In responding to Research Question 1, “How should the concept of ‘percentages’ in Grade 7 Algebra, as discipline of Mathematics as Learning Area, be taught in classrooms?” using data from documents, key principles that are basic to teaching of percentages in OBE Mathematics are discussed. Based on documents data, it will be argued that ‘On Track with Maths’ (Barry and Dugmore, 1998) provides a clear guide to teaching percentages in Algebra in Mathematics as Learning Area. The text will thereafter be used as the ‘instructional system’ to establish if teachers have shifted to teaching OBE Mathematics as intended in the national innovation. Based on questionnaire data, a case will be made for the teachers selected in the sample to argue for their suitability and build confidence in the findings.

Department of Education Senior Phase (Grades 7 - 9) Policy Document (October 1997)

The Department of Education Senior Phase (Grades 7 - 9) Policy Document (1997) indicates key principles guiding C2005 development to include integration, outcomes, holistic development, relevance, participation and ownership, learner-oriented approach, accountability and transparency, critical and creative thinking, and so on. Thus OBE Mathematics teaching should involve principles laid above. The policy document defines the Specific Outcomes to be achieved by a teaching and learning experience. Each Specific Outcome has its own Assessment Criteria, Range Statements and Performance Indicators that guide and ascertain achievement of such Specific Outcomes in learning Areas. With regard to learning of Percentages, learners would be said to have achieved the outcomes of learning the concept if they show the Performance
Indicator of using algebraic techniques to solve problems involving percent, rate, ratio and proportions (Department of Education, 1997: MLMMS-5)

Northern Province Department of Education C2005 in a Nutshell, OBE, Intermediate and Senior Phase (2001)

The Northern Province Department of Education C2005 in a Nutshell (2001) policy document provides a definition of OBE as indicated in the introductory chapter. It also states that learner-centered approach is an important principle that gives considerable emphasis to constructivist approaches to learning. It gives different forms of learning strategies that are relevant to OBE, such as cooperative learning, experiential learning, deductive and inductive learning. Cooperative learning is explained as an approach that afford learners an opportunity to react to ideas, experience, insight and knowledge of generating alternative ways of thinking and feeling (The Northern Province Department of Education, 2001). Thus learners are expected to cooperate, to experiment, to deduce or induce in the learning situation, which can be realized when they interact in group-work.

On Track with Maths, Grade 7 (Barry and Dugmore, 1998)

The textbook “On Track with Maths” by Barry and Dugmore (1998) indicates that teachings of percentages need to be done following three elements of the lesson which are: discussion, algorithm and exercises as seen on the twelve lessons described below. It is also clearly stated on the introductory pages of this text that it acknowledges principles such as integration, group-work, learner-centeredness, participation and ownership to be key principles guiding C2005 development as stated in the policy document.
According to Barry and Dugmore (1998) there are two components of the textbook, which are an activity book for learners and a teaching and assessment guide. These two components of the textbook provide information on OBE and C2005 and notes on teaching guidelines. The opening statement written to teachers in the introduction says that the textbook follows OBE approach to C2005, and encourages learner involvement and enables teachers to focus on the actual learning process. The textbook shows that new topics to be learned are set under three main headings; that is discussion, worksheet and exercises. With discussion it says that the teacher guide discussions of new topic including oral examples to reinforce new concepts so that learners can work through exercises without assistance (Barry and Dugmore, 1998). Worksheets are designed for group-work and exercises for learners to work by themselves, but the chapter on percentages does not have worksheets, but algorithm. The text indicates that learners understand percentage when they are applied to marks and sale discounts (Barry and Dugmore, 1998: Teaching and Assessment Guide). For that reason it calls on teachers to try to find relevant situations where percentages can help to make useful comparisons.

The focus of the study is teaching of percentages, the chapter in the text has twelve lessons with the eighth lesson being optional, plus a set of diagnostic test and a looking back section that can be used for formal, summative or continuous assessment. These lessons start from page 169 to page 189. Lessons have three elements, which are the discussion, algorithm and exercises.

