



MODES DE LA CONNAISSANCE | FORMAS DE CONOCIMIENTO  
WAYS OF KNOWING

# IB AFRICA, EUROPE & MIDDLE EAST REGIONAL CONFERENCE 2014

ROME • 16–19 OCTOBER



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*Addressing Ways of Knowing through  
ICT Teaching in a High-Tech  
Classroom*

**Developing students knowing and critical thinking in a High-Tech  
Classroom**

German School Beirut – Lebanon

Deutsche Schule Beirut - Libanon



*Do you think there is a difference  
between your learning experience  
and your teaching experience?*

[Let's Watch the Difference...](#)





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Our mission is to create lifelong learners who possess the *competencies* , confidence and *knowledge* to meet the challenges that face them. Living in a diverse society and a globalized world, we work on graduating students who are contributing members of society, tolerant of others and *empowered to shape their own*

*future*



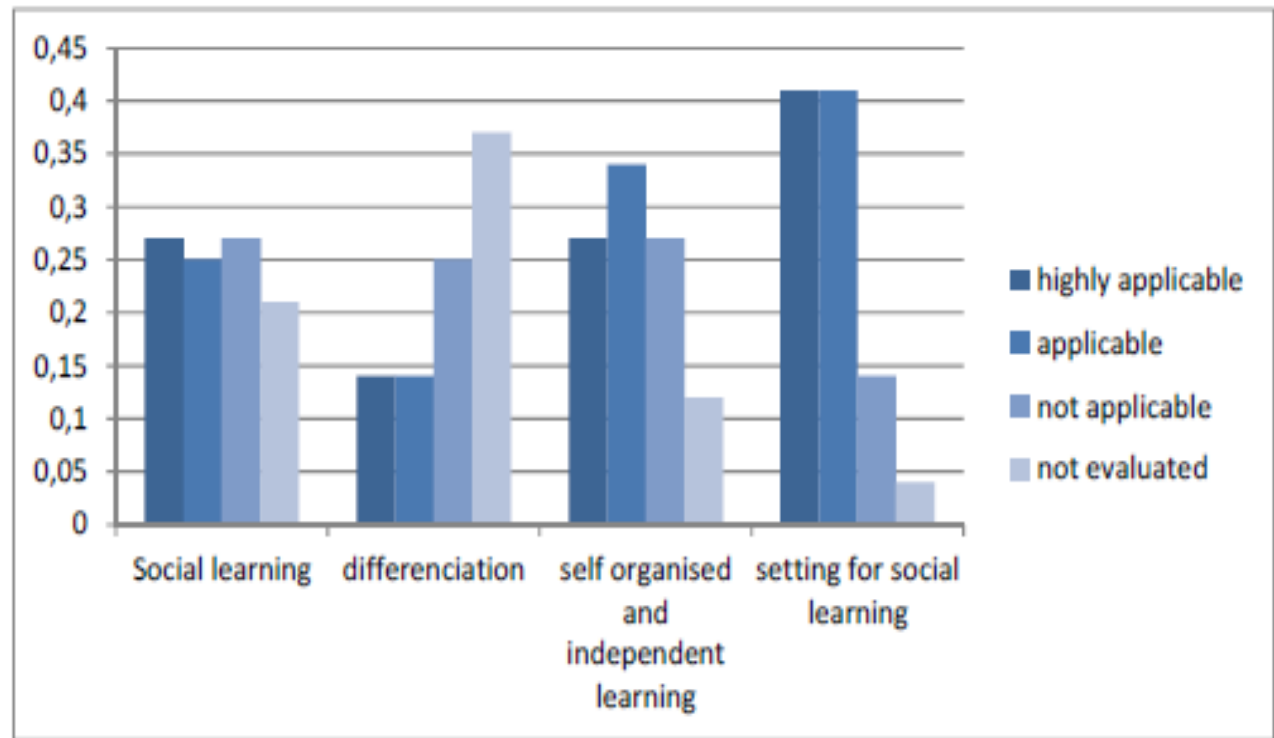
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# 21st Century Competencies

