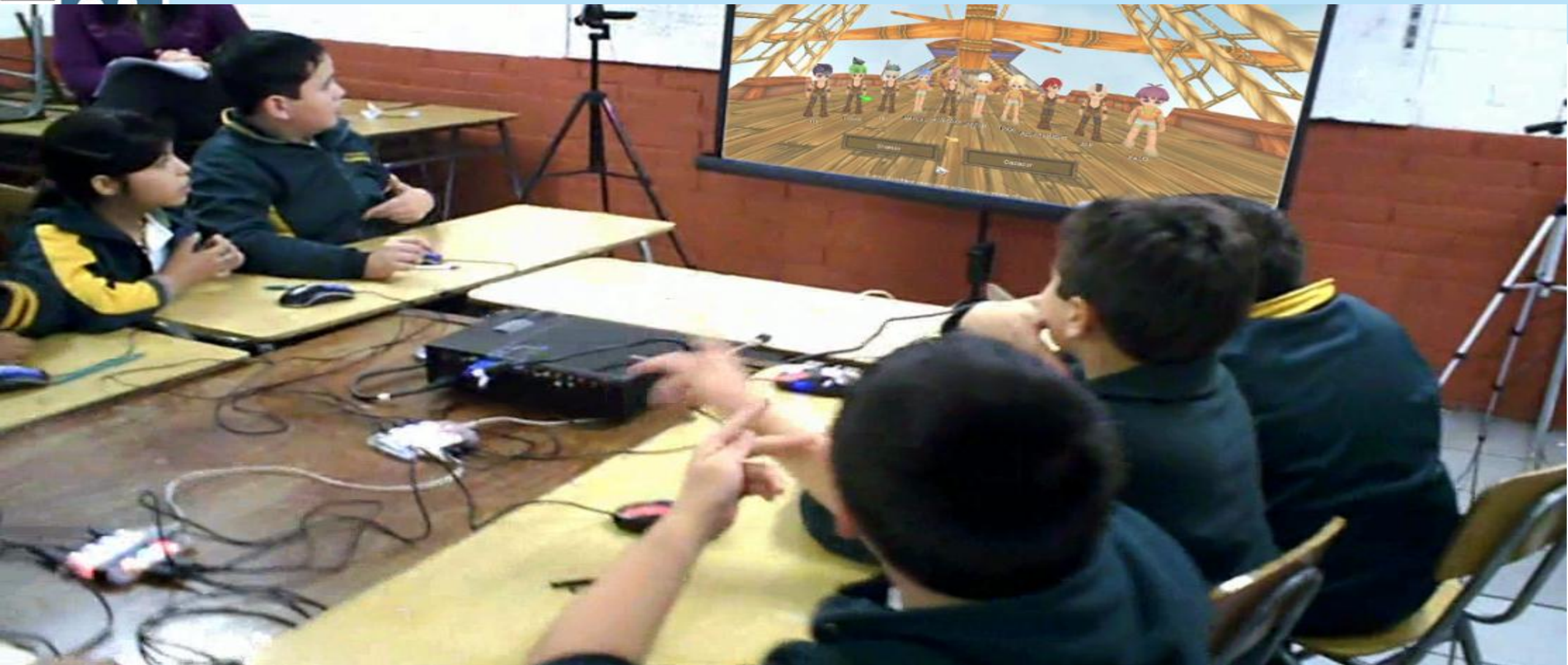


1:10

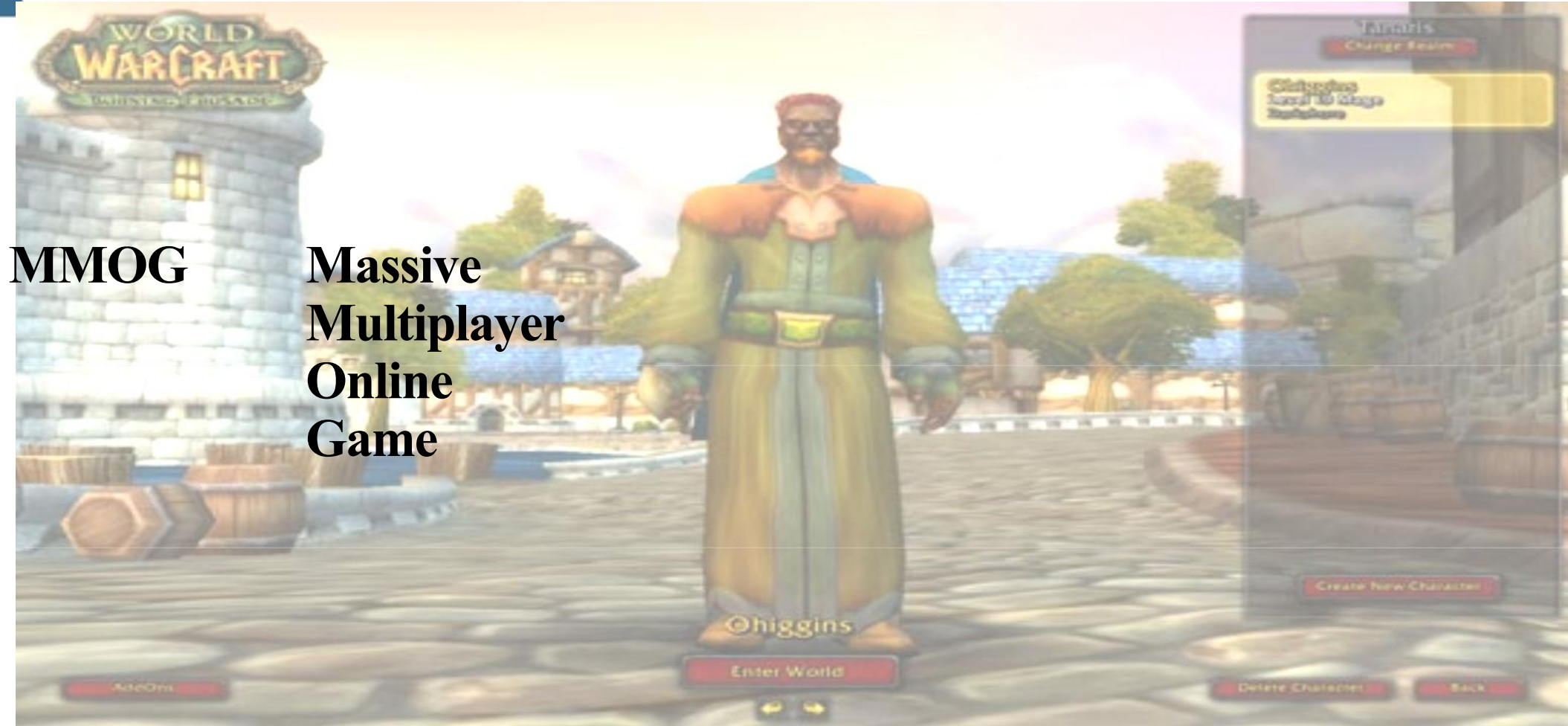




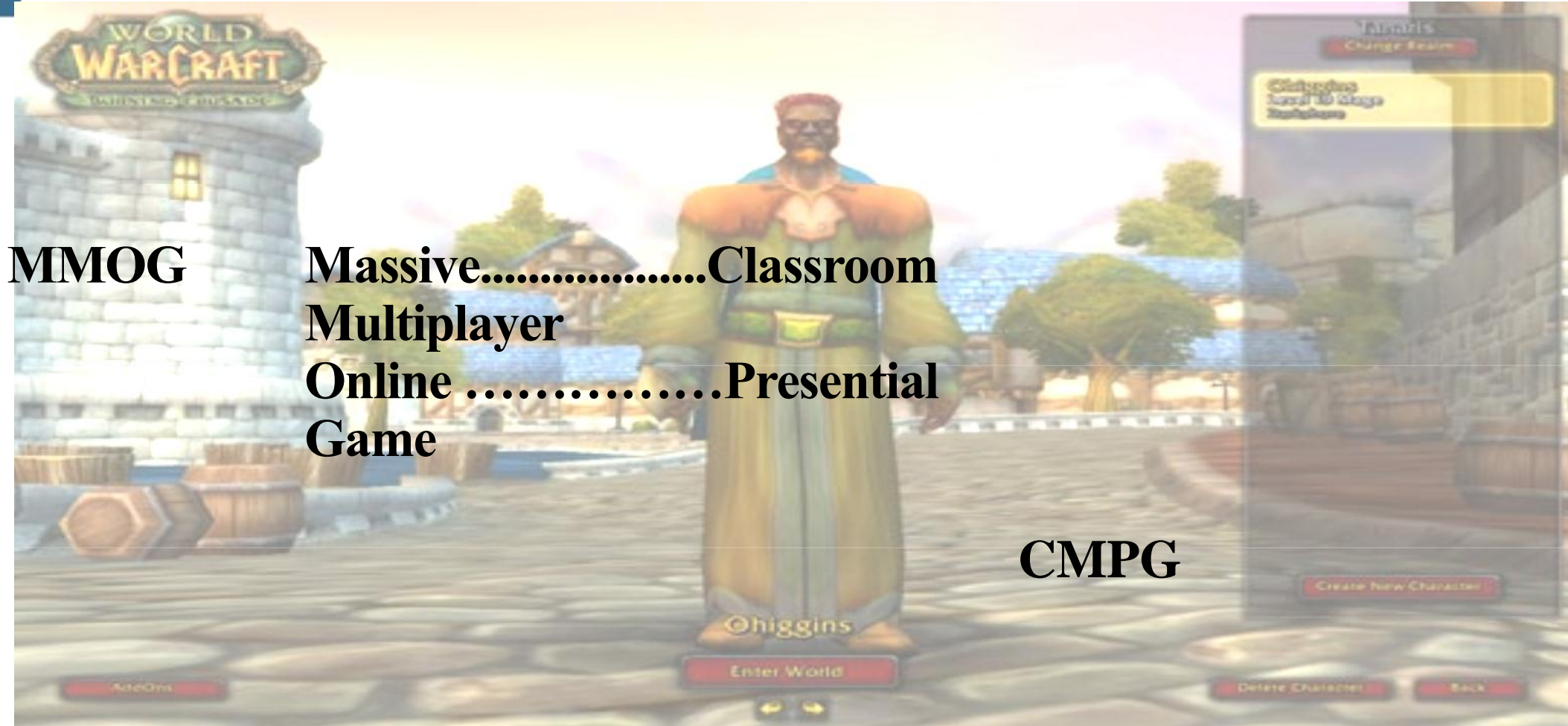








MMOG **Massive
Multiplayer
Online
Game**



MMOG

**Massive.....Classroom
Multiplayer
OnlinePresential
Game**

CMPG

Game mechanics: how should the game be played?

1. Interactivity and guidance
2. Mechanics linked to learning objectives

Game progression: how should the game evolve?

3. Clear narrative.
4. Gradual increase in difficulty.

Methodology: how does the game help the instructional strategy?

5. The teacher is a mediator during the game

Collaboration: how can teamwork between the game's participants be improved?

6. Organize face to face interaction
7. Mechanics linked to collaboration

On-screen information: how should the game look?

