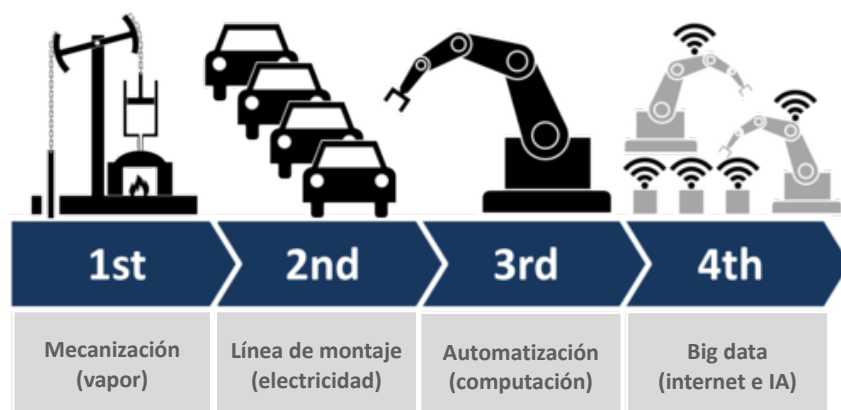


La educación digital y su impacto en las bibliotecas universitarias

Carlos Delgado Kloos
 Universidad Carlos III de Madrid
 @cdk100s

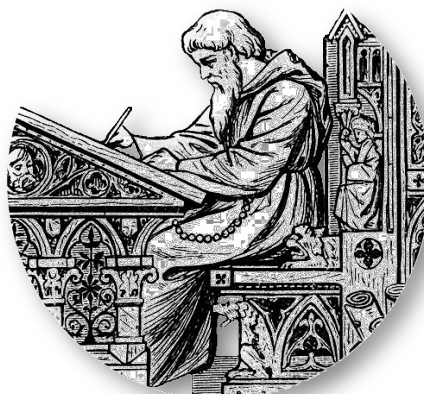
Industria 4.0



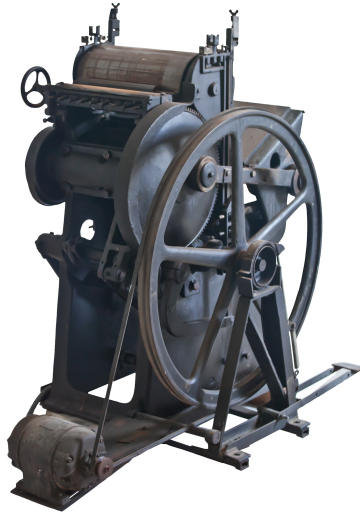
Educación 0.0



Educación 0.9



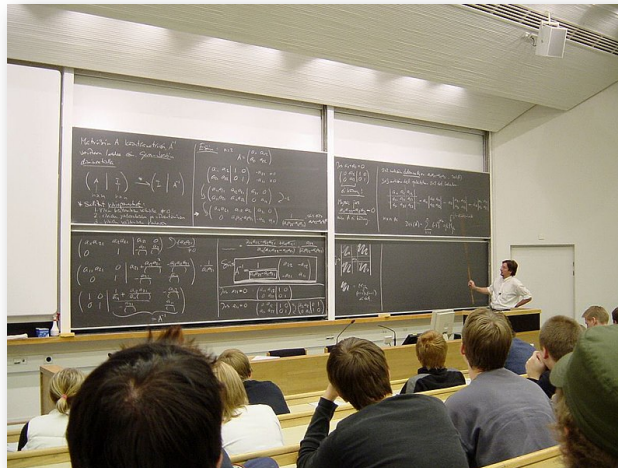
Educación 1.0



Educación 1.0



Educación 1.1



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Educación 1.1



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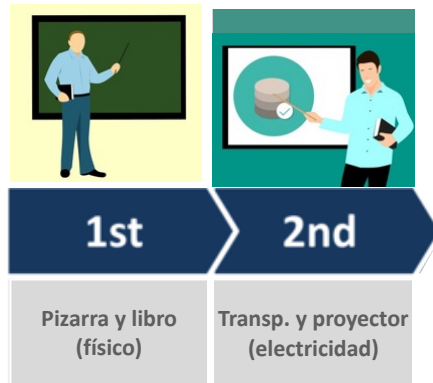
