



PHL 363

Philosophy and Cognitive Science

S1 External 2018

Dept of Philosophy

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	3
<u>Delivery and Resources</u>	8
<u>Unit Schedule</u>	8
<u>Policies and Procedures</u>	9
<u>Graduate Capabilities</u>	10
<u>Changes since First Published</u>	16

Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

General Information

Unit convenor and teaching staff

Senior Lecturer

Karola Stotz

karola.stotz@mq.edu.au

Alexander Gillett

alexander.gillett@mq.edu.au

Credit points

3

Prerequisites

(39cp at 100 level or above) or admission to GDipArts

Corequisites

Co-badged status

Unit description

The cognitive sciences have made great strides in our understanding of mind and cognition. This unit covers the philosophical foundations of cognitive science. It examines the successes of cognitive science as well as some of the problems it currently faces – such as the nature of consciousness. It also looks at the recent challenge to computational approaches to cognition from the embodied and embedded movement and examines the importance of emotion and culture to understanding the mind and cognition. Some of the topics that are likely to be covered include (but are not limited to): representation and computation; pain; embodiment and body image; emotion; memory and the perception of time; moral cognition; the extended mind. No background in psychology or science is assumed.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy.
2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy.
3. Articulate clearly and coherently philosophical arguments in

written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

General Assessment Information

All tasks will be assessed using the criteria listed under the description of each task, such as: critical analysis, written expression (etc). A detailed rubric for each task will be supplied on iLearn.

Late Submission Penalty

“Unless a Special Consideration request has been submitted and approved, (a) a penalty for lateness will apply – two (2) marks out of 100 will be deducted per day for assignments submitted after the due date – and (b) no assignment will be accepted more than seven (7) days (incl. weekends) after the original submission deadline. No late submissions will be accepted for timed assessments – e.g. quizzes, online tests.”

Assessment Tasks

Name	Weighting	Hurdle	Due
Class/Blog participation	15%	No	Weekly
Fortnightly Online Quizzes	30%	No	Fortnightly
Essay plan	10%	No	Week 10
Long Essay	45%	No	Week 13

Class/Blog participation

Due: **Weekly**

Weighting: **15%**

The participation mark is based in part on the extent to which students come to class well prepared, having done the required reading and devised questions and discussion points. It is also based on the extent to which students make a constructive contribution to classroom discussion, so students should come to class with prepared questions and discussion points.

Grading: Students will receive a mark out of 100 at the end of term.

Class participation marking criteria:

- **Outstanding contributor:** Contributions in class reflect extensive preparation. Ideas offered are usually substantive; provide major insights and direction for class discussion. Challenges are substantiated and persuasive. Makes an important contribution to class discussion overall.
- **Good contributor:** Contributions in class reflect thorough preparation. Ideas offered are often substantive; provide useful insights and some direction for class discussion. Challenges are substantiated and often persuasive. Makes a significant contribution to class discussion overall.
- **Adequate contributor:** Contributions in class reflect adequate preparation. Ideas offered are sometimes substantive; provide some insight but rarely offer direction for class discussion. Challenges are sometimes presented, substantiated and persuasive. Makes a contribution to class discussion overall.
- **Unsatisfactory contributor:** Contributions in class reflect inadequate preparation. Ideas offered are rarely substantive; rarely provide insight but do not offer useful direction for class discussion. Contributions may be distractions rather than constructive. Does not make a positive contribution to class discussion overall.
- **Non-participant:** This person says little or nothing in class. There is not an adequate basis for evaluation. Makes no contribution to discussion.

(Adapted from Tyler, J. (2004) Class Participation Assessment Guide. Department of Education, Brown University).

External students are required to post a discussion point online in response to the readings for the week. They should also provide courteous and relevant feedback on at least one other post each week for an absolute minimum of 7 weeks of the semester. The marking criteria are the same as for internal students.

Grading: Mark out of 100 per week, overall grade will be the calculated mean

On successful completion you will be able to:

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence

from a broad range of disciplines including cognitive science, psychology and neuroscience.

Fortnightly Online Quizzes

Due: **Fortnightly**

Weighting: **30%**

Due: **Weeks 2, 4, 6, 8, 10 & 12** Weighting: **30%**

Multiple choice questions will cover material discussed in weekly class readings. Each quiz is worth 5%.

Marks are determined by the accuracy of your responses to the quiz questions.

Assessment:

This assessment task will be assessed by the following criteria set out in the following learning outcomes:

1. A working knowledge of some of the current major issues connecting philosophy and biology
2. The ability to understand and critically evaluate the theories and arguments studied, identify their strengths and weaknesses, and develop an appreciation of the ways in which these positions have developed in response to identification of problems in other views
3. An ability to understand and critically evaluate theories and arguments in the philosophy of cognitive science.
4. An ability to express and expound the positions studied clearly and lucidly
5. Students should start to develop their own philosophically informed views on the issues studied and defend their views, clearly and courteously in response to critical evaluation from others in discussion and in writing

Grading: Students have to submit answers to all the questions, which are posted weekly before class based on the readings, each week from Week 2-11. They will have to submit answers to the questions for at least 7 weeks to get a pass.