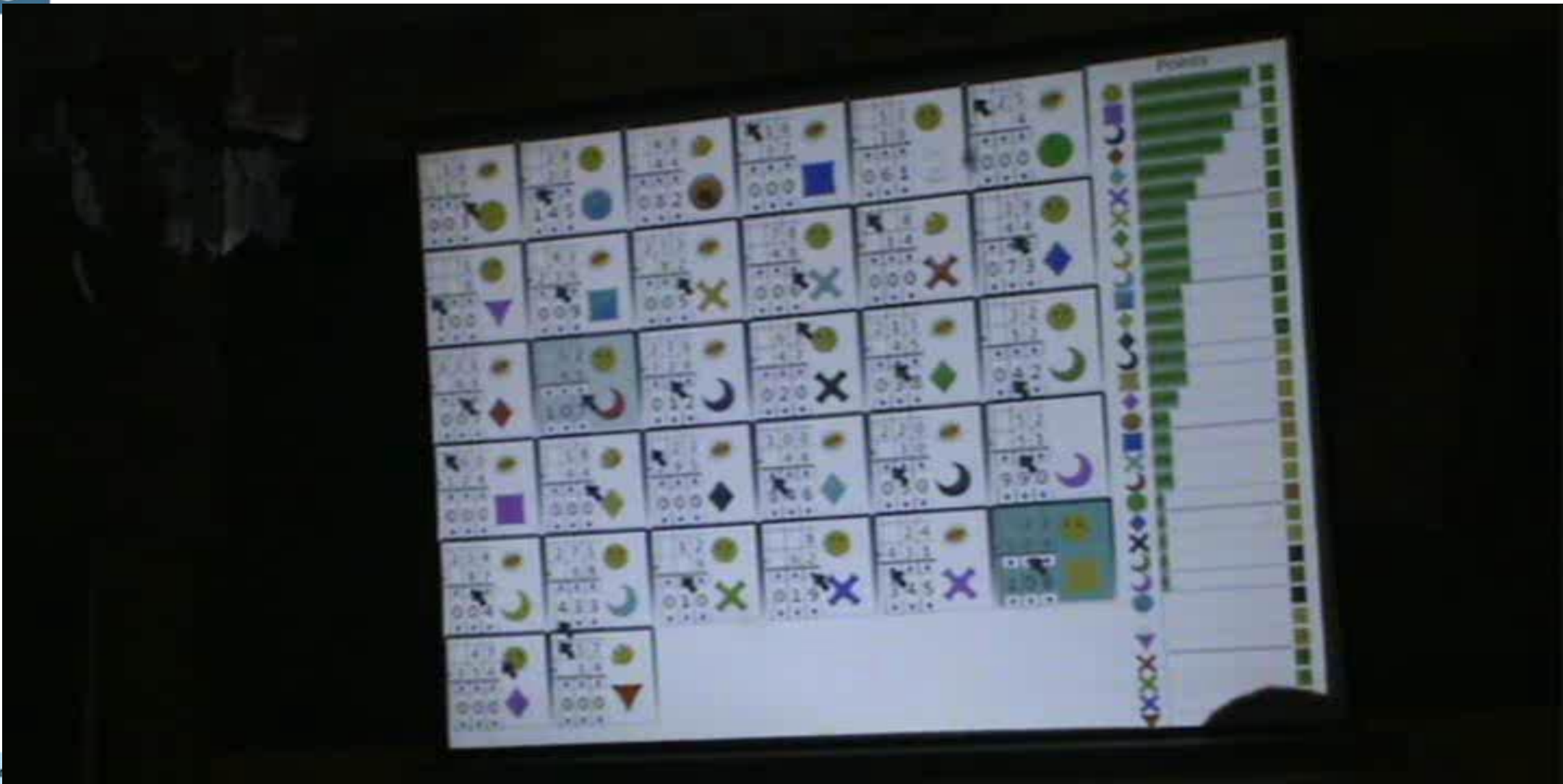
8. Adequate spatial distribution
9. Recognizable elements
10. Accessible language
11. Avoid information overload

Holism: how can a holistic experience that satisfies the ludic and instructional aspects of the game be created?

