

Student projects: plagiarism and assessment

Conference or Workshop Item

Presentation

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Student Projects

Plagiarism and Assessment

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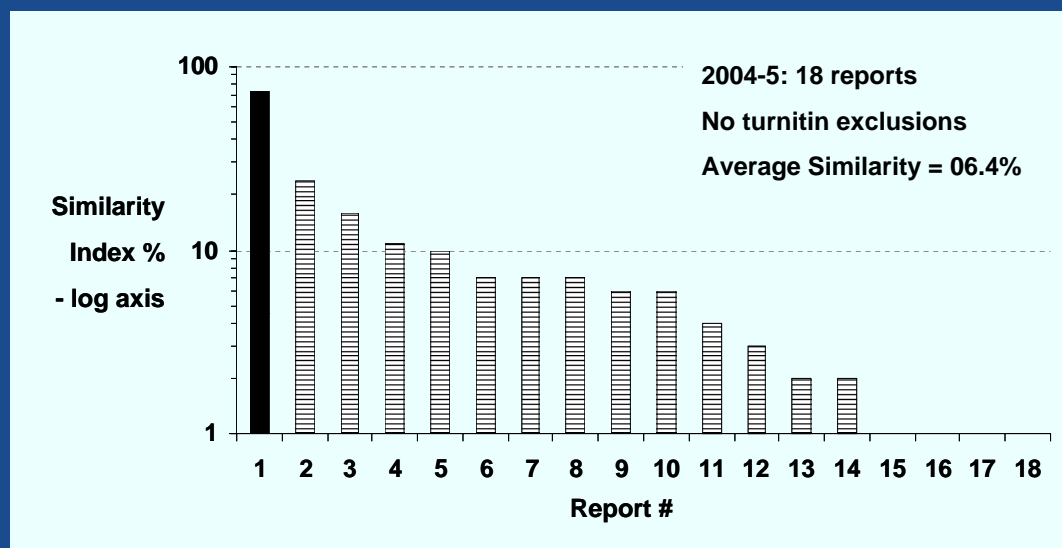
The Information Technology Project

- customer-centred project delivered by student
- 20%+ of study programme by weight, ~400 hrs work
- 40% = pass, a hurdle for the B.Sc. (Hons.) degree
- conducted in a 'Virtual Company' regime
 - projects awarded on a competitive basis
 - senior PM (mentor), QA (convenor), colleagues (students)
- assessment areas, largely based on final report
 - Investigation, analysis and design, implementation, PM
- looking for judicious mix of 'own' and 'other' voices

First Cohort, 2004-5

- regime in which the module was conducted
 - ‘virtual company’ v ‘academic’ experience
 - nature of support provided
 - level of mentoring and monitoring
- Project Reports provided the major feedback
- one student’s report
 - semi-detached from project
 - references somewhat out of line with the core text
 - smoking gun: one incongruous phase
- response: Google, turnitin ... University process

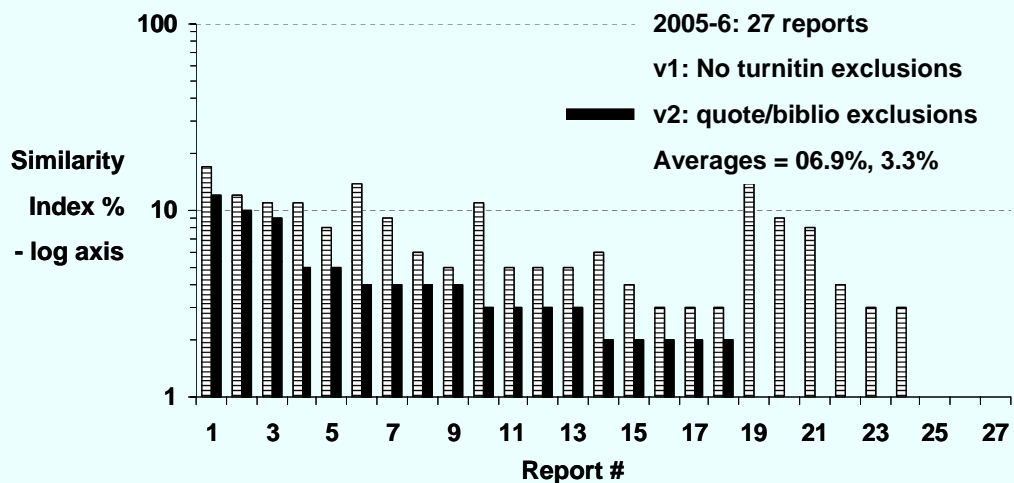
turnitin on the 2004-5 Reports



Plagiarism Prevention Measures

- earlier references to SSE-specific advice on citation
- all mentors advised mentees during the year
- repeat references in lecture on report writing
- students advised that all reports would be scanned

