

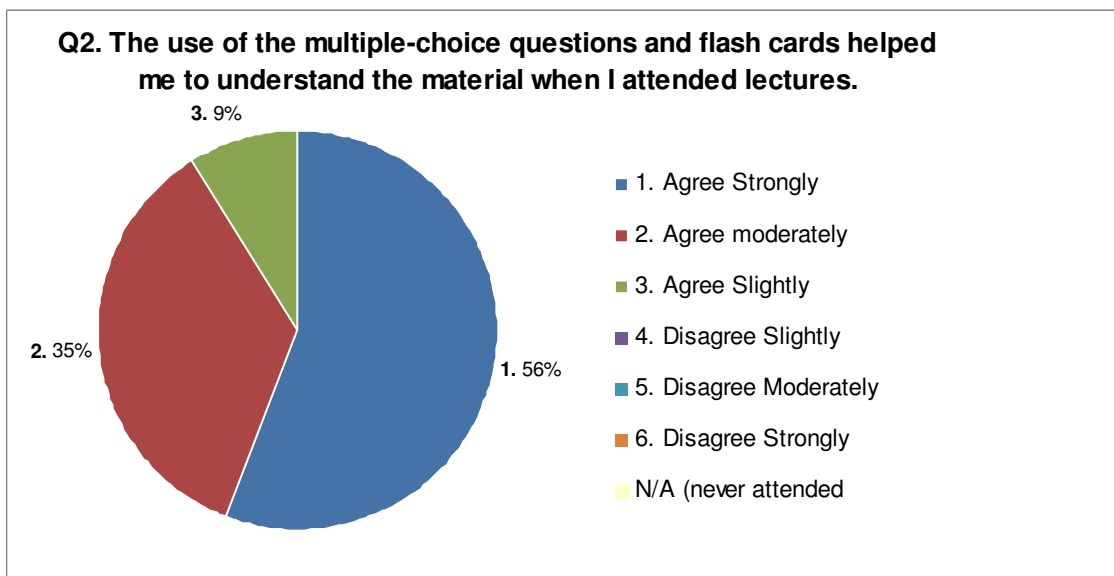
PHL1030: *Thinking: Analysing Arguments*. Monash University, School of Philosophy and Bioethics. Semester 1, 2006.

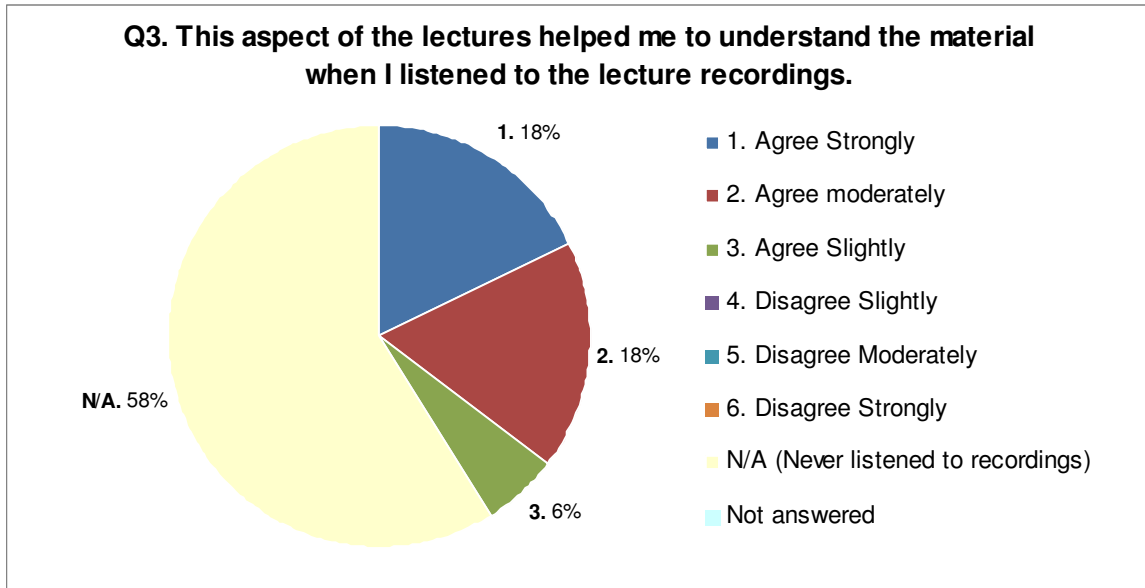
Description

Approximately 4-6 questions were used in each one-hour lecture. 34 students completed the questionnaire. This represents 56% of the total enrolment of 61. However, given that typically about 25-30 students attended lectures, it is likely that this figure represents nearly all students who attended lectures.

