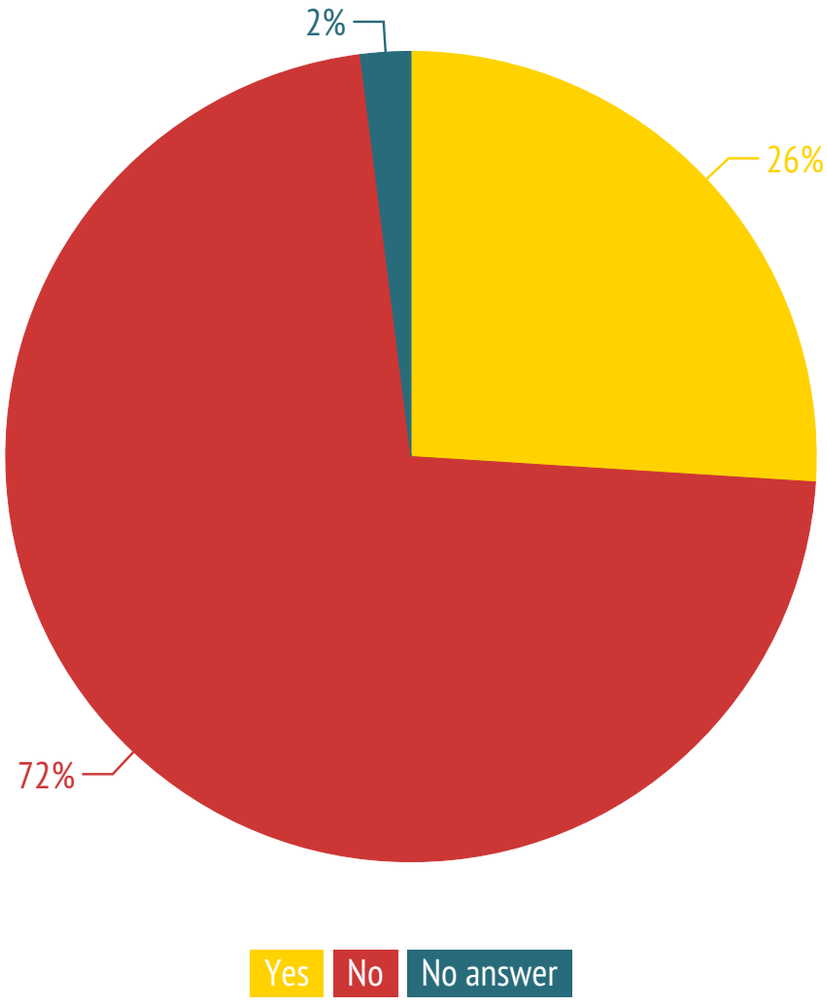
Paperless studies

Can you imagine working paperlessly?



ZHAW Paperless Pilot Project

30

Students and 19 lecturers committed to working paperlessly.

iPad and Surface

Students were able to choose between Apple iPad and Microsoft Surface Pro.

Moodle

Study materials were provided electronically.

Broad acceptance among students

71%

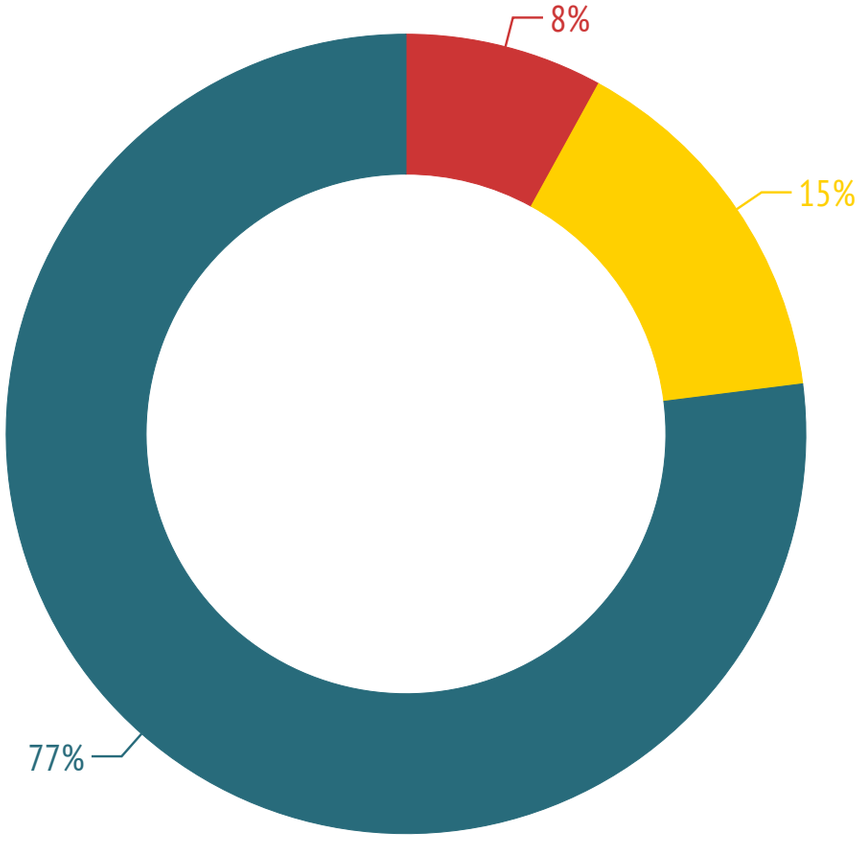
of the students would recommend the purchase of a tablet to their classmates.

