

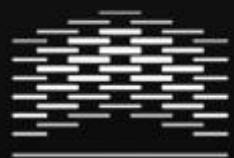
Learning Analytics Summer Institute ASIA 2016

Privacy and Data Protection, Concerns and Efforts towards Design

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@tore

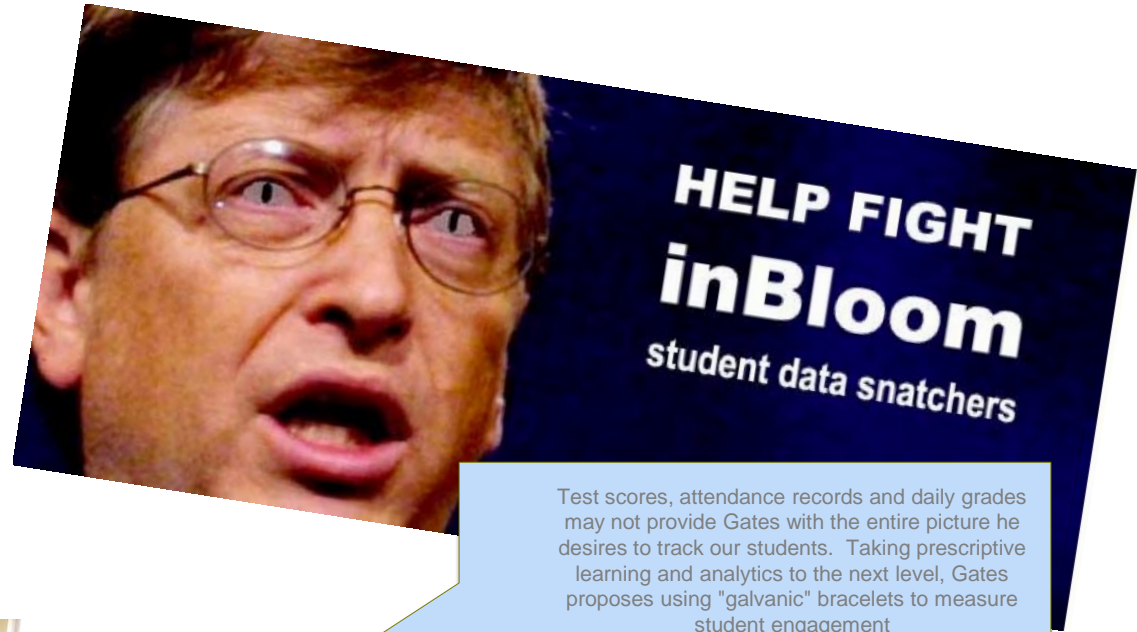
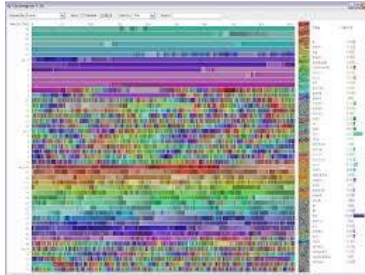


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LACE

Concerns – what can go wrong?

