

Chapter Four

Data

Introduction to chapter four

This chapter is organised in order to reflect the data collection. The following tools were used to gather data: the observations, the interviews, the questionnaires, and the self-reports. They are divided into two categories: the first three tools (observations, interviews, and questionnaires) represent the first category which is designed to investigate and explore the student teachers' performance, while the second category is the self-reports which represent the student teachers' perspectives. They should reflect their experience from their perspectives during their teaching practice.

4.1 Observations (Video documents)

The observations are designed and organized to reflect the student teachers' performance during the phases of the training course. The first video was organized to give an idea that the trainee had actually started the teaching practice, by performing some parts of the lessons during this phase, which nominated the partial teaching practice. Normally the trainees started their teaching practice by making one of the following parts of the lesson: preface to the lesson, explain one concept of the topic, organize a discussion, and many activities. The philosophy of this procedure is to train the trainees partially about the parts of the lesson. Thus, the first video was not evaluated by the lesson evaluation form, but by looking at the whole performance in one part of the lesson. The idea of the evaluators was that the evaluation form should be for the whole lesson (45 minutes) not for a part of the lesson.

The second video was used to reflect the new performance of the trainees during the third month of the training course. It was about 30 minutes long. The expectations of the educators about this video are that the trainee should perform a complete lesson plan in limited time (30 minutes) inside the Mathematics classroom, and the performance should be improved at the satisfied level.

The third video should reflect the best performance of the trainee at the end of the training course (fourth month). This video was about 45 minutes long, which consider a complete lesson in Jordanian schools.

The expectation supposes that the student teacher during this time is viewed as a teacher. Thus, the last video was the final exam for the trainees. In addition to the previous considerations, the last two videos were evaluated by using the lesson evaluation form, and by three evaluators in order to give transparency, consistency, and creditability about the satisfied level of the student teacher's performance.

All the observations were videotaped in Arabic; the researcher prepared Arabic transcription, and then translated into English.

4.1.1 The first video (V1)

This video was about 15 minutes long for each case; the following comments were taken by the observers (researcher and two supervisors) during the lessons. The main comments that were listed after each video gives the reader an idea about what was going on during a limited time of the first teaching practice of the student teachers inside the Mathematics classroom.

The lesson plan was already prepared in Arabic by the student teachers, and then the researcher translated it into English. While the first video does not have a lesson plan, he or she performed the part of the lesson by using some notes (summary) prepared by the student teacher in a separate paper. This was because during the time of the teaching practice the student teacher was not able to prepare the lesson plan. The student teacher wrote the objective of the first teaching practice.

4.1.1.1 The case of Samer 1

The title :Discount in sales calculations, grade 8

Transcription of the lesson

01:T: Suppose that radio price is written 250JD, find the percentage of discount if the buyer pays 230JD.

01:P1: The price on it was 250 JD.

02:T: Yes we need to compute discount as percentage.

02:P2: $250-230=20$ JD.

02:T: Please what does mean 20 JD.

03:P2: The discount = 20 JD.

03:T: Is this percentage?

03:P2: aha. $(20/100) \times 100\%=8\%$.

04:T: Delete what the pupil wrote and write down the formula again:

04:P2: Discount = written price \times percent of discount.

$$20 = 250 \times y$$

05:T: What does y mean? You have to write in other way.

05:P3: Yes; instead of y we write $y/100$.

$$06:P2: 20 = 250 \times \frac{y}{100}.$$

$$y/2 = 4; \text{ tend: } y = 8\%.$$

06:P: the same answer as in the previous way.

07:T: Yes; but this is what we need. It's better.

07:T: Write down from the board. (2 minutes for writing from the board).

09:T: Now; question number three; who will read it?

09:P: price of a shirt after discount is 40 JD; the percent of the discount was 20%; what was the price that was written in the shirt before computing the discount?

10:T: how does that solve it?

11:P: 40 JD the price after the discount.

11:T: The percent of discount is given.

11:P: Yes it's 20%.

12:T: discount = written price \times discount percent.

$$12:T: \text{ Write on the board: } \text{discount} = \text{price} \times \frac{20}{100}.$$

13:P: $40 \times \frac{20}{100} = 8\%$.

13:T: Doesn't care about her, ... what the price of the shirt?

14:P: The price = $40 + y$.

14:T: Do you understand?

Pupils: no.

15:T: $40 = z + y$. but $y = \frac{20}{100} 20/100$ then $z - (z \times \frac{20}{100}) = 40$.

$Z = 50$ JD.

Objective: pupils should apply some activities on discounting of things sold or/and bought.