- Civic Literacy, Global Awareness and Cross-Cultural Skills
- Critical and Inventive Thinking
- Communication, Collaboration and **Information Skills**

Since our classrooms are equipped with computers and IWB the way of teaching in our school changed in a significant way.	I totally agree	I mostly agree	I mostly do not agree	I do not agree	I don't know
teachers response in %	79	21	0	0	0
students response <sup>4</sup> in %	77	21	0	1	0

Tab. 8: Change of the way of teaching since start of Computer Project Source: FB-L, FB-S





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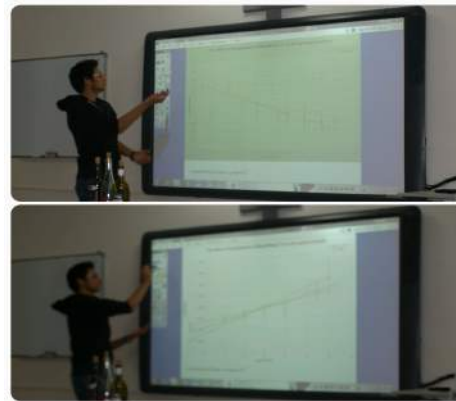
# Background

- Innovation
- Engaging

Step 1: IWB  
10/11



ool Beirut Inspire-Educate-Support



Step 2: IWB  
11/12/13

- Non-linguistic Stimulation
- Effective Strategies

- Maximizing Impact

Step 3:  
High Tech  
CR 13/14





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# IWB Inclusion

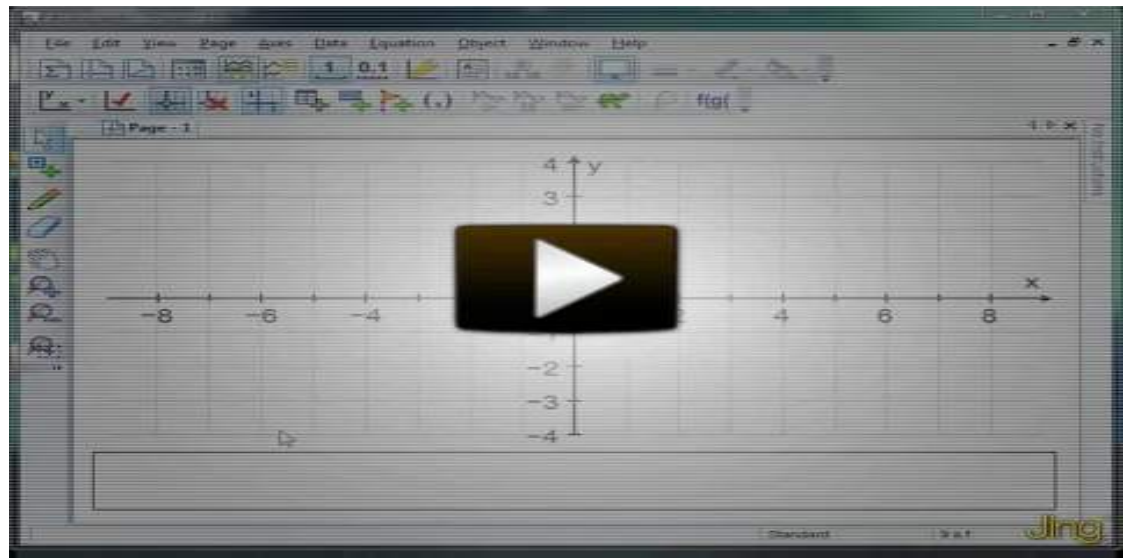
## Process

- Suitable IWBs
- Debates and Demos
- Training Teachers and Students

## Methods

Simulations

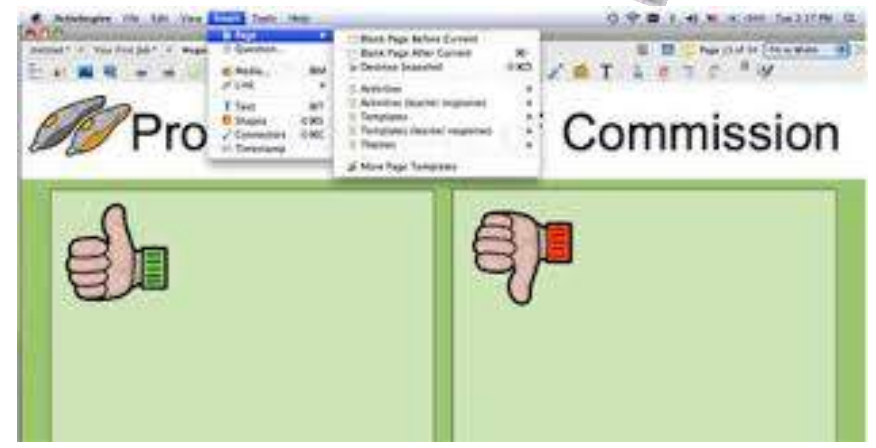
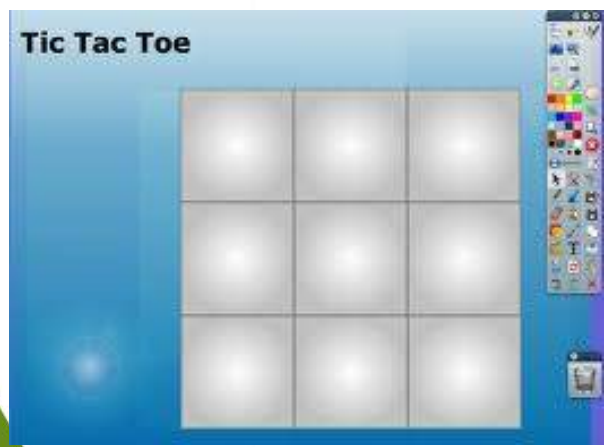
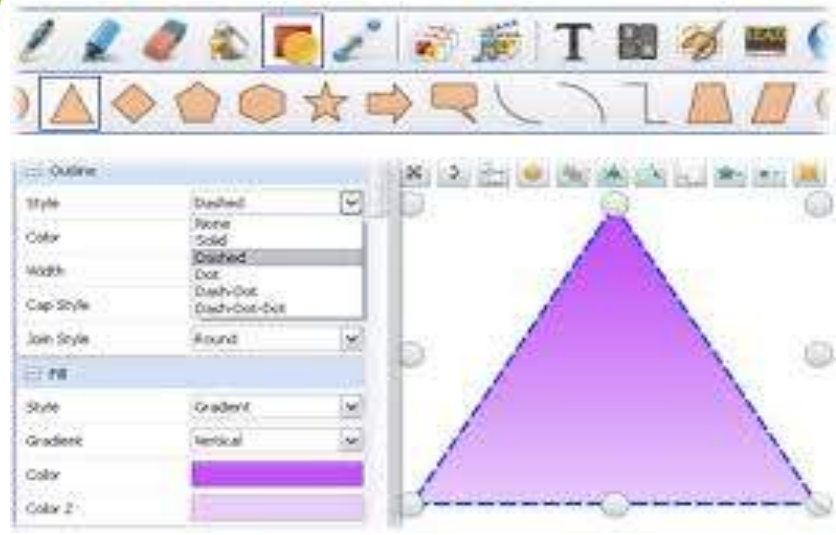
Graphic Organizers







