Tutorial Letter 201/1/2017

Teaching Numeracy to Adults

ABT1518

Semester 1

Department of Adult Basic Education and Youth Development

IMPORTANT INFORMATION

This tutorial letter contains important information about your module

BARCODE

Dear Student

The information in this Tutorial Letter is for Semester 1 2017. It contains **answers to the Multiple Choice Questions, feedback from the essay type question and examination guidelines.** Use this feedback to enhance and support your learning.

The tutorial letter is dis divided into **Section A** and **Section B**.

Section A provides you with feedback to Assignment 01 and Assignment 02. The purpose of this feedback is to enhance your learning, clarify the sections that you might have misunderstood and guide you on how you might have answered questions.

Section B consists of guidelines that you need to use to prepare for the coming examinations.

Please note: all queries **about feedback in this tutorial letter must** be directed to the lecturer. Have your study material, tutorial letter and student number ready when you contact the lecturer.

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SECTION A

FEEDBACK FOR ASSIGNMENT 01 AND ASSIGNMENT 02

ASSIGNMENT 1

Question	**Answer**
1	**4**
2	**1**
3	**4**
4	**4**
5	**3**
6	**3**
7	**2**
8	**1**
9	**2**
10	**3**

Question	**Answer**
11	**2**
12	**1**
13	**4**
14	**2**
15	**3**
16	**2**
17	**3**
18	**2**
19	**2**
20	**2**

ASSIGNMENT 2

Question 1

1.1 Distinguish between numeracy and mathematics

- Numeracy is the skill to work with numbers and mathematics
- A numerate person should have knowledge of basic mathematical operations
- Numeracy also refers to the ability to solve numerical problems in different contexts
- Numeracy is mathematics at a simple level
- At complex level, numeracy is mathematics
- Mathematics deals with difficult problems related to numbers
- Mathematics use abstract symbols related to numbers
- Numeracy is the skill to work with numbers and mathematics
- A numerate person should have knowledge of basic mathematical operations
- Numeracy also refers to ability to solve numerical problems in different contexts
- Numeracy is Mathematics at simple level
- At complex level numeracy is Mathematics
- Mathematics deals with difficult problems related to numbers
- Mathematics use abstract symbols and rigorous logical reasoning
- Mathematics is not always tight to everyday life activities, that is why is sometimes regarded as more difficult than numeracy

(2x5=10)

1.1 Advance reasons why many people do not want to teach mathematics and show how the fear can be overcome.

Why people do not want to teach mathematics?

- Practitioners might feel that they do not understand mathematics themselves, so how can they teach it?
- They might feel that teaching numeracy is reserved for only intelligent people.
- Mathematics is a subject that involves rules, which might be complicated a times.
- Practitioners might not have a solid foundation of mathematics themselves and therefore be afraid to teach it.
- Schools lack resource to support students for mathematics
- Some schools do not offer maths
- Learners also have negative attitude towards maths
- Maths teachers are always blamed as learners perform poorly in maths
- Fear of maths instilled at tertiary level during professional training
- Lack of continuous development of maths teachers
- Untrained teachers do not know maths concepts and teaching strategies
- Teachers who are not well trained in teaching maths lack confidence

(2x3=6)

Total (10)

How the fear can be overcome

- Practitioners can consult with colleagues for assistance
- Undergo developmental training
- Register for course in Mathematics

(2x2=4)

1.1.1 How will you help learners to recognise what they already know about numbers?

- Find out what learners know about the numbers by giving them the opportunity to realise for themselves what they know.
- Ask them how they have experienced number use in practical situations and in their daily lives.
- Place learners in groups that can easily interact with each other to share ideas.
- Find out the language that they are using about numbers. How they use numbers.
- Working with quantity, weight, and capacity, as related to numbers.
- Give learners challenges that will connect their existing knowledge to the new knowledge about the numbers.

(2x5=10)

1.2 Substantiate by means of examples the assertion that "People who say they cannot do mathematics are actually already using mathematics in their everyday lives".

