A quasi-experimental comparison of assessment feedback mechanisms

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Overview

- **Teaching Context**

- **The problem**

- **Research process**

- **Discussion**

Teaching context

Degree Program

- First Year teaching in the Bachelor of Information Technology (BIT)
  - Nathan and Logan campuses of Griffith University

Cohort

- Small and large classes
  - 25 – 260 students
- Wide range of academic ability - Generally little maths background
- Many students are first in family at university
- Many students are from low socio-economic areas

Typical course delivery mode

- 2 hour lecture scheduled during the day
- 1-2 hour workshop scheduled during the day

Teaching context

Courses:

Web design and development (HTML, CSS, Javascript)
- Computer program code (Web pages)
- Technical and non-technical design diagrams
- Learning how to use software applications

Computer architecture
- Mathematics and technical jargon
- Technical design diagrams

The issue

Feedback

- A key component for facilitating student learning is useful feedback (Hattie and Timperley, 2007)

- Usefulness and individual tailoring issues have been identified as specific challenges to students' use of feedback (Jonsson, 2013)

The problem

- Feedback from students indicated dissatisfaction with the quality of feedback related to the major assessment items in both courses

Challenge

- Improve the usefulness of the feedback and tailor it to the individual without increasing marker workload

The solution

Solution

- Make the feedback more useful and individually tailored
- Create feedback electronically using a touch tablet and digital ink
- Develop a short video recording of the creation of the feedback for each student individually

Digital ink

- Digital ink has been successfully implemented for improving student engagement and learning in similar first year undergraduate courses (Venema & Lodge, 2012 & 2013)

Video recording

- To address the usefulness and individual tailoring aspects:
  - a short recording was created where the marker spoke about the mark and explained the comments in terms of the expectation
  - This recording was created as the assessment was marked resulting in no increased marker workload

Research process

The project

- Implemented across 2 semesters, once for each course
- Cohorts range from 25 to 260 students

The process

- In each semester, students were assigned to one of three groups based on tutorial session
- Each group received one of three types of feedback on their major assessment item:
  1. Standard paper based form with detailed comments
  2. Electronic version of the paper based form with electronically marked up comments
  3. Electronic version of the paper based form with electronically marked up comments and a short video discussing the sheet and the comments.

Discussion

Survey

- Students were subsequently surveyed regarding their perceptions of the usefulness of the three different methods of feedback
- 52 students completed the short survey

**Outcomes**

Students receiving feedback via video

- More likely to agree that the feedback was easy to understand, more useful and interesting
- More satisfied with the feedback they were given
- More likely to agree that the feedback will assist their learning