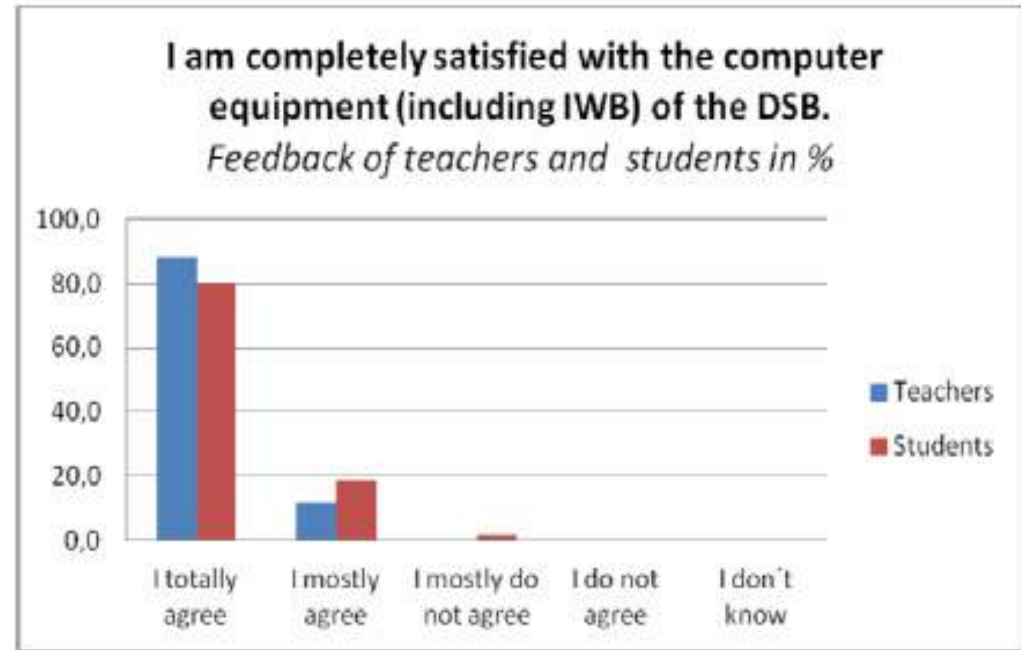
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# A Story of Resistance... A Story of Change



*“It is a big step, a great one. It's human nature to refuse change, but it's also human nature to adapt. I always tell my kids when they miss books, it is going to be an easier adaptation to your future career where there is not going to be books but only laptops or think pads.”*

10/11/2014 8:44 AM



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# Components...How does it work?

## Hardware

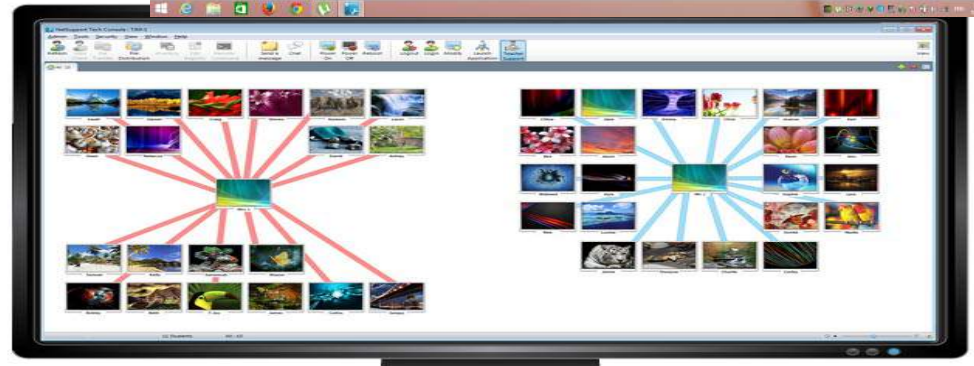
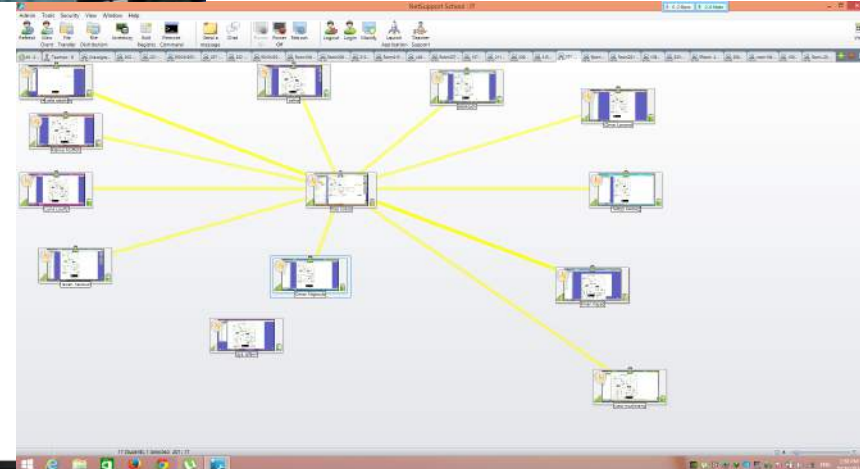
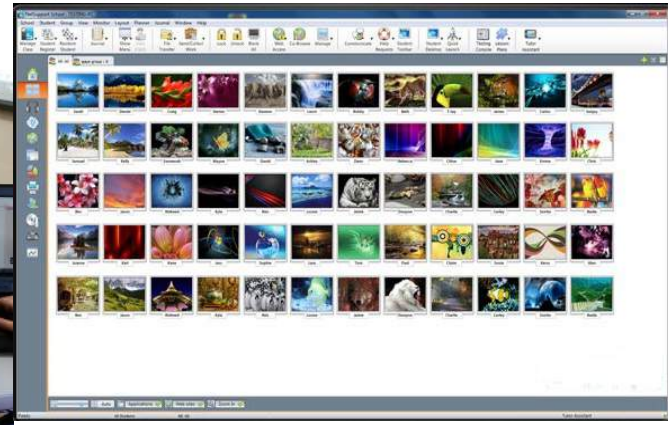
- PC/Laptop
- UPS
- IWB