12. Action guide



1:49









India



| | | | | | |
|------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| $30+50+10$ | $200+60+1$ | $100+60+1$ | $100+60+1$ | $\begin{array}{r} 28 \\ + 28 \\ \hline 617 \end{array}$ | $100+50+2$ |
| $\begin{array}{r} 100 \\ + 0222 \\ \hline \end{array}$ | $\begin{array}{r} 57 \\ + 21 \\ \hline 644 \end{array}$ | $300+40+2$ | $\begin{array}{r} 27 \\ + 11 \\ \hline 652 \end{array}$ | $100+30+1$ | $\begin{array}{r} 32 \\ + 35 \\ \hline 609 \end{array}$ |
| $\begin{array}{r} 47 \\ + 077 \\ \hline \end{array}$ | $20+40+20$ | $\begin{array}{r} 5 \\ + 000 \\ \hline \end{array}$ | $\begin{array}{r} 7 \\ + 7 \\ \hline 347 \end{array}$ | $20+50+20$ | $20+40+30$ |
| $20+60+10$ | $\begin{array}{r} 6 \\ + 012 \\ \hline \end{array}$ | $\begin{array}{r} 2 \\ + 1 \\ \hline 66 \end{array}$ | $\begin{array}{r} 800 \\ + 0900 \\ \hline \end{array}$ | $\begin{array}{r} 57 \\ + 21 \\ \hline 503 \end{array}$ | $\begin{array}{r} 1 \\ + 00 \\ \hline \end{array}$ |
| $\begin{array}{r} 3 \\ + 06 \\ \hline \end{array}$ | $\begin{array}{r} 22 \\ + 000 \\ \hline \end{array}$ | $\begin{array}{r} 33 \\ + 057 \\ \hline \end{array}$ | $400+10+4$ | $400+10+1$ | $\begin{array}{r} 20 \\ + 00 \\ \hline \end{array}$ |
| $\begin{array}{r} 1 \\ + 1 \\ \hline 68 \end{array}$ | $\begin{array}{r} 200 \\ + 0000 \\ \hline \end{array}$ | $\begin{array}{r} 700 \\ + 100 \\ \hline 0552 \end{array}$ | $\begin{array}{r} 73 \\ + 15 \\ \hline 812 \end{array}$ | $\begin{array}{r} 7 \\ + 014 \\ \hline \end{array}$ | $20+30+10$ |