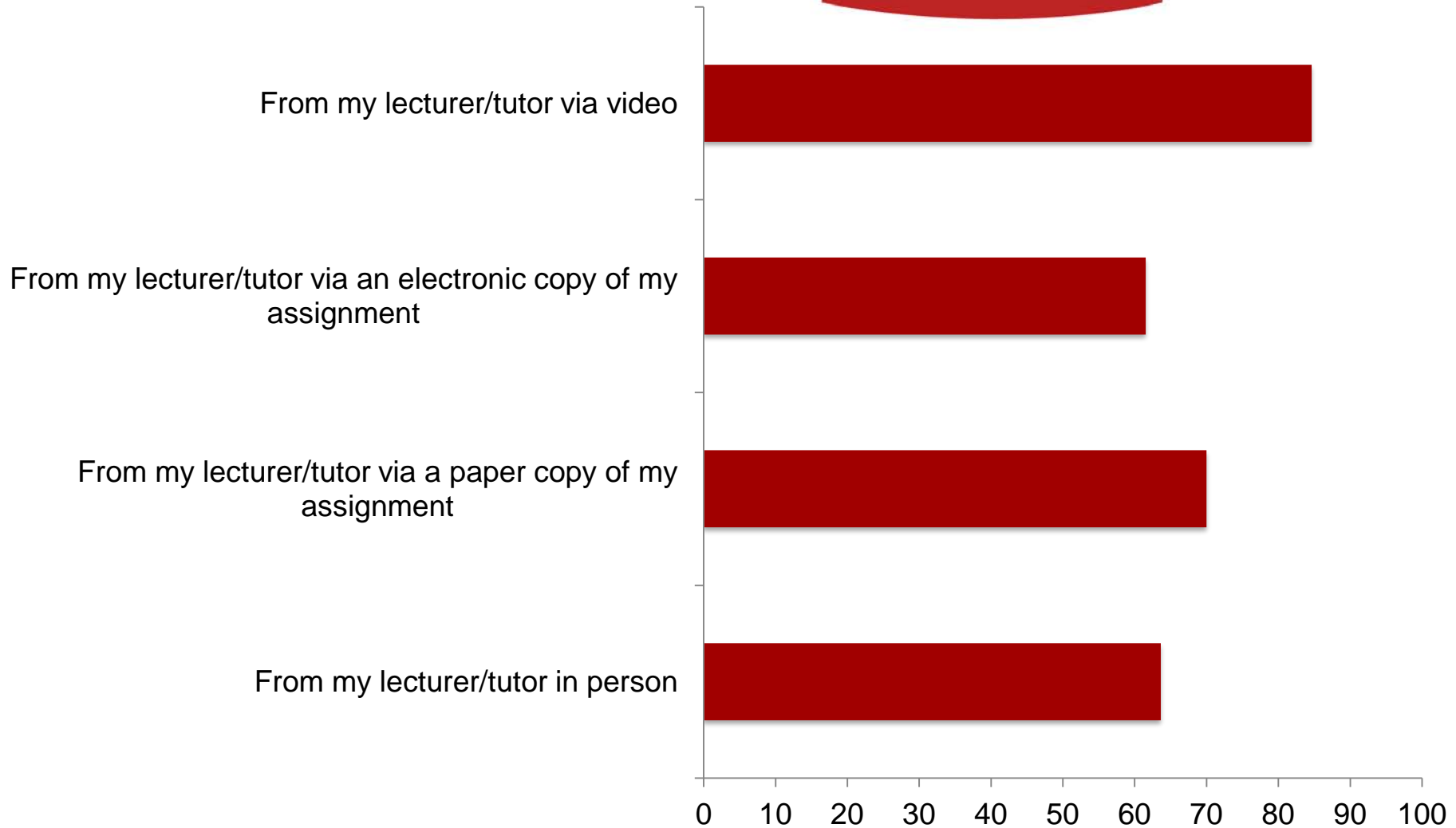**Students receiving feedback electronically**