Results

Effect on understanding of lecture material





Student comments

They consolidated the content of the lecture and helped build confidence that the things I was taking from the lecture were the right ones. ...

Multiple choice questions throughout the lecture were very good in terms of practically using and understanding what he had just learnt about and consolidated my learning.

They were a good way to reinforce the theory we were learning in the lectures. I wanted to do more of the multiple choice questions. I felt they helped me understand the course material and gave me an opportunity to practice my critical thinking skills.

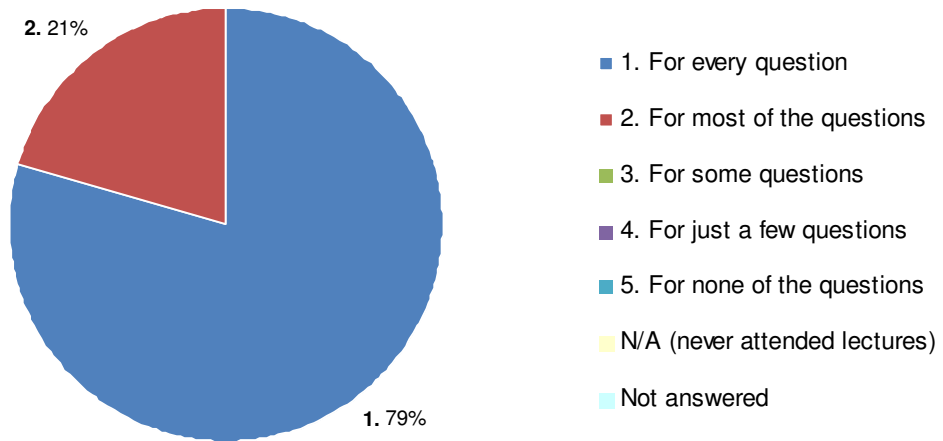
The cards help you understand the material because they force you to actually work out the answer. It's too easy to sit and watch a lecturer tell you the answer when you might not really be paying much attention, but if you're forced to participate then you have motivation to get it right.

They're great! They are also good because they highlight times when a particular part of a concept hasn't been fully explained (or where people have misinterpreted the lecturer). I wish more lecturers would use this method - well done!

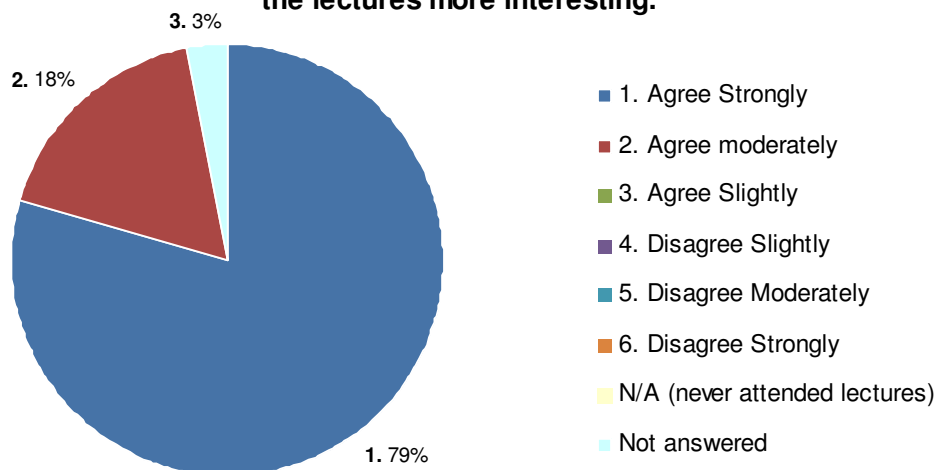
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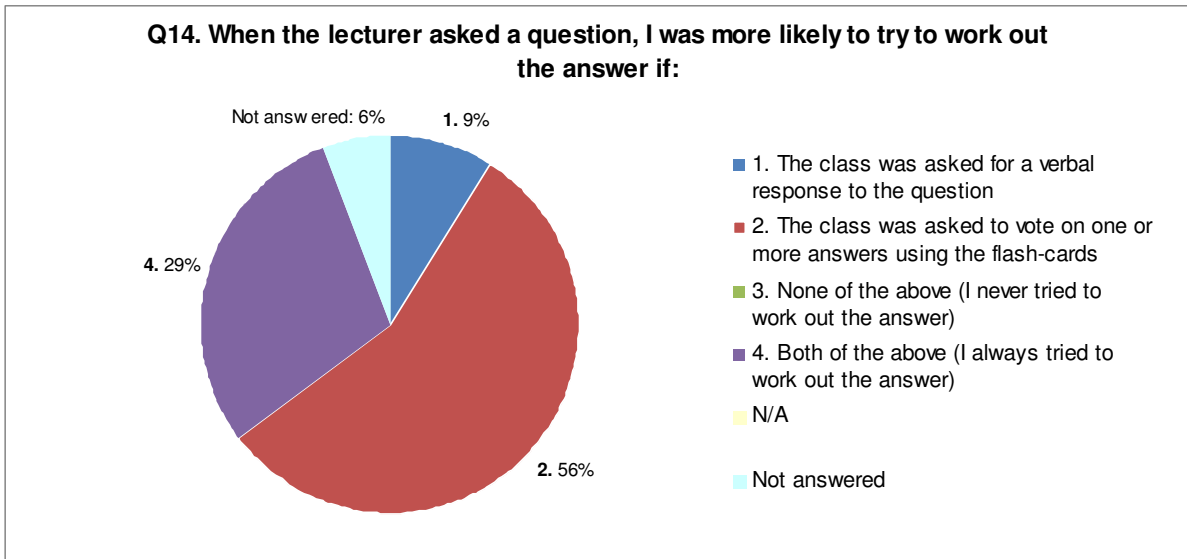
Effect on participation and engagement