36%

would be willing to buy a tablet by themselves.

Positive feedback from lecturers

The feedback from the lecturers is more positive after one year than it was at the beginning of the project.



Very bad / Bad | Neither bad nor good | Goog / Very Good

Tablets create new opportunities for learning

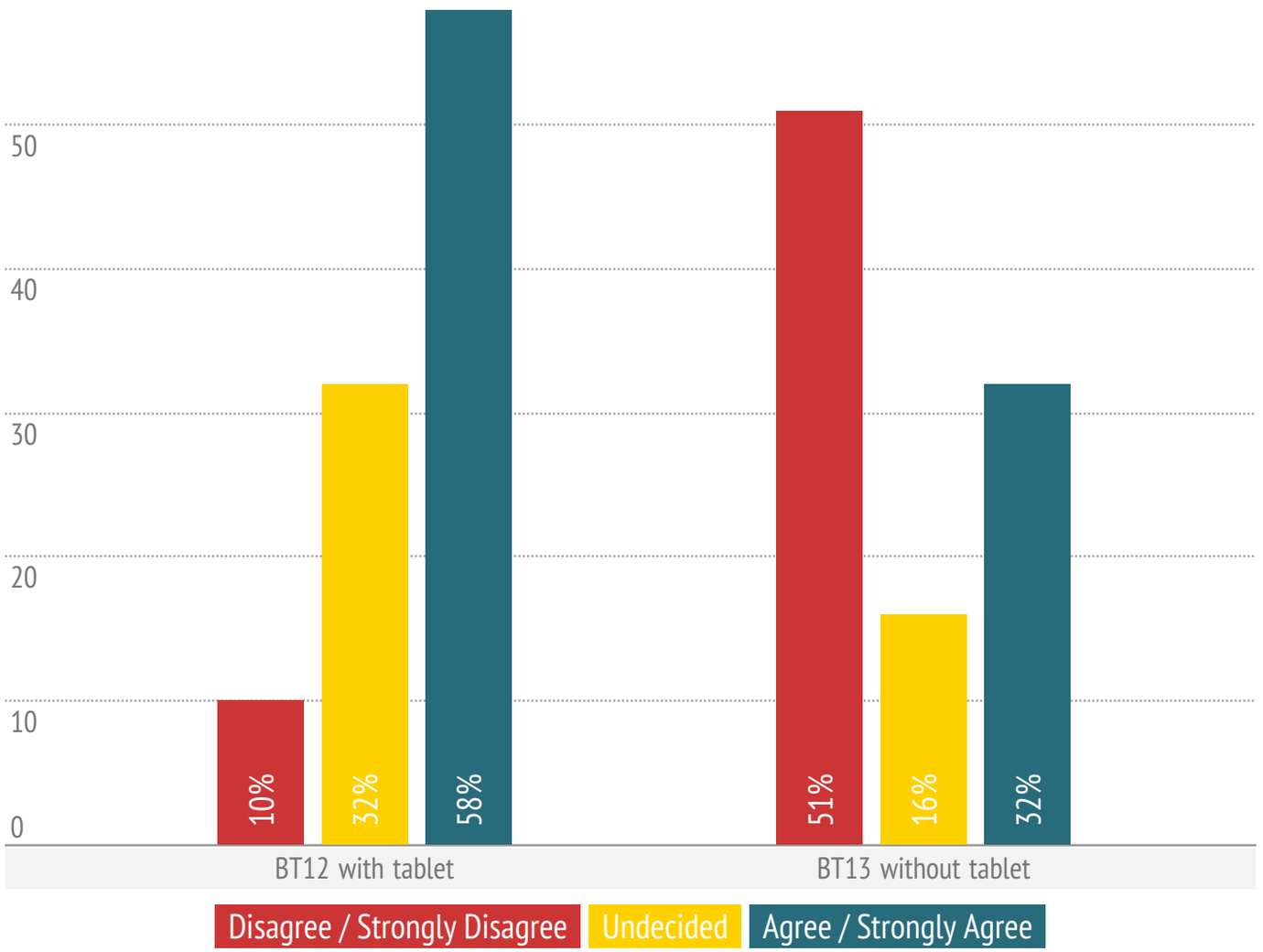
77%

indicate that they experience new ways of learning through using the tablet device.

Disagree / Strongly Disagree | Undecided | Agree / Strongly Agree

Students make use of additional information resources during lectures

I use the internet or specific apps to look up information during lectures:



Paperless students take more notes than the control group without a tablet

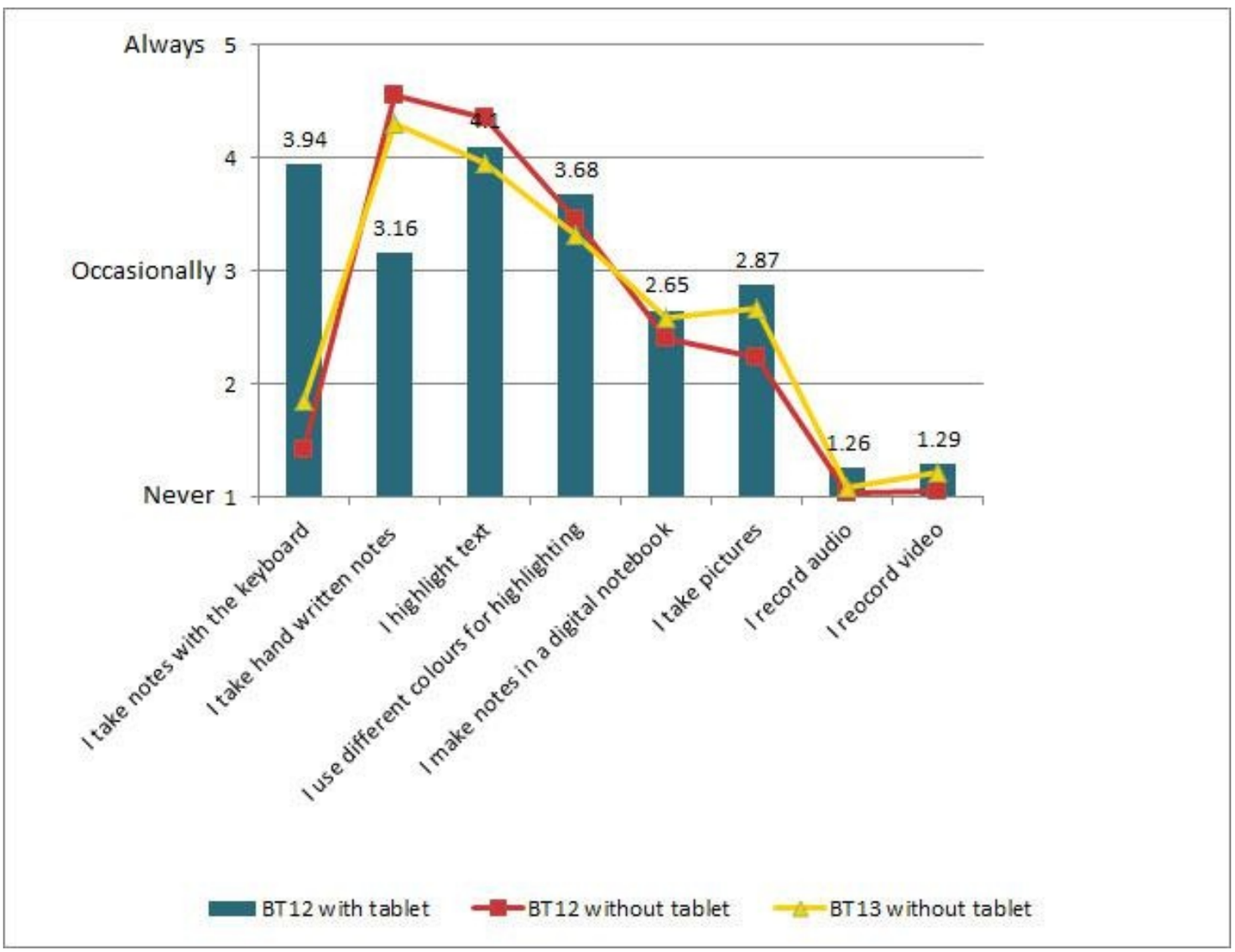
Students use new options such as keyboard, pen and multimedia recordings

84%

Take notes with the keyboard.

52%

Take handwritten notes with a pen and see it as one of the main advantages of working with a tablet.



Tablet use during self-study

64%

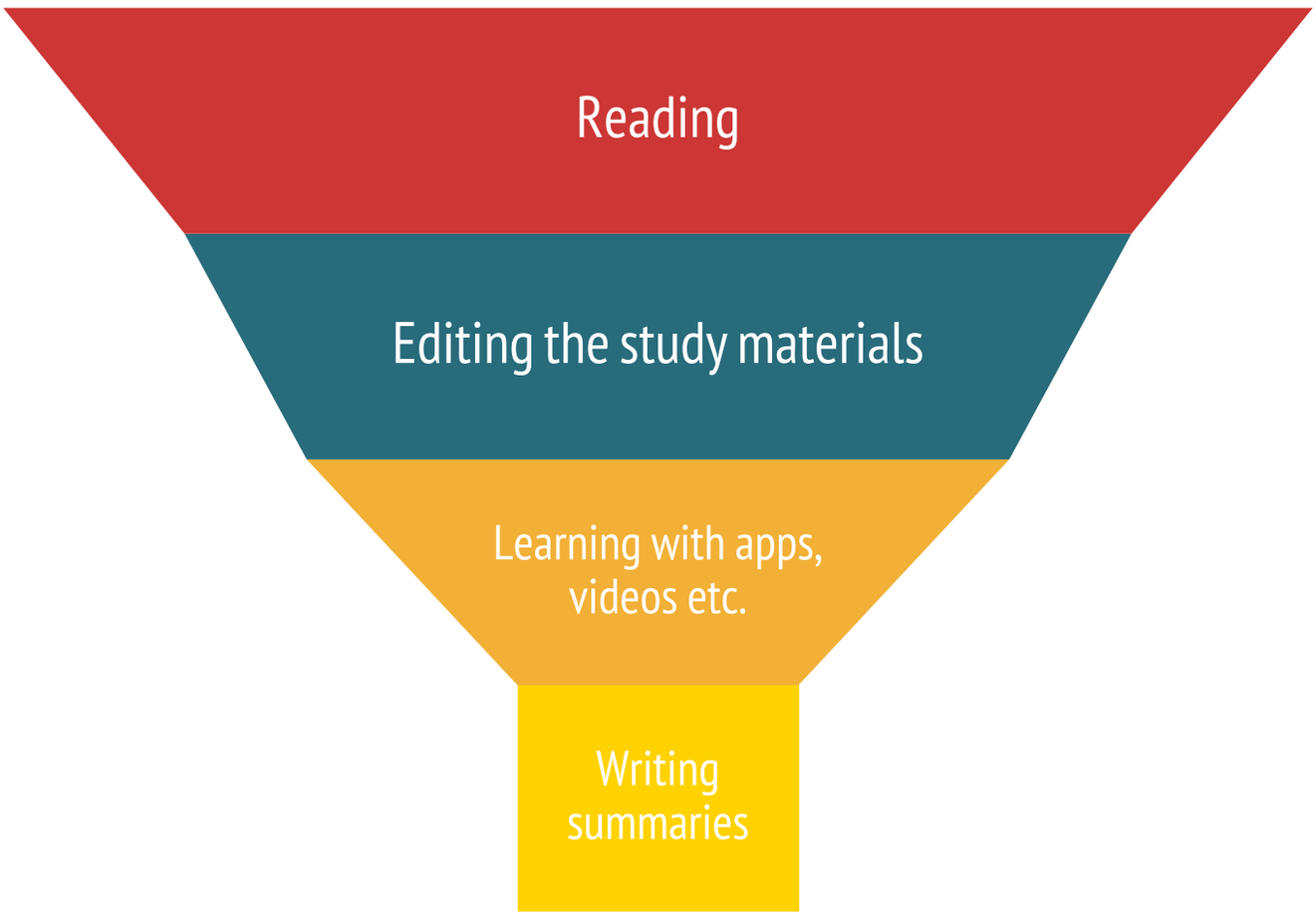
use the tablet as a reading device.

