

Assessment of Individuals

Carl Jones

NSA

Assessment of the Contribution of Individual Students on an agile team project

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Heretic

5



Heretic

A photograph of two white, stylized human figures hugging. They are set against a dark, moody background with a warm light source from the left, creating a soft glow. The text "We understand" is overlaid in large, white, sans-serif font on the left side of the image.

We
understand

Since 2015

CARDIFF
UNIVERSITY

PRIFYSGOL
CAERDYDD

National Software
Academy

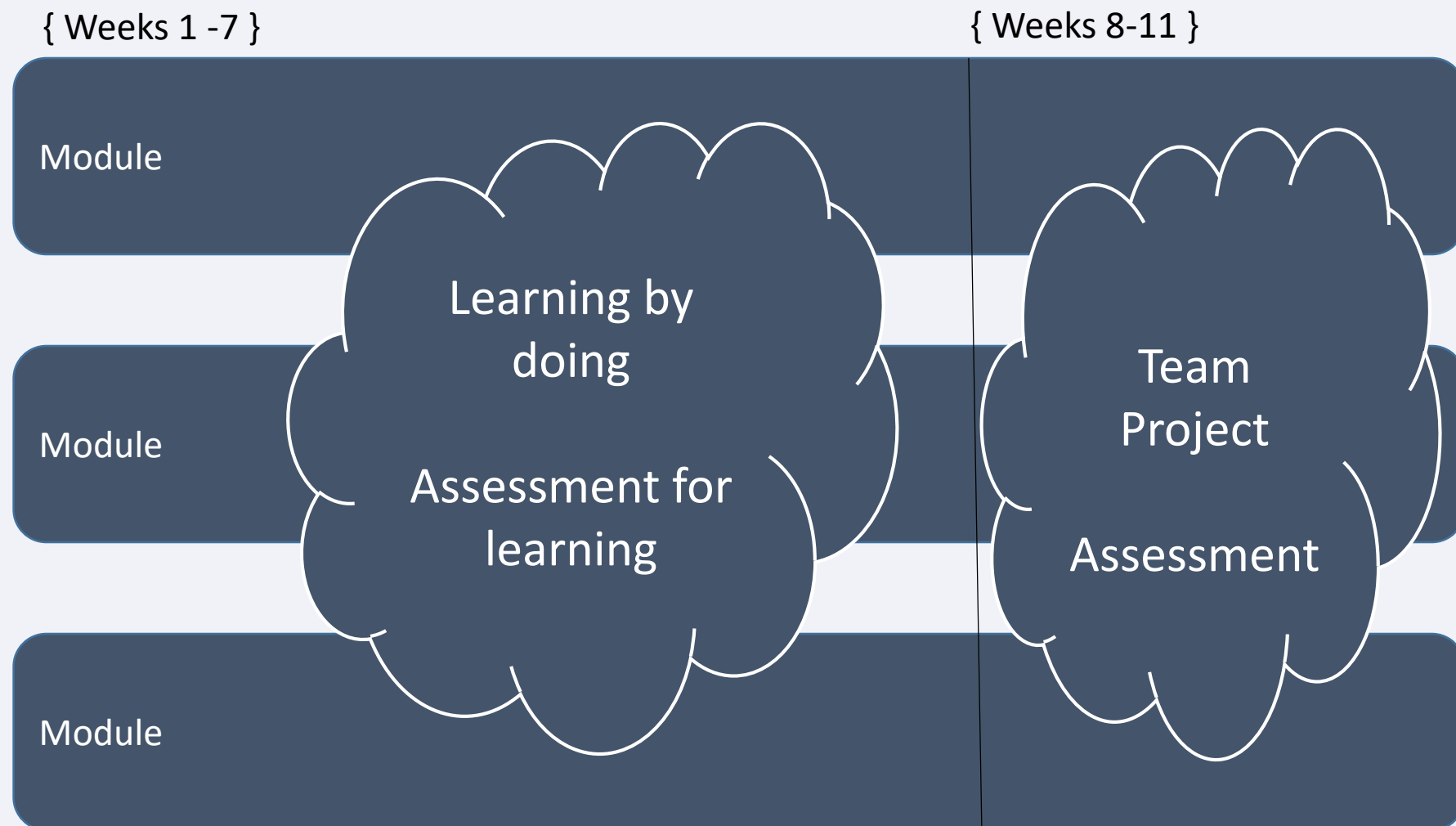
Academi Meddalwedd
Genedlaethol

- Industry-led degree programme
 - Shadbolt review
- Learning-by-doing & Project-based Learning
- Syllabus built with industry
 - Agile, DevOps, Cloud, Development disciplines,...
- Our project clients have included...
 - Clinical psychiatrists, pharmacists, historians,...