The first lesson focuses on achieving Specific Outcomes 1 (SO1), which states: Demonstrate understanding about ways of working with numbers, and Assessment Criteria 5 (AC5) about evidence of knowledge of percent, rate and ratio (Barry and Dugmore, 1998). This lesson is not titled and starts by discussion, where learners are asked to give one-word answers to the given
statements and that all the words in the statements begin with ‘cent’. The text describes percentage as meaning ‘per hundred’. The discussion is followed by algorithm, where guiding examples of how to write common fractions as percentages are given, such as \( \frac{1}{2} = \frac{50}{100} = 50\% \). The lesson concludes with exercise 87.

The second lesson focuses on SO1, AC5 and is titled ‘Percentages are used for comparing’. This lesson starts by the discussion that includes algorithm of comparing scores of learners. They discuss a competition to find the “Boot of the Year” in a rugby team between Peter who scored 12 out of 15, Musa scored 12 out if 16, Lesiba scored 15 out of 20, Khalid scored 7 out of 10 and Tsolo who scored 3 out of 5. The scores were converted into percentages for easy comparison, for example Peter scored \( \frac{12}{15} = \frac{4}{5} = \frac{80}{100} = 80\% \). The lesson concludes with exercises 88.

The third lesson focuses on SO1, AC5 and is titled ‘Percentages, fractions and decimals’. This lesson starts with a discussion where learners are to work in pairs to do conversions of decimals to percentages and vice versa. The discussion requires learners to complete the given task on page 173 to 174. After discussion it provides methods of converting decimals to percentages and percentages to decimals, which is the algorithm. The method for converting decimals to percentages is: “multiply the decimal by 100 and add the % sign” while for converting percentages to decimals is: “remove the % sign and divide by 100”. The lesson concludes with exercise 89.

The fourth lesson focuses on SO6 which states: “Use data from various contexts to make informed judgements”, and AC3 stating: “Organization of data”. The lesson is not titled and starts by discussion of a computer program used to give correct rule of conversions to percentages. Here learners are expected to follow the arrows showing sequence of steps of the
program using common or decimal fractions to convert to percentages, which is the algorithm. The lesson also gives the table of equivalent fractions that learners are to learn by heart to recognize them quickly, such as \( \frac{1}{2} = 0.25 = 25\% \), \( \frac{1}{3} = 0.3 = 33\frac{1}{3} = 33.3\% \) and so on. The lesson concludes with exercise 90.

The fifth lesson focuses on SO1, AC5 and is titled “Calculating percentage parts”. It starts with the discussion exercise requiring learners to name percentages of given values. In the algorithm, it gives three guiding examples of calculating percentage parts of given values with or without using a calculator. The first example is of using a calculator as follows: 24% of 250m is \( 24 \times 250 \) % = or \( 24 \times 250 \div 100 \) =. The second method is 25% of R16.92 = \( \frac{1}{4} \times \frac{1692\text{cents}}{1} \) = R4.32 and the third example is of solving the word problem which states: “a bag of avocados had a mass of 22kg, 37.5% of the avocados were overripe. How much mass of avocados were good?” and calculated as follows: \( 22kg - 37.5\% \) of 22kg, = \( 22kg - \frac{3}{8} \times \frac{22kg}{1} \), = \( 22kg - 33\frac{1}{8}kg \), = 22kg – 8.25kg, = 13.75kg. The lesson concludes with exercise 91.

The sixth lesson focuses on SO1, AC6 stating: “Solving a real life and simulated problems” and is titled “Percentage increase and decrease”. This lesson starts by discussion of percentages in discounts when buying a radio priced R200 discounted with 20%. In the algorithm, it gives two guiding examples of methods of calculating discount price and sale price on a 25% discount of R84.64 as follows: Method 1 is Discount = 25% of R84.64, = \( \frac{1}{4} \times \frac{8464\text{cents}}{1} \), = R21.16, then sale price = R84.64 – R21.16, = R63.48. Method 2 is: % to pay at sale = 100% - 25%, = 75%, then sale price = 75% of R84.64, = \( \frac{3}{4} \times \frac{8464\text{cents}}{1} \), = R63.48. The lesson concludes with exercise 92 that focuses on achieving SO1, AC3 stating: ‘evidence of estimation approaches’ and SO9 stating: ‘Use mathematical language to communicate mathematical ideas, concepts, generalizations, and thought processes’, AC2 stating: ‘Use of mathematical notation, symbols’.
The seventh lesson focuses on SO1, AC6 and is titled “Other increases and decreases” starting with discussion exercise. The discussion is of percentage increases to given amounts. This lesson has no guiding example in the algorithm and concludes with exercise 93.