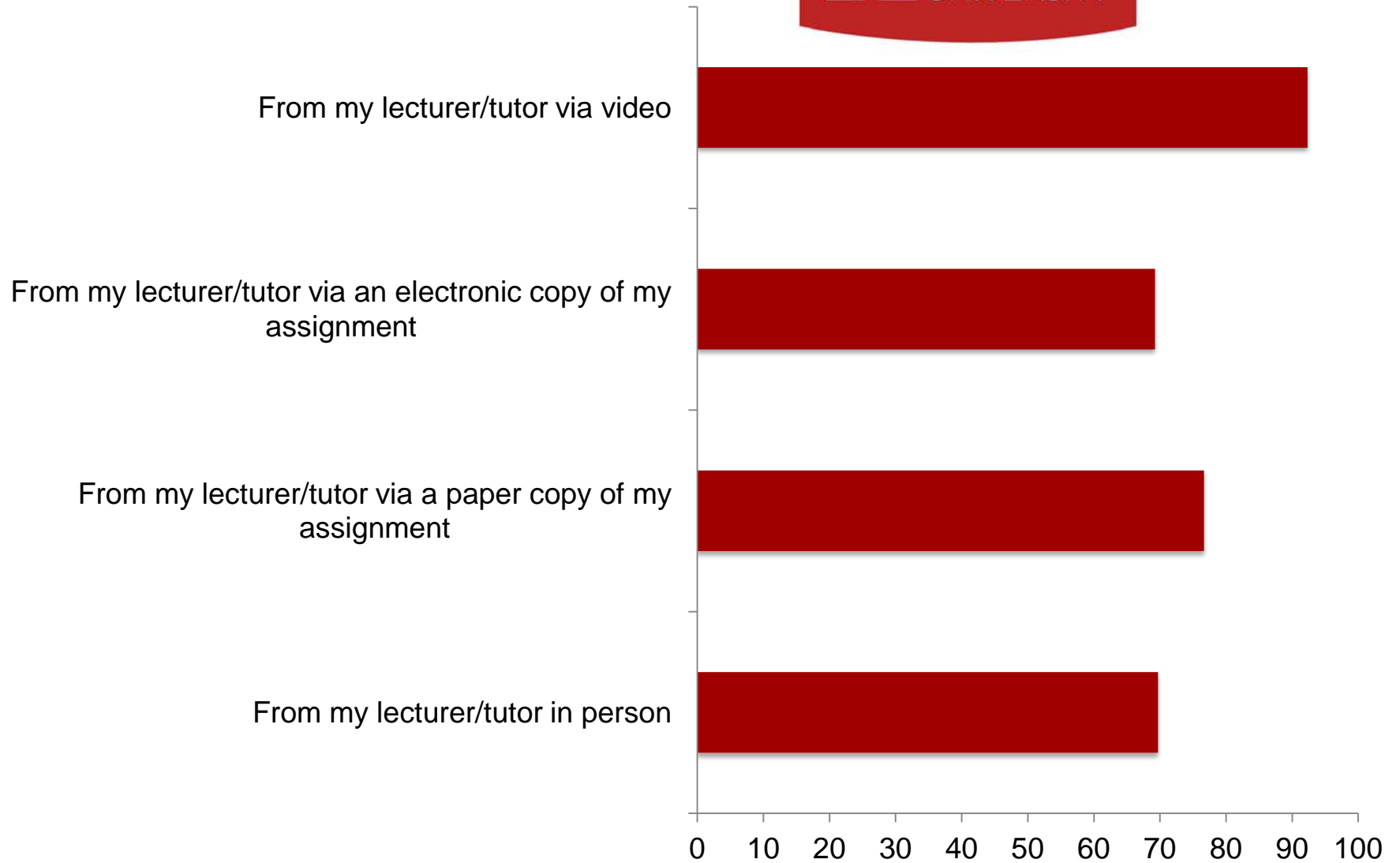- Responses tended to be positive compared to the more traditional paper-based approach