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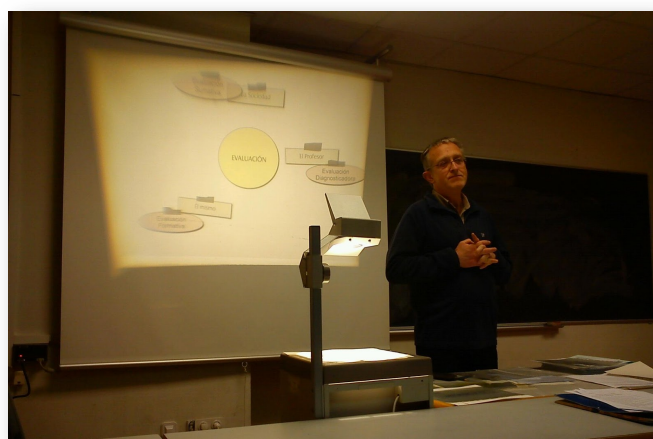
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Educación 2.0



Educación 2.0



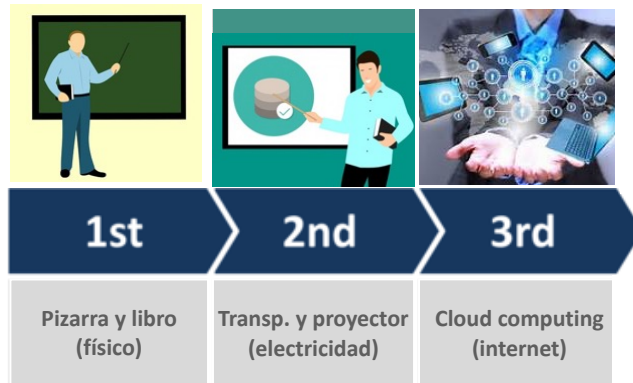
Educación 2.1



Educación 2.2



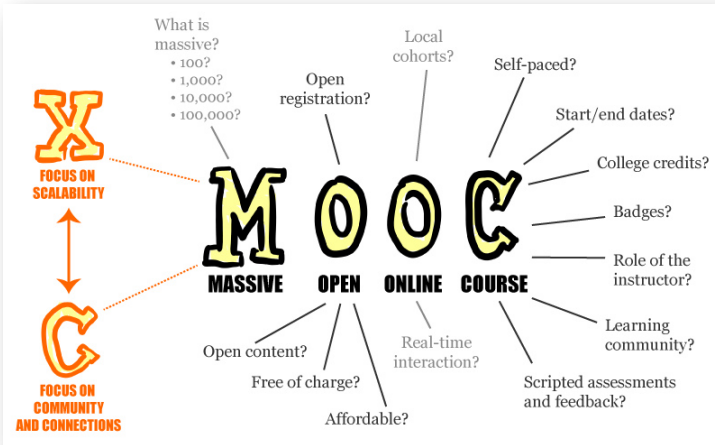
Educación 3.0



Educación 3.0



Educación 3.1



Educación 3.2



Resumen: Educación 0.0 a 3.0

- 0.0
- 1.0
- 2.0
- 3.0

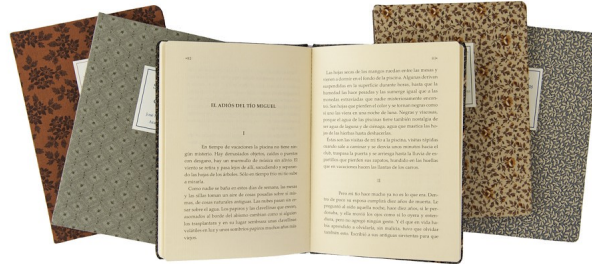


- Acústica (Oral)
- Mecánica (Escrita)
- Eléctrica
- Telemática

La biblioteca como apoyo a la educación (y la investigación)