The student teacher presented the concept during two minutes, and then he encouraged the pupils to perform a task on the board. It was direct speech from the student teacher to the pupil who wrote down on the board.

There was a dialogue (conversation) about the task between the pupils and the student teacher. The student teacher often told the pupil what he should write down on the board. After that, he gave the pupils a new task in order to perform on the notebook as individual work. The student teacher was still far away from following the pupils.

After 15 minutes the pupils could not solve some questions from the textbook, while the student teacher told the supervisor and the cooperating teacher that he had failed to meet the goal of the lesson. And he will try next time using new methods and with the same group of pupils.

4.1.1.2 The case of Dana 2

The topic :Pythagorean theorem, grade 9

The transcription of the lesson

01:T: last lesson was circles; who can remind us what the diameter is?

01:P: segment in a circle.

02:T: another thing, who define the chord?

02:P: a segment between any two points on the circle.

03:T: you have to say on the circumference.

03:P: no miss; this is wrong; not on the circumference; on the circle because circumference is just distance.

04:T: we were talking about arc; sector; other things.

05:T: there is a theory we can use to solve this, look to this triangle (she draws ABC right triangle in B); who can write AC by using Pythagorean theorem.

06:P: $(AC)^2 = (AB)^2 + (BC)^2$.

07:T: What are the names of AB; BC; AC?

07:P: AC: hypotenuse; AB; and BC sides.

08:T: suppose that BC; and AC are given; how do you find AB?

09:P: $(AB)^2 = (AC)^2 - (BC)^2$.

09:T: there is another concept; you have to know this.

10:T: The outside angle of a triangle? Who remembers it?

11:P: outside angle of any triangle is equal to the other two angles of the triangle except one beside it.

11:T: yes; means " she draws the triangle and show the pupils the situation.

12:T: Now; solving textbook problems; I need one on the board.

She starts reading the question and immediately stops , she gives the role to the pupil on the board and then 3 of pupils answer the following:

12:P1: BA.

13:P2: AC.

13:P3: MA; and AM.

14:T: o.k. I need four arcs; from the same figure.

14:P: abc, abd, bcd, and cde.

14:T: o.k. Next.

15:P: the big one is hypotenuse.

15:T: who draw this on the board?

16:P: draw circle with radius 5cm.

16:T: what is mx ?

16:P: 5 cm.

17:T: if x is inside the circle.

17:P: so; mx is less than 5 cm.

18:T: if x is outside the circle.

18:P: mx should be greater than 5 cm.

18:T: I read the question and you draw on the copybook right triangle inside a circle; find the hypotenuse of the triangle if the radius is 4cm?

Objective: Applications on Pythagorean theorem.

The lesson was doing activities in the classroom by using the textbook.

She started the lesson by using the questioning technique. She asked many closed and small questions, for example; what is the name of a big side of the right triangle? And what are the two shorter sides?

She talked a lot. She did not give the pupils opportunities to express themselves. The goal of the lesson was not clear as they wrote in the plan, it was immeasurable. She confused the pupils, many ideas crossed each other. Although her voice was stable and somebody who sitting at the end of the class could not hear something.

After 13 minutes, she gave the pupils 2-tasks on the board. It was not clear if the pupils' performance was completely right or not, because the student teacher immediately moved to a new idea.

4.1.1.3 The case of Fuad 3

The topic :Drawing circles by using compass, grade 6

Transcription of the lesson

01:T: the teacher puts the compass in his hand and asks pupils, what is our topic today?

Pupils: geometry.

02:T: write a geometrical figure on the board.

02:T: He prepares the tools of geometry: compass; triangle; ruler; and protractor.

The teacher is going through the pupils; looking to their tools.

03:T: putting compass in his hand, what is the name of this tool?

03:P: compass, for drawing circles.

04:T: putting protractor in his hand; what is this?

04:P: protractor.

05:T: this is known for all "ruler in his hand".

One of pupils has prepared geometrical figure; the teacher said oh. This looks like good

work thank you “AHMAD HYARI”: the teacher said that: he used compass and protractor and may be used a ruler. Hah,...NIVEEN used too attractive things look; she made perfect figure; thank you Niveen. Circles some concept like: radius; diameter; centre; again thanks Niveen.

08:T: how do you draw the circle?

08:P: open the compass suitable distance; and put one side of the compass on the point called centre and then start drawing the circle.

09:T: yes; all try to do a circle on your notebook.

09:T: explain the process of drawing the circle two times in front of the class.

09:T: draw a circle with diameter 32 cm.

Pupils: oh we can't do it on the notebook;

10:T: o.k. on the board.

One of pupils does it on the board.

11:T: who will define the circle?

