# Assessment in Informatics
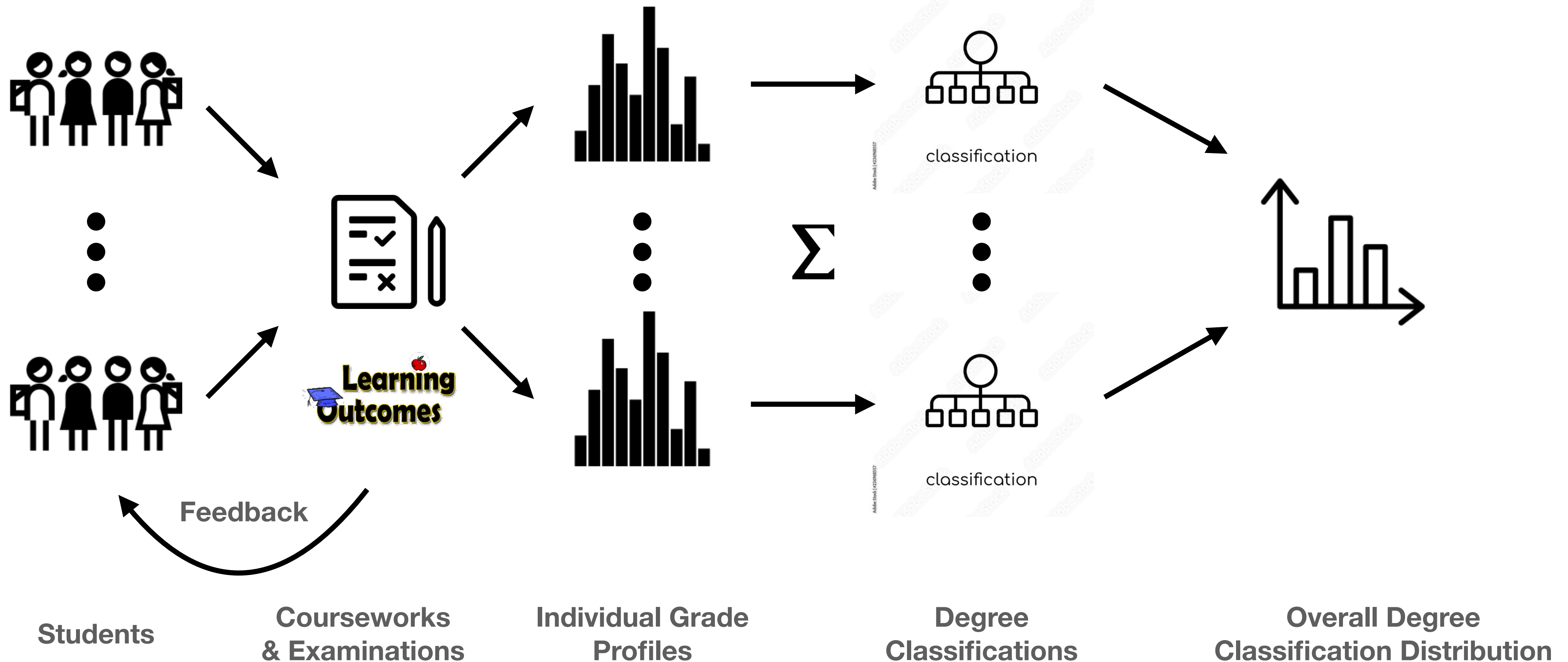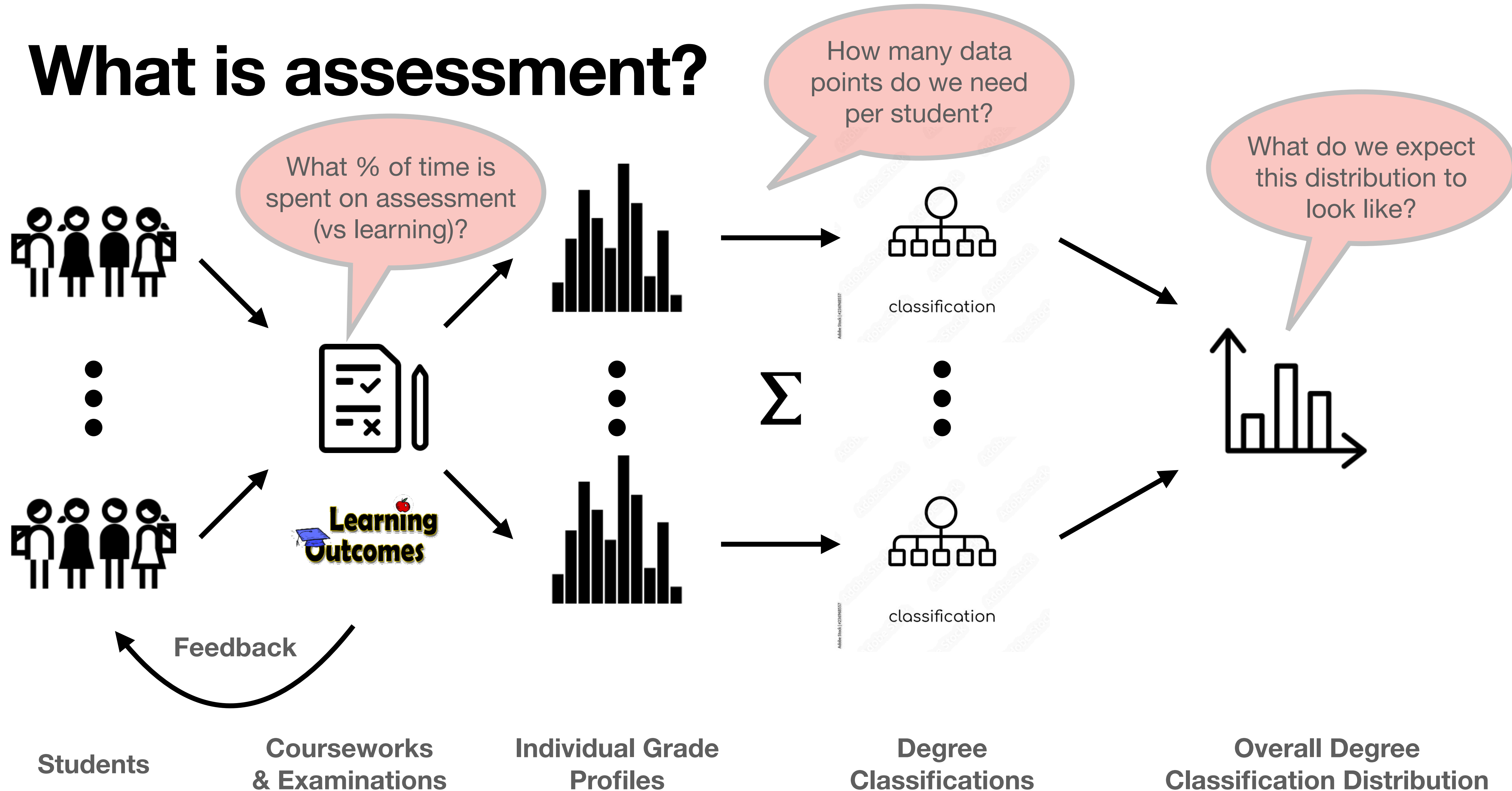
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# Overview