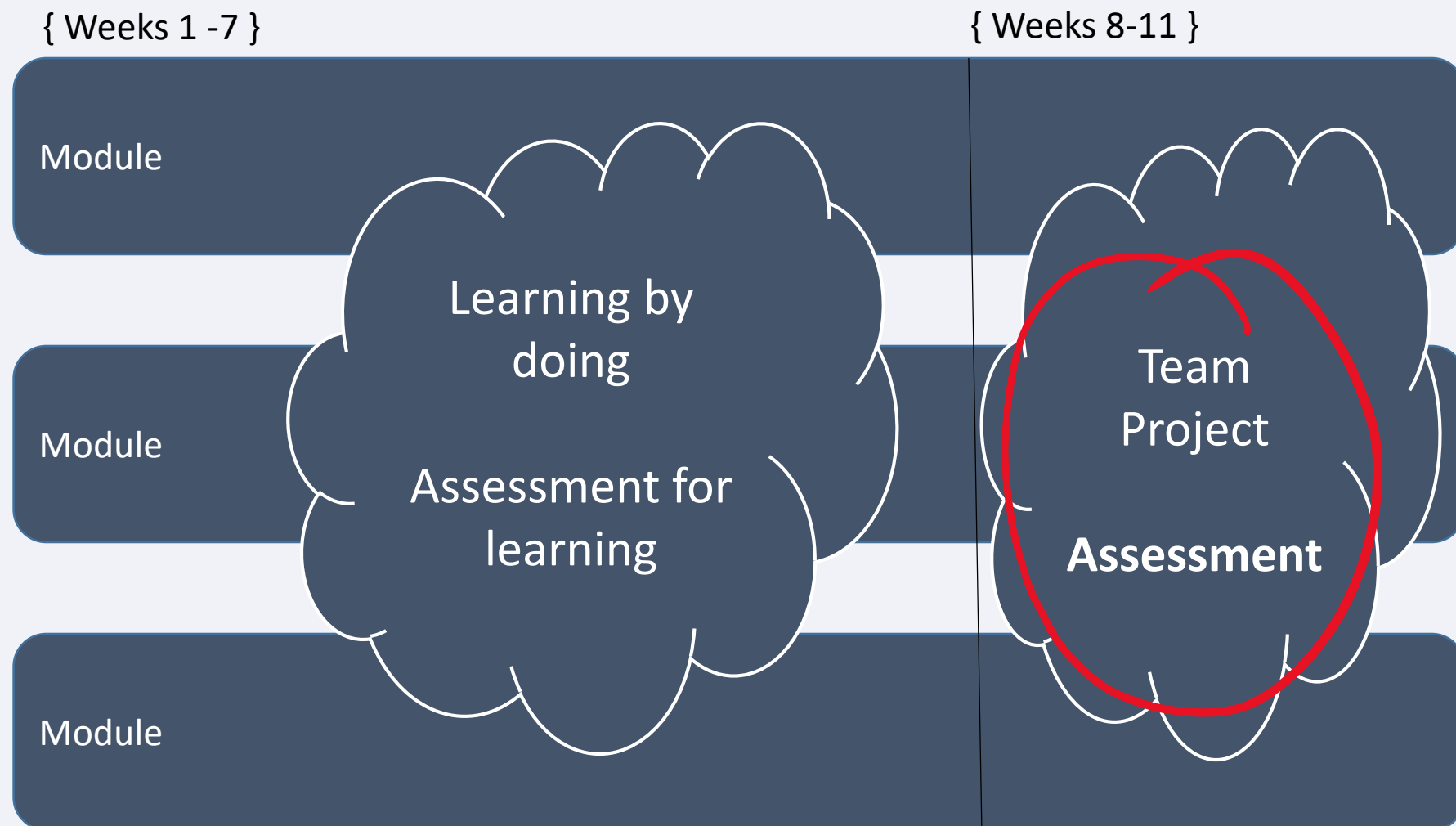
National Software Academy



Typical semester at the NSA



Typical semester at the NSA



- 3 clients, 3-5 teams per client, 4-5 students per team
- 4 weeks
- “Working software” every week
- Client attends at start, midpoint and end
- Staff reviews weekly + mentoring
- Teams selected by staff
 - Typically a range of capability
 - Different teams for each project

What I did 1992-2015



What I did 1992-2015



Mostly good times...