The eighth lesson is said to be optional, it is not titled and has no indication of SOs to be achieved. It has no discussion and starts with one guiding example and end with exercise 94 which is also optional.

The ninth lesson focuses on SO1, AC3 and is titled “Percentage pie charts”. The lesson does not have any discussion or guiding example in the algorithm of how to represent percentages on pie charts, but only has exercise 95 with two questions, one of which is marked more challenging work.

The tenth lesson focuses on SO1, AC6 and is titled “What percentage is … of …?” and start with discussion of profit and loss. The discussion is about a learner who wants to set up a Corner Market on Saturdays and needs to work out the costs and selling price. In the algorithm, there is a guiding example of calculating profit and loss in this lesson, which is of a shopkeeper who bought a stove at R1 840 and sold it at R1 580. Calculations were done as follows: loss = R1 840 – R1 580, = R 460, then loss % = R460/R1840, = ¼, = 25%. The lesson concludes with exercise 96.

The eleventh lesson focuses on SO1, AC5 and titled “Other percentages”. It starts with the discussion of calculating percentages of quantities, which also serves as a guiding example of how to do the algorithm. The discussion is on what percentage is used if 1.5l out of 6l of paint is
used and is calculated as follows: \( \% \text{ used} = \frac{1.5}{6}, = \frac{1500}{6000}, = \frac{1}{4}, = \frac{25}{100}, = 25\% \). It then concludes with exercise 97.

The twelfth lesson focuses on SO1, AC4 stating: “performance of operations accurately” and titled “Percentages on the calculator”. It starts with Discussion of converting fractions to percentage and finding percentage parts using a calculator. It provides two guiding examples in the Algorithm of using pencil and paper methods to calculate percentage parts. The first example is of converting \( \frac{38}{43} \) to percentage, which is \( 38 \div 43 \times 100 = 88.37209 \) which should be rounded to the tenths as 88.4\%. The second example is finding a percentage part in 16.5\% of R31.50, which is \( 16.5 \times 31.5 \div 100 = 5.1975 \) which should be rounded to cents as R5.20. This lesson is concluded by two sets of Exercises, which are exercises 98 and 99 with one marked more challenging work.

After the twelve lessons there is a diagnostic test on percentages. Both the teacher and learners can use this test for formal, summative and formative assessment where they can identify weak areas in the section on percentages.

In responding to Research Question 1, “How should the concept of Percentages in Grade 7 Algebra, as discipline of Mathematics as Learning Area, be taught in classrooms?” from document analysis, data indicate principles to be considered when teaching an OBE lesson to include integration, learner-centeredness, relevance, group-work, active participation and cooperative learning. That is, teaching is to be learner-centered, context to be relevant to learners and learners to learn cooperatively in groups. According to Barry and Dugmore (1998) teaching percentages need to be done following three parts of a lesson, which are discussion, algorithm and exercises. In discussions, teachers are expected to assist learners to develop meaningful
understanding of the learnt concept through utilizing group-work where learners are engaged in discussions. In algorithm, teachers are expected to assist learners on how to do calculations related to percentages through giving relevant guiding examples. Teachers are also expected to give learners exercises to do on their own so as to assess learners’ progress relating to the learnt concept. Documents analysis also indicates the outcomes that teaching of percentages should focus on achieving. Participants in the study are expected to teach Percentages in their OBE Mathematics classes following the above indicated approach from the text as ‘instructional system’.

**Teachers’ experience and qualifications**

Using data from questionnaires, a case is first made for teachers selected in the sample to argue for their suitability and building confidence in the findings of the study. Thereafter and based on questionnaire data, it is argued that teachers seem to have developed an understanding that is relevant for teaching percentages in OBE Mathematics following text of C2005, and that teachers view “On Track with Maths” by Barry and Dugmore as text that provide clear guidelines on teaching percentages.

All three teachers are on the permanent staff of their schools, are very experienced teachers having taught for between 9 and 15 years, one Grade 7 Mathematics for 6 years, two for 10 years each. All are degreeed and well experienced in teaching Mathematics.

In addition, all three teachers have attended the District Development School Programme (DDSP), a USAID funded programme to upgrade teachers understanding for teaching Mathematics, Natural Sciences and English. This is one of many training workshops they have
attended in the last 3 years, 2002-2004, average of 5 being attended in 2002, 4 in 2003, and 1 in 2004 as seen in Table 1 below.