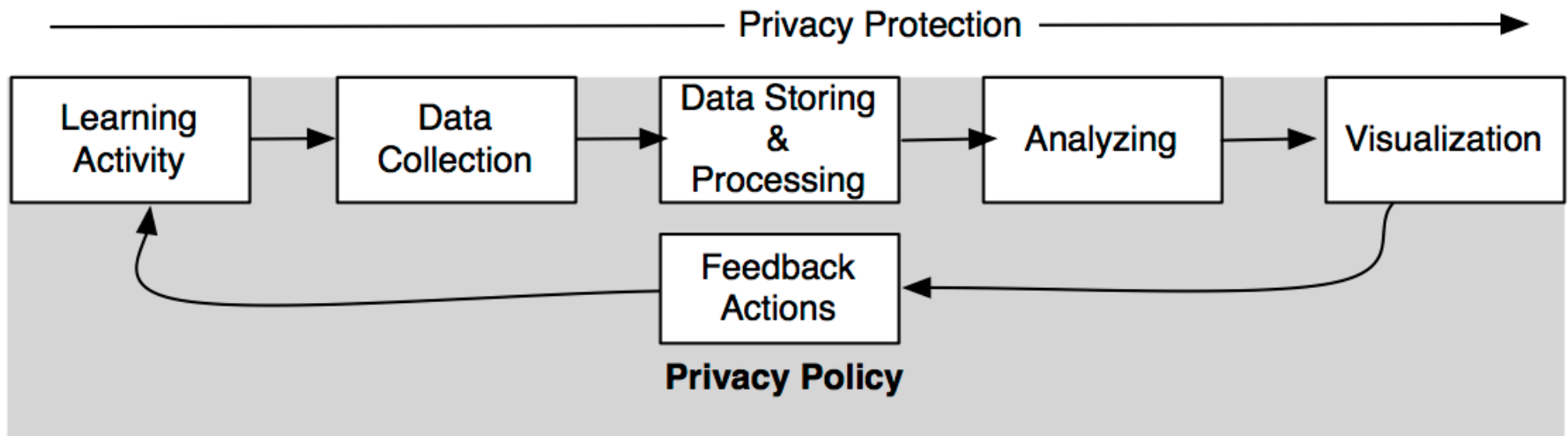


Test scores, attendance records and daily grades may not provide Gates with the entire picture he desires to track our students. Taking prescriptive learning and analytics to the next level, Gates proposes using "galvanic" bracelets to measure student engagement

<https://sites.google.com/site/schoolbelongstothechildren/history-of-inbloom-in-jeffco>