Grade: Mark out of 100 per week, overall grade will be the calculated mean of all submissions.

On successful completion you will be able to:

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate

philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Essay plan

Due: **Week 10**

Weighting: **10%**

Students will produce a detailed 1-2 page plan of the research paper for peer review and submit it via Turnitin. A planning worksheet and instruction on how to write an essay plan, and an essay based on this plan, will be provided on iLearn.

Submission Instructions for Internal Students: Students will submit their plan via turnitin and bring their plan to seminar in week 10 for peer discussion and feedback.

Submission Instructions for External Students: External students will submit their plan via turnitin and post their essay plans to the external students forum and provide feedback on at least one other plan.

Grading: Mark out of 100

This Assessment Task relates to the following Learning Outcomes:

- Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy.
- Analyze and critically evaluate philosophical arguments.
- Reflect individual performance to identify opportunities for improvement.

Assessment criteria for this essay are detailed in the rubric provided on ilearn.

On successful completion you will be able to:

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Long Essay

Due: **Week 13**

Weighting: **45%**

Students will write a research paper of 3000 words (with a margin of 10% on either side), which provides a careful critical examination, based on reasons, argumentation and evidence, of a set topic. A list of topics will be made available on iLearn in week 6, and the research paper must choose one of these topic. Students are encouraged to come up with their own essay topic, which they need to present to the convenor for approval.

There will be materials for how to write an essay on iLearn.

Submission: Turnitin submission on iLearn

Grading: Students will receive a grade out of 100 for the paper.

This assessment task will be assessed by the following criteria set out in the following learning outcomes:

- Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy.
- Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy.
- Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences.
- Analyze and critically evaluate philosophical arguments.
- Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship.
- Reflect individual performance to identify opportunities for improvement.
- Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment criteria include the accuracy of the paper's engagement with the material, the quality of its explanation of how that material relates to the theme of the course, and the technical and stylistic quality of the paper. A detailed rubric regarding the grading of the final essay will be made available on learn.

On successful completion you will be able to:

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in

written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Delivery and Resources

Seminars will be held Fridays from 4-6pm in X5B 134, 29 Wallys Walk

The unit website is available through iLearn (<http://ilearn.mq.edu.au>). It contains essential resources for the unit, and you are expected to log in on a regular basis.

Unit Schedule

A detailed schedule can be found i iLearn. Here is a draft schedule:

Week (Date)	Seminar Topic	Tasks
	1. INTRODUCTION	
1	Introduction: What is cognitive science?	
	2. THEORIES OF COGNITION	
2	The mind as a classical computer	Week 2 Questions
3	Is computation enough?	Week 3 Questions
4	Alternative 1: Connectionism	Week 4 Questions
5	Alternative 2: Embodied Cognition	Week 5 Questions
6	Alternative 3: Extended Cognition	Week 6 Questions
7	Alternative 3: Extended Cognition	Week 7 Questions
	SEMESTER BREAK	
	2. COGNITIVE SCIENCE AND EVOLUTION	
8	Investigating animal cognition	Week 8 Questions
9	Evolutionary Psychology	Week 9 Questions

10	Cultural evolution	Week 10 Questions, Research Paper Plan
3. CASE STUDIES FROM COGNITIVE SCIENCE		
11	Case study: Are there gender differences in the brain?	Week 11 Questions
12	Case Study: The Predictive Brain	
13	No Seminar: Research paper meetings	Research Paper (5/6/15)

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of

Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment tasks

- Class/Blog participation
- Fortnightly Online Quizzes
- Essay plan
- Long Essay

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment tasks

- Class/Blog participation
- Fortnightly Online Quizzes
- Essay plan
- Long Essay

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment tasks

- Class/Blog participation
- Fortnightly Online Quizzes
- Essay plan
- Long Essay

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary

solutions to problems.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment tasks

- Class/Blog participation
- Fortnightly Online Quizzes
- Essay plan
- Long Essay

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence

from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment tasks

- Class/Blog participation
- Fortnightly Online Quizzes
- Essay plan
- Long Essay

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment tasks

- Class/Blog participation
- Fortnightly Online Quizzes
- Essay plan
- Long Essay

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess,

write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment tasks

- Class/Blog participation
- Fortnightly Online Quizzes
- Essay plan
- Long Essay

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to

identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment task

- Long Essay

Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Learning outcome

- 1. Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy. 2. Synthesize and analyze information from a variety of sources concerning foundational concepts and arguments in cognitive science and philosophy. 3. Articulate clearly and coherently philosophical arguments in written and oral form to a variety of audiences. 4. Analyze and critically evaluate philosophical arguments. 5. Apply acquired knowledge and skills in the context of philosophical and cognitive science scholarship. 6. Reflect individual performance to identify opportunities for improvement. 7. Understand and critically evaluate evidence from a broad range of disciplines including cognitive science, psychology and neuroscience.

Assessment task

- Long Essay

Changes since First Published

Date	Description
18/02/2018	Assessment tasks changed from: Participation 20% Weekly Questions 20% Essay Plan 10% Essay 50% to: Participation 15% Fortnightly Online Quizzes 30% Essay Plan 10% Essay 45%