**Table 1: Number of OBE Mathematics training workshops attended by teachers.**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
<th>Average Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>2</td>
<td>4</td>
<td>9</td>
<td>$\frac{15}{3} = 5$</td>
</tr>
<tr>
<td>2003</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td>$\frac{12}{3} = 4$</td>
</tr>
<tr>
<td>2004</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>$\frac{3}{3} = 1$</td>
</tr>
</tbody>
</table>

Section C of the questionnaire helped me respond to the Research Question 1, “How should the concept of ‘percentages’ in Grade 7 Algebra, as discipline of Mathematics as Learning Area, be taught in classrooms?” with regard to National Curriculum Statement policy as part of instructional system.

All three teachers indicated they used a learner-centered approach in teaching OBE Mathematics. They understood ‘learner-centeredness’ to mean:

- “Learners are fully involved throughout the lesson” (Nhlangano, 2004: Qe, p3)

- “Give most time to learners to express themselves on how they understand the concept”, (Nhlamulo, 2004: Qe, p3)

- “I learn that learners understand Mathematics better than when is teacher’ centeredness. They gain insight” (Ntsakisi, 2004: Qe, p3).

They indicate clearly that learner-centeredness refers to teaching involving learners fully in lessons, learners expressing themselves to construct their understanding of concepts, learners
being given time to assimilate concepts, and that learners understand Mathematics teaching best when it is not teacher-centered.

Teachers indicated that it is beneficial to group learners in small groups and teach them, and indicate they are fully aware that this is so, as seen in their reasons below:

“Learners are given the chance to participate in the learning activities” (Nhlangano, 2004: Qe, p3)

“Learners are able to help one another. Small groups can be controlled easily” (Nhlamulo, 2004: Qe, p3)

“Because they share ideas among themselves and they do not forget what they have discussed with peers” (Ntsakisi, 2004: Qe, p3).

These responses show understanding of the purpose of group-work, as including learners actively participating in learning, helping each other and sharing of ideas through discussion with peers. However, my experience proved that few small groups may be easily controlled, but many small groups demand more management skills on the part of the teacher.

Teachers said that there is similarity between learner-centeredness and group-work. This is seen in their reasons below:

“In groups is where pupils discuss to find solutions to problems” (Nhlamulo, 2004: Qe, p3)

“Learner-centeredness and group-work is one and the same thing because is where they have time to explore and discover” (Ntsakisi, 2004: Qe, p3)
“Because even in a group-work the learners are involved and take part in lesson, therefore there is learner-centeredness during the lesson” (Nhlangano, 2004: Qe, p3)

These responses show that teachers understand group-work to be similar to learner-centeredness as in both approaches learners discuss, have time to explore, to discover and to be involved in lessons.

Teachers indicated their understanding of a ‘facilitator’ to mean:

“The teacher gives direction on how to discuss but not dictating learners” (Nhlamulo, 2004: Qe, p3)

“Facilitator in OBE Mathematics monitors the situation of learning. He only uses 5% in teaching and learning and learners 95%” (Ntsakisi, 2004: Qe, p3)

“The teacher should control the learning situation (class) as he or she facilitate in the classroom” (Nhlangano, 2004: Qe, p3)

They indicate clearly that facilitator refers to giving direction, not dictating, monitoring and controlling of the learning situation. However, teachers should be involved in the teaching and learning throughout the lesson and not only to use 5% as indicated by one of the teachers.

Teachers indicated they understand ‘learners being able to develop at their own pace’ to mean slow learners not forced to learn as fast learners do, learners discussing towards common understanding and finding answers as they share ideas. This is seen on their reasons given below:
“Learners who are slow in learning should not be forced to learn very fast as the fast-learners will do”  
(Nhlangano, 2004: Qe, p3)

“They discuss and have common understanding about percentages”  (Nhlamulo, 2004: Qe, p3)

“They find answers themselves because they share ideas”  (Ntsakisi, 2004: Qe, p3).

Teachers indicated that the idea of learners developing at their own pace affects their OBE Mathematics teaching as

“learners need more time to develop”  (Nhlamulo, 2004: Qe, p4),

“because they explore or search answers for themselves without the help of the teacher” (Ntsakisi, 2004: Qe, p4) and

“learners will understand the lesson better and as a teacher I will get better results in mathematics”  
(Nhlangano, 2004: Qe, p4).