Q1. When I attended lectures, I voted using the flash-cards:



Q4. The use of the multiple-choice questions and flash-cards made the lectures more interesting.





Student comments

I enjoyed the interactivensess that they brought to the lectures and the general discussion that usually ensued for the trickier questions.

It made lectures interactive and also gave me an oppotunity to demonstrate if I had or hadn't grasped the material just taught and then if so, to clarify them ... they're fun and interesting!

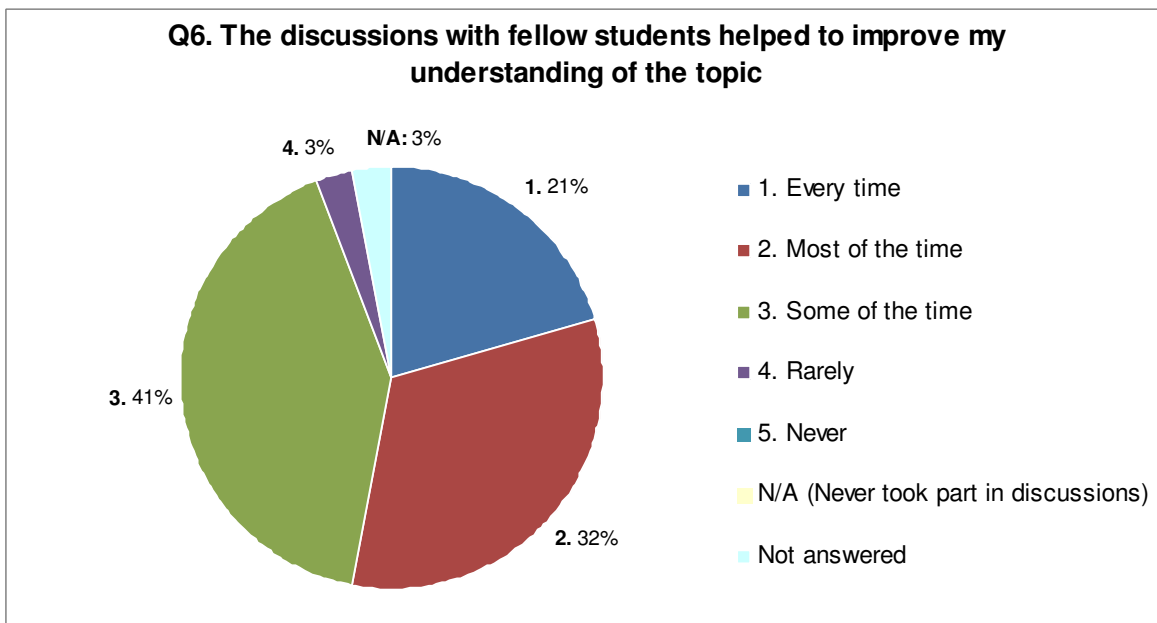
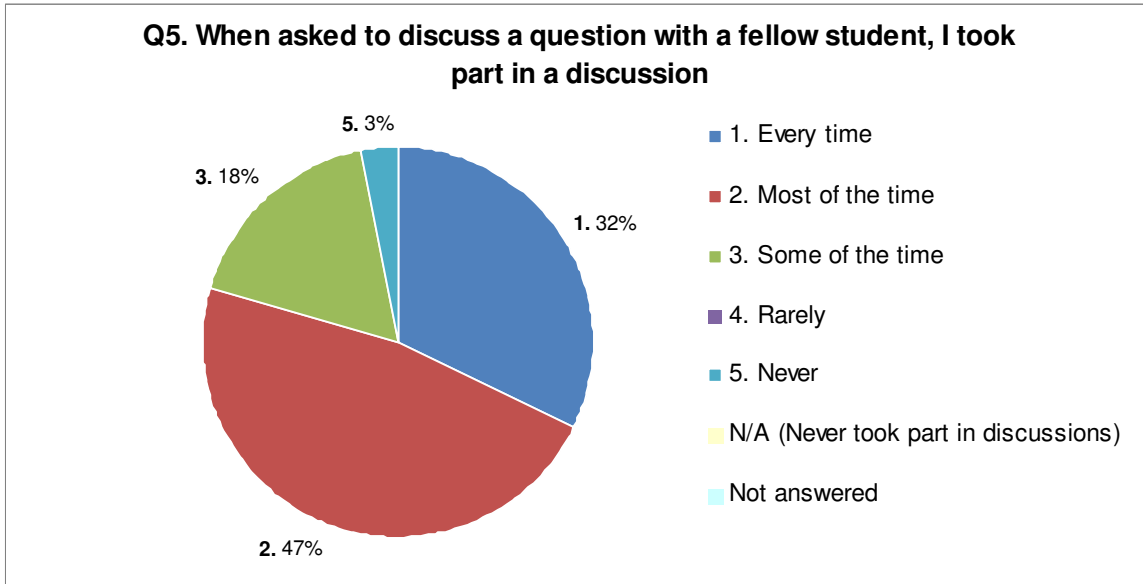
... broke up the lecture and gave us something to actively do instead of just passively listening and taking in the information. ...