Educación 1.0: Biblioteca



Libros y revistas



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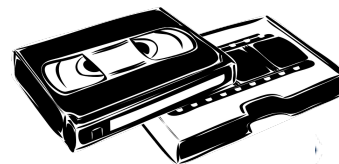
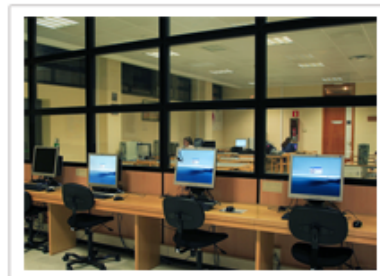
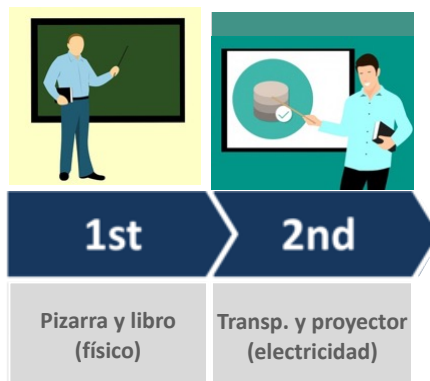
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Educación 2.0: Mediateca



Recursos audiovisuales



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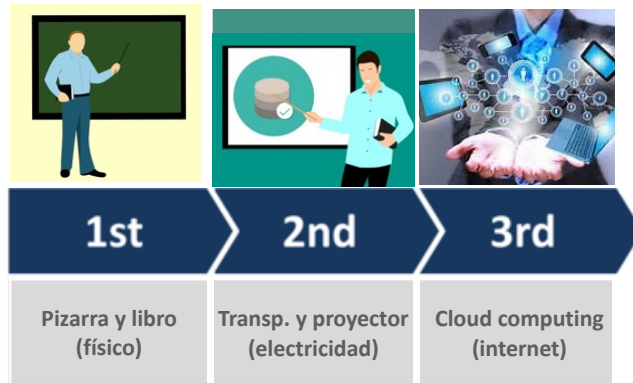
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Educación 3.0: CRAI