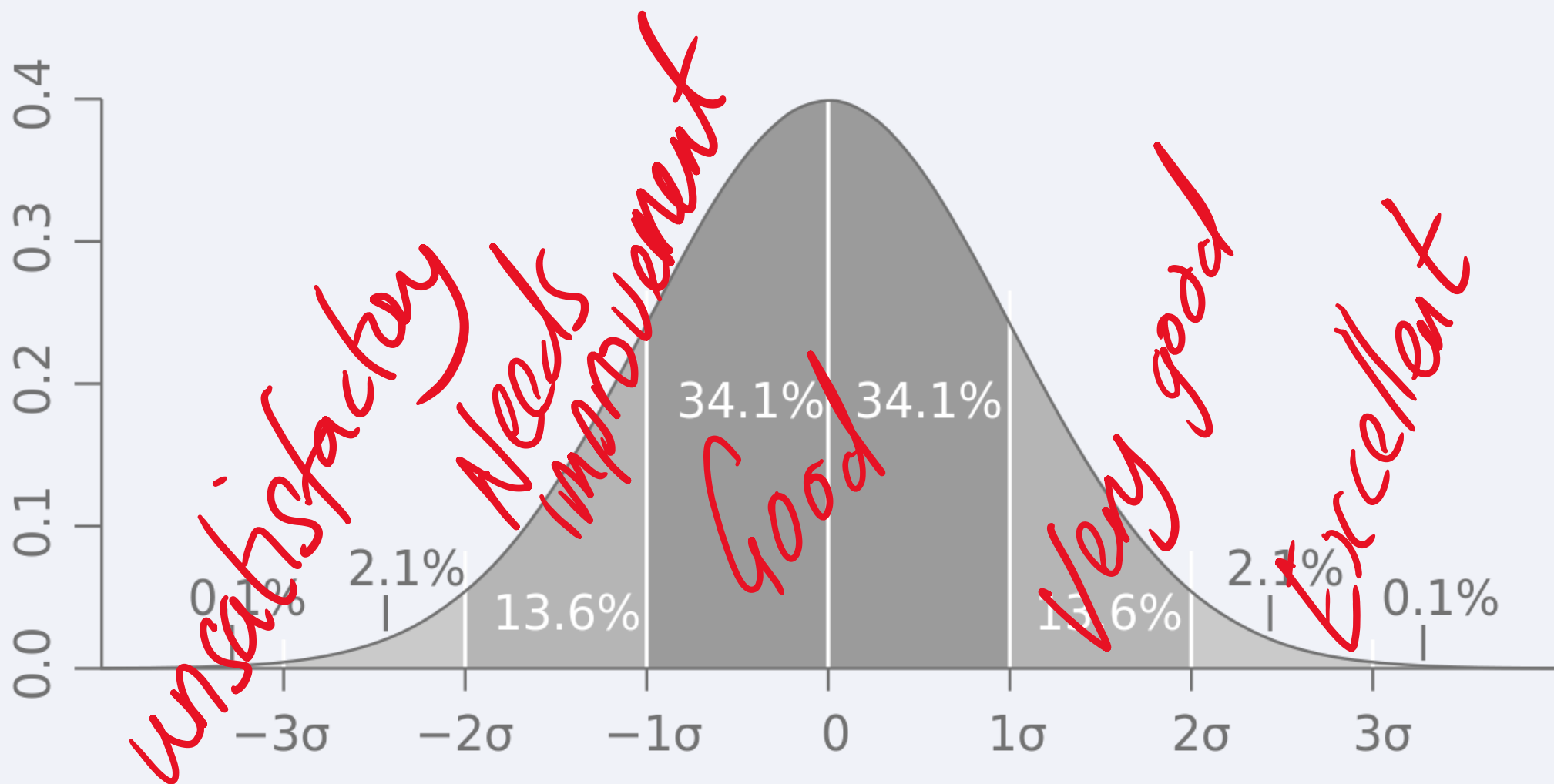


What I did 1992-2015

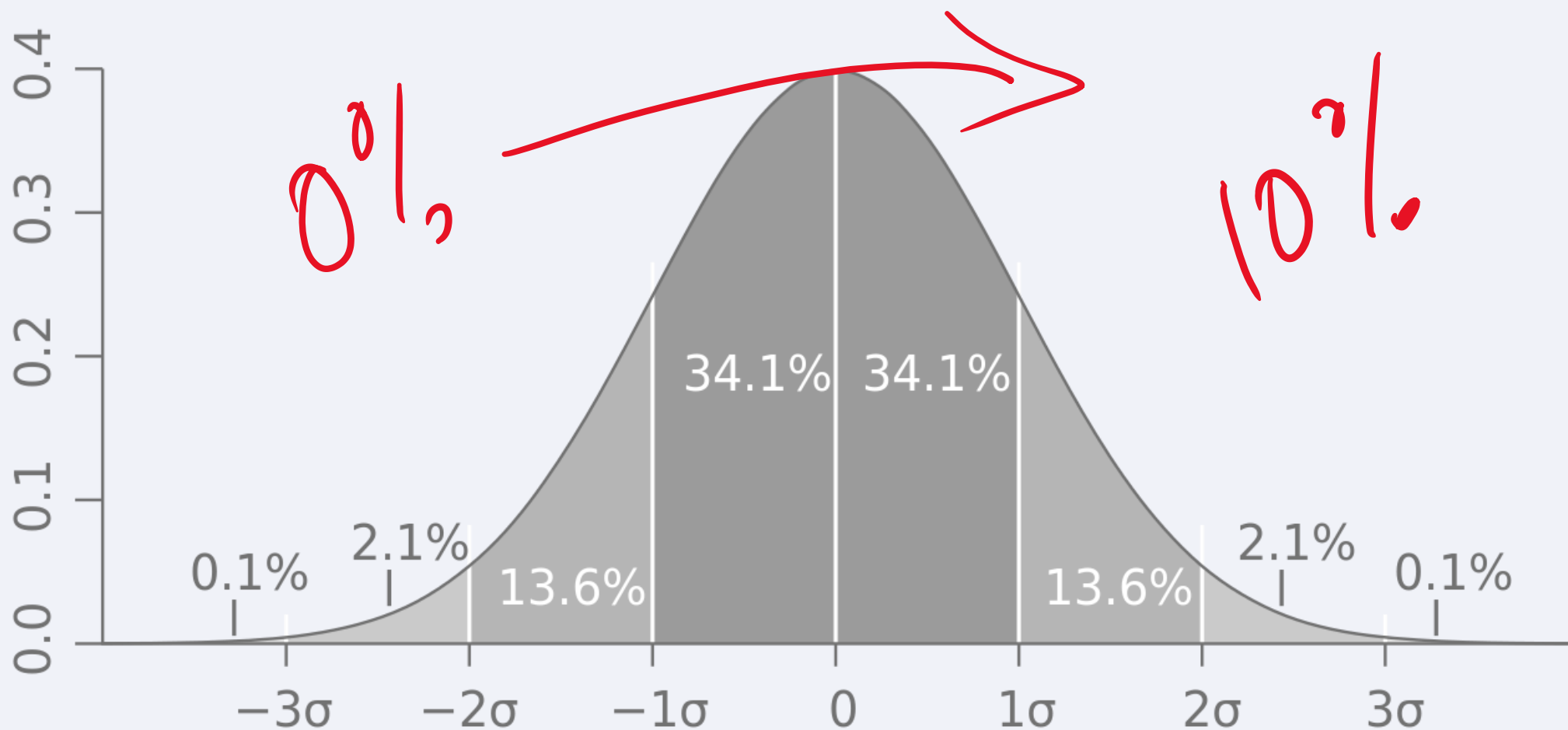
- Developer, architect, team lead, agile *advocate*
- BT systems, NHS, UK Government, ONS, Charities
- Performance Management
- Being agile in these contexts often hard
- Graduates - demand side