46%

use the tablet for editing and completing the notes taken during lessons.

34%

enhance their learning experience with educational apps and videos.



Common preconceptions are not confirmed

74%

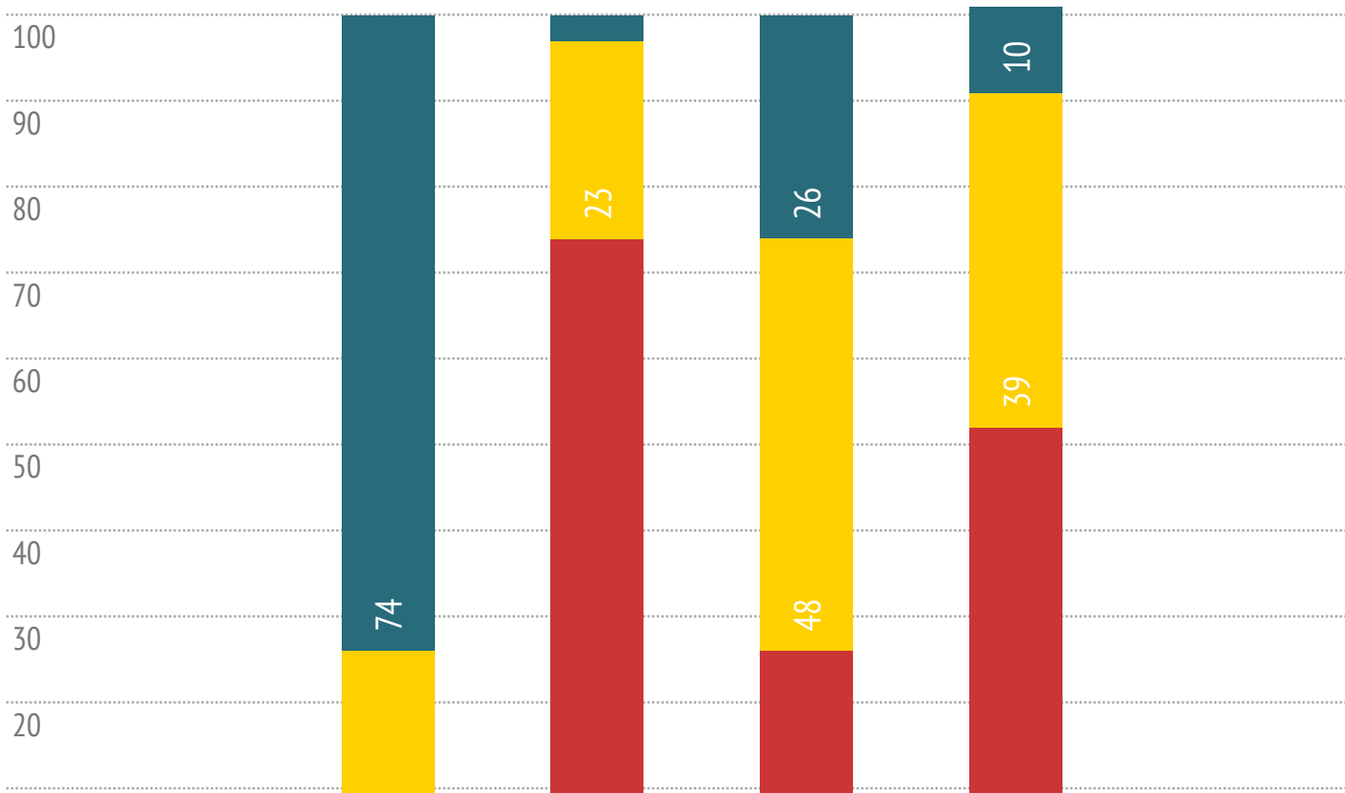
of the students report that they are able to follow the lectures easily.