11:P1: plane shaped and closed.

12:P2: plane and closed shape, which has a centre.

12:P3: each points in circle shifted equal distance from the centre.

13:T: o.k. Closed shapes, which plane and consisting of many points, has regular distance from the centre.

14:T: who will repeat the definition?

Three pupils repeat it.

15:P: asks the teacher: how do you find this line surrounding the circle? ”
Circumference”

16:T: we will do this in the future; there is a formula.

Objective: Using compass and ruler in drawing geometrical figures.

The goal in the plan was very clear and measurable.

He started the lesson with a small presentation and then he changed to the questioning technique. He did not give the pupils enough time to think about the questions. Sometimes he started the answer of the question by saying the first word of the answer. Many times he took the role of the pupils, which made the responses of some pupils not clear. They repeated the answers after the student teacher.

He tried to motivate them but he failed to do this because the pupils were just listeners without any kind of participation. He used closed questions that made the pupils careless about the answers. The form of the questions was not suitable to stimulate the pupils.

The reaction of the pupils with the student teacher was at low level. One could notice that the action of the student teacher was very weak and not satisfactory.

4.1.1.4 The case of Ibtessam 4

The topic :Drawing square and rectangle by using compass and protractor, grade 6

Transcription of the lesson

01:T: who can remind us about last topic?

01:P1: drawing parallelogram given two sides and an angle between them.

02:P2: and drawing a triangle that has three sides.

02:T: how did we make this drawing?

03:P3: firstly we drew a small shape; with given information; then we started drawing accurately

04:T: o.k. Draw small model and ...
 04:T: Our lesson today; ...
 05:T: Who can give me the properties of a parallelogram?
 05:P4: they have two parallel sides.
 06:P5: geometrical figure has equal sides and equal angles.
 06:P6: no; plane figure with two parallel sides and two equal sides.
 07:T: o.k. a plane figure has four sides; each two opposite sides are parallel and equal and each two opposite angles are equal.
 08:T: draw a figure; she explains the properties on the board by using the figure.
 08:T: draw parallelogram ABCD; given that AD=5cm; CD=6cm;and diagonal AC=7cm.
 They spend some minutes in drawing on notebook and teacher asks them to draw on the board.
 11:P7: we draw by ruler segment CD=6cm.
 12:P8: by compass; open it 5cm. and put one side on D then draw arc.
 13:P9: again by compass; open it 7 cm and put one side on C then draw arc crossed the first one in A. with a ruler join the points to get triangle ACD.
 14:T: In the same way and process; you can get ACB; and then parallelogram ABCD is formed.

Objective: draw parallelogram; given 2 sides and diagonal.

She started the lesson with a small discussion, how to use geometrical tools and how to get accurate shapes by using the tools of drawing.

She organized: discussion, presentation, questioning, and applying activities on the board as a class work. She was very active, and always she motivated the pupils to participate in the discussion.

The pupils were not taking enough time to perform individually on their notebook.

4.1.1.5 The case of Hyamm 5

The topic : The line joining the centre at the midpoint of a chord of a circle is perpendicular to the chord, grade 9.

Transcription of the lesson

01:T: Close the textbook and look at me.

What are the types of triangles by using sides?

02:P1: Three equal sides, two equal sides (isosceles); and triangle of three different sides

03:T: What are the types of triangles by using angles?

03:P2: Right triangle; triangle of acute angles; and triangle of obtuse angle.

04:T: Who can remind us about congruent triangles cases?

04:P3: The case of three sides.

05:P4: The case of two sides; and angle between them.

05:P5: The case of two angles and side joined them,

06:P6: The case of right triangles (one side; one angle; and right angle).

07:T: There is an important theory about the right triangle, who can remind us?

08:P7: Pythagorean theorem.

08:T: Could you give me the rule?

09:P8: Yes; $(AC)^2 = (AB)^2 + (BC)^2$.

09:T:Now, look at this, and tell me some information.

09:T: Define the shape?

10:P9: Circle with radius n.

10:T: Who can define the chord?

11:P10: A segment joined two points of a circle.

11:T: Who can draw a perpendicular segment from n to the chord.

One pupil made it on the chart.

12:T: could we draw another one?

13:P11: no; it is impossible.

13:T: Make a discussion about this issue for a long time then she told them about the perpendicular segment from the centre of a circle to the chord (any chord) and split the chord into two equal parts.

Objective: the perpendicular segment drawing from centre of a circle to any chord in the circle divided into two equal parts.