- Extended Common Marking Scheme

- Assessing learning outcomes efficiently

- Quantity of assessment

- Quality of feedback

- Communication with your students (and other course markers?)

- Adapting assessment to both ECMS and SCQF levels

# Assessment & Feedback

# What is assessment?



Students    Courseworks & Examinations    Individual Grade Profiles    Degree Classifications    Overall Degree Classification Distribution

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Students — Courseworks & Examinations — Individual Grade Profiles — Degree Classifications — Overall Degree Classification Distribution

# Percentage of Time for Assessment
## What it should be according to SCQF

- **20 credit** point course → **200 notional hours**

- 20% (40 hours) for programme level activities: **160 hours left in reality**

- **20% (40 hours) for assessment**

- 60% (120 hours) for learning activities

  - Contact time

  - Directed study

  - Independent study **including assessment preparation**

**Assessment Equivalence Tariff from Ulster University**

**Do we need to introduce such a tariff?**

| 20 Credit Module | | |
|---|---|---|
| **200** notional learning hours (comprises contact time, directed study, independent study including assessment preparation) | Assessment learning hours/preparation constitutes approx. **20%** of notional module learning hours | **40 hours** notional assessment work hours <br><br> **4000** word count equivalence |

**Assessment equivalence examples**:

| Assessment Type | WCE | Notional Assessment Work Hours | Credits |
|---|---|---|---|
| Written essay | 1000 words | 10 h | 5 |
| Exam / test | 1 hour | 10 h | 5 |
| Reflective journal/log | 1000 words | 10 h | 5 |
| Lab/practical report | 1000 words | 10 h | 5 |
| Group assignment | 750 words per member | 10 h | 5 |
| Individual presentation | 15 minutes | 20 h | 10 |
| Viva/oral exam | 20-30 minutes | 20 h | 10 |
| Small Group presentation | 10 minutes per member | 20 h | 10 |
| Portfolio of evidence | 6000 words | 40 h | 20 |
| Research proposal, small project | 4000 words | 40 h | 20 |
| Research project/dissertation | 8000 words | 80 h | 40 |

# Review of our Approach to Assessment
## Fact finding mission

- Students are regularly **complaining** about the volume of assessment

  - Students report (credibly) much more **hours** spent on assessment

- Each students has to submit around **50 pieces of assessment per year**

- We rank at the **bottom of the NSS** (literally!) for "Feedback & Assessment"

- We find it hard to decluster coursework deadlines (**no more free dates**)

- Teaching staff are **struggling** to turn around marking

- We are **struggling** to find enough teaching support staff for marking

# How effective is our assessment?

# Reminder
## Descriptor for a mark in the "A" range

"Outstanding in some respects, the work is often beyond what is expected of a competent student at their level of study.

Demonstrates that the student is actively extending their knowledge and capacity well beyond required materials and making new connections independently: for example, by showing a strong grasp of a range of related materials that are optional or not directly provided, or by demonstrating unusual creativity, depth of analysis, or synthesis with other areas of study."