The use of flash cards deals with what I believe would be one or the biggest hurdles for lecturers, to overcome the apathy of students to volunteer to give responses. Students have a tendency to not participate if they are singled out to give a response, but with everybody responding simultaneously, it creates a more dynamic and engaged studying environment.

They're fun and interesting!

They should be done in more classes. They break up the lecture and make retaining attention easier.

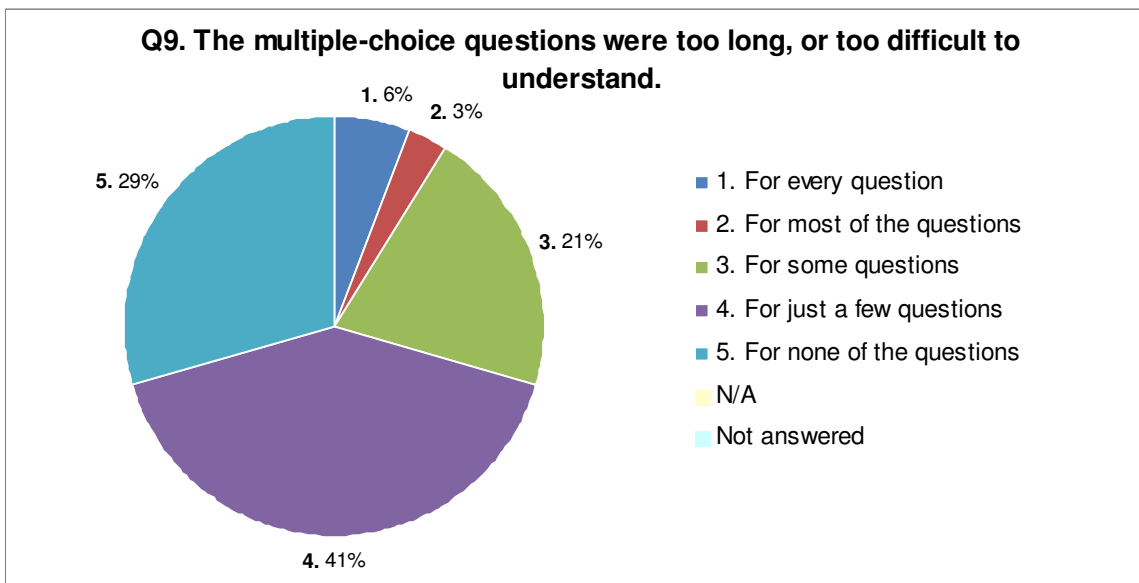
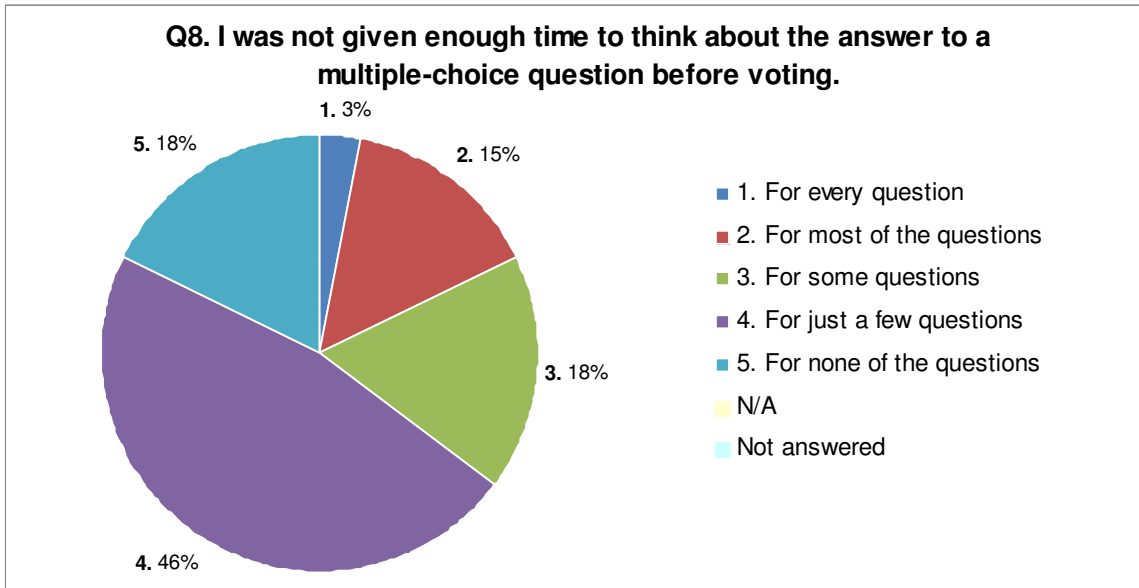
Effectiveness of discussions



Student comments

It was really good how we gave our initial answer and then tried to 'sell it' to each other and then revote.