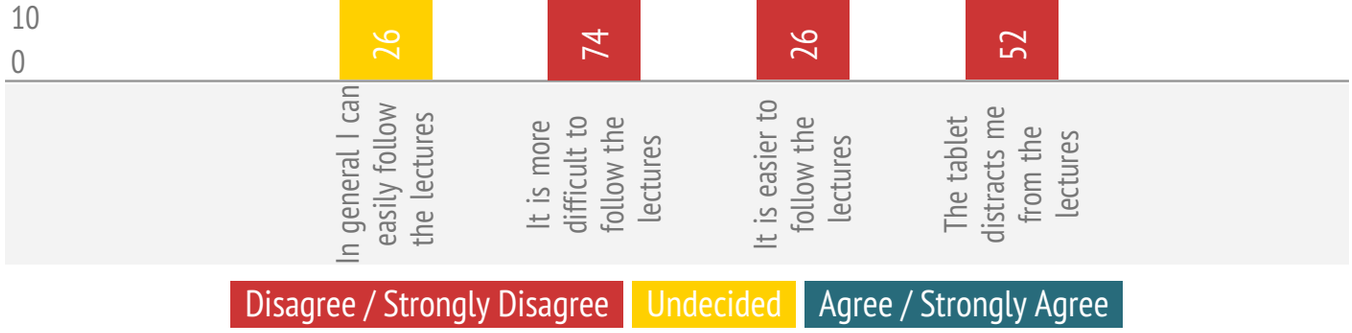
26%

of the students report that they are able to follow the lectures better than before.

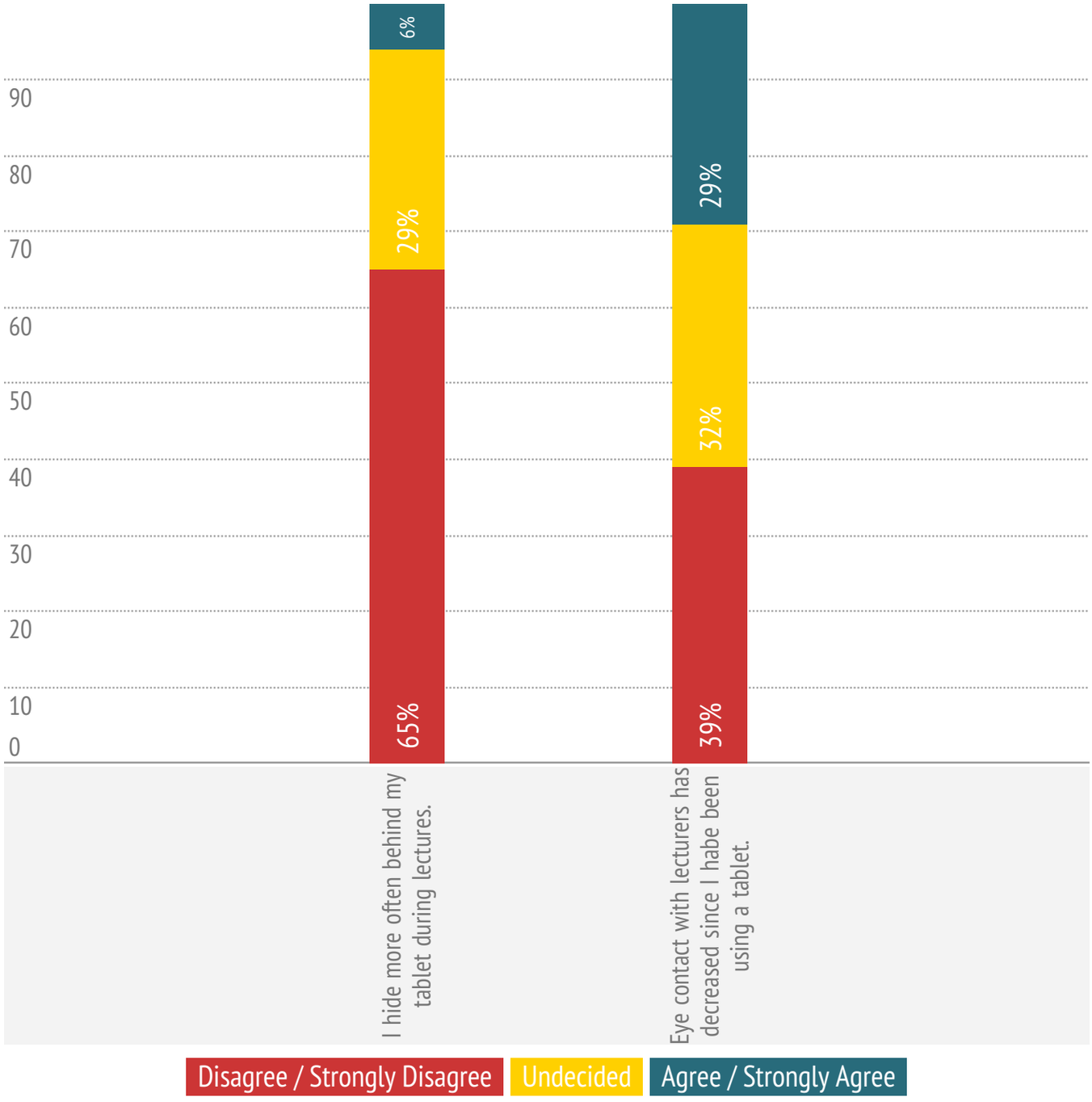
10%

of the students report that the tablet distracts them from following the lectures.



