Student projects: plagiarism and assessment

Conference or Workshop Item

Presentation


It is advisable to refer to the publisher's version if you intend to cite from the work.
Published version at: http://www.jisc.ac.uk/events/2006/06/event_plagiarism_0606.aspx

Publisher: JISC

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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

2004-5: 18 reports
No turnitin exclusions
Average Similarity = 06.4%
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

2005-6: 27 reports
v1: No turnitin exclusions
v2: quote/biblio exclusions
Averages = 06.9%, 3.3%
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 course-grain matching
  – an MT four times longer is more than 4 times as significant
  – current similarity index = SI% \propto \text{sum(length of MT)}
  – let T = \text{sum(length}^k) \text{ with } k > 1; k = 1.5 \text{ 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

Diagram showing the process:
- ‘Acceptable Text’ File
- The Student Work
- Corpus of Prior Art
- Report on Matching

Links:
- Pre-filter
- Turnitin
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