2 0 0 + 2 0 + 3


△ △ △ △

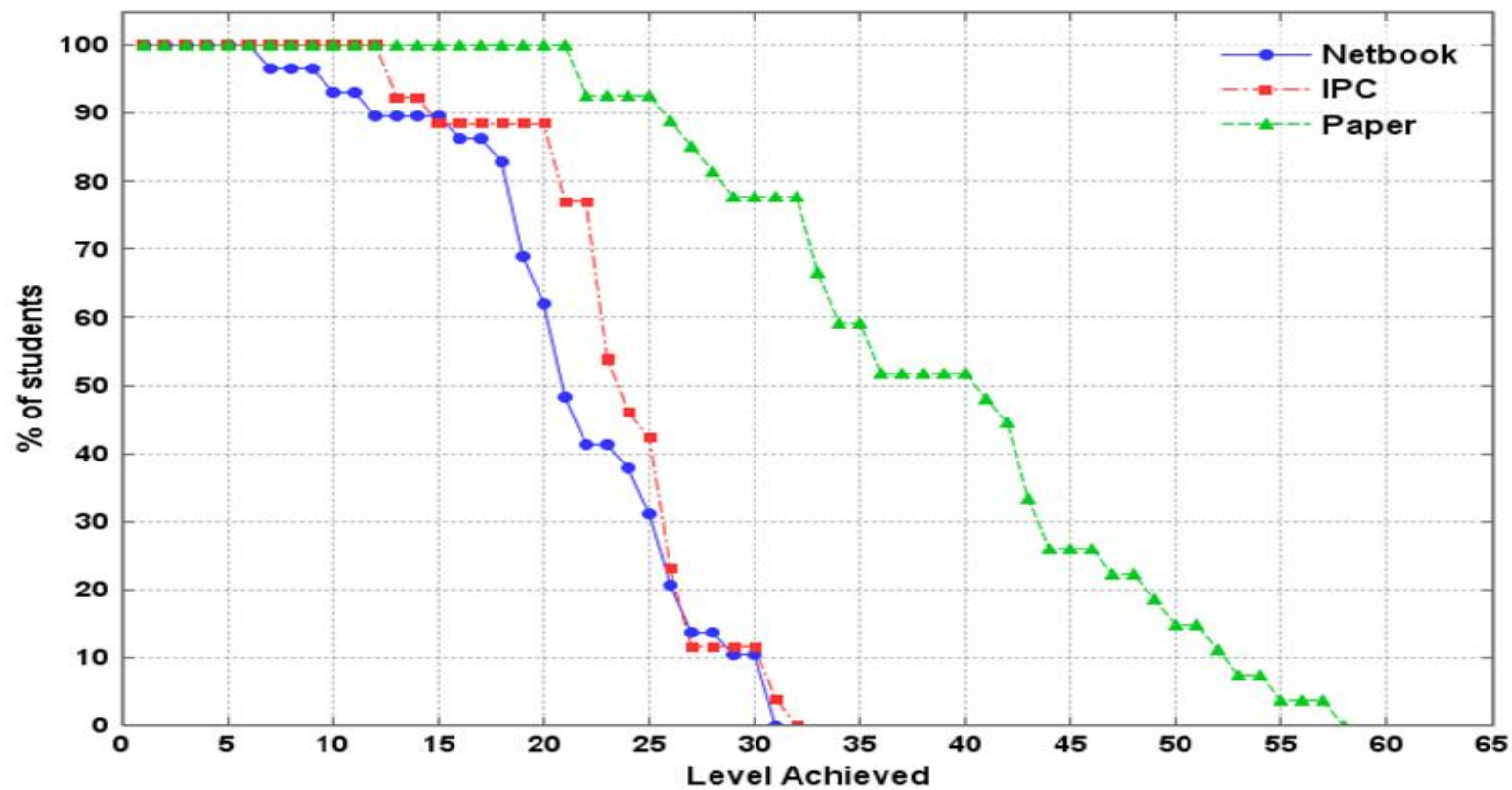
0 2 2 3

▽ ▽ ▽ ▽



Level
8





| | No. of students | Pre-Test | | Post-Test | | Δ% | Significance |
|---------|-----------------|-----------|------|-----------|------|--------|--------------|
| | | \bar{X} | s | \bar{X} | s | | |
| IPC | 19 | 18.95 | 5.97 | 29.26 | 6.59 | 54.44% | $p < .0001$ |
| Netbook | 17 | 19.06 | 6.56 | 28.71 | 6.88 | 50.62% | $p < .0001$ |
| P&P | 18 | 25.50 | 8.09 | 32.44 | 9.94 | 27.23% | $p < .0001$ |