Performance Management



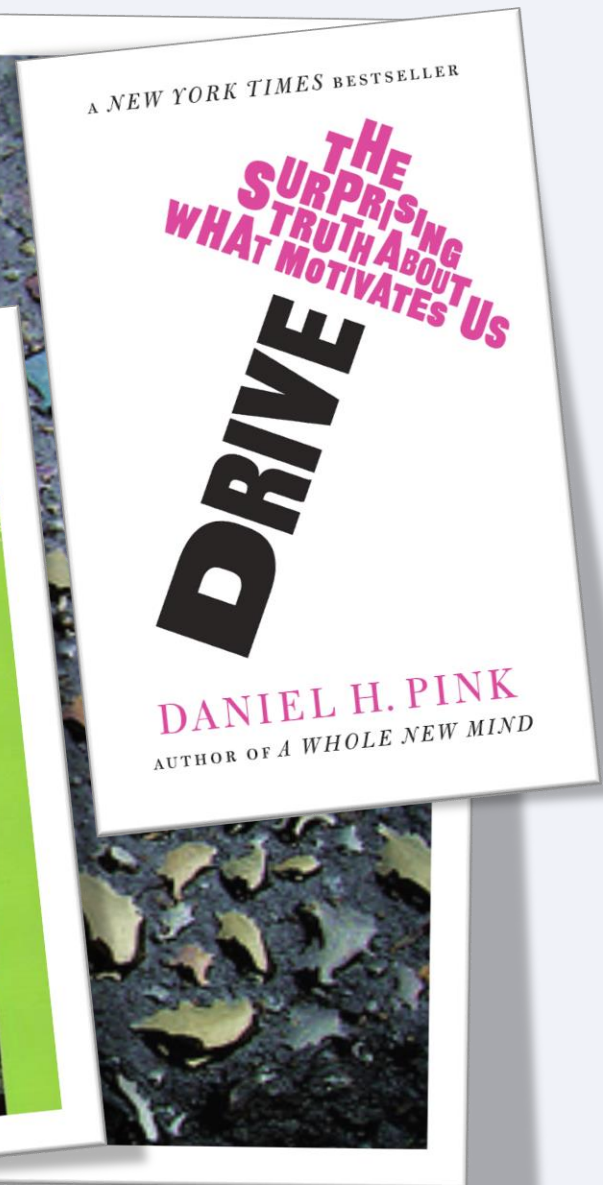
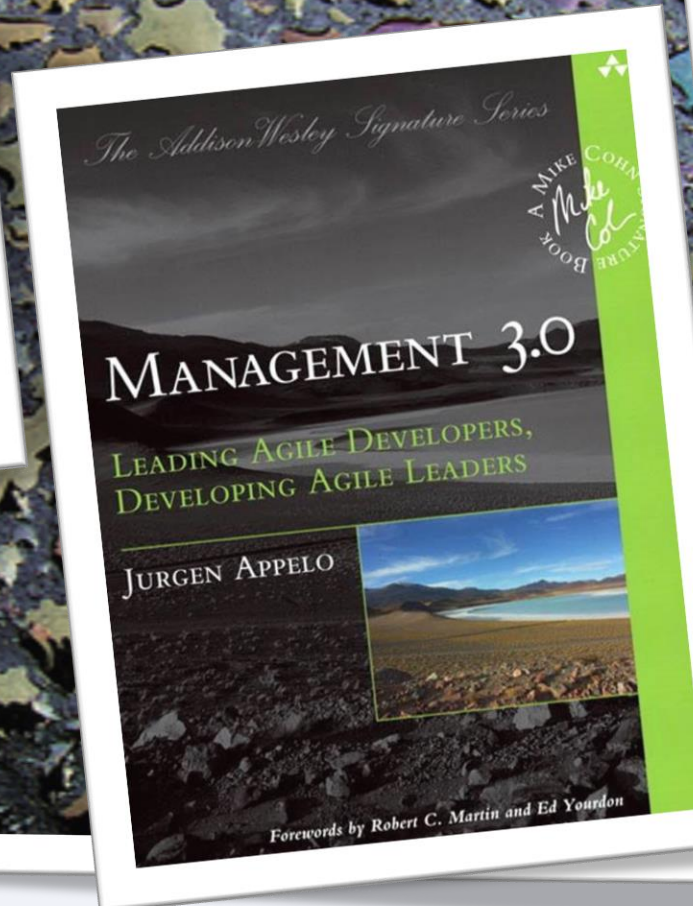
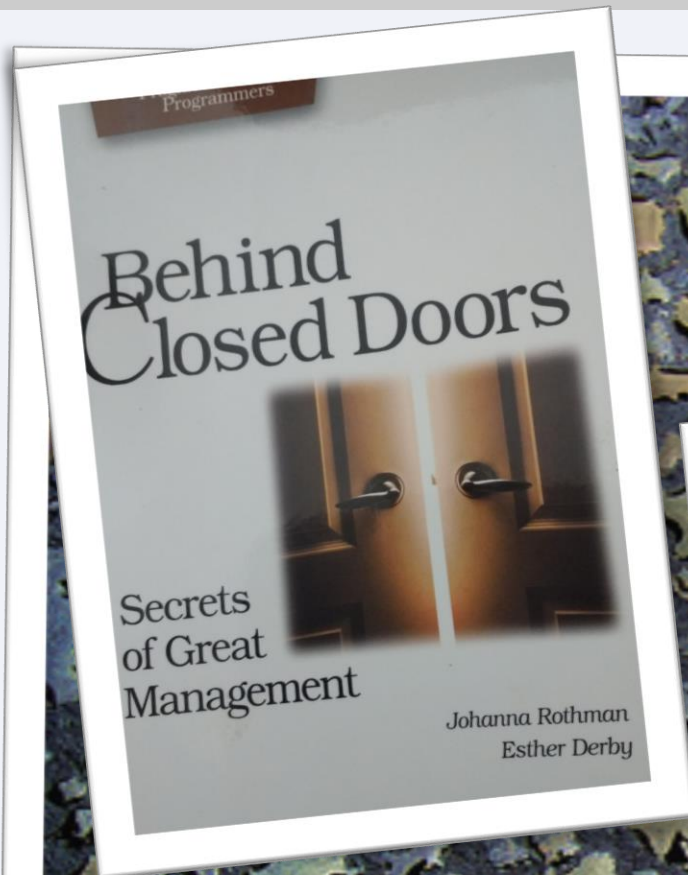
Performance Management