turnitin on the 2005-6 Reports



Analysis of turnitin 2005-6 results

- 2004-5 reports reviewed in 2005:
 - 6.4% without turnitin exclusions
- 2005-6: 6.9%, and 3.3% with turnitin exclusions
- 2004-5 reports reviewed again in 2006:
 - now 10.6% and 7.2%, without and with turnitin exclusions
- observations
 - inflation in Similarity Scores from 6.4 % to 10.6%
 - 6.9% is an improvement against a contemporaneous 10.6%
 - 2005-6 reports are less resistive to turnitin exclusions
 - encouraging signs of better referencing by students

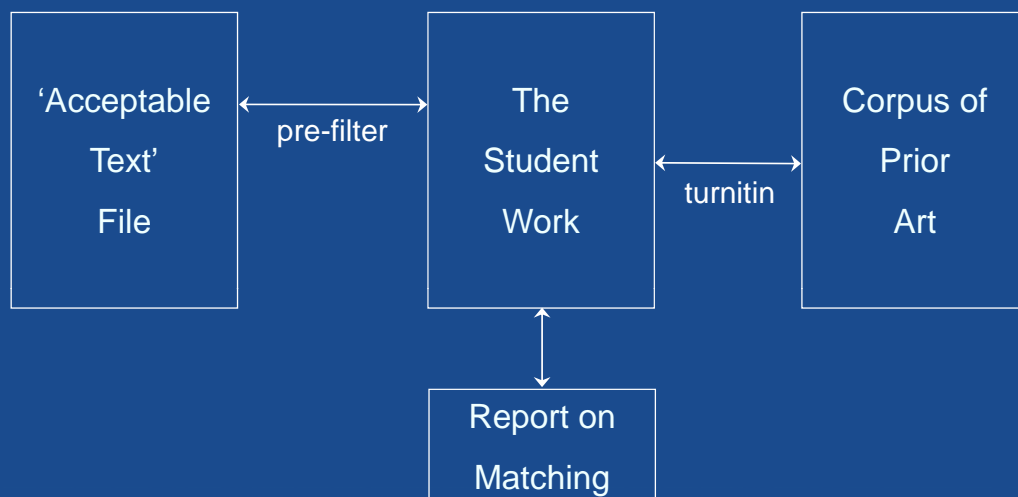
JISC PAS and the turnitinUK service

- service and support have been good
 - turnaround time: instant to 36 hours
 - response to queries last year: quick and sympathetic
 - colleagues find quantification usefully backs up judgement
- the 6.4% → 10.6% inflation seems to indicate that
 - ‘background radiation’ in the universe is increasing
 - Inevitable? An infinite number of monkeys ...
 - plagiarism signal accompanied by more ‘similarity noise’
 - increasing percentage of ‘false positive’ matches
 - increasing workload ignoring these ignorable matches
 - service will become decreasingly attractive to users

Suggested software improvements

- attach more significance to courser-grain matching
 - an MT four times longer is more than 4 times as significant
 - current similarity index = $SI\% \propto \text{sum}(\text{length of MT})$
 - let $T = \text{sum}(\text{length}^k)$ with $k > 1$: $k = 1.5$ is proposed here
 - then T/S indicates the granularity of the matched text
- focus on Statistically Improbable Phrases (SIPs)
 - a ‘My turnitin’ would ignore your domain’s lingua franca
- deletable MTs – added to an ‘Acceptable text’ file
 - one source may match both significant and ignorable MTs
 - a deleted source can be replaced by another
 - an ‘ignorable match’ may indicate part of the lingua franca

Proposed Matching Process



Assessment and the 'target student'

Two key Reading Information Technology programme aims

- students should be socially mature
 - able and willing to help and be helped by colleagues
 - aware of the needs of the project team they are in
- students should build on the established 'state of the art'
 - 'reuse': key engineering discipline, specifically taught
 - Object Orientation is central to the Information Systems industry
- assessment methods should encourage this
- society needs honest team-players, reusing wisely

Summary

- plagiarism case in 2005 led to:
 - reactive use of turnitin in 2005, advertised use in 2006
 - increased measures to prevent plagiarism in 2006
- signs of
 - improving standard of referencing by students
 - increasing level of time-wasting turnitin 'false positives'
 - danger of reducing value from turnitin
- scope for improvement in 'Matching Services'
 - ignorable 'Matched Texts' as well as ignorable 'Sources'
 - a non-linear measure indicating granularity of matching
 - focus on Statistically Improbably Phrases