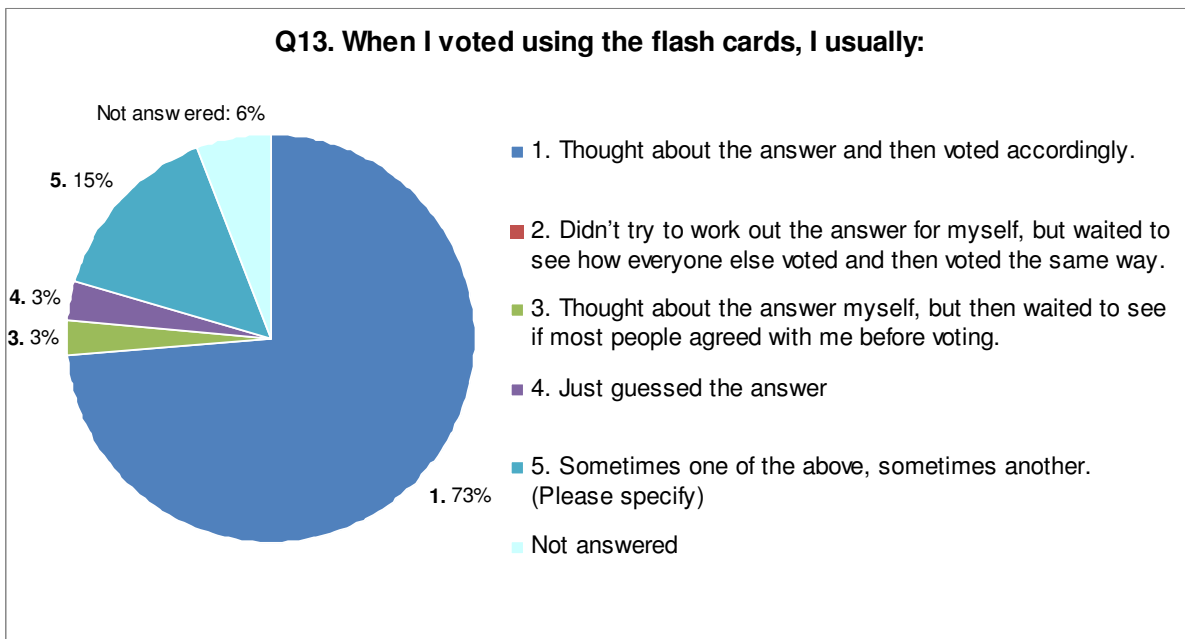
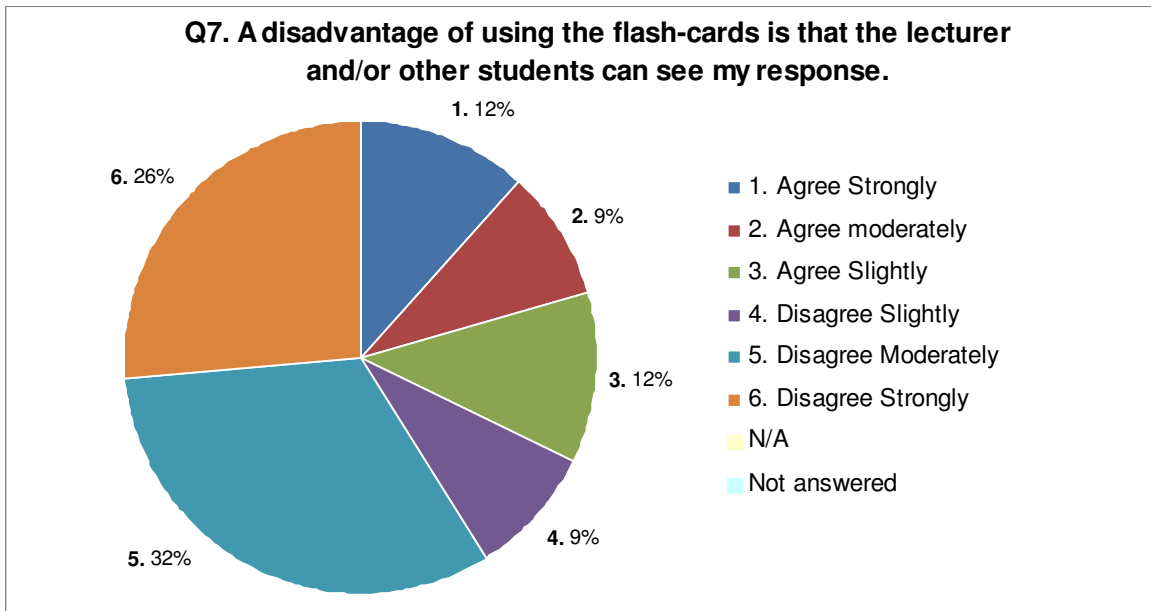
Problems with questions



Student comments

I was not given enough time to think about the answer. Because of this, I ended up voting with the majority of people because I was unable to answer the question myself in the time given.

Voting mechanism



Q13. When I voted using the flash cards, I usually:

1. Thought about the answer and then voted accordingly.	73%
2. Didn't try to work out the answer for myself, but waited to see how everyone else voted and then voted the same way.	0
3. Thought about the answer myself, but then waited to see if most people agreed with me before voting.	3%
4. Just guessed the answer.	3%

5. Sometimes one of the above, sometimes another:	15%
3 and 4	3%
1 and 4	3%
1 and 3	9%
Not answered	6%

Student comments

Very easy to vote according to how the rest of the class votes.

I reckon some people voted deliberately in conformity with the rest, which is a disadvantage of being able to see what everyone else is voting for.

Other people saw your answers, and people can easily just vote with everyone else.

Benefits

Q10. What were the benefits (for you) of the multiple-choice questions and flash-cards (if any)?

Number of students who answered: **24** (of 34)

Improved understanding	9 comments
Interaction and engagement	9 comments
Useful feedback	7 comments
Improved attention	5 comments

Comments

Improved understanding (9 comments)

They were a good way to reinforce the theory we were learning in the lectures. I wanted to do more of the multiple choice questions I felt they helped me understand the course material and gave me an opportunity to practice my critical thinking skills

They helped to ensure that I understood the concepts being taught and could put them into practice.

They consolidated the content of the lecture and helped build confidence that the things I was taking from the lecture were the right ones. ... They should be done in more classes.*

Participation and understanding.*

Understood the concept better.

It forced me to consider the question and was also good practice for the exercise questions. Tricky questions were easier to understand after answering them in class.