These responses show that teachers understand the idea of learners developing at their own pace to positively affect their teaching as it demand more time, and learners develop better understanding of mathematical concepts and getting better grades.

Teachers said they link learners’ interest to teaching OBE Mathematics. They indicate they do it:

“By using the relevant teaching aids and learning activities which the learners know and of their own interest”  (Nhlangano, 2004: Qe, p4)

“Because we start from things they know”  (Nhlamulo, 2004: Qe, p4)
“By letting them ask questions and even to give them chance to solve problems being alone or with peers”
(Ntsakisi, 2004: Qe, p4)

They show linking to be done through the use of teaching and learning aids that are relevant, known and interesting to learners, starting lessons from what learners already know and allowing learners to ask questions.

Teachers agreed to involving learners in the selection of content for teaching percentages, two indicating to involve them through using practical situations known to learners such as like buying at discounted price. However, one teacher showed that he do not involve learners as he taught according to the work programme.

Teachers said that class sizes influence their teaching of OBE Mathematics, as seen on their reasons below:

“The bigger the class, the more time we spend” (Nhlamulo, 2004: Qe, p5)

“Because the class is not overcrowded, it is very much easy to facilitate learning in this size” (Ntsakisi, 2004: Qe, p5)

“The bigger the class makes the lesson to be difficult, but the smaller the class makes the teaching possible” (Nhlangano, 2004: Qe, p5)

These responses show teachers to have an understanding that it is easier to facilitate learning in classes with few learners than in overcrowded classes.
Teachers indicated they work with learners’ different learning abilities in their lessons. They showed to do it by concentrating on all learners, giving more time or attention to slow learners and more challenging work to brilliant learners. This is seen in their responses below:

“Slow learners are given more attention, while brilliant learners are given more challenging work” (Nhlamulo, 2004: Qe, p5)

“By concentrating on both learners with different abilities, eg; slow learners and even fast learners” (Ntsakisi, 2004: Qe, p5)

“Because some learners understand faster than the learners who are slow – who need more time to understand” (Nhlangano, 2004: Qe, p5)

Two teachers said they consider using individual learning styles in their OBE Mathematics teaching and one in the negative. They motivated their responses by saying:

‘It is very much important to consider teaching or learning styles because is easy to assist learners in all spheres of life’ (Ntsakisi, 2004: Qe, p5)

“Learners have problems and should be taught separately” (Nhlamulo, 2004: Qe, p5)

“Because sometimes the teacher used group-work and combine with individual teaching” (Nhlangano, 2004: Qe, p5).

These responses show considering of individual learning style as including assisting learners in totality, being considerate of individual problems of learners and as an approach that can be used in conjunction with group-work. Even Nhlangano who responded in the negative to considering
individual learning style, he gave a reason supporting the use of individual learning style to OBE Mathematics teaching.

Two teachers indicted that using learner-centered approach assist them in their teaching of OBE Mathematics, and gave reasons stated below:

“Learners understand better if they talk to one another than when a teacher is talking alone” (Nhlamulo, 2004: Qe, p6)

“It assists because it helps learners to enjoy mathematics because they do not use rote learning, but they explore” (Ntsakisi, 2004: Qe, P6)

They indicated it assist learners to understand mathematics better as they talk to one another and explore, than using rote learning. However, one teacher did not respond to the question.

Section D about teaching of OBE Mathematics in the questionnaire helped me explore how teachers view text to contribute to teaching OBE Mathematics as intended in the national innovation, establishing response to Research Question 1 of “How should the concept of ‘percentages’ in Grade 7 Algebra, as discipline of Mathematics as Learning Area, be taught in classrooms?” with regard to relevancy of text to National Curriculum Statement policy.

Teachers’ understanding of ‘On Track with Maths’ for teaching percentage indicate, that the text provide a clear guide on how should percentages be taught in Algebra in OBE Mathematics as intended in C2005. In their view, the text encourages the use of learner-centered approach to teaching percentages, two teachers arguing that it has challenging exercises and work for
learners. The third argues that it helps develop an interest in learning Mathematics, as it is a difficult Learning Area. This is seen in their responses below:

“It has challenging exercises and even problem solving questions helps learners to have the interest of learning mathematics” (Ntsakisi, 2004: Qe, p6)

“Because it has work that can be given to learners to discuss” (Nhlamulo, 2004: Qe, p6)

“Because learners start to forget that mathematics is a difficult learning area. They develop interest in learning mathematics than the previous years I taught” (Nhlangano, 2004: Qe, p6).