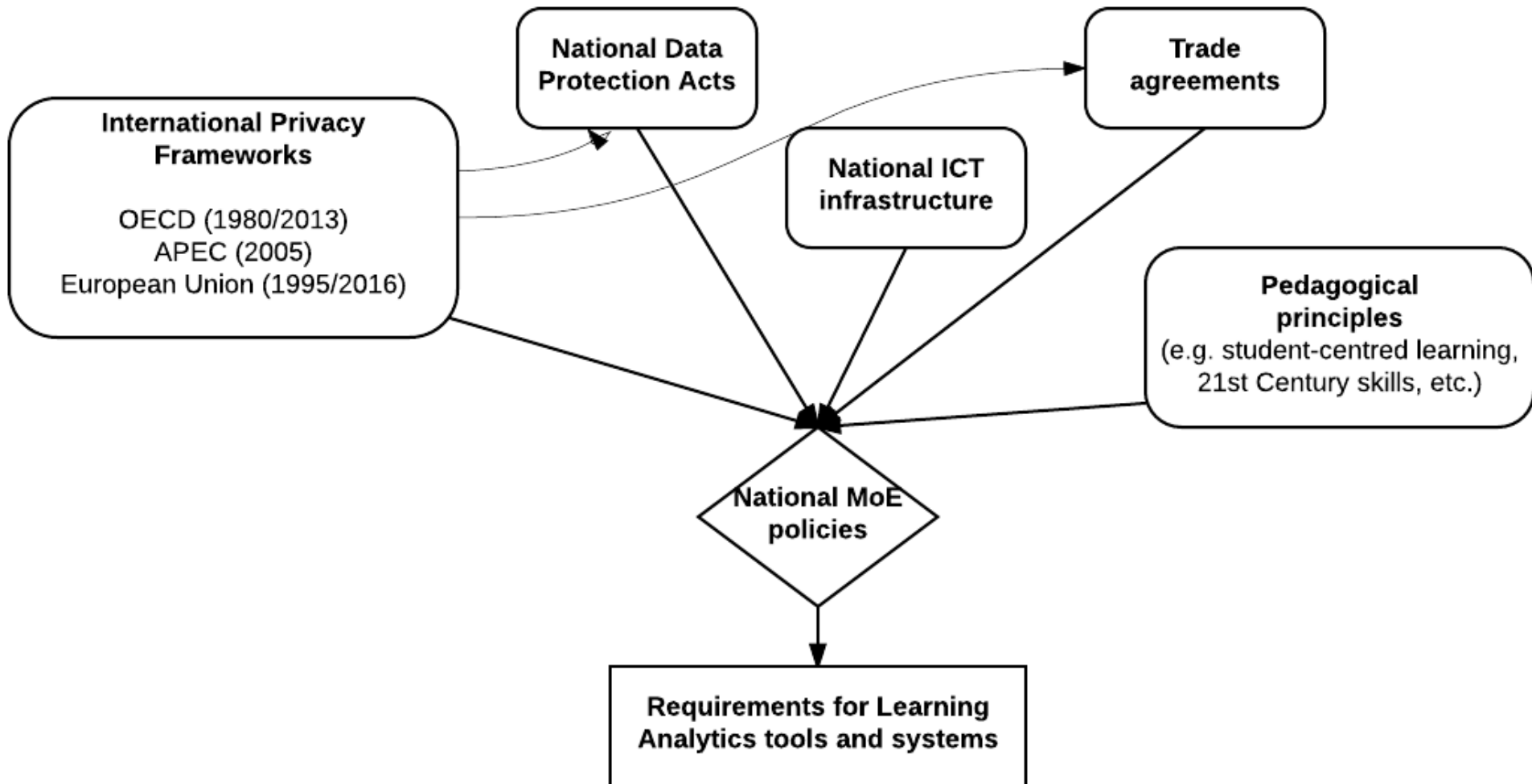


A new part of the ISO standard on Privacy and Data protection of Learning Analytics



LA processes defined by ISO/IEC JTC 1/SC36

What influences Requirements for LA systems?



| OECD | APEC | EU: GDPR (Article 5 & 25) |
|--------------------------|-----------------------------------|---|
| Collection limitation | Preventing harm | Lawfulness, fairness and transparency |
| Data Quality | Notice | Purpose limitation |
| Purpose specification | Collection limitation | Data minimisation |
| Use limitation | Uses of Personal Information | Accuracy |
| Security Safeguards | Choice | Storage limitation |
| Openness | Integrity of Personal Information | Integrity and confidentiality |
| Individual Participation | Security Safeguards | Accountability |
| Accountability | Access & Correction | |
| | Accountability | (Article 25) Data Protection by Design and by Default |

What is the Law?



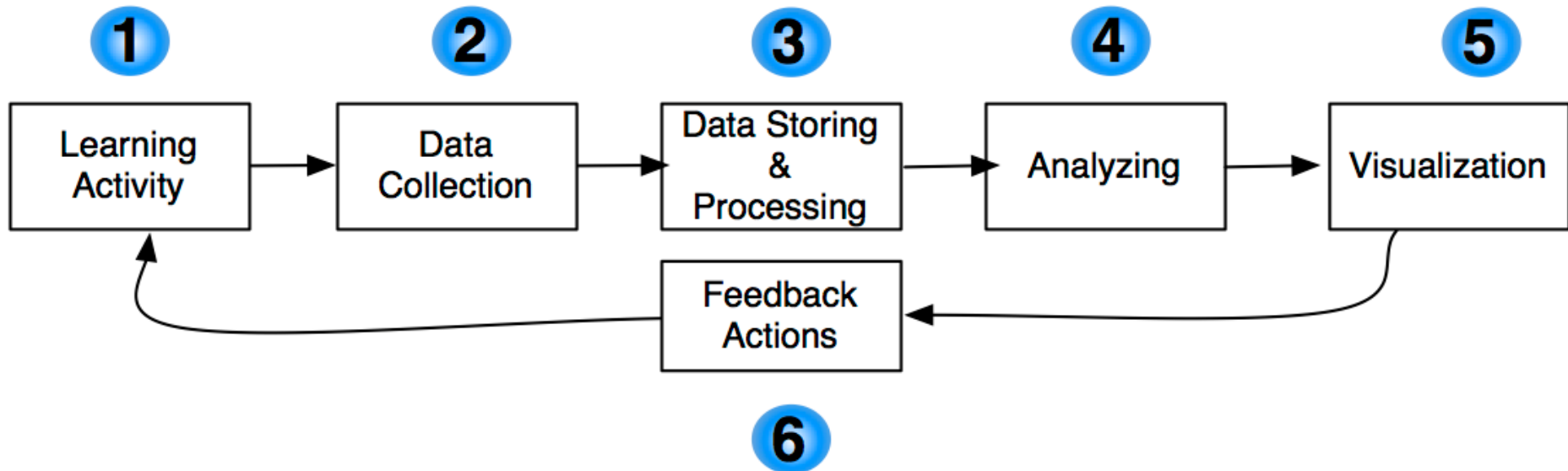
New European Data Protection Regulation (GDPR) for the digital age