She started the pre-learning by using the discussion and the questioning technique. The conversation between pupils and the student teacher was not ordered. The pupils were saying in one voice. It was difficult to know who was speaking. The student teacher didn't care about the situation. She used the media and the materials very efficiently for this situation. She encouraged the pupils to participate in the lesson. When she failed to get them to participate in the lesson, she started to tell them the information as a presenter.

Although, she couldn't meet the goal of the lesson in the time limit, the supervisor continued to attend her performance for access time, but she couldn't have done better than what she did in the limited time. At this moment, she stopped the lesson. At the same time, the pupils asked the cooperating teacher to explain the topic another time.

4.1.1.6 The case of Hayat 6

The topic : Trigonometry function, grade 10

Transcription of the lesson

01:T: define the angle?

01:P1: two rays coming from one point-making an angle.

02:T: another.

02:P2: two rays going to the intersection point.

03:P3: the region between two rays starting from one point.

03:T: where is the angle?

04:P4: I would like to draw, she draws and locates the angle repeating that P 3 said.

04:T: look to the XY-plane; two axis perpendicular; right angle between them.

05:T: again the intersection point is called the original point, if the head of the angle corresponding with original point of plane and one side of the angle corresponding has a positive X-axis, then we say the angle is in the standard position.

06:T: draw the angle $a = 60^\circ$ in standard position.

07:P5: with a compass we draw angle of 60° where it's head is on the original point and initial side of angle corresponds to X-axis.

08:T: draw the angle $A = 130^\circ$?

09:P6: pupils drew it correctly its in 2nd quarter.

10:T: what is the reference angle in this case?

10:P7: $180 - 130 = 50^\circ$.

11:T: o.k. What about 125° ?

11:P8: $180 - 125 = 55^\circ$.

12:T: again what do you mean by standard position?
 12:P9: head of angle in original point and side initial side of angle corresponds to positive X-axis.
 The last definition is repeated by five pupils.
 14:T: there is negative angles; for example; $A = -140$. We started from positive X-axis with clockwise 140° ,
 15:T: who can tell me a reference angle for this case?
 15:P10: $180 - 140 = 40^\circ$ it is in 3rd quarter.
 16:T: draw the angle -240° . And find a reference angle?
 16:P11: it's in 2nd quarter and the reference angle is 30° .
 17:T: no; who will try again?
 17:P12: $240 - 180 = 60^\circ$.
 18:T: o.k. Who can locate it?
 18:P13: it's here.

Objective: angles in standard position and a reference angle.

She started the lesson with small discussion in: the angles, the right triangles, and the basic trigonometric relationships.

The strategies of teaching were questioning and discussion during the lesson. She gave an opportunity to the pupils to participate in groups and individually on the notebook.

She organized the activities of the solving problems of the textbook on the board for many pupils. She used the visual aids for some problems, which were solved on the board. At the end of the lesson, she made a mistake in scientific accuracy.

4.1.1.7 The case of yassmeen 7

The topic : Pythagoras theorem, grade 8

Transcription of the lesson

01:T: today we have a theory; it's very important in our life.
 01:T: look into the right triangle; ABC: right triangle in B.
 02:T: who show me a hypotenuse?
 02:P1: AC, the pupil pointed to the board.
 03:T: write the square of hypotenuse?
 03:P2: $(AC)^2$.
 03:T: who can count the squares from the figure?
 04:P3: 100.
 05:T: who can write the squares of two sides of right triangle?
 06:P4: $(BC)^2 + (AB)^2$.
 07:T: Count the squares from the figure?
 07:P5: $(BC)^2 = 64$; and $(AB) = 36$.
 08:T: what do you note?
 08:P6: $100 = 64 + 36$.
 09:T: very good; who can write it in symbols.
 09:P7: $(AC)^2 = (AB)^2 + (BC)^2$.
 10:T: this is the form of Pythagoras theorem.
 10:T: we need to prove it?
 11:T: focus on the following triangle: What is MB ?
 11:P8: MB perpendicular AC.

12:T: consider triangles ABC; and AMB; they are similar triangles.

Angle M = angle B = 90°.

$$AC/AB = AB/AM \Rightarrow (AB)(AB) = (AC)(AM) \Rightarrow (AB)^2 = (AC)(AM) \dots (1).$$

13:T: now; consider triangles: ABC; and CMB; they are similar;

$$AC/BC = BC/MC \Rightarrow (BC)^2 = (AC)(MC) \dots \dots \dots (2).$$

14:T: now; by addition (1) and (2): we got:

$$\begin{aligned} (AB)^2 + (BC)^2 &= (AC)(AM) + (AC)(MC); \\ &= (AC)((AM) + (MC)); \\ &= (AC)(AC); \\ &= (AC)^2. \text{ Which we need.} \end{aligned}$$

Objective: Pythagoras theorem applications.