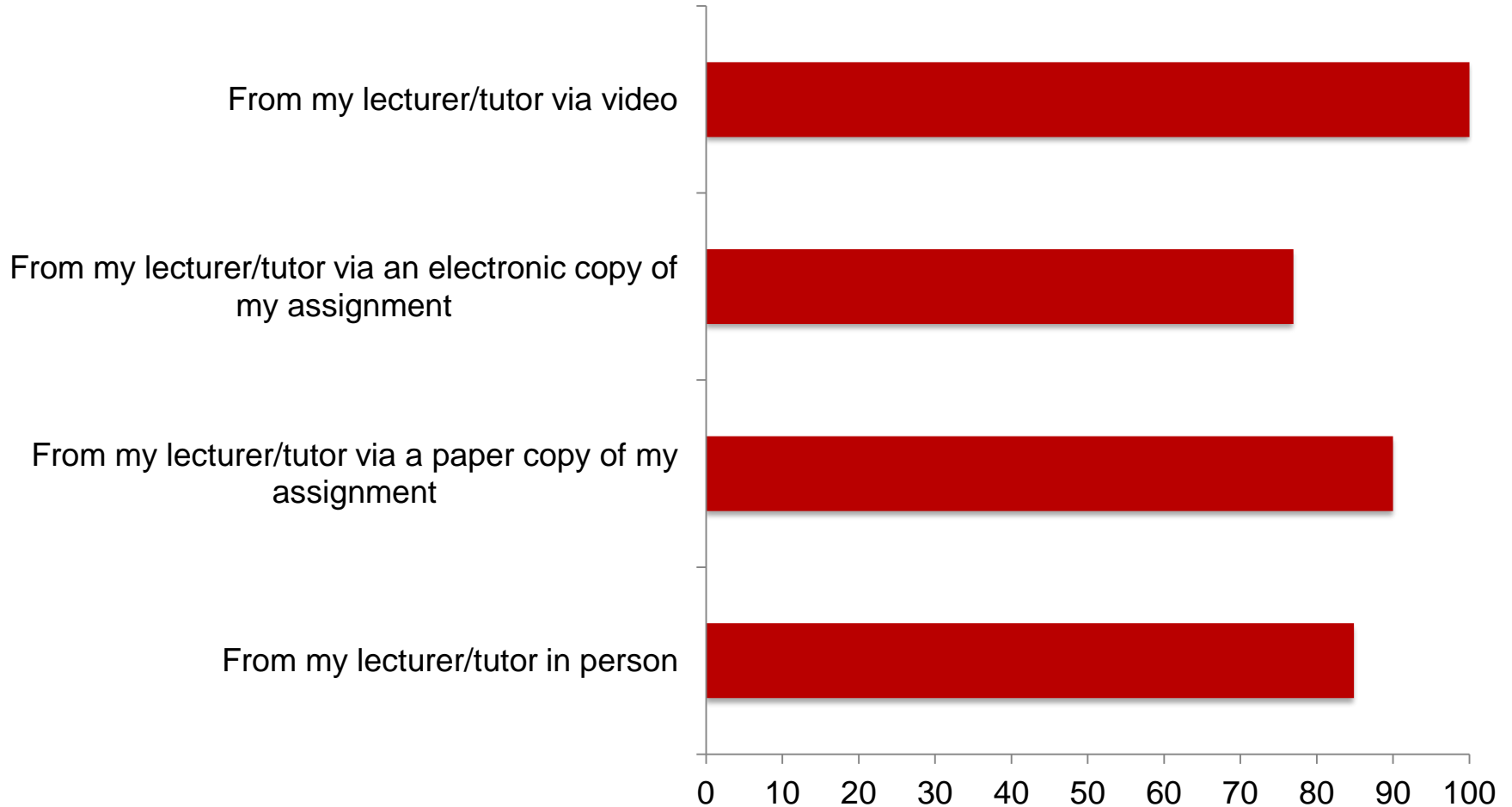
% Students agree or strongly agree that feedback on their assignment was clearly organised