*Published May 2016 –
National law in all
European countries
from 2018*

- Consent for processing data:
A clear affirmative action
- Easy access to your own data (Data Portability)
- Data breaches (e.g.,
hacking): Notice without
undue delay
- Right to be forgotten
- Data protection by design
and Data protection by
default



Learning Analytics Privacy Attributes



Right to be informed

| <i>Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|-----------------------------|---|
| Right to be informed | <p>The learner will throughout the full cycle of the LA process (1-6) be able to get information about</p> <ul style="list-style-type: none">- what is the purpose of the LA session specified to learning activity (1)- what data are collected (2)- how the data are stored and processed (3)- what principles (e.g., predictive models, algorithms) are used for analysing learning data (4)- what visualisations are used to render results (5)- what are the technical (as different from human) LA feedback actions that are designed for the particular LA process (6) |

Right to access

| <i>Privacy Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|-----------------------------|--|
| Right to access | <p>The learner will throughout the full cycle of the LA process (1-6) be able to access, i.e., read and download,</p> <ul style="list-style-type: none">- personal information (3)- activity data (2) used for analysis (4)- stored results of analysis (3) |

Right to rectification

| <i>Privacy Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|-------------------------------|--|
| Right to rectification | The learner will at any time be able to enter into communication with the data controller □ to launch claims for rectification of personal information (1-3). |

Right to erasure

| <i>Privacy Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|-----------------------------|--|
| Right to erasure | <p>(1-3)The learner has at any time the opportunity to raise the wish to be forgotten, which means deletion or removal of personal data whether there is no compelling reason for continued processing. In an educational context this could a number of actions, depending on educational level (mandatory or voluntary education) and contract agreements. These are some of possible scenarios:</p> <ul style="list-style-type: none">• LA is not a necessary pedagogical means: All involvement with the LA process is abolished• LA is necessary on aggregated data: Only anonymised data are collected (and there are taken steps to make sure that re-identification is not possible)• A time restriction for storage of data is agreed, and all data are erased after completion of module, course, academic semester, degree...• LA is an integral part of the course offering and the student is given the option to terminate the course and have his/her data deleted. |

Right to restricted processing

| <i>Privacy Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|-------------------------------------|---|
| Right to restrict processing | <p>(3) This is somewhat similar to the LA attributes described above (Right to erasure), with the difference that the processing is put on hold and the data kept for use in historical analysis, aggregated analysis etc.</p> <p>The learner could also reserve herself from taking part in specific learning analytics processing.</p> |

Right to data portability

| <i>Privacy Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|-----------------------------|---|
| Right to data portability | (3) The learner has access to her or his learning activity data, so that when moving to another institution or another tool or LA system the learner should be able to bring with him or her data for reuse in the new setting. |

Right to object

| <i>Privacy Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|------------------------------------|---|
| Right to object | (1-6) There must be a service agreement that informs about the learners rights to object to any aspect of the LA processes (1-6) |

Automated Decision & Profiling

| <i>Privacy Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|---|---|
| Right related to automated decision making and profiling | <p>(4-6) Individuals have the right not to be subject to a decision when: it is based on automated processing; and it produces a legal effect or a similarly significant effect on the individual. Learning analytics may entail automated decision making and profiling of sorts, and these might be part of the contract between the institution and the individual.</p> <p>Learners must be able to</p> <ul style="list-style-type: none">- obtain human intervention;- express their points of view; and- obtain an explanation of the decision and challenge it. |

Other Requirements

| <i>Privacy Requirements</i> | <i>LA Attributes</i> (numbers refer to LA subprocess) |
|---|---|
| Accountability and governance | (1-6) The institution must be able to demonstrate that they have systems in place (policies and procedures) that uphold the protection of personal information and minimise risk of breaches. |
| Breach notification | (3) When systems are compromised in any way, learners should be notified. |
| Transfer of data | (Only EU relevant for European countries - the GDPR has regulations about transfer of data outside the EU region???) (3) |
| Data Protection By Design And By Default | LA systems development should conform to the principle of Data Protection By Design And By Default |

**we have a 2 years window of Opportunity to
make good Learning Analytics Tools &
Architectures!**



Thank you!

Hoel, T. (2016) Privacy and data protection, concerns and efforts
Presentation a www.lasi-asia.org in Seoul, Korea, 19 September 2016

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