They made me think about the question properly, and come up with an answer. I had to utilise the stuff that was being taught immediately, rather than simply remembering it and trying to use it later on when I've forgotten half of it. It definitely helps with remembrance, and ability to use the skills being taught.

Helped put my knowledge to practise, and apply what I have learnt to an example, with the opportunity to discuss with others and have it further explained to me. It also made me feel less stupid when I knew I wasn't the only one with the wrong answer.*

... helped me to better understand different approaches to questions.*

Interaction and engagement (9 comments)

Participation and understanding.*

I enjoyed being able to test my knowledge and ability to apply that knowledge right there in the lecture. It also broke up the lecture and gave us something to actively do instead of just passively listening and taking in the information. ... I wish more lecturers would use this method - well done!

Interaction. Practice doing the questions.

It made lectures interactive and also gave me an opportunity to demonstrate if I had or hadn't grasped the material just taught and then if so, to clarify them ... they're fun and interesting!*

More interaction and enjoyable.

Encouraged engagement in lectures.

I enjoyed the interactiveness that they brought to the lectures and the general discussion that usually ensued for the trickier questions. Also helped me to better understand different approaches to questions.*

They made doing sample problems more interesting. I guess it appeals to people's sense of competition.

Made the lecture much more interesting than most of the other lectures I've been to.

Useful feedback (7 comments)

Cleared up misunderstandings. Sometimes I thought I understood and the flash cards showed that I hadn't...**

Validated my progress through the course. Let me know I was travelling in the course.

Allowed me to see how i was doing in comparison with others in the class. I was not put down by being wrong, because i could see that at least i was not the only one who answered in a particular way. Also allowed the lecturer to address where and why people went wrong in their reasoning without singling out individuals.

Easy to determine what was voted and how many people got what correct

Allows real time application/testing of our understanding of the current topic. This makes it a lot easier for me to spot areas which I am unsure about and raise questions

It made lectures interactive and also gave me an opportunity to demonstrate if I had or hadn't grasped the material just taught and then if so, to clarify them ... *

...it also made me feel less stupid when I knew I wasn't the only one with the wrong answer.*

Improved attention (5 comments)

They kept my attention in lectures and also allowed me to associate certain principles with examples.

... Broke up lectures a bit, kept me alert and focusing on the material.***

...They break up the lecture and make retaining attention easier.*

Made me more alert during lectures. Helped sustain my attention and interest during the lecture. ... Good, innovative approach.

They recapture your attention if you were drifting off a little. The force you to focus on the lecture content again.

Disadvantages

Q11. What were the disadvantages (for you) of the multiple-choice questions and flash-cards (if any)?

Number of students who answered: **19** (of 34)

No disadvantages	10 comments
Too easy to vote with the majority	4 comments
Not enough time given to think	2 comments
Embarrassed when answered incorrectly	1 comments
Not as effective when listening to recordings	1 comment
Too many questions	1 comment

Comments

No disadvantages (10 comments)

I found no disadvantages.

None.

Nil.

None, except when people don't vote.

Not enough desk space for the cards and my laptop! I kept dropping them. Seriously, no major drawbacks.

none. the system worked well and i have no criticisms of it. i thought it needed a few more of the tougher questions, but the system itself was fine.

None.

none really

there were none, it was great, we should have that for every class

None really. If I wasn't sure of the answer I just abstained. Anyone uncomfortable with voting in front of everyone else could do the same, I suppose.

Too easy to vote with the majority (4 comments)

Other people saw your answers, and people can easily just vote with everyone else.

Very easy to vote according to how the rest of the class votes.

I reckon some people voted deliberately in conformity with the rest, which is a disadvantage of being able to see what everyone else is voting for.

Some students seemed afraid to think on their own.

Not enough time given to think (2 comments)

Sometimes too quick.

I was not given enough time to think about the answer. Because of this, I ended up voting with the majority of people because I was unable to answer the question myself in the time given.

Embarrassed if answered incorrectly (1 comment)

Sometimes if I was unsure of an answer it was embarrassing holding up the flash cards when others could see my answer, especially if I got it wrong!