Agile & Performance Mgt

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When Feedback Doesn't Correct the Situation

Start with a verbal warning. When corrective feedback doesn't work, most companies enter a formal process with legal ramifications. Talk to your company's Human Resources department or your corporate lawyer to see how to stay within your corporate guidelines and the law.

When corrective feedback isn't working, make sure your employee knows the situation is serious. Verbal warnings need to be

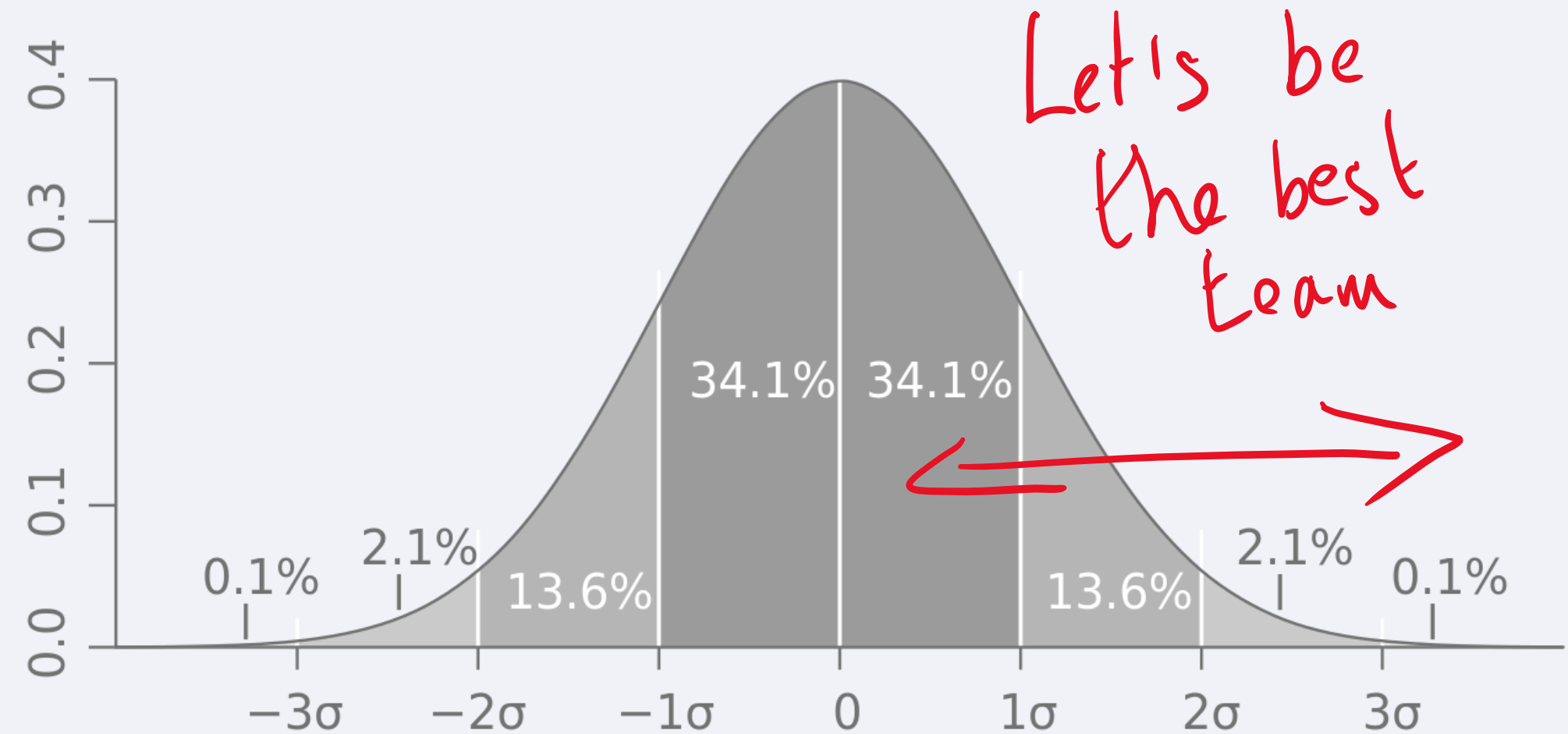
and unambiguous deliverable [state s before. This is a ve if you want to keep