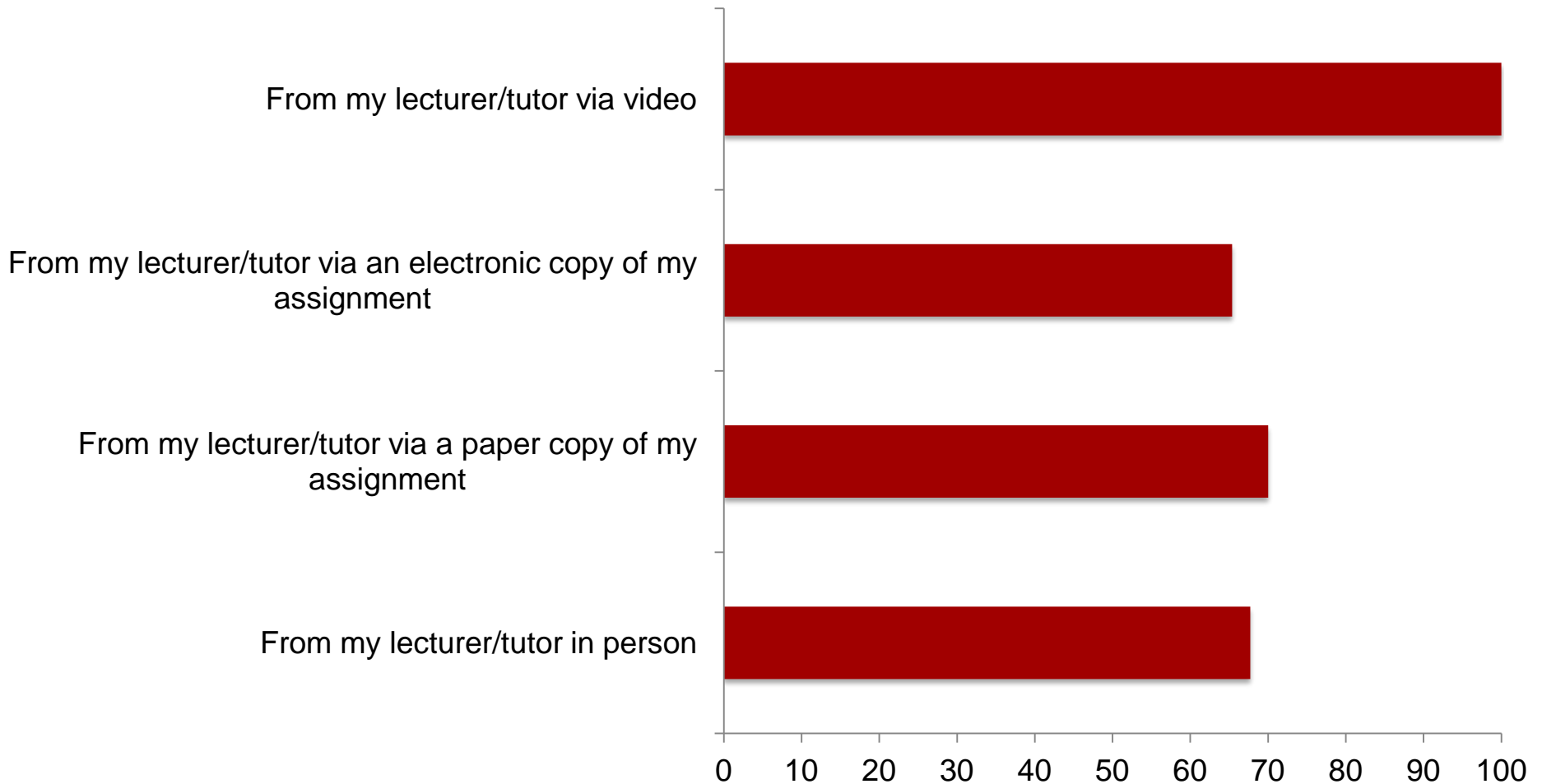
% Students agree or strongly agree that feedback on their assignment was presented in an interesting way