The text, according to teachers, integrates Mathematical concepts with other learning areas. All three agreeing that its themes integrate with Natural Sciences, Social Sciences and Economic and Management Sciences. This is evident in teachers’ responses below:

“It covers different learning areas being one textbook. It covers HSS, LLC2, EMS and other learning areas” (Ntsakisi, 2004: Qe, p7)

“Because it includes volume which can be found in Natural Science” (Nhlamulo, 2004: Qe, p7)

“Some of the topics are good and needs other support materials to have good knowledge information” (Nhlangano, 2004: Qe, p7).

Teachers further agreed that the text provides better explanations of the concept percentage, all three agreeing that it has a broader approach to teaching percentage; it gave learners a chance to complete challenging exercises and that it covers most aspects of percentages.

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The research participants also agree that the text provide activities that cater for learners of different learning abilities, all three arguing that it has exercises that are categorized from simple to complex, some activities refer to environment where learners live and that exercises caters for both slow and fast learners. This is seen on their responses as quoted below:

“Because some of the activities should be and refers to environment where the child live”, (Nhlangano, 2004: Qe, p7)

“Because exercises have been categorized from simple to complex” (Nhlamulo, 2004: Qe, p7)

“It has exercises which caters all learners, ie, both slow and fast learners” (Ntsakisi, 2004: Qe, p7)

In teachers’ view, the text provides activities that are applicable to learners’ daily or practical situations. Two teachers arguing that it gives learners a chance to discover for themselves, but they did not quote the page and exercise number from the text as requested in the questionnaire. However, one teacher did not respond to this question. This makes me to conclude that teachers were using their understanding and perspectives to answer questions rather than referring to the textbook.

Two teachers indicated that their lessons on percentages reflected guidelines from the text. One teacher did not respond to the question. Reasons given by the two teachers were as stated below:

“Because learners were given exercises from Maths On Track” (Nhlamulo, 2004: Qe, p8)

“Because in my lesson I don’t write all information of my lesson but the book have many activities about the percentages” (Nhlangano, 2004: Qe, p8)
These responses indicate that teachers used the text in their lessons for activities and exercises they gave to learners.

Asked to describe on their own words how they view the text contributing to teaching OBE Mathematics, all three teachers said they view the text as good arguing that it covers aspects and concepts of percentages.

All teachers commented on the teaching of OBE Mathematics as good and enjoyable, and that more workshops should be conducted so that they may become fully acquainted with teaching OBE Mathematics as intended in the national innovation.

From questionnaire data, it is established that sample teachers are well qualified and experienced in teaching mathematics, and that they have developed an understanding that seem relevant to teaching OBE Mathematics following the national innovations and policy for C2005. Data show teacher indicating their knowledge and utilization of some of the principles of OBE, such as learner-centeredness, group-work, integration, catering for learners’ abilities and interests, relevance and learners’ developing at own pace during their teaching. Data also indicate teachers to know their roles and expectations regarding teaching OBE Mathematics as intended in the national innovation, and that they view “On Track with Maths” by Barry and Dugmore (1998) to provide clear guide on explaining and teaching the concept of percentage. With such sample teachers, confidence is built on the findings of the study.
Conclusion

In responding to Research Question 1, “How should the concept of percentages in Grade 7 Algebra, as discipline of Mathematics as Learning Area, be taught in classrooms?”, data indicate that lessons of teaching percentages are to be taught in three elements, which are discussion, algorithm and exercises. It indicate that teachers are to facilitate discussions of concept percentage, then give guiding examples on doing the algorithm and conclude by giving learners exercises to do on their own. Data also provide a clear explanation of the concept percent as meaning ‘per hundred’. Data indicate key principles that are basic and need to be considered in teaching percentages in OBE Mathematics to include learner-centeredness, integration, group-work and relevance. Data indicate sample teachers selected for the study to be well qualified and experienced in mathematics teaching, and they have developed an appropriate understanding of OBE teaching which makes them suitable and build confidence in the findings of the study.