Deliver a written duce change and y the warning in wri versations related t

Don't underestimate the impact of poor performance. Anyone can have a bad day once in a while. But long-term poor performance affects not only the results but the morale of the entire team. If poor performance is ongoing, discuss and resolve those issues.

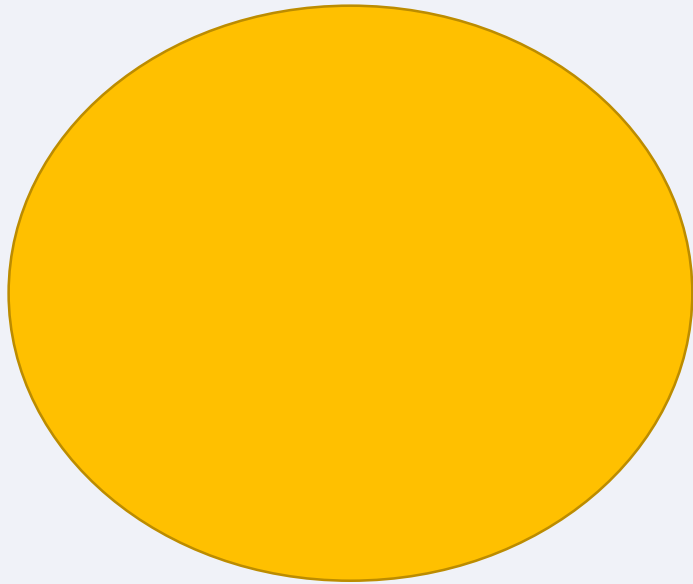
Implement a get-well plan. Along with the verbal or written warning, implement a get-well plan. A get-well plan is a short period (four to five weeks) where the employee must show evidence that he is meeting acceptable standards. If at any time the employee's work doesn't meet the standard, terminate the plan and terminate employment.^[7]

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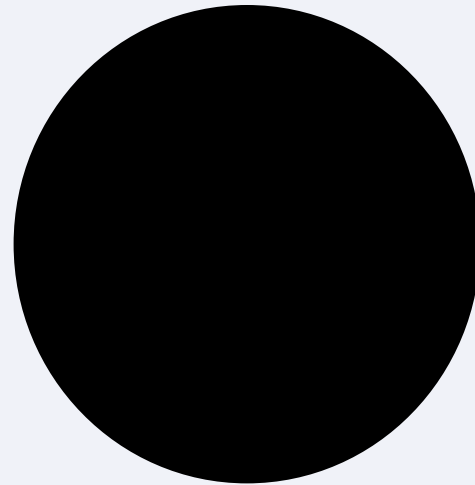


