Unit 1 Gender issues

Unit overview

Part	This part will help you to …	By improving your ability to …
A	**Understand data presented in lectures**	• recognize different types of numerical data • understand and use language to simplify numerical data.
B	**Understand and evaluate data and graphics**	• recognize and use verbs and adverbs for describing trends • use nouns and adjectives to show trends • use prepositions to describe trends.
C	**Keep accurate records of your research**	• use punctuation correctly in references • paraphrase while note-taking.
D	**Contribute to discussions**	• use appropriate verb tenses for describing trends • compare data using the discourse markers *while* and *whereas* • compare data using multiple values and fractions.
E	**Write standard academic reports**	• follow tense patterns in literature reviews • build paragraphs using *it* as a subject • build paragraphs using determiners to link ideas • write definitions of key terms using participle phrases.

Unit 1

Part A

Understanding spoken information

By the end of Part A you will be able to:

- recognize different types of numerical data
- understand and use language to simplify numerical data.

1 Recognizing different types of numerical data

Many students find dealing with numerical data one of the most difficult aspects of listening to lectures. In order to help you understand and note down numerical data quickly, it is important that you are aware of the different ways in which it is presented.

1a Work in pairs. Discuss why writers or lecturers refer to data.

1b Work in pairs. Complete the second column of the table with the numerical data in the box below.

5.4 5th 4/5 2005 54% 5,400

Types of data	Example	Examples in context (Exercise 1e)
1 cardinal numbers (counting numbers)		
2 ordinal numbers (ranking numbers)		
3 decimals		
4 percentages		
5 fractions		
6 year (of publication)		

1c **1** How do we pronounce the figures and symbols in the box below?

‘ . ’ ‘%’ 0 104 2/3 2010 3.142 5/8 9/10

2 The numbers *0, 104* and *2010* all have more than one pronunciation.

a What are the alternative pronunciations for these numbers?

b Can we use the alternative pronunciations for each number in any context or only in specific situations?

3 How do we pronounce the numbers after the ‘ . ’ in a decimal?

4 With ordinal numbers, when are these abbreviations used?

–th *–st* *–nd* *–rd*

1d You are going to listen to some extracts from a lecture on some of the differences male and female children experience in their education in the developed world, with a particular focus on the UK. Before you listen, work in small groups and discuss these questions.

1 Are there any differences in the way in which girls and boys are educated in your country? Consider the following.
- quality of education
- duration of education
- expectations of families
- exam results

2 Do you expect it to be the same, or different, in the UK?


1.1

1e Listen to extracts from a lecture on education in the UK. In each extract, the lecturer refers to numerical data. Make a note of the data in the third column of the table in 1b.

1f Check your answers with a partner.

1g Work in groups. You are going to listen to a longer extract from the same lecture. Before you listen, look at a student's lecture notes and predict the following.

1 What type of data might you expect to hear for each point (e.g. ordinal number, percentage)?

2 Do you have any idea of what the numbers could be (for your home country or for the UK)?

Notes

- UK male–female ratio studying degree programmes = 1) _____
- Male–female wage differences:

  School leavers (M)
  - First 10 yrs. work = earn 2) _____ less
  - After 10–15 yrs. work = no difference

  Uni graduates (M)
  - After 30 yrs. work = earn 3) _____ more
  - 2006 survey = 4) _____ all snr academic posts held by M.


1.2

1h Listen to the extract and complete the missing information (1–4) in the notes in 1g.

1i Check your answers with a partner. Is any of the information surprising? Why / Why not?

2 Understanding and using language to simplify numerical data

Many lecturers help their audience by simplifying numerical data to communicate key points more effectively. Preposition or adverb phrases such as: *about*, *around*, *a little over*, *just under*, *roughly*, etc. signal simplified data. There are three common ways of simplifying specific data:

- rounding numbers up or down to give an approximate value in place of the specific one (e.g. *75% …* in place of *76.3%*)
- using a fraction in place of a specific value (e.g. *About three-quarters …* in place of *76.3%*)
- giving a subjective estimate of the size of the value (e.g. *many women / the majority of professors …* in place of *76.3%*)

2a Work in pairs. You are going to listen to an extract from a lecture about the numbers of male and female students studying engineering in UK universities. Before you listen, discuss these questions.

1 In your country, is it common for female students to study engineering?
2 Are there some subjects which male students typically prefer and others which are typically studied by female students? Why do you think this is?
3 Do you expect the situation will be the same in the UK?


1.3

2b Listen to the extract. How well balanced is the student population in this university?

2c Listen to the extract again. As you listen, write the numbers you hear below.

Notes

% male engineering undergrads: 30 yrs ago = _____

% increase female eng. undergrads: over last 20 yrs = _____

All courses – ratio females enrolled = _____

2d Check your answers to 2c with a partner. Did you note down the same numbers?

2e Look at this transcript from the extract and identify:

- any words or phrases used to signal that a piece of data has been simplified
- two different ways in which data has been simplified.