- Telling time is part of what they already know about mathematics
- Telling distance is a mathematical skill

- Operation of cell phones is part of what they already know about numeracy and mathematics
- Calculating change is part of mathematics
- Buying stock for their spaza shops is skill of mathematics
- Knowing when to collect medication is part of numeracy and mathematics
- Knowing speed limit is mathematical knowledge
- Knowing how to take their medication is what they already know about mathematics
- Knowing time for their classes is part of mathematics
- Measuring weight and volume is mathematical knowledge

(2x10= 20)

Question 2

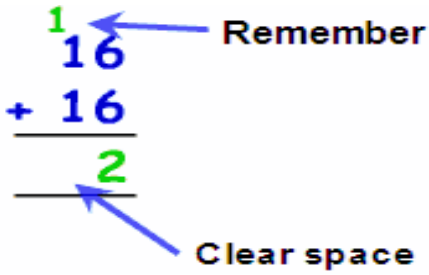
2.1 Describe the basic mathematical operations and give two examples under each operation using numbers not exceeding 50. (20)

Addition

Addition is finding the total, or sum, by combining two or more numbers. The result is the sum.

Example 1: Simple addition
Example: 4+ 3 = 7 is an addition.

Example 2: We can do addition by writing one number below the other and then add one column at a time, like this:



Any other relevant method of teaching addition should be accepted.

Subtraction

To take one number away from another If you have 5 apples and you subtract 2, you are left with 3.The symbol of subtraction is −.

Example 1: Simple subtraction: Example: 5 − 2 = 3

Example 2: Using the columns method using the borrowing method: Example: 25-17 = 8

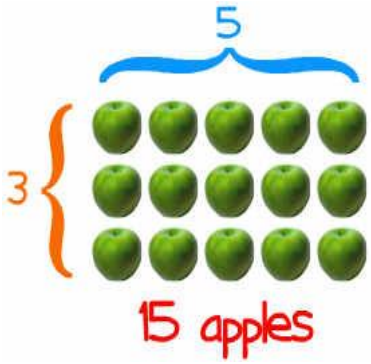
- Take the learners step-by-step through the method of drawing up an operation table.
- Help learners to put numbers in the right columns so that they practice the skill of borrowing.
- Together with the learners represent the numbers on the operation table (using match sticks)
- Gather together the straws in the units' column and subtract. Go borrow from the 10's column then place them below the answer line, continue until the whole sum is done.

Any other relevant method of teaching subtraction should be accepted.

Multiplication

The basic idea of multiplication is repeated addition. The symbol for multiplication is x

Example 1: Simple multiplication. For example: 5 × 3 = 5 + 5 + 5 = 15



Example 2: Using the columns method:

Any other relevant method of teaching multiplication should be accepted.

Tens	Units
1	2
X	3
3	6

Division

Division refers to dividing one number by another. The result of division is quotient. The number that is doing the division is the divisor. The symbol is ÷

Example 1: Dividing 4 oranges between 2 boys
4 divide by 2 equals 2 (4÷2=2)

Example 2: Dividing 9 books between 3 boys
9 divide by 3 equals 3 (9÷3=3)

(Mark allocation: Description 2. Explanation 3=maximum 5x4=20)

(Drawing pictures is not compulsory. There is no penalty if there are no pictures. They are, however, good to clarify the description.

2.2 Describe in detail two activities from real life situations that you will use to teach adult learners distance, weight and volume.

Your answer should be structured as follows:

Definition of concepts
- Distance
- Weight
- Volume

Description of the two activities

Distance

- Distance can be defined as the length of the space between two points, e.g. "I cycled the short distance home". It can be in miles or kilometres. This answer is open to the student's interpretation. The only criteria are that the activities must be related to distance.
- Examples of what the student could have included to describe the two activities:
- The learners can be asked to measure the distance from one point to another.
- Learners can be asked to walk across a certain distance and calculate the distance they walked.
- The learners can be asked to walk across different distances and thereafter compare who walked the furthest distance.

- Learners can be asked to calculate the quickest route to walk from point A to point B.

(10)

This answer is open to the student's interpretation. The only assessment criteria are that the activities must be related to the concept of weight.

Weight

Weight can be defined as "Heaviness". The downward force caused by gravity on an object. A bar of gold has a mass of 1 kg, and weighing scales would normally show 1 kg. Even though weight and mass are different things, weight often uses the units of mass. For example grams, kilograms and, tons (metric) or ounces and pounds

Examples of what the student should have included describing the activities:

- The practitioner can bring a scale and the learners can weigh different objects.
- Learners can be asked to bring food items from home, and write down the weight of these items and compare their items with the peers.
- Learners can be asked to weigh different objects on a scale and thereafter rank the objects from the lightest to the heaviest.
- Learners can be asked to imagine that they want to start a diet and use a food scale to weigh food items to determine how much food they can eat per day.