## Software

- IWB Software on Student/Class PC
- Communication Software

## Methods

- Connecting Student PC Tablets to Classroom PC
- Projection of IWB
- Display of Student Screen
- Transfer of Files

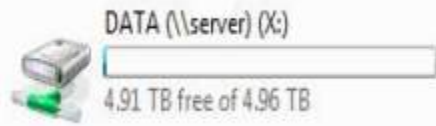
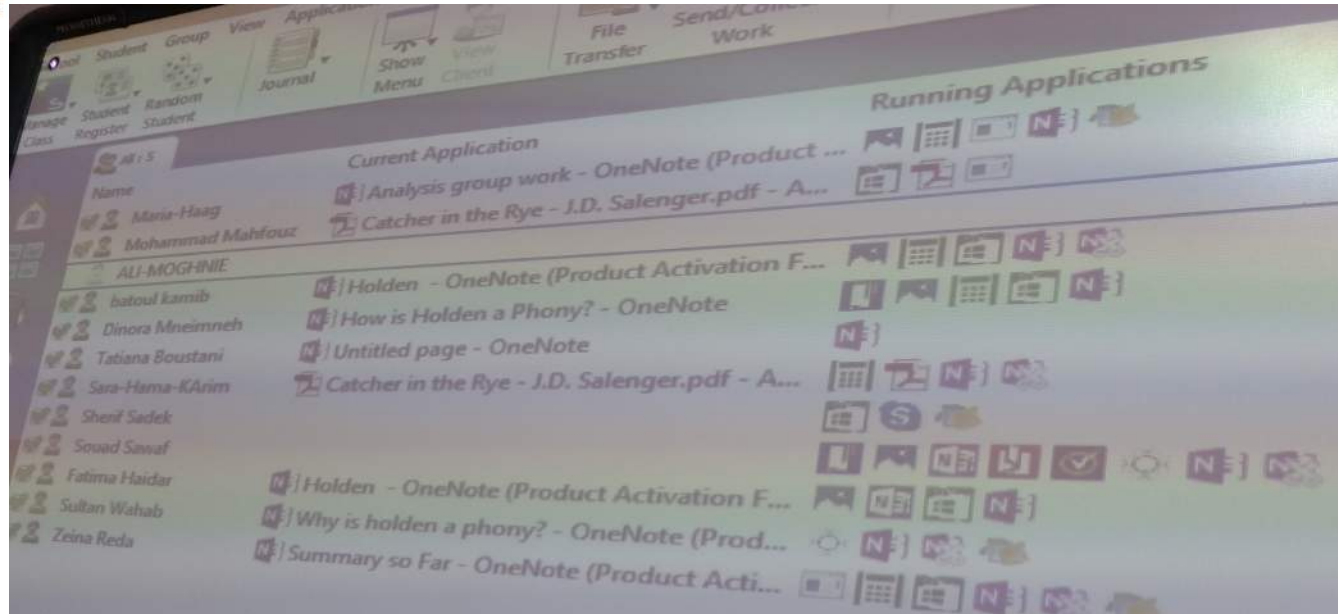