Certainly, engineering has traditionally been a male-dominated field: about 90% of engineering undergraduates here were male 30 years ago. However, have things changed? Well, they have. Proportions of female students have increased by over 20% over the last twenty years, though the ratio of female students remains well under half on all degrees and still around a quarter on most. And this is a university which prides itself on its male-to-female ratio!

Words and phrases which introduce simplified data

2f Work in pairs. Add the signalling words and phrases from the transcript in 2e to the first two columns of this table. Then add any other signalling words that you can think of.

<	≈	>
	about	

Rounding up or down to give approximate values

Lecturers can simplify numbers by using approximate values of figures rather than the exact number. Depending on their purpose, these might be very approximate (e.g. *around 50%* for an exact figure of 45%) or more specific (e.g. *around 49%* for an exact figure of 48.6%).

2g You are going to listen to some extracts from a lecture about some gender differences in the workplace. Work in pairs. Look at these notes. What approximate values could the lecturer give for the underlined data? Discuss your ideas.

Extract	Notes
A	*consistent increase in female employment rates, 2008: 69% women / 81% men employed.*
B	*2008: 48.73% of workforce female.*
C	*at age 50, graduate women earn average £13.89 per hour. Men without degrees £13.63 per hour.*
D	*2005 female graduate proportion: 71% education, 65.8% arts and humanities, 56.8% business and law, 39% science, 25.2% engineering.*
E	*25.93% women employed in education, 26.2% public services.*


1.4

2h Listen to the extracts and complete these sentences with the approximation of the data used by the lecturer.

A

In one sense, women are enjoying much better career opportunities than ever before: female employment rates have increased consistently over the last few decades, until in 2008 _____ /_____ % of UK women were in work (men were slightly ahead, with _____ /_____ % in work, but the gap is closing fast).

B

Furthermore, a greater percentage of the workforce across the EU and the UK is now made up of women – in 2008, for instance, the UK workforce was split almost evenly, with women making up _____ /_____ % of all people in work.

C

By the age of 50, the gap was even starker: university-educated males earned _____ / _____ / £_____ an hour, with university-educated women again earning more or less the same as men who did not have a degree – _____ / £_____.

D

_____ /_____ % of all education degrees awarded in 2005 went to women, about 66% of graduates in the arts and humanities were female, and _____ /_____ % in business and law. However, the number of female graduates in sciences, maths and engineering courses was far lower, with _____ /_____ % of science graduates being female, and a mere 25% in engineering.

E

_____ /_____ % of all working women are employed in education of one form or another, and _____ another _____ % are employed in public services, and women vastly outnumber men in these types of job.

2i Check your answers with a partner.

2j Add any other phrases for simplifying data to the table in 2f.

Using fractions

The final technique commonly used is to simplify data as fractions.

2k Complete these descriptions by choosing a suitable word or phrase from the box below.

a	~~of~~	of	out of	of	in

1 70% _____*of*_____ undergraduate students may be female in future years.

2 Over two-thirds _____ undergraduate students may be female in future years.

3 Under _____ third of students on most education courses are male.

4 Over two-thirds _____ students on most education courses are female.

5 Approximately one _____ ten primary school teachers in the UK is male.

6 Over nine _____ ten primary school teachers in the UK are female.

2l Work in pairs. Complete these grammar notes, using the examples in 2k to help you.

Grammar notes: using fractions and percentages

- The preposition a) _____ is used between the fraction (e.g. 1/4) or percentage (e.g. 25%) and the noun the value describes (e.g. male students).
- When using fractions, we can replace the number one with the indefinite article b) _____.
- Percentages may be simplified into tenths (e.g. 1/10), but expressed as c) X _____ *ten* or d) X _____ _____ *ten* rather than *X tenths*. This is possible, but less common, with other fractions too.


1.5

2m Phrases, as well as adverbs, are also used to make generalisations about quantities. Listen to a final extract from the same lecture. Which phrases match these meanings?

1 *Most of* (MEng and PhD students of Engineering)

2 *Very few* (female software engineering students)

2n Work in pairs. Can you think of any other synonyms for the phrases above?

2o Check your answers with a partner.

LESSON TASK

3 Dealing with numerical data

3a Work in pairs. Each student should read one of the tables in **Appendix 1** to find the answer to these questions.

Student A – Read Table 1 and answer this question.

In 2007, which nation had the most even distribution of senior female academics across all age groups?

Student B – Read Table 2 and answer this question.

Which academic fields saw the greatest growth in female PhD researchers between 2001 and 2006?

3b Write a short summary of the information in the table, using approximate data.

3c Use your summary to explain the information in the table to your partner.

3d Review the information you have learned about the gender gap so far in this unit. In small groups, discuss the following question. Use approximate language to help support your opinions.

'How significant is the gender gap in education?'

4 Review and extension

Using numerical data

1.6

4a Listen to a lecturer giving a summary of some statistics, in turn taken from another lecture. The lecture deals with the gender gap in education in the United States. Write notes on the lecturer's summary, and hand them to your teacher in the next class.

4b Find a chart or table which presents information about the gender gap. Take notes of the data shown on the graphic you have found. Find ways to simplify the data by using preposition and adverb phrases, approximations and fractions.

4c Practise delivering the information in your graphic to your classmates at the beginning of the next class.