**Revealed: The degrees at Edinburgh that award the most firsts**
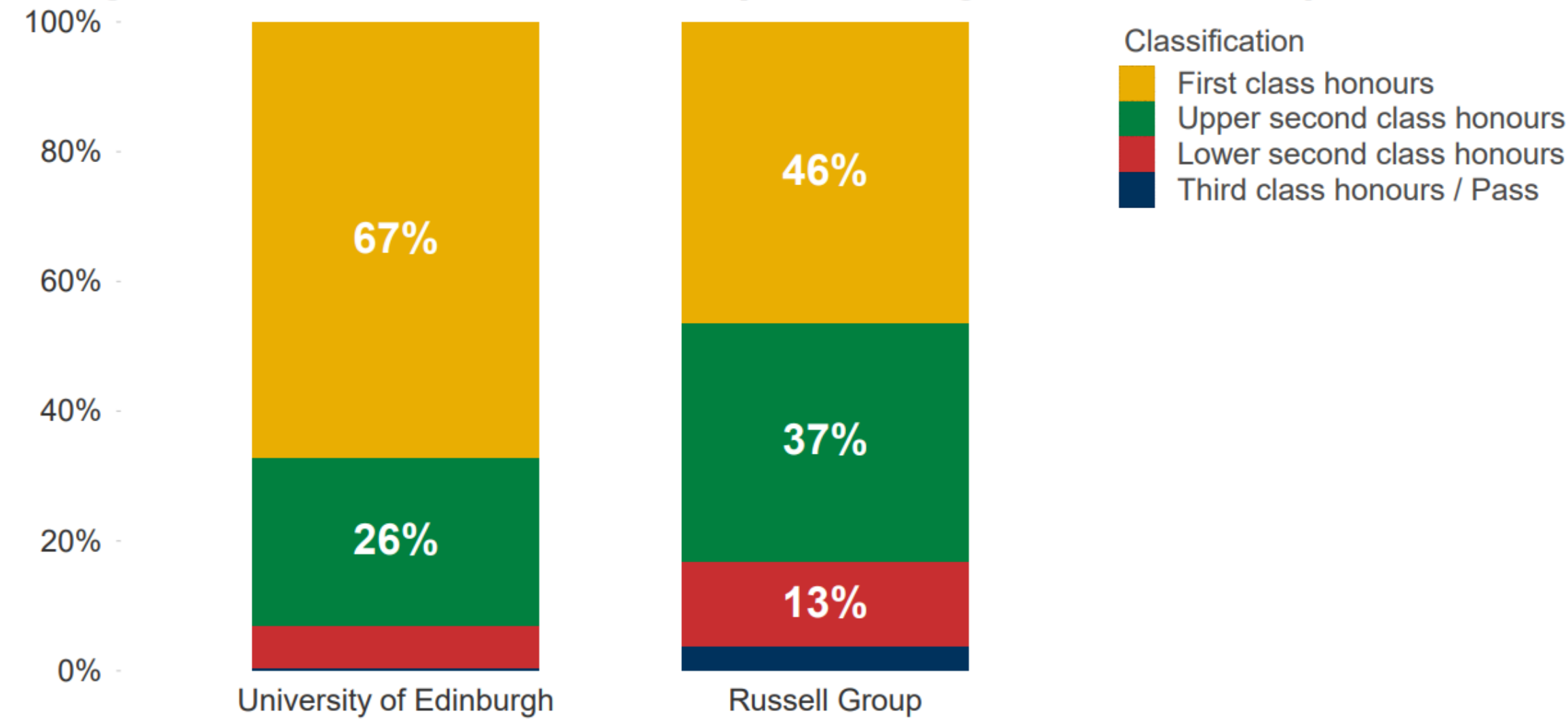