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# Administration & Teacher Role

Monitoring  
Organization



Session 1- Gases- October 5-2014	10/9/2014 8:59 AM	File folder
Session 2- Liquids- October 7-2014	10/9/2014 9:00 AM	File folder
Session 3- Solids- October 9-2014	10/9/2014 8:53 AM	File folder



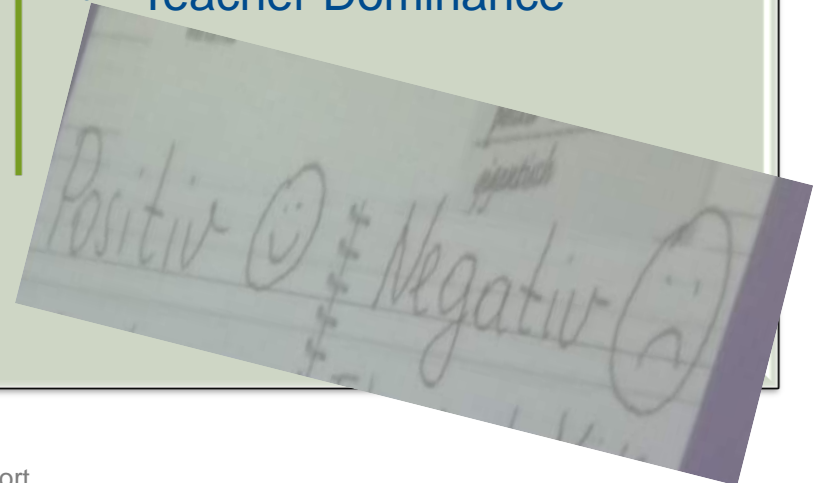
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## Pros

- Carry Load
- All material is found in one place (*previous/ organization*)
- Elimination of wasted time
- Note taking and Attention
- Academic Honesty
- Going Green
- Better monitoring of student work
- Access to resources
- Clarity of Communication

## Cons

- Distractions
- Advance over other systems
- Difficulty to adapt
- Accuracy of Outcome
- Country based outcome
- Teacher Dominance