She started directly to ask the questions. She encouraged the pupils to participate in the lesson's activities from the first moment of the lesson. She used the questioning technique in a suitable way.

The types of questions were mixture, and the conversation was very interesting, because the most pupils participated in.

She used the visual aids at the appropriate time. The pupils were performing activities firstly on the board and then on the notebook, where the conversation still took place actively to the end of the lesson.

4.1.2 The second video (V2)

This video was about 30 minutes long, in the third month of the training course, at the end of the partial performance of the teaching practice stage.

The main feature of this stage was that the student teacher should be trained on all small tasks of teaching, and all skills that supported the teaching process. In more detail, how the teacher explains the topic, how he manages the problem solving approach in the classroom, how he deals with the homework in the classroom, how he guides a discussion in mathematics classroom, and others.

The following lessons are transcript from the second video, while the lesson plan was translated into English word by word as it was in Arabic version. The form of lesson planning in Jordan schools consists of three parts, these parts are, objectives, methods of teaching, and evaluation. (see appendices).

4.1.2.1 The case of Samer 1

The title : The Scale, grade 6

Transcription of the lesson

01:T : Can we draw a city on the paper?

02:P1: It is impossible, the city is a big and the paper is small.

03:P2: May be; but we need tools.

04:P3: How did they prepare a map for the world? Certainly there is a way.

05:T: So; we need tools. This is our lesson today; it's called "scale".

06:T: Suppose that the distance between two cities is 100 km.; but the distance between them on the map is 5 cm., what is the scale in this case?

08:P1: The multiple of $5 \times 100 = 500$ then each 1 cm. on paper is 1 km. on earth.

10:T: This is not true.

11:T: Who can tell me? Try to do that.

12:P2: $100 \text{ km.} = 100 \times 1000 \times 100 = 10000000 \text{ cm.}$ then we divide as follow:

$$\frac{5}{10000000} = \frac{1}{2000000} \text{ and this is the scale.}$$

14:T: This is right; who can explain the answer?

15:P: This means each 1 cm. on map represented by 2000000 cm. on earth.

16:T: You are very good.

17:T: Suppose that the distance between two cities was 2000 km.; and it's 4 cm. on the map; what is the scale? Do it on your notebook.

During this time; the pupils are working on this task where the student teacher follows up their steps, and sometimes talks with someone here or there.

22:T: How did you find the answer?

The pupils point with their hands and the student teacher chooses two of them:

23:P1: $\frac{4}{20000000} = \frac{1}{5000000}$ which is the scale.

24:P2: $\frac{4}{2000 \times 1000 \times 100} = \frac{1}{50000000}$ which is the scale.

25:T: Which one is correct?

26:P: The second one; i.e. $\frac{1}{50000000}$ is the scale.

27:T: O.K.; now; Open your textbook on page 89; and solve problem number one.

After that; one pupil asks the student teacher to solve it on the board; the student teacher gives him the chance:

28:P: I will write the rule:

$$\text{Scale} = \text{distance on map} / \text{distance on earth} = \frac{4}{1500000} = \frac{1}{375000} \text{ which is the scale.}$$

30:T: O.K.; the homework is: 3 & 5 page 89.

The lesson plan (my translation)

Objectives:

- 1) Scale: the proportion between the size of something and the map, which represent it.
- 2) Solve the problems of the textbook.

Method:

The teacher explains the main ideas in the topic, by using some activities from the textbook. And then, the teacher organizes a discussion about them. Questioning technique is the important strategy used during the lesson.

The pupils participate in performing activities as a whole group (class work), and individual work on their notebook.

Evaluation:

- 1) Solve the problem number one, page 89.
- 2) Solve questions 3 & 5 on page 89 as a homework.

4.1.2.2 The case of Dana 2

The title : Real numbers, grade 9

Transcription of the lesson

01:T: Who has a view about real numbers?

02:P1: Real numbers are like natural numbers.

03:P2: It is positive and negative numbers.

04:T: We need a comprehensive definition for real numbers.

05:P3: It is positive & negative & decimals & fraction & zero.

06T: Well; it is union of rational numbers and irrational numbers.

08:T: What do we mean by irrational numbers?

09P: wow...hhaa.

11:T: These numbers can't be written down as a fraction at all. For example; π or $\sqrt[4]{4}$.

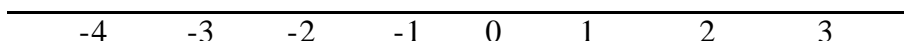
13:T: who can give an example of a rational number?