In the news: 2016/17
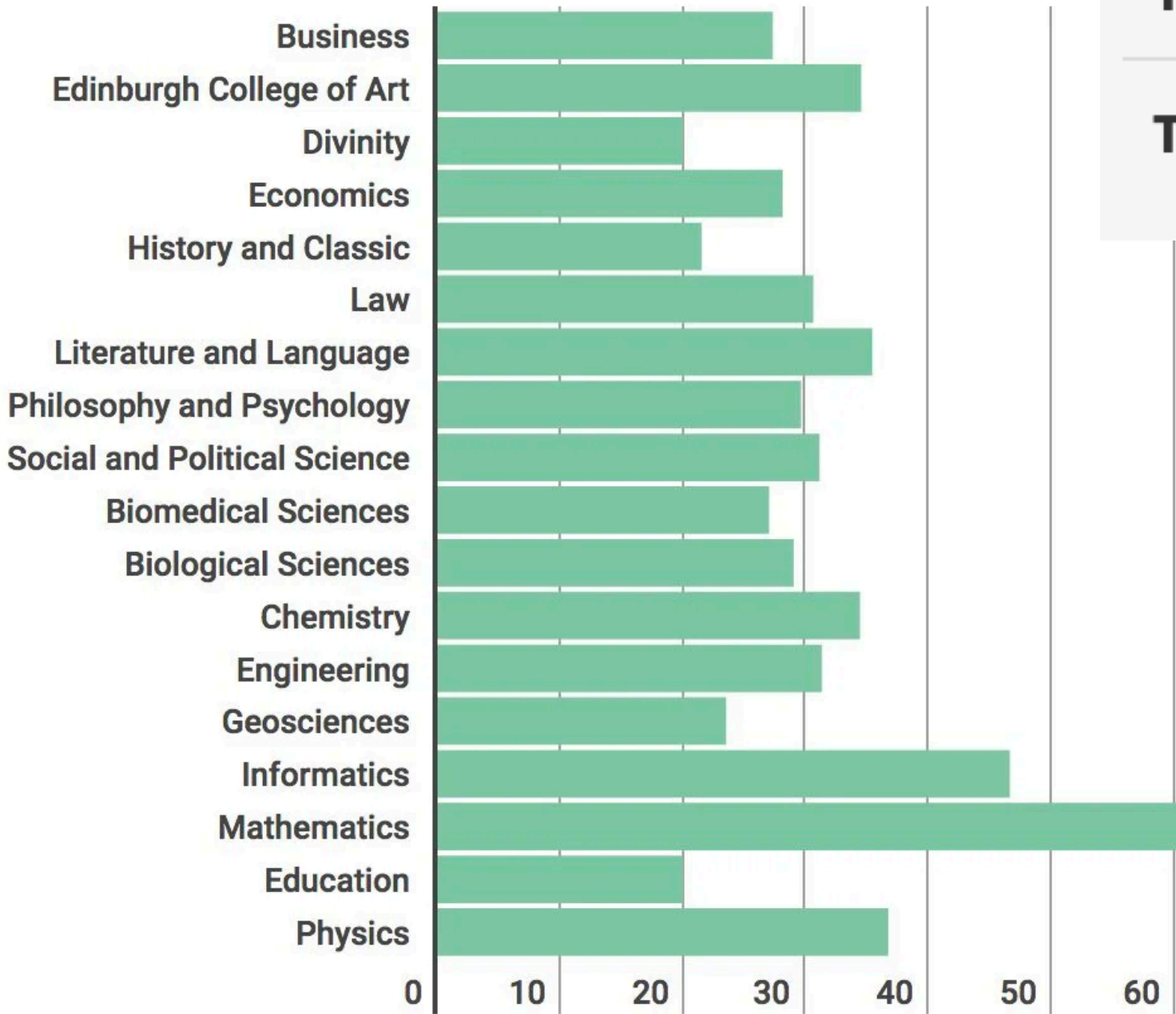
# 4th Year Results 2020/21