(10)

Volume refers to the space something can take or fill. For example: water in a tank.

Students will interpret this question differently.

The following are examples of what the students might include:

- Learners can bring empty bottles and containers.
- Learners can be asked to bring measuring jugs and cups.
- Learners can be asked to bring liquid items, for example, oil, vinegar.

(3x10=30)

(50)

TOTAL [100]

SECTION B

THE EXAMINATION

The first thing we want to tell you is "**don't panic**". We are not setting exams to try and trick you. Previous students have told us they thought the exams were very fair, and many said they actually enjoyed them! In the exams, we want to find out what you have learned and understood from the course, and so the questions will give you the chance of showing this to us. Often the questions will ask you to apply some knowledge to your community, or to a

situation with which you are familiar. So they are similar to the kind of assignment questions you have already dealt with.

The examination paper will contain almost similar questions to those in the self-assessment sections of your study guide and to those in your assignments.

The examination question paper consists of four (4) questions and you will be required to answer **any TWO** questions. **Each question carries a total of 50 marks.** Previous examination question papers are **not** available to students. You will also be required to **hand in your examination question paper** with your answer book after you have finished writing your examination. All the question papers are the sole property of the Examination Office of the University of South Africa.

The Examination

Answers must meet the requirements of the question. You need to think carefully about the precise wording of the question.

Answers must meet the requirements of the question. You need to think carefully about the precise wording of the question. When answering the questions, please bear the following key words in mind regarding what is required of you from the various questions:

Word	**Action**
Analyse	Describe the various parts of X and explain how they work together, or whether they work together. Give points for and against.
Compare	Describe the major similarities between two or more ideas, topics, etc.
Contrast	Describe the major differences between two or more ideas, topics, etc. Define: Write a brief paragraph explaining the meaning of …. If there is more than one thing to define, explain any similarities or differences.
Describe	Give a detailed account of …
Discuss	Write about the various opinions you have read on the subject. Give points for and against and draw a conclusion from the points presented.
Elaborate on	Write about a statement or a quotation that is part of the question.
Explain	Explain the statement/quotation in more detail and then state your viewpoint concerning it.
Evaluate	Give an opinion supported by evidence on the worth or value of something.
Examine	Divide into parts and describe each part critically.
Explain	Write out in detail; make clearer; examine reasons and causes.
Give an account of	Give a statement of facts in sequence.
Illustrate	Use a figure, a diagram, or specific examples to make the meaning clearer.
Justify	Give reasons for your conclusions or opinions.
Outline	Describe the essential parts only.
Show	Give reasons and causes.
State	Present clearly and concisely.
Summarise	Give the main points omitting details.

You will also be required to hand in your examination question paper with your answer book after you have finished writing your examination. All the question papers are the sole property of the Examination Office of the University of South Africa.

To Recap

- **Answers should be well structured** – pay special attention to your paragraphing. Remember to make your answers as realistic as possible by including sufficient 'factual' everyday information. Where you do not have access to actual information, you may describe a typical example that you make up.
- If you need to do some **rough work**, use the back pages of your answer book and rule a line through it so we can see it is **not** to be marked.
- Be sure that you **have enough time** to finish all the answers that we must mark.
- **Plan your time carefully** to ensure that you respond to all questions. Rather do brief answers to both questions than spend all your time on one question.
- On the other hand, you should not rush so much that you do not use all the time available to you. If you do finish early **reread your answers** and try to improve them.

DEMARCATION OR SCOPING OF EXAMINATIONS AND ASSESSMENT

NB: A College decision has been made that lecturers are not to demarcate scope specific work for examination purposes. Examination questions should be based on the entire work covering the notional hours of the modules. You are encouraged to learn everything. Where other competencies or skills are assessed differently during the tuition period, the various assessments will be spelt out clearly by the lecturer in Tutorial Letter 201.

According to Assessment Procedure Manual 2013 point number 4.5.2(e), the examination memoranda (guidelines, rubrics etc.) shall not be made available to students.

We wish you everything of the very best with your studies and for your exams.

Kind regards
Your Lecturer and the ABET Team