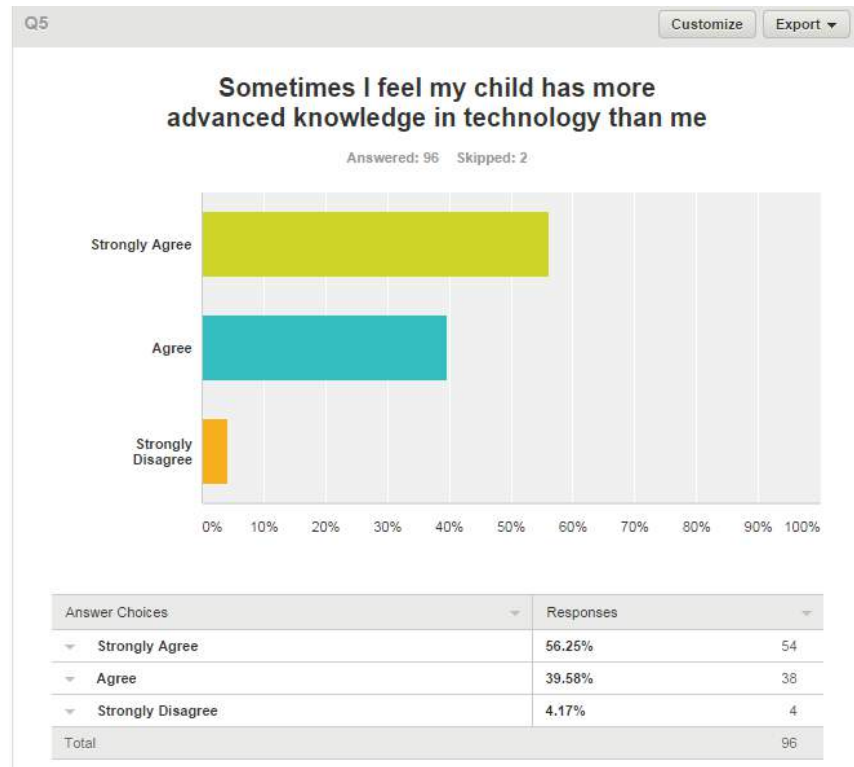




# Challenges

## Official Exams

## Distractions



<b>One of the aims of our teaching should be to make the students aware of the risks of computer use.</b>	<b>I totally agree</b>	<b>I mostly agree</b>	<b>I mostly do not agree</b>	<b>I do not agree</b>	<b>I don't know</b>
teachers response in %	88	12	0	0	0
students response in %	61	29	6	1	3

Tab. 6: Importance of teaching about risks linked to computer use

Source: FB-L, FB-S

<b>It is very important that students learn about using the possibilities of computers (and internet) in a useful way.</b>	<b>I totally agree</b>	<b>I mostly agree</b>	<b>I mostly do not agree</b>	<b>I do not agree</b>	<b>I don't know</b>
teachers response in %	100	0	0	0	0
students response in %	74	19	6	1	0

Tab. 7: Importance of teaching about useful way of computer use

Source: FB-L, FB-S



# Challenges

Teacher Dominance

Accuracy of Outcome

Country Based Development

8)	Yes	mostly	mostly not	no
The lesson is supporting social learning.	13	12	13	10
The tasks are different in levels (differentiation).	6	6	12	18
The lesson supports independent learning.	12	15	12	5
The setting of the lesson supports learning.	18	18	6	2

While using the computer/IWB technical problems occur.

	no	not to mention	little	severe
Grade 1-7	9			
Grade 8-12	21		4	
<b>total</b>	<b>30</b>	<b>0</b>	<b>4</b>	<b>0</b>

Tab. 1: Technical Problems (Data from lessons observation)