Mixed results

Brightspots

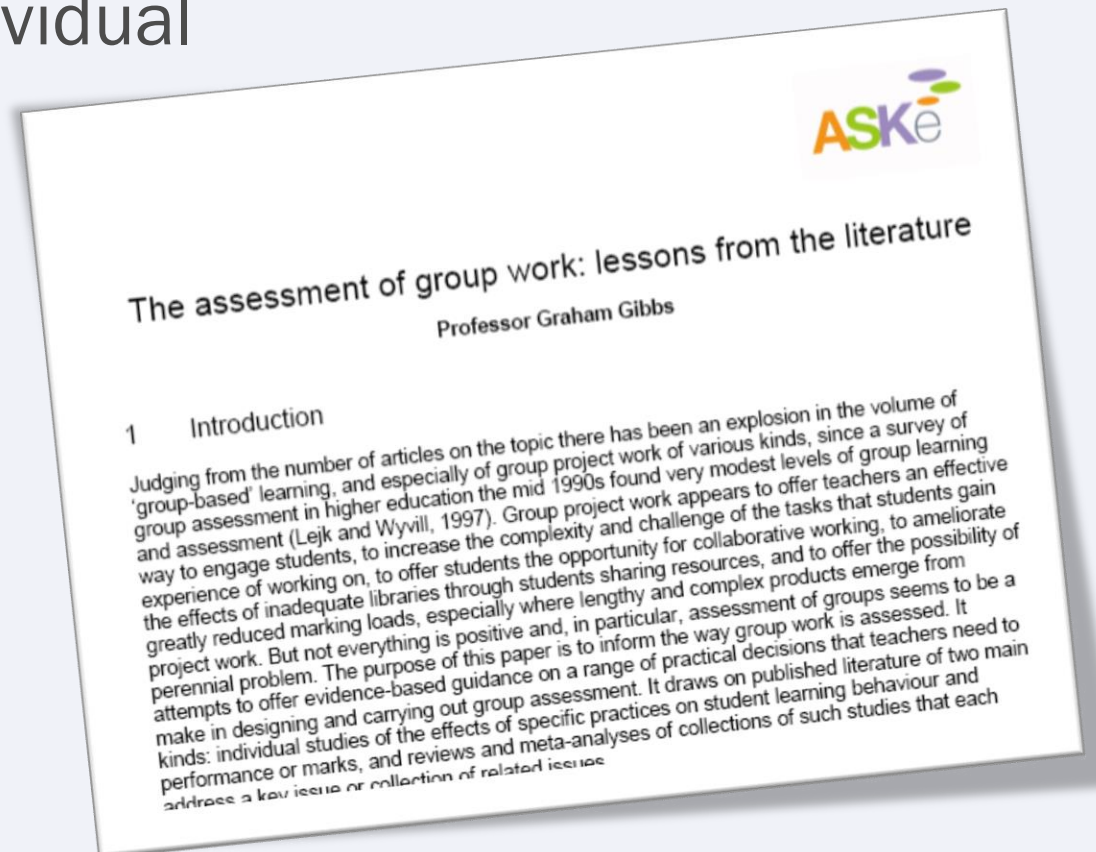


Dark spots



This has been done surely?

- Numerous academic views on this
- Separation of product and process
- Separation of group and individual
- Assessor options
 - (self, peer, staff, client)
- Couldn't find clear guidance
- Prof. Graham Gibbs



Current Approach

- We set & publish assessment criteria up-front
- Actions lead directly to marks
- Too much reward to the team -> free-loading
- Too much reward to the individual -> task grabs
- When asked, students tell us that they want to be assessed on their contribution
- ...

Current approach

- Fortnightly client review => client mark (team)
- Weekly staff review => contribution mark (ind)
 - Informed by Git, Taiga, Wiki, Teams, listening
- Weekly staff review => professionalism (team)
 - Informed by working software, preparation, adapting to change
- Post-project reflection (ind)
 - Individual retrospective
- **All assessment criteria known up front**
 - 40% from weekly scores
 - 16/40 client score, 12/40 team, 12/40 individual
 - 60% on reflection

Issues with current approach

- Enables some gaming of the assessment
- Extrinsic v intrinsic motivators
- Balance between team & individual marks
 - Relatively easy to get 20-25 marks.
- #commits, #stories are not direct indicators

Idea

Is it a better approach to focus on outputs and outcomes during the project phase, coach the students to collaboratively make decisions and record their own thoughts, and then gather reflective thoughts after the project as assessment...*only revealing the rubrics after the project?*

Dan North recently said...



Dan North

@tastapod

Follow

What do I mean by principles?

1. Obsess about lead time
2. Obsess about feedback
3. For software, obsess about engineering principles. XP matters
4. Obsess about collaboration
5. All specialist roles act as coaches: Product Managers, Testers, SMEs, etc.

Stuff like that.

In “Accelerate”

THE SCIENCE BEHIND DEVOPS
ACCELERATE
Building and Scaling High Performing
Technology Organizations



Nicole Forsgren, PhD
Jez Humble *and* Gene Kim

IT Revolution
Portland, Oregon

Software Delivery Performance
Lead Time
Deployment Frequency
Mean Time to Restore (MTTR)
Change Fail Percentage

Figure 2.1: Software Delivery Performance

Table 3.1 Westrums Typology of Organizational Culture.

Pathological (Power-Oriented)	Bureaucratic (Rule-Oriented)	Generative (Performance-Oriented)
Low cooperation	Modest cooperation	High cooperation
Messengers “shot”	Messengers neglected	Messengers trained
Responsibilities shirked	Narrow responsibilities	Risks are shared
Bridging discouraged	Bridging tolerated	Bridging encouraged
Failure leads to scapegoating	Failure leads to justice	Failure leads to inquiry
Novelty crushed	Novelty leads to problems	Novelty implemented

Westrum

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I want students here

Separate data from assessment

- Students have to gather data *such as*...
 - Time to first shippable version
 - Average cycle time
 - Build health (including code quality)
 - Accuracy of project board
 - Frequency of collaboration
 - Improvement actions
 - Peer-assessment of effort
 - Recognition of assistance provided
- ...whilst also delivering a rated value to the client!

After the project, the rubrics

- Students may fork the project and submit against the fork
 - This allows parked work or other options to be explored
- Students are given reflective questions to answer that must use project data to evidence...e.g.
 - From your project data...
 - (a) Identify an improvement in your outputs and analyse the changes that led to that improvement
 - (b) Describe the overall impact of those changes
 - (c) Formulate an improvement pattern based on that action that could be applied to other teams

What's Important?

- Moving from shallow knowledge of practices...
- ...to deeper knowledge of principles
- Ability to make decisions and trade-offs in context
- Understanding of the link between management, personal and technical skills
- To be positive contributors and disruptors

Discuss

Edna – pass me my suit!