From my lecturer/tutor via video

From my lecturer/tutor via an electronic copy of my assignment

From my lecturer/tutor via a paper copy of my assignment

From my lecturer/tutor in person

0 10 20 30 40 50 60 70 80 90 100

% Students agree or strongly agree that the tools used to provide them feedback assisted their learning

From my lecturer/tutor via video

From my lecturer/tutor via an electronic copy of my assignment

From my lecturer/tutor via a paper copy of my assignment

From my lecturer/tutor in person

0   10   20   30   40   50   60   70   80   90   100

% Students agree or strongly agree that the feedback they received will allow them to improve their learning

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From my lecturer/tutor via video

From my lecturer/tutor via an electronic copy of my assignment

From my lecturer/tutor via a paper copy of my assignment

From my lecturer/tutor in person

0 10 20 30 40 50 60 70 80 90 100
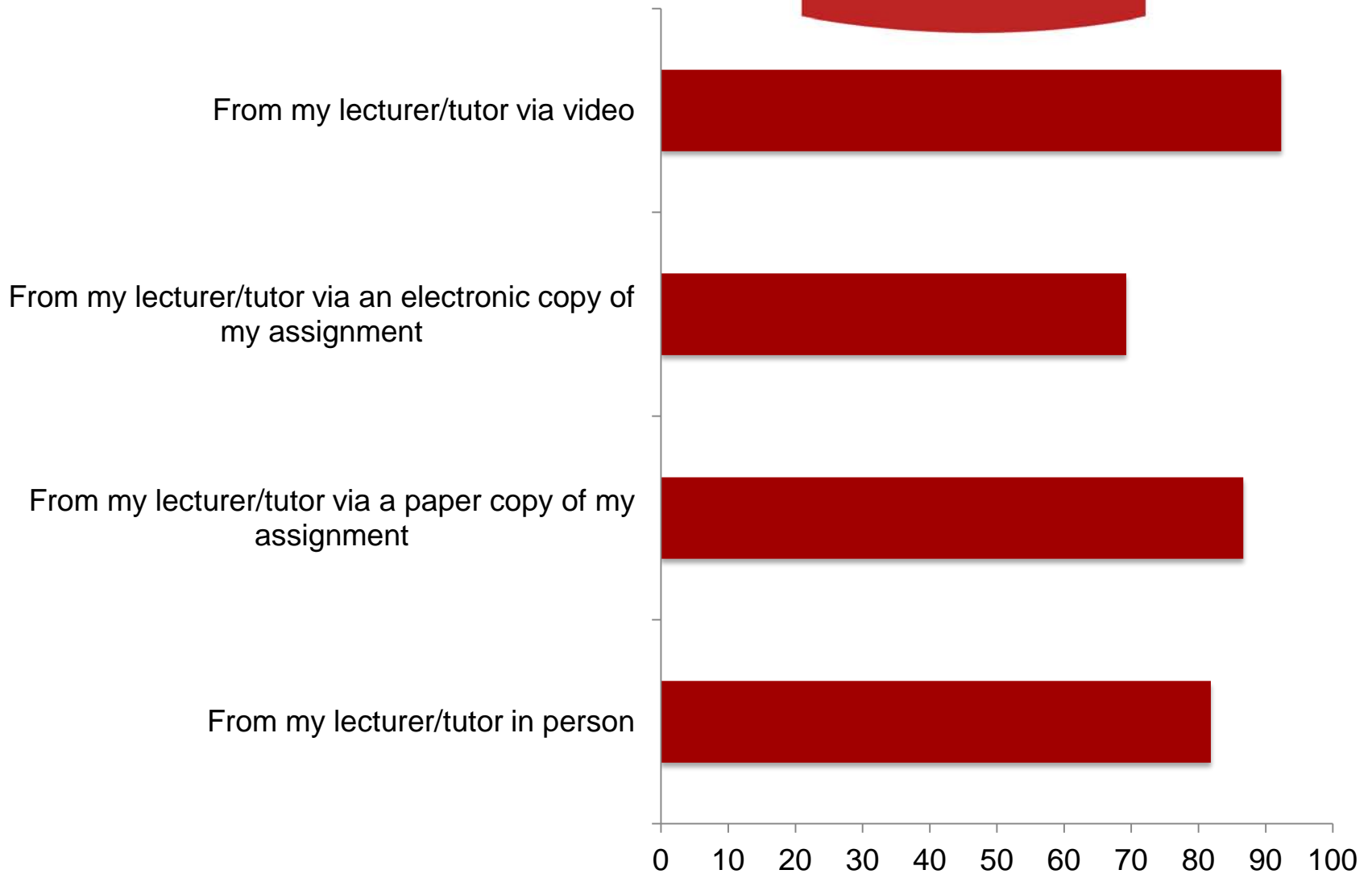
% Students agree or strongly agree that they were satisfied overall with the feedback they got on their assignment

Discussion

Student comments

- Comments from students supported these trends

- One student commented:

  "The video was clear and easy to understand"

Evaluation

- Preliminary evaluation suggests that:

  - Marked up electronic copies and video feedback were appreciated more by students than traditional paper based methods

  - Marked up electronic copies and video feedback led to higher levels of confidence in being able to use the feedback than traditional paper-based methods

References

Hattie, J., Timperley, H. *(2007). The power of feedback*. Review of Educational Research, 77, 81–112.

Jonsson, A., (2013), *Facilitating productive use of feedback in higher education*, Active Learning in Higher Education, March 2013 vol. 14 no. 1 63-76.

Venema, S., Lodge, J. (2012). *Improving First Year First Semester Lecture Engagement*, 15th First Year in Higher Education (FYHE) Conference.

Venema, S., Lodge, J. (2013). *Capturing dynamic presentation: Using technology to enhance the chalk and the talk*, Australasian Journal of Educational Technology, Vol 29, No. 1.