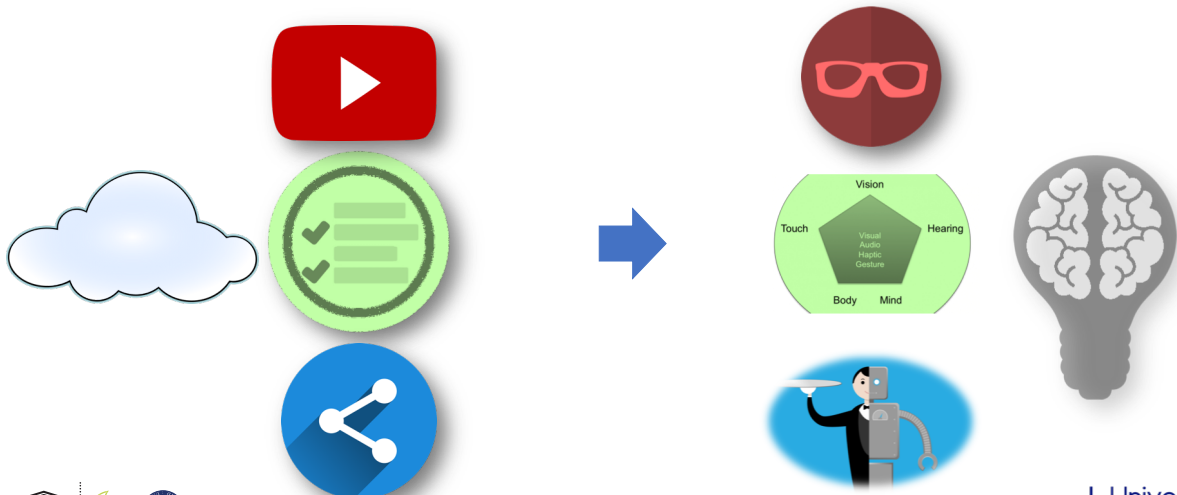


Recursos digitales

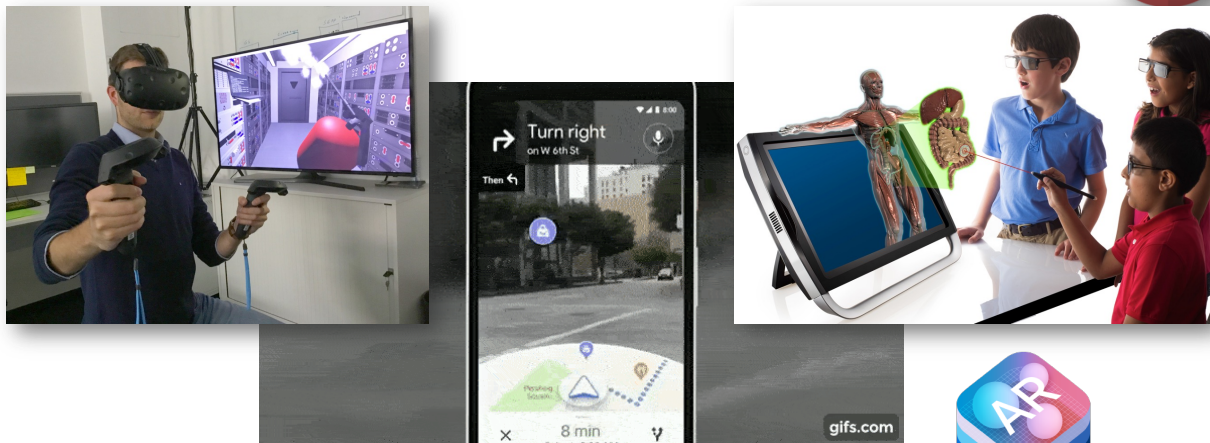
¿Y el futuro?



De Educación 3.0 a 4.0



Realidades mixtas



Interacción multimodal



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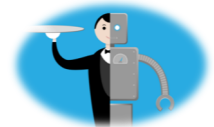
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Redes sociales mixtas



Are we allowed to use any modules from PILLOW? Sorry, if this was already stated somewhere.

Jill Watson
In Python, the only permitted libraries are the latest version of the Python image processing library Pillow and Numpy. You can use all modules inside these external libraries. No external libraries are permitted in Java.

Thank you for sharing. This indeed incredibly interesting to me. I wish I would have the opportunity to implement something like this in my own research.

Just when I wanted to nominate Jill Watson as an outstanding TA!



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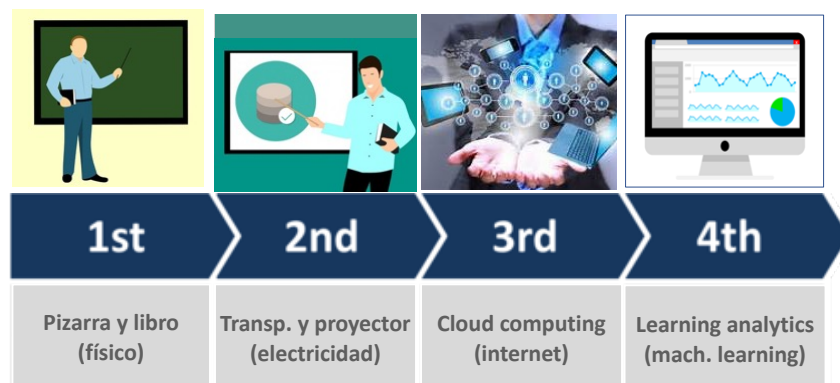
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The diagram illustrates the difference between traditional computation and machine learning. On the left, a blue box labeled 'Computación' (Computation) receives 'reglas' (rules) as input from the left and 'datos' (data) as input from the top. It produces 'resultados' (results) as output to the right. On the right, a blue box labeled 'Aprendizaje máquina' (Machine Learning) receives 'datos' (data) as input from the top. It produces 'resultados' (results) as output to the right, which are then fed back as 'reglas' (rules) as input to the left, forming a feedback loop.