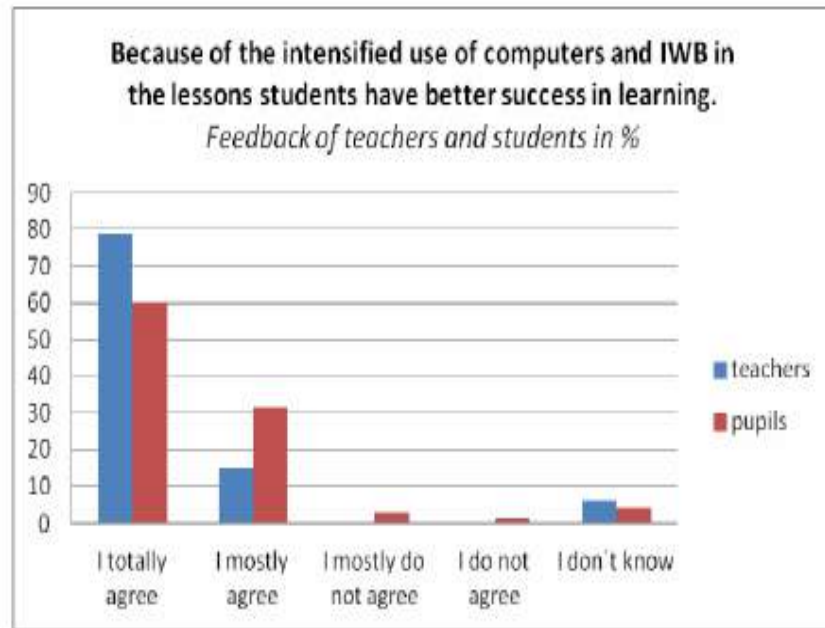


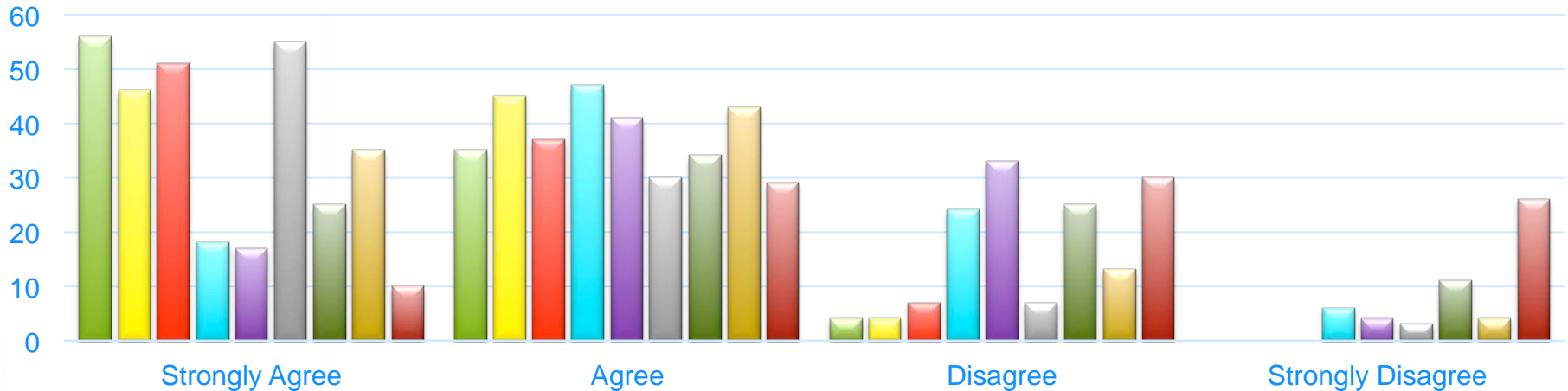
Abb. 3: Impact of computer use on learning results  
 Source: FB-L, FB-S



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# What Our Students Think...

## High-Tech Classroom Experience Survey



- With the PC Tablet the weight load of carrying bags is not a problem anymore
- I have access to more resources and material
- I can easily refer to previous material
- I interact more in the classroom
- I feel more independent when working on tasks in class or at home
- During explanation, I understand better with the use of visuals (videos, simulations, etc...)
- My handwriting has not been affected by writing on the PC tablet
- The transfer of data between students and teacher in classroom is efficient (file transfer)
- Reading from the e-books on the PC tablet is easier and clearer





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# What the Parents Think...

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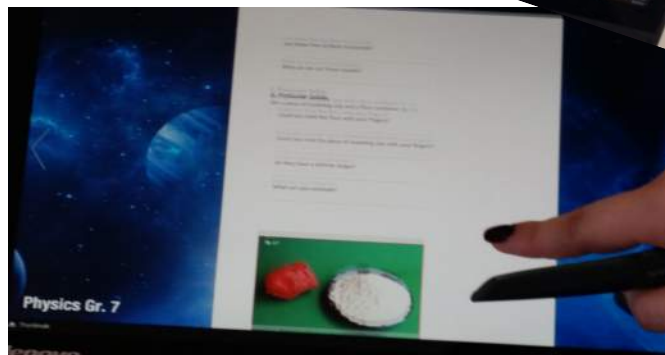
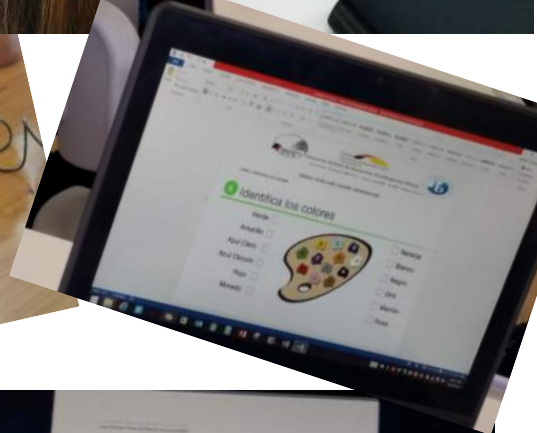
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# What the Teachers Think...

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