14:P1: -7

15:P2: 1.5

16:P3: 0.676

17:T: There are many: there is a line which joins them called "line numbers" and contains all numbers:



20:T: Positive real number is greater than zero; and negative real number is less than zero.

We can write $-7 \leq 0$ & $7 \geq 0$ & $-1.5 \leq 0.5$ and so on.

Some pupils say to student teacher; we don't understand what do you mean by decimal fraction; she dose not care about it and she continues her presentation by saying these worksheet should returned in 5 minutes.

After that; they start solving the task of worksheet on the board one by one and their responses were as follows:

27:P 1: ordered $10 \geq 9 \geq -5$.

28:P2: it is $-7 \leq 5$ or $5 \geq -7$.

29:P3: here $2 \leq 10$.

30:P4: $0.6 \leq 0.69$.

31:P5: $0.6 \geq 0.59$.

T: O.K. that is enough; now open your textbooks on page 88 and solve the problems.

All pupils "all of them" ; she says yes all of them: if you can't finish in the class; do it at home.

During this time she follow up the pupils' work.

The lesson plan (my translation).

Objectives:

Pupils should know the concept of the real number.

Pupils should solve the textbook problems.

Methods:

The teacher organizes a discussion about the topic.

The teacher uses the questioning technique.

The pupils participate in all steps of the lesson.

The pupils solve the activities during the lesson, while the teacher follow up their performance one by one.

4.1.2.3 The case of Fuad 3

The title : Drawing Parallelogram, grade 6

Transcription of the lesson

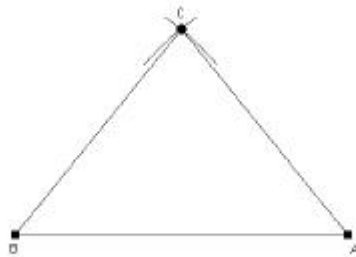
01:T: Last time; we drew parallelograms. Could you remember it? It was with some conditions: if you know 2 sides of parallelogram and the angle between them, today; we will explain the drawing of ABCD parallelogram; such that $AB = 3$ cm., $BC = 4$ cm., and diagonal $AC = 5$ cm., using a compass, how can we draw it? Who can do first step?

04:P1: Draw without voice: segment $AB = 3$ cm. using a ruler.

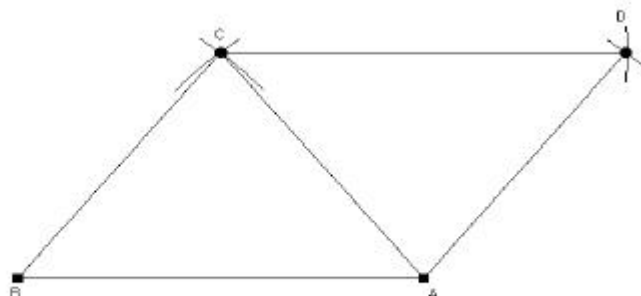
Open compass with $BC = 4$ cm. and stand in B then draw arc.

05:T: who can continue?

06:P 2: again open a compass with $AC = 5$ cm. and stand in A then draw an arc cross the previous one. So; we construct a triangle ABC. As shown:



10:P3: Now; open compass with 3 cm. and stand in A then draw an arc; then open the compass 5 cm. and stand in C and draw arc cross the previous one in D. then you join CD and AD, So you have parallelogram ABCD. As shown:



14:T: O.K.; listen to me; I will explain all steps again.

(He did this in 3 minutes)

15:T: Open your textbook on page 79 and start solving the first problem:

It was a parallelogram ABCD such that $AB = 4\text{cm.}$; $BC = 5\text{cm.}$; $BD = 5\text{cm.}$
During the time of working on this task (15 minutes), the student teacher follow up his or her work and said in a clear voice: Is there anybody who can't draw a triangle by using a compass.

None of the pupils commented or said anything.
(30 minutes).

The lesson plan (my translation):

Objectives:

- 1) Construct the parallelogram using the compass and the ruler.
- 2) Solve the textbook problems.

Methods:

The teacher prepares some materials, which were needed in the lesson; compass; ruler; and coloured chalk.

The teacher guides the class by giving specific roles to the pupils to perform the activity step by step until parallelogram is constructed.

The teacher explains the steps in a clear voice, and answers the questions of the pupils.

The pupils complete one activity as individual work on their notebook.

The teacher follows up the work of the pupils.

Evaluation:

Notice the pupils' performance during the performing activities.

4.1.2.4 The case of Ibteham 4

The title : Metric system applications in Area and Volume, grade 6

Transcription of the lesson

01:T: What are the units of area?