Which agencies promote public debt?

Legend: ■ Financial public debt ■ Regulatory debt

Country	Agency	Number of Agencies
UK	HM Treasury	1,100
USA	Treasury Dept	1,000
France	Ministry of Economy and Finance	1,000
Germany	Ministry of Finance	1,000
Italy	Ministry of Economy and Finance	1,000
Spain	Ministry of Economy and Finance	1,000
Portugal	Ministry of Finance	1,000
Other countries	Various agencies	1,000



Analítica del aprendizaje



1. informe (pasado)
2. Modelado predictivo (futuro)
3. Encontrar el camino óptimo (routing)



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CNU, Beijing, 2019-06-14

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Educación 4.0



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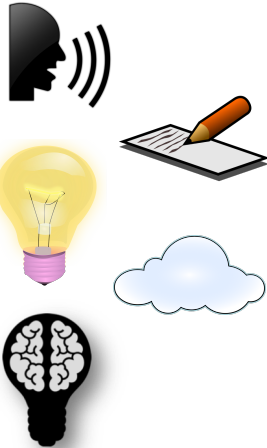
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Resumen: Educación

- 0.0
- 1.0
- 2.0
- 3.0
- 4.0



- Acústica (Oral)
- Mecánica (Escrita)
- Eléctrica
- Telemática
- Inteligente

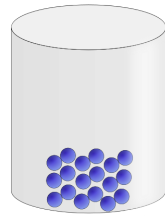
Resumen: Bibliotecas

- 0.0
- 1.0
- 2.0
- 3.0
- 4.0

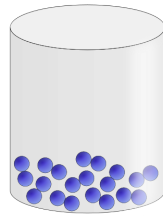


- Biblioteca de libros
- + Mediateca
- + CRAI
- + Data sets

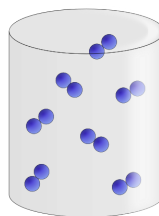
“Estados” de la información



Sólido



Líquido



Gas



Plasma

1st

2nd

3rd

4th



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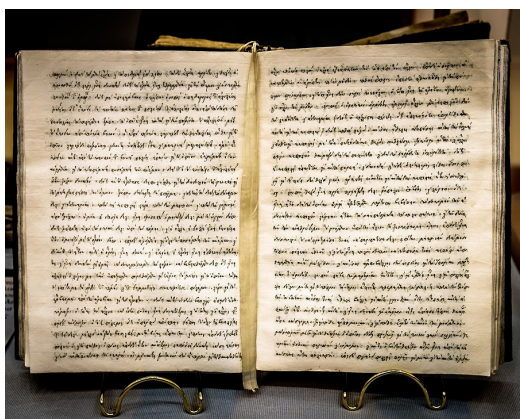
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Unidad básica



Más fragmentada

Más transportable

Más maleable



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Más transportable

Más transportable

- El confinamiento la información ya no es intrínseco al soporte
- Recursos educativos abiertos (OER)
- Open Data



Más maleable

Más maleable

- Computable, procesable
- A partir de información se puede inferir más información
- El valor de los algoritmos y del aprendizaje máquina
- Ya no somos los únicos que entendemos y procesamos la información





Aprendiendo



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¡Dalí está vivo!