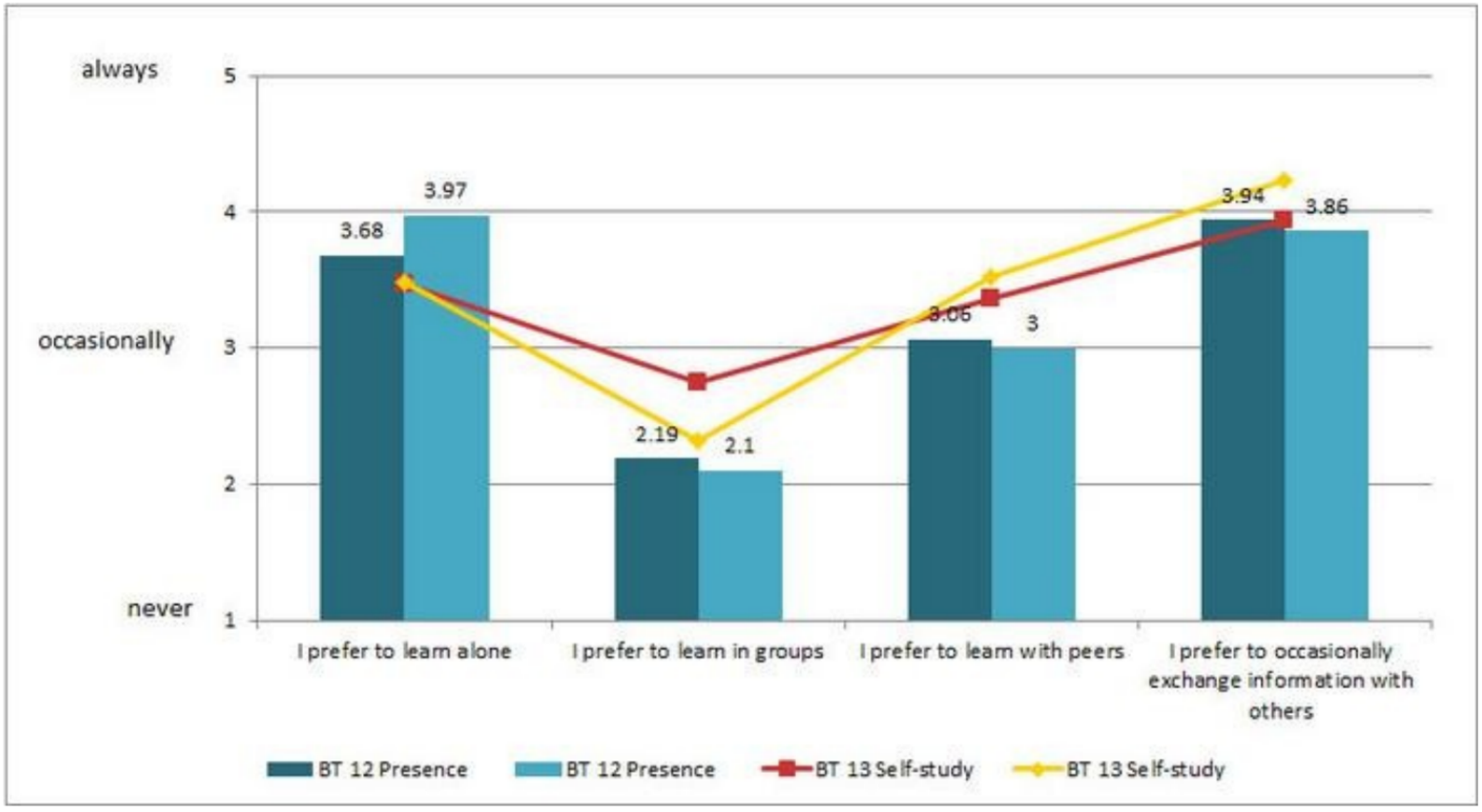


Eye contact during lectures is decreasing



Paperless working does not foster collaboration

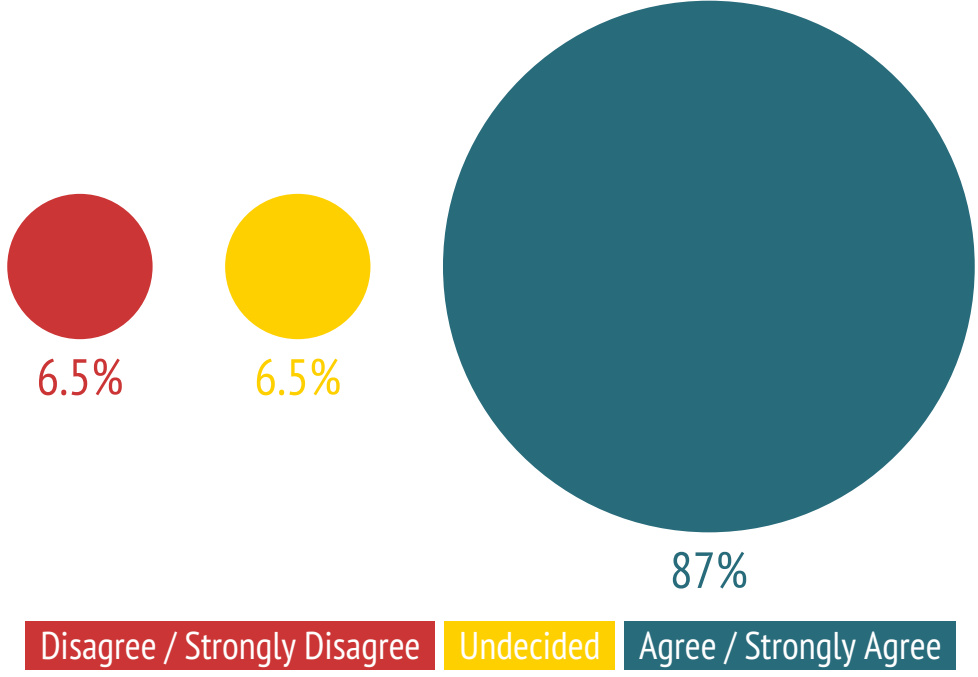
The pilot class reports less collaborative learning behaviour than the control group. However 19% of the students reported that they communicate more with their classmates since they have had a tablet. This is especially true for the iPad users.