## Summary for degree classifications awarded:

| Classification/Award | No. of Students | Percentage of Total |
|---|---|---|
| First | 107 | 66% |
| 2:1 | 47 | 29% |
| 2:2 | 6 | 4% |
| Third | 1 | 1% |
| Total | 161 | 100 |

Undergraduate classifications for University of Edinburgh and Russell Group, 2017/18

Classification
- First class honours
- Upper second class honours
- Lower second class honours
- Third class honours / Pass

University of Edinburgh: 67%, 26%
Russell Group: 46%, 37%, 13%

# Feedback
## What we're up against

- Students don't always **recognise feedback**

- Students often expect feedback of proportional **volume** to the volume of assessment

  - A few bullet points on a large piece of assessment will be perceived as disappointing, irrespective of the quality of the feedback

  - Students are often expecting **personalised feedback**

- Students often don't distinguish between between **return of marks** and **feedback**

- Students expect their feedback to show them "how to achieve 100%"

  - Expect sample solutions, even for exams

  - Difficult in the light of the 70-100% range of the ECMS

# Feedback & Assessment
**Where We Have To Improve**

- Rethink **volume** and **quality** of assessment

  - What would you do if you had 30mins per student to decide on their final course grade? What would be your strategy?

- **Design feedback** into the course, rather than bolt it on

  - Quality feedback designed to **improve learning**

- Make students **recognise feedback** whenever it is delivered

  - Silly badge? 