1:49 and Games

$61 + 17$

25

75

38

78

47

$82 + 15$

1

97

96

67

1

$8 + 1 =$

x3

13

8

9

3

$62 + 22$

26

87

84

54

67



2+2

3+1

6+1

8+1

2+2

4+3

8+1

7+1

5+2

2+3

2+3

3+2

3+3

1+3

2+2

6+2

6+1

6+1

4+2

4+3

1+7

3+1

8+1

7+1

4+2

6+1

5+2

2+4

2+1

2+2

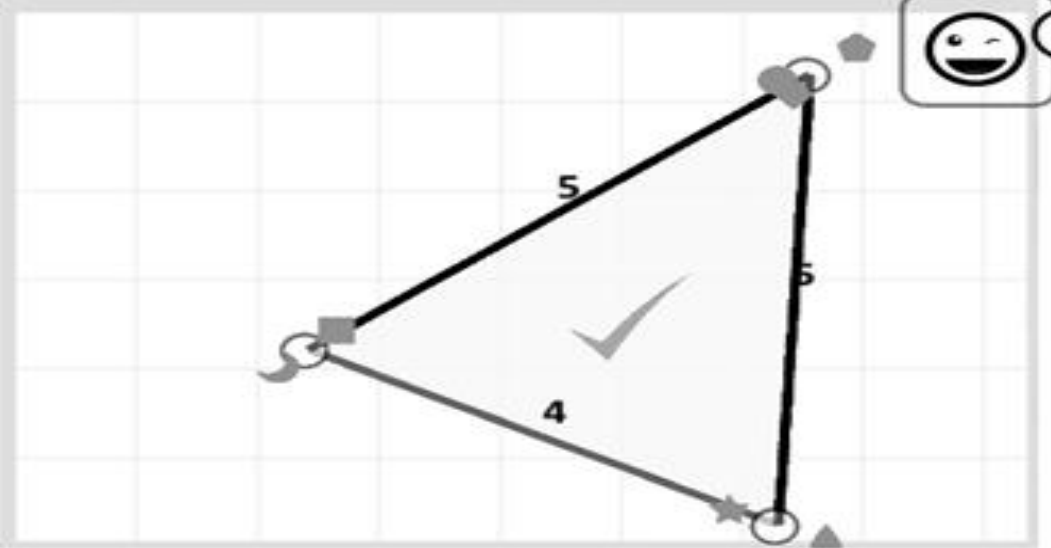