Paperless studies are a catalyst for e-learning

87%

of the students report using Moodle more often than before.



46%

of the students report using more functionalities of Moodle than before.

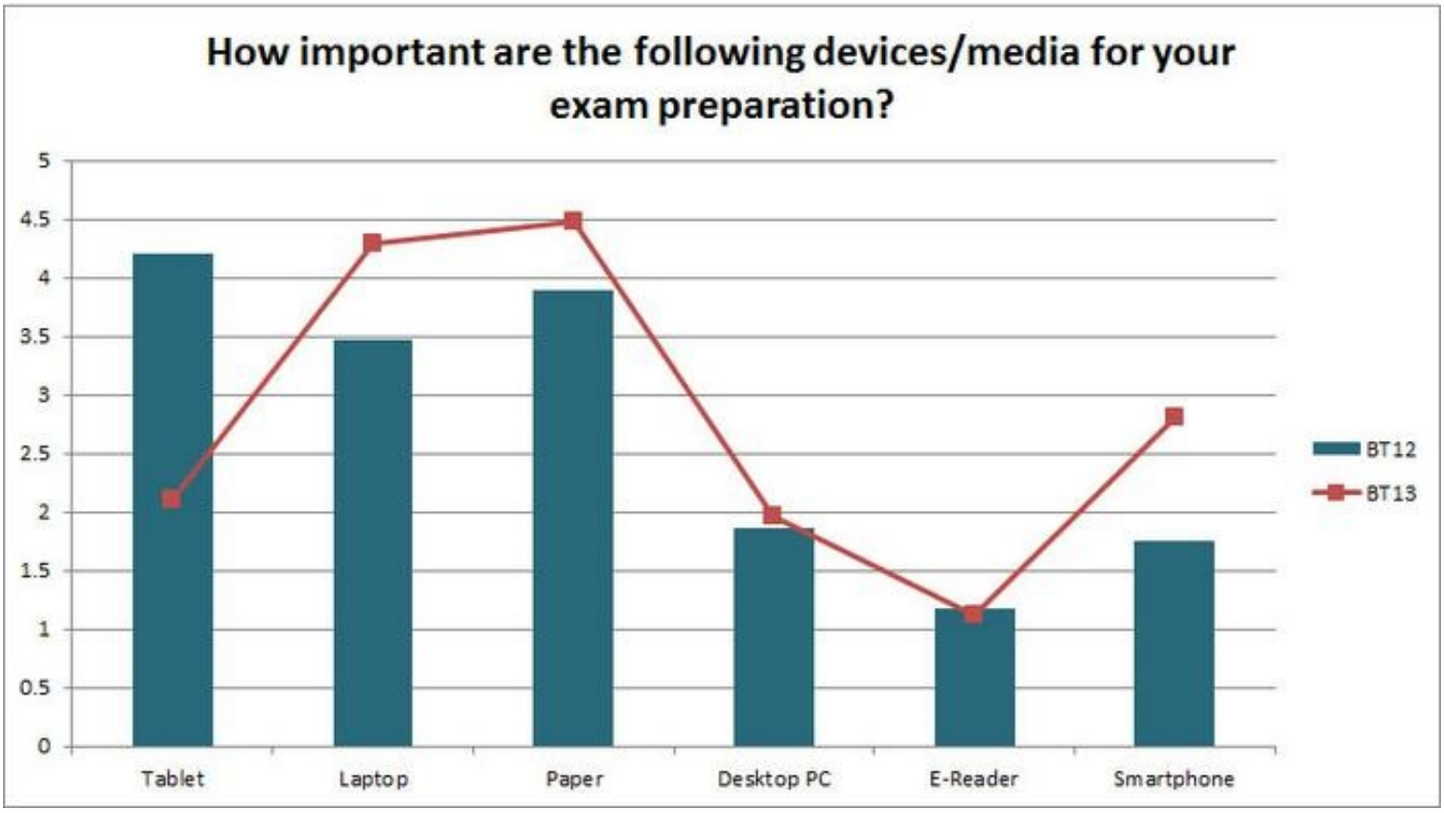
Tablets replace other devices

58%

use the tablet as a substitute for paper.