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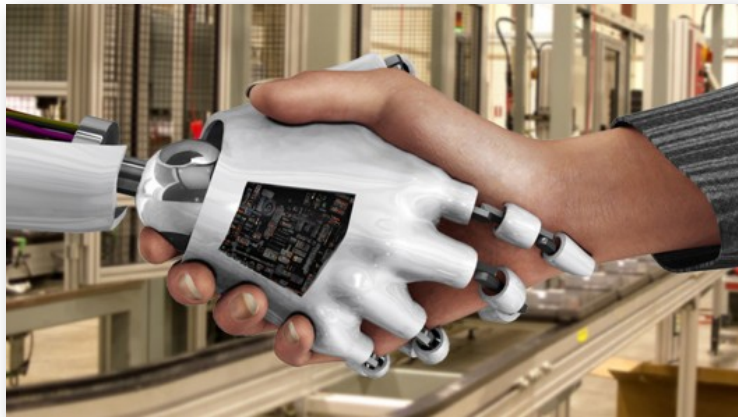
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Colaborar y complementarse con los robots



COTEC



#miempleomifuturo

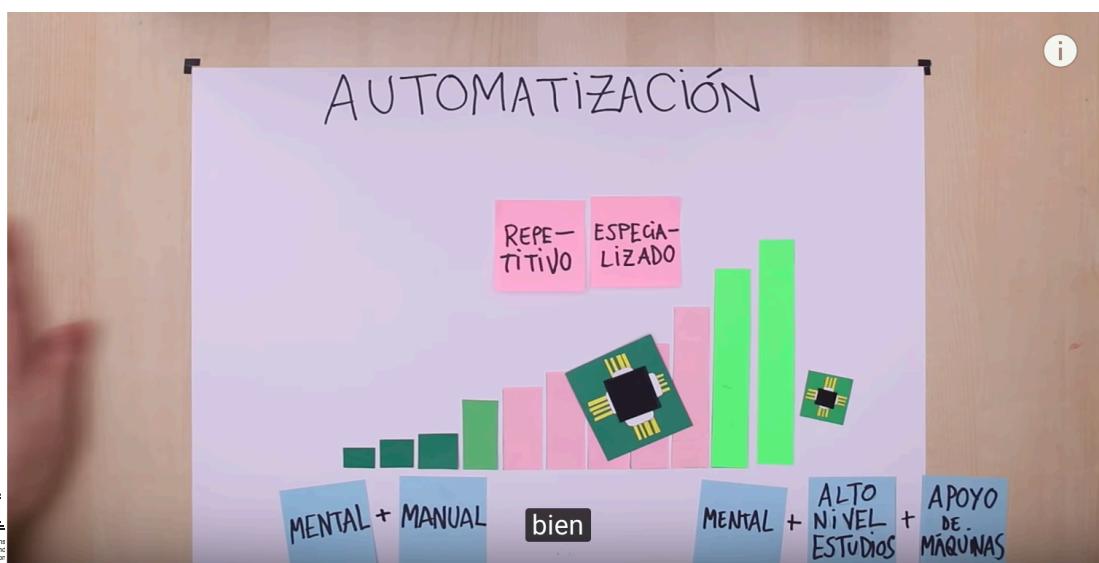
youtu.be/-z5z8aGRSQ0

www.change.org/p/el-miedo-a-que-las-m%C3%A1quinas-nos-dejen-sin-empleo-es-cada-vez-mayor-pero-no-todo-est%C3%A1-perdido-firma-por-miempleomifuturo