Not as effective when listening to recordings (1 comment)

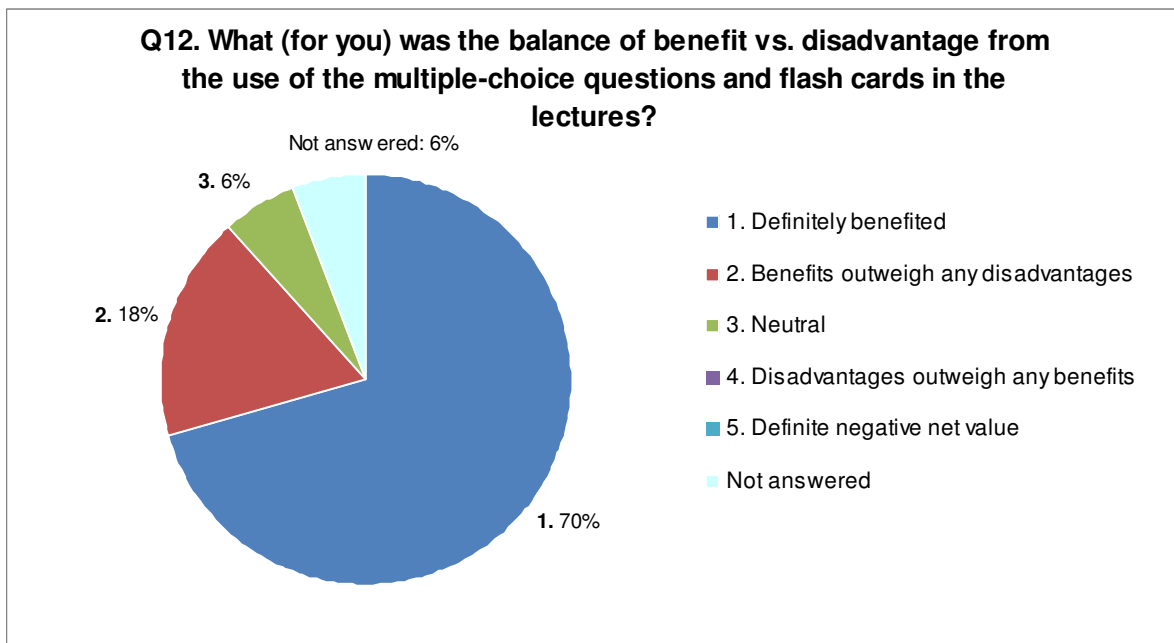
I listen online and they are not as effective this way.

Too many questions (1 comment)

Sometimes when we did 5 or 6 in a row I lost interest. But I am a bit of a short attention student.

Overall benefit

Q12. What (for you) was the **balance** of benefit vs. disadvantage from the use of the multiple-choice questions and flash cards in the lectures?



Other comments

Q15. Any other comments on the use of the multiple-choice questions, flash-cards and discussions:

Number of students who answered: **18** (out of 34)

Positive	18
Negative	0
Neutral	0

Comments

Positive

They're great! They are also good because they highlight times when a particular part of a concept hasn't been fully explained (or where people have misinterpreted the lecturer). I wish more lecturers would use this method - well done!

they were awesome!!!!!!!!!!!!!!

The cards help you understand the material because they force you to actually work out the answer. It's too easy to sit and watch a lecturer tell you the answer when you might not really be paying much attention, but if you're forced to participate then you have motivation to get it right.

All lecturers should try incorporate them into their lectures. Its a great idea and kept us active during the lecture. Would definitely help with the 'boring' factor a LOT of other lectures have.

Good job by SAM

they were a simple yet effective method. I enjoyed the unit thoroughly!

keep the multiple choice questions and flash cards within the course, perhaps even have some weekly tests with similar questions that students could do for practice put up on MUSO

The use of flash cards deals with what i believe would be one or the biggest hurdles for lecturers, to overcome the apathy of students to volunteer to give responses. Students have a tendency to not participate if they are singled out to give a response, but with everybody responding simultaneously, it creates a more dynamic and engaged studying environment. I hope it continues to be used, perhaps it will spread to the other subjects, and perhaps eventually they will build electronic multiple choice buttons built into the chairs :).

More lecturers should use them. Keep it up.

Good, innovative approach.

they are definitely worth having. keep it up :)

Good idea, keep using them.

They are good. It was really good how we gave our initial answer and then tried to 'sell it' to each other and then revote.

They should be done in more classes. They break up the lecture and make retaining attention easier.

Really enjoyed using the cards; made me much more interested in the process. You should ask more people to explain their answer. Though I suppose we do that in tutorials.

Keep it up.

Multiple choice questions throughout the lecture were very good in terms of practically using and understanding what he had just learnt about and consolidated my learning. I also think that they make [the lecturer] feel good about his teaching because it always seems like most people are paying attention and learning stuff! Flash cards are fun! Discussions are good for reasons mentioned previously.

They're fun and interesting!

Negative

None.

Neutral

None.