02:P1: square units.

03:P2: There are: square centimetre, square decimetres, square metre, square decametre and so on.

04:T: If we have a diagram as shown:

How we can find its area?

06:P: Just count the small squares.

07:T: O.K. this is right; but you have to know each small square is 1 square unit.

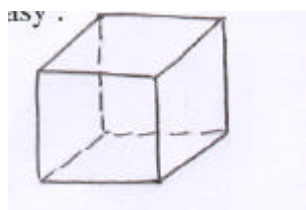
08:T: Today we take the concept of volume; what do you know about volume?

09:P1: volume is whole vacuum that the body occupies.

10:P2: the same as in natural science lesson.

11:T: O.K. who can draw a cube on the board?

12:P: yes it's easy:



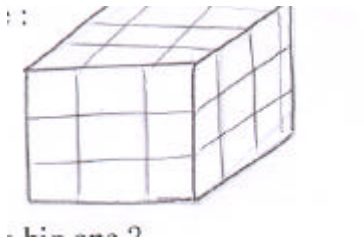
14:T: How can you find its volume?

15:P1: we know the length of the side, then triple it.

16:P2: if the length of side is 5 cm. then the volume is 125 square centimetres.

17:T: There are many cube, which can construct a big cube?

18:P1: o.k. Here is a big one:



20:T: What is a volume of a big one?

21:P2: Count all the small cubes and then the number is a volume. Its 27 cubs.

22:T: Again this is right but the unit is cubic unit.

23:P3 : yes its 27 cubic centimetres .

24:T: Who can construct a new cube and find its volume?

25:P: she constructed one by using 16 cubes, she found the volume about 16 cubic centimetres.

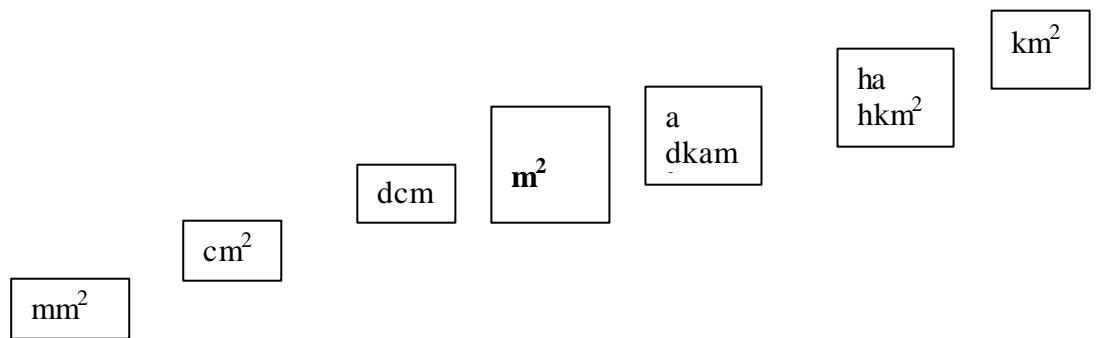
26:T: Who can define the volume?

27:P: the number of the cubes in the whole body.

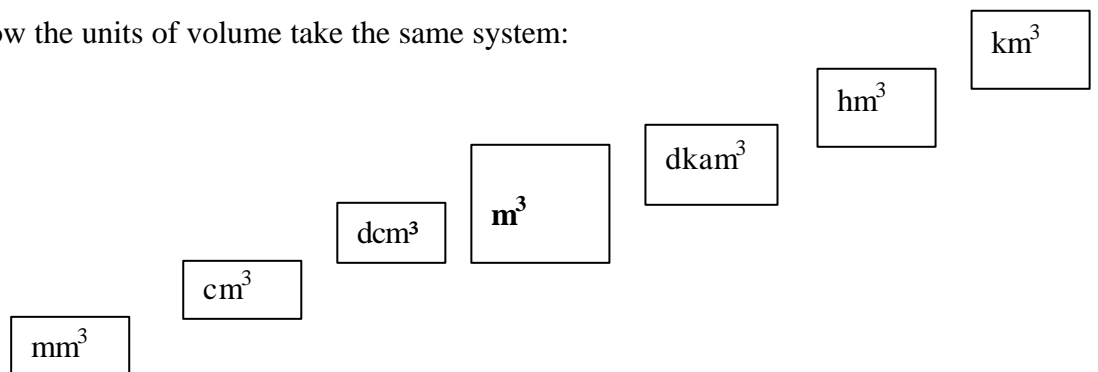
28:T: the number of cubic units in the whole body.

28:T: who can write the units of area?