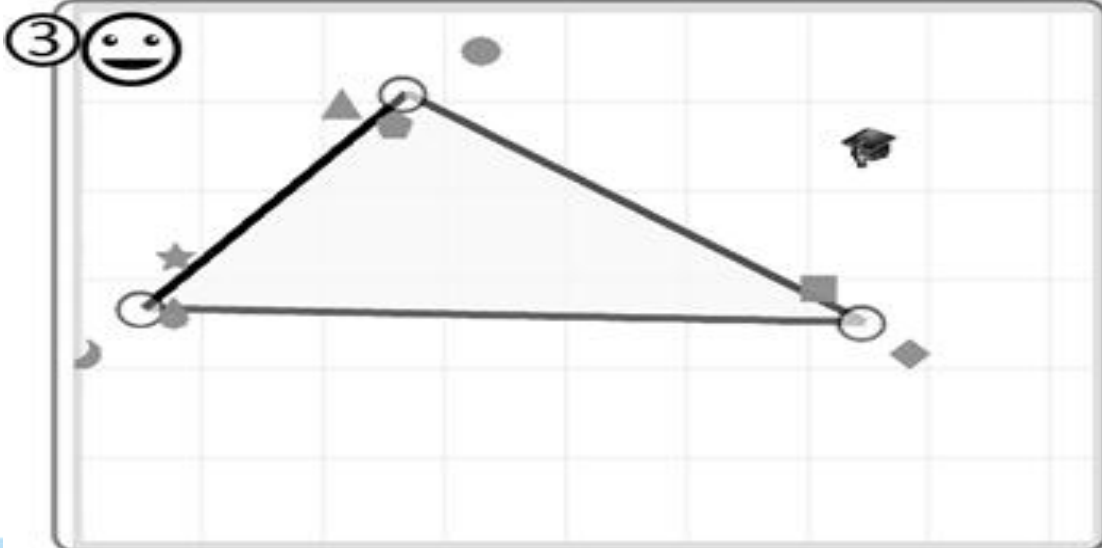
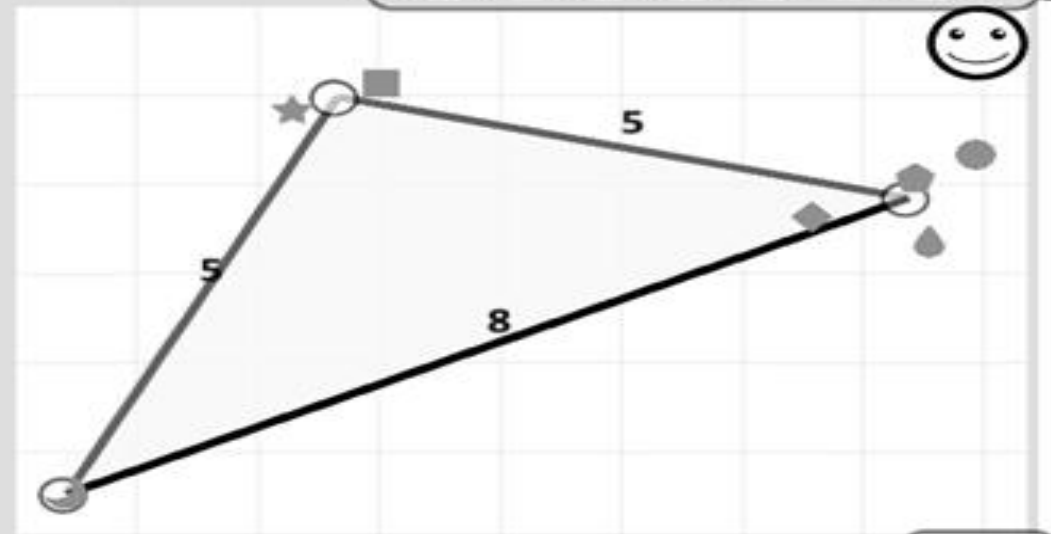
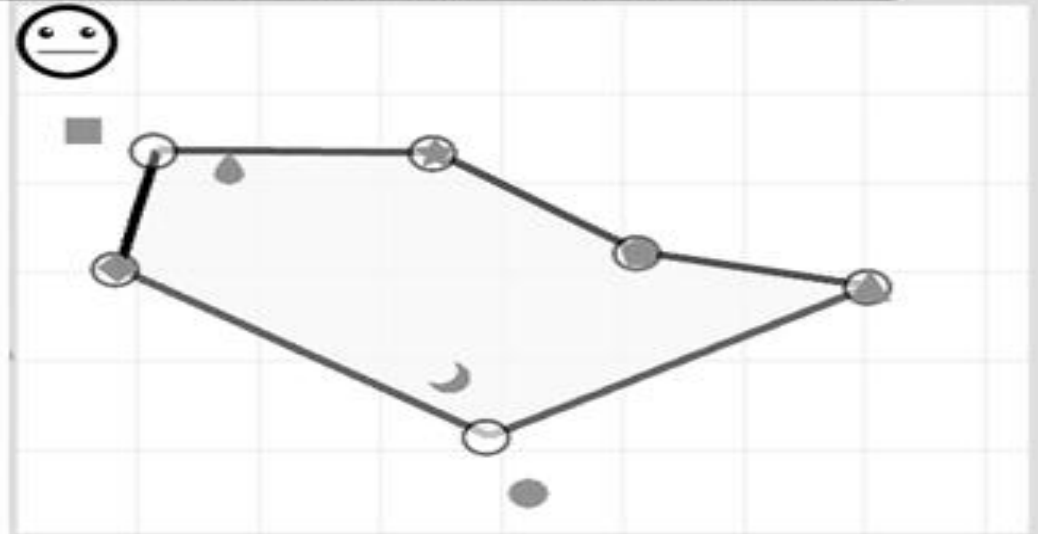


Collaborative

1:49



① Construyan un triángulo con 2 lados iguales







The world of Multimouse

Miguel Nussbaum
Pontificia Universidad Católica de Chile

mn@ing.puc.cl

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