# Extended Common Marking Scheme

# Overview

| Honours Class | Mark (%) | Grade | Non-Honours Description |
|---|---|---|---|
| I | 90-100 | A1 | Excellent |
| I | 80-89 | A2 | Excellent |
| I | 70-79 | A3 | Excellent |
| II.1 | 60-69 | B | Very Good |
| II.2 | 50-59 | C | Performance at a level showing the potential to achieve at least a lower second class honours degree |
| III | 40-49 | D | Pass, may not be sufficient for progression to an honours programme |
| Fail | 30-39 | E | Marginal Fail |
| Fail | 20-29 | F | Clear Fail |
| Fail | 10-19 | G | Bad Fail |
| Fail | 0-9 | H | Bad Fail |

**Bonus Range**

**Pass Range**

**Fail Range**

# Range Descriptors

**Grade / Mark / Descriptor**

**A1 / 90-100 / Excellent (Outstanding)**

Often faultless. The work is well beyond that expected at the appropriate level of study. See also the guidance above.

**A2 / 80-89 / Excellent (High)**

A truly scholarly and/or professional piece of work, often with an absence of errors. As 'A3' but shows (depending upon the item of assessment): significant personal insight/creativity/originality and/or extra depth and academic maturity in the elements of assessment.

**A3 / 70-79 / Excellent**

- Knowledge: Comprehensive range of up-to-date material handled in a scholarly and/or professional way.
- Understanding and handling of key concepts: Shows a good command of the subject and current theory.
- Focus on the subject or task: Clear and analytical; fully explores the subject or task.
- Critical analysis and discussion: Shows evidence of deep thinking and/or an appropriately logical and rigorous approach in critically evaluating and integrating the evidence and ideas. Deals confidently with the complexities and subtleties of issues. Shows elements of personal insight/creativity/ originality.
- Literature synthesised, analysed and referenced: Comprehensive grasp of the up-to-date literature which is used in a scholarly way.
- Structure: Clear and coherent showing logical, ordered thought. Additionally for code: likely to support re-use. No unused variables or dead code.
- Presentation: Clear and well presented with few, relatively minor flaws. For writing: Accurate referencing; using the correct referencing system. Figures and tables well-constructed and accurate. Good standard of spelling and grammar. Alternatively for code: well-documented, readable code.
- Design of software or experiments: sensible, with appropriate justification.
- Correctness and robustness: Compiles and executes without errors or warnings. Strong evidence of testing and (if appropriate) optimisation. Correct functionality and robust to unexpected input.