42%

use the tablet as a substitute for a laptop.



Students save paper

Although paper plays still an important role in exam preparation mainly in the form of printed out summaries and formulae the paperless students report printing out significantly less additional material than their colleagues from the control group.

41%

But...

... there is still room for improvement

19%

say the infrastructure is good or very good.

40%

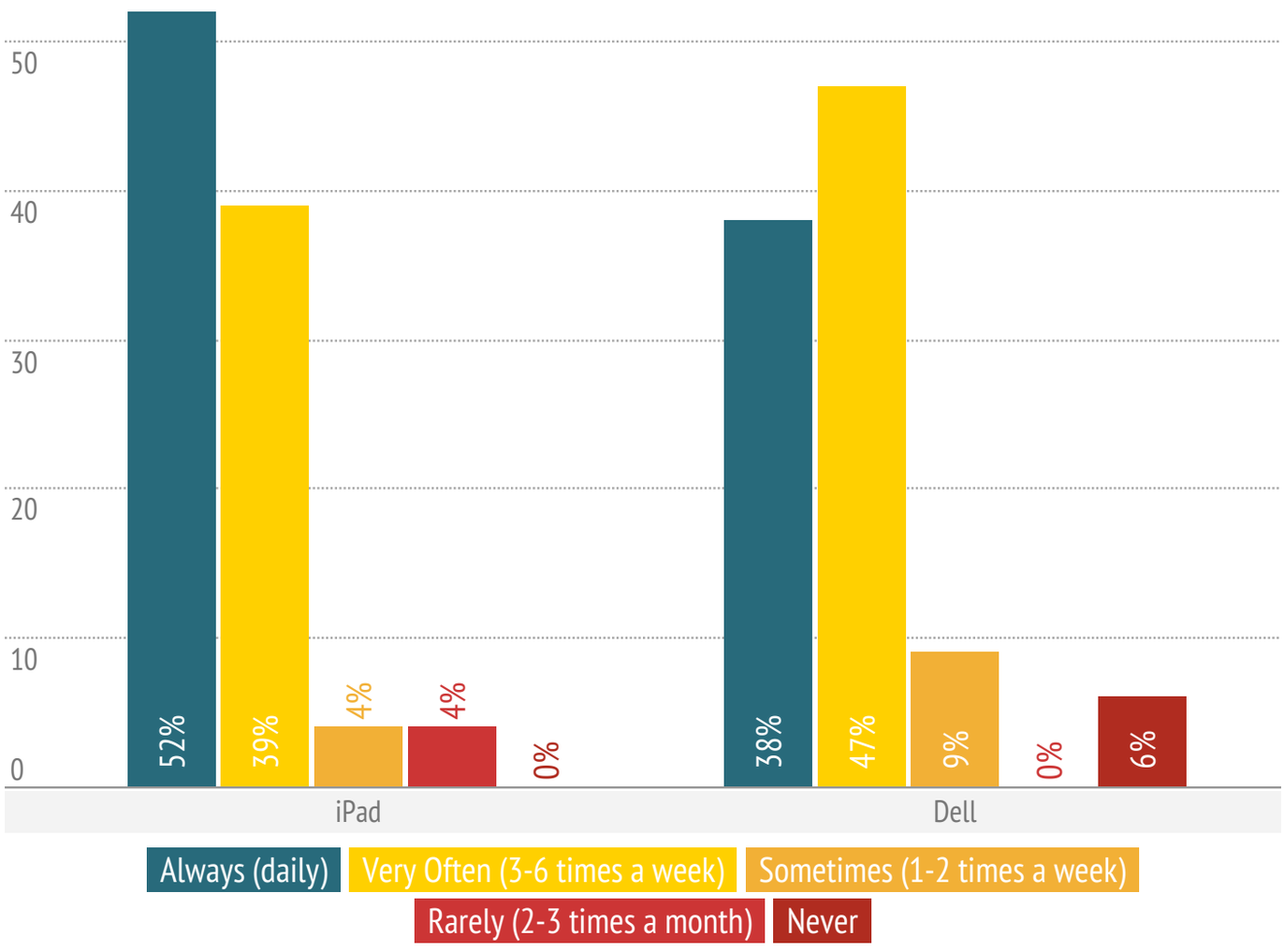
say it is satisfactory or barely acceptable.

18%

say it is poor or very poor.

Device functionality and usability influences the ability to work paperlessly

Students with a Dell Venue 11 Pro were less often able to work paperlessly than their colleagues who used an iPad Air. This gap is probably due to functionality issues with the Dell Venue 11 Pro performance and pen recognition.



Future Challenges

First year students

are overtaxed by starting the study programme and having to familiarize themselves with the tablet at the same time. They should get their device a couple of weeks before the start of studies, but they are not yet officially enrolled.

Windows tablets

are either too expensive (Surface) or inadequate (Dell) for everyday use in higher education.

Leasing contracts

for Windows tablets are highly complex and very time-consuming.

10-20% of the students

leave during the first year and return a used tablet device.

Open Book exams

with tablets and disconnected WiFi are difficult to monitor.

ICT Support

configures tablets for security reasons – resources are limited and the service is not scalable.

$ Tablets are expensive

ZHAW would like to switch to ‘Bring Your Own Device'.