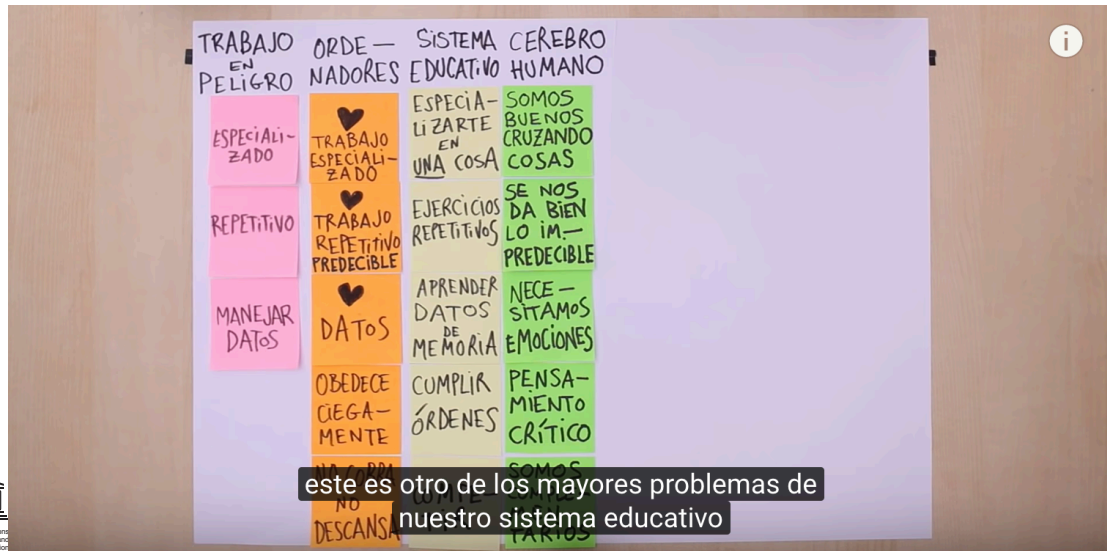
Trabajo repetitivo



Automatización



Problema del sistema educativo



Habilidades más buscadas



Ventana de Overton



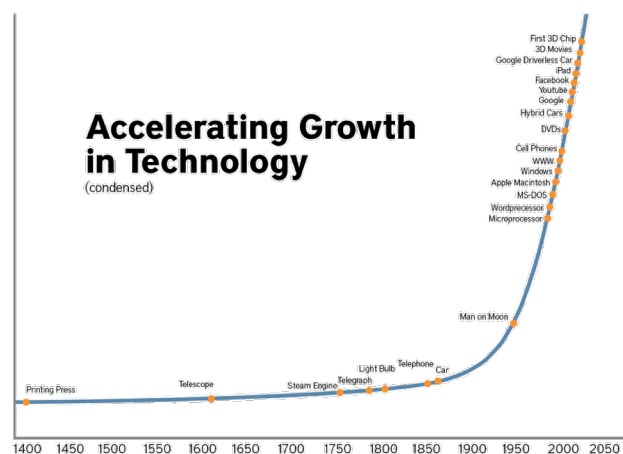
Enseñar habilidades



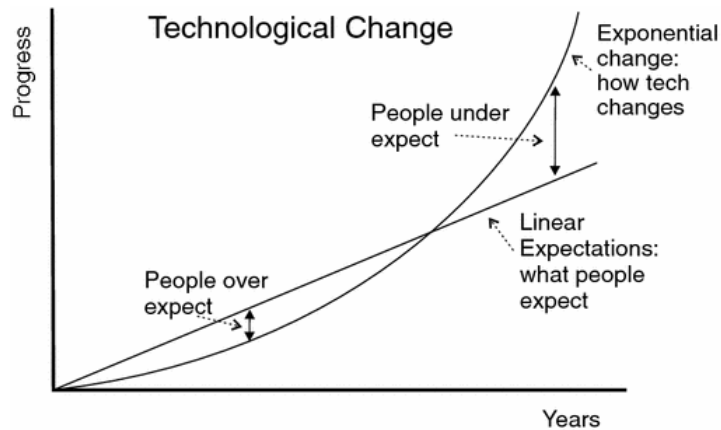
Las bibliotecas y los MakerSpaces



Cambio exponencial



¿Dónde estamos?



No salimos del asombro