# The "Bonus" Range

**"I got a mark of 70%. Where did I loose marks?"**

# The "Bonus" Range

**"I got a mark of 70%. Where did I loose marks?"**

## 70% is the new 100%!

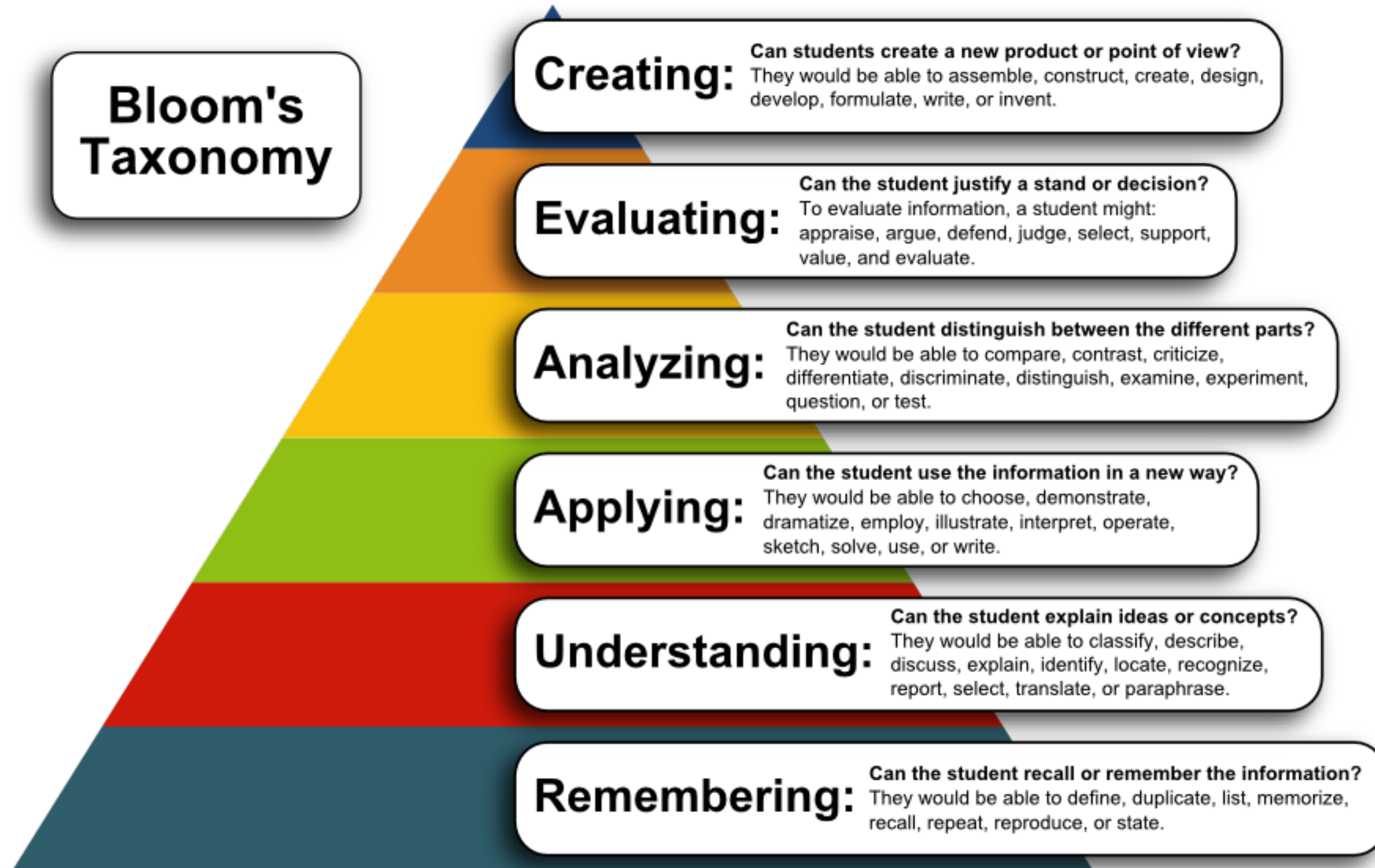**You got full marks, you just didn't earn any bonus marks.**