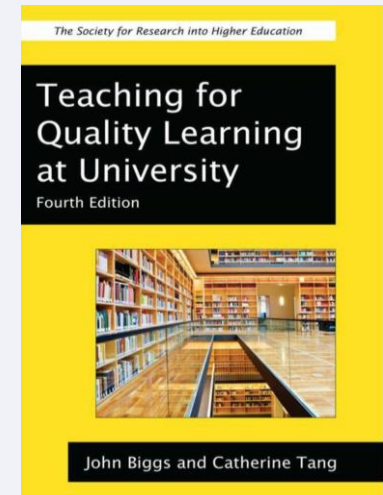
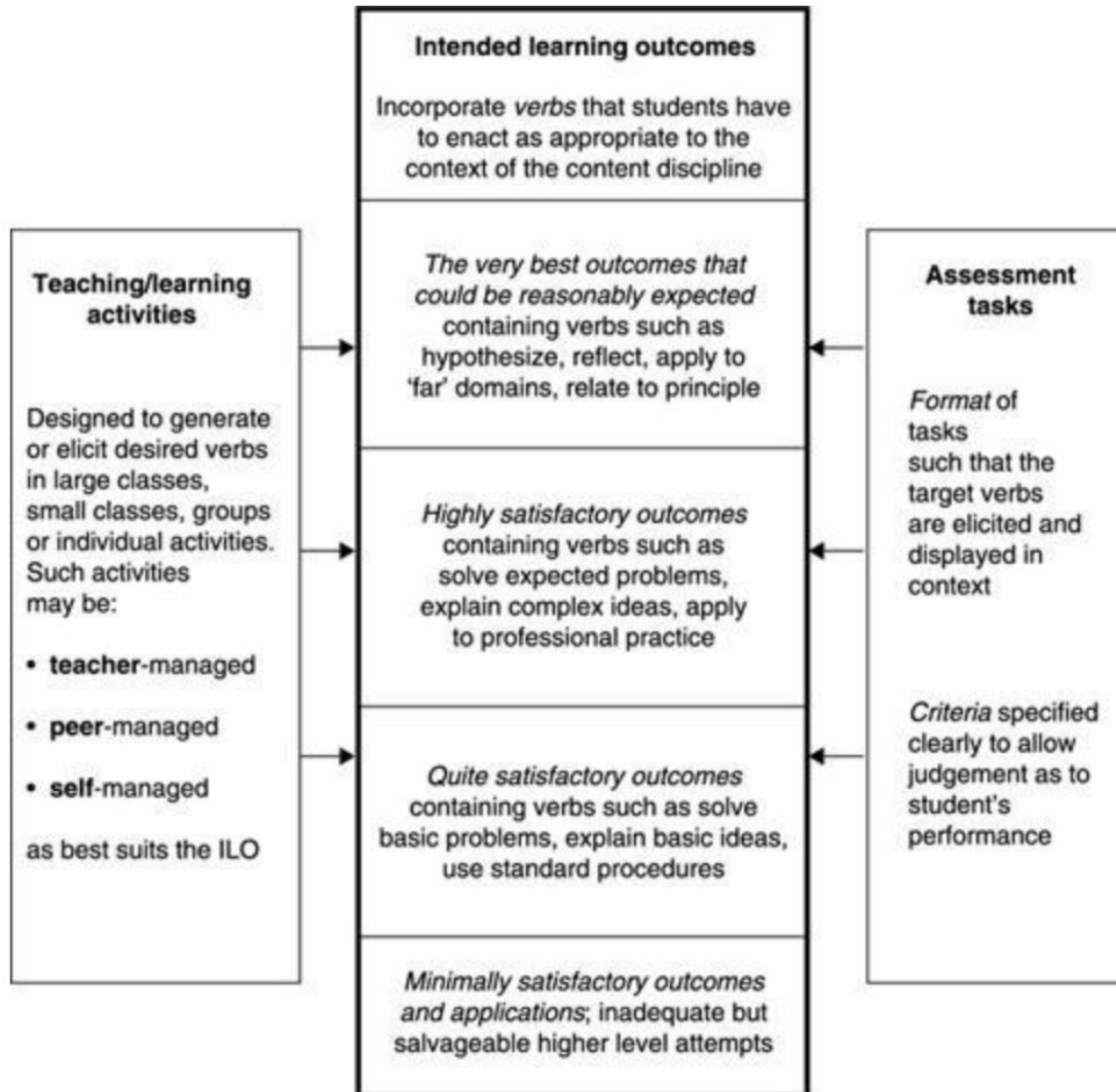


Workshop time...

Questions

- Should we assess individual contribution?
- Are there measures in industry that could transfer to academic practice?
 - DORA (DevOps Research and Assessment)
 - OKRs (based on Monday, I have a view)
- Are there better ways of gathering data?
 - Based on visual thinking workshop on Monday, I have a view
- How important is it that students leave with the ability to understand, question and improve agile practice?

Constructive Alignment



Constructive Alignment

Intended learning outcomes
Incorporate <i>verbs</i> that students have to enact as appropriate to the context of the content discipline
→ <i>The very best outcomes that could be reasonably expected</i> containing verbs such as hypothesize, reflect, apply to 'far' domains, relate to principle ←

<starter>

Analyse and reflect on a team or organisation process in context and lead improvements to outcomes.

</starter>