# The "Bonus" Range

**"I got a mark of 70%. What do I need to do
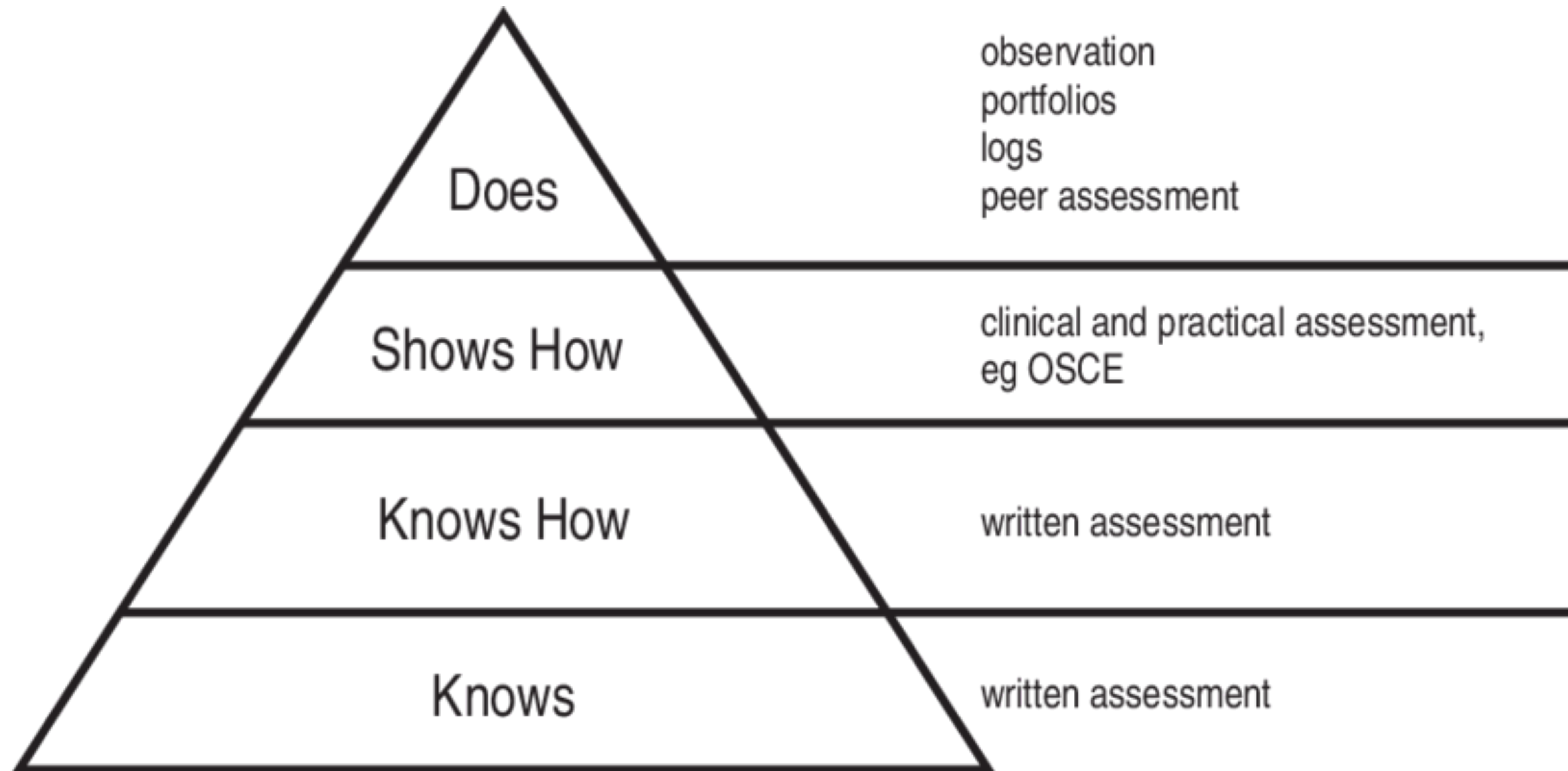in order to get a mark of 100%?"**

# Surprise me!

**If I told you what to do, it wouldn't be worth a bonus.**

# From Learning Outcomes to Assessment



Bloom's Taxonomy

**Creating:** Can students create a new product or point of view? They would be able to assemble, construct, create, design, develop, formulate, write, or invent.

**Evaluating:** Can the student justify a stand or decision? To evaluate information, a student might: appraise, argue, defend, judge, select, support, value, and evaluate.

**Analyzing:** Can the student distinguish between the different parts? They would be able to compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, or test.

**Applying:** Can the student use the information in a new way? They would be able to choose, demonstrate, dramatize, employ, illustrate, interpret, operate, sketch, solve, use, or write.

**Understanding:** Can the student explain ideas or concepts? They would be able to classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, or paraphrase.

**Remembering:** Can the student recall or remember the information? They would be able to define, duplicate, list, memorize, recall, repeat, reproduce, or state.

# From Learning Outcomes to Assessment

# Questions?