29:P: They look like stairs:



30:T: Now the units of volume take the same system:



30:T: Find the volume of a cube with 1 m. a side?

31:P: Volume = $1 \times 1 \times 1 = 1$ cubic metre.

32:T: Find the volume of previous cube into cubic decimetre?

33:P: Volume = $1 \text{ m}^3 \times 1000 = 1000 \text{ m}^3$.

33:T: O.K.; what do you conclude?

33:P1: 1 cubic metre = 1000cubic decimetres.

34:T: So; 1 cubic metre = ...cubic metre?

34:P: 1 cubic metre = 1000000 cubic metre.

35:T: Find volume of a cube with a side of 0.6 cm.?

35:P: $\text{volume} = 0.6 \times 0.6 \times 0.6 = 0.216$ cubic metre.

36:T: Find the following:

15 cubic metre = ... cubic metre?

12 cubic centimetre = ... cubic decimetre?

37:P1: $15 \times 100 \times 100 \times 100 = 15000000 \text{ cm}^3$.

38:P2: $12 \div 1000 = 0.012 \text{ cm}^3$.

The lesson plan (my translation)

Objectives:

1) Find the volume of the cube if the sides are given in different units.

2) Convert into the units of volume.

3) Solve the textbook problems.

Method:

The teacher makes a discussion from pre-learning using the questioning technique.

The teacher explains the main topic, by explaining some activities and then the pupils to perform some other activities, under the supervision of teacher.

The teacher drew the stairs of the units of the volume from the metric system of the area.

The pupils applied this on both the notebook and the board.

Evaluation:

1) Observe the pupils during the performing of activities on the board or on their notebook.

2) Solve some problems from the textbook or outside.

4.1.2.5 The case of Hyamm 5

The title : Factorise the Quadratic Equation, grade 8

Transcription of the lesson

01:T: What is the meaning of square number?

02:P: The number times itself.

03:T: o.k. That means $X^2 = X \cdot X$ & $25 = 5 \times 5$...and so on.

04:T: Who can find $(X+ 2)^2$?

05:P1: x^2 first term.

06:P2: $4x$ second term.

07:P3: 4 third terms.

08:T: So; $X^2+4X+4 = (X+2)^2$.

09:T: Now; what is $(X - \frac{1}{2})^2$?

10:P1: $(X - \frac{1}{2})^2 = (X - \frac{1}{2})(X - \frac{1}{2})$

11:T : I need all terms.

12:P2: $X^2 + \frac{1}{4}$.

13:T: There is some thing wrong .

14:P3: $X^2 + X + \frac{1}{4}$.

15:T: No; who can try again.

16:P4: $X^2 - X + \frac{1}{4}$.

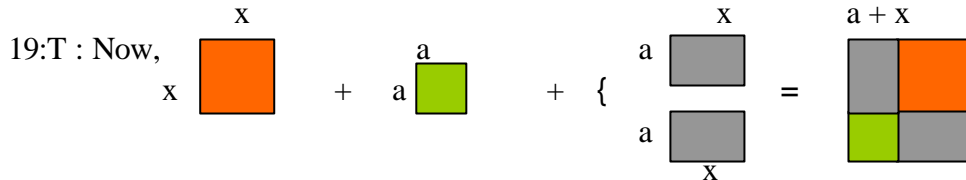
17:T : the last answer is right.

18:T : $X^2 + 2AX + A^2$ are three terms:

X^2 : squared term.

A^2 : squared term.

$2AX$: double of AX .



i.e. $x^2 + 2ax + a^2 = (a+x)(a+x) = (a+x)^2$

22:T : so; suppose that $x=5$, $a=3$, and we need to check the equation.

Right side : $(5+3)(5+3) = 64$.

Left side : $5^2 + 2(3)(5) + 3^2 = 25 + 30 + 9 = 64$.

Each side is completely squared.

24:T: If $x^2 + 2ax + a^2$ and given that $a = 1, 2, 3$ find the equation in three variations?

25:P1 : $x^2 + 2x + 1 = (x+1)(x+1)$.

26:P2 : $x^2 + 4x + 4 = (x+2)(x+2)$.

27:P3 : $x^2 + 6x + 9 = (x+3)(x+3)$.

28:T : What is the relation between second term and third term in each one?

29:P1: $2 \rightarrow 1$

$4 \rightarrow 4$

$6 \rightarrow 9$ it is difficult to find a relation.

30:P2 : the relation is : if we take 2 and divide by 2 then square the result to get 1 and in case of $4/2 = 2$ then $2^2 = 4$ & $6/2 = 3$ then $3^2 = 9$.

32:P3 : coefficient of 2nd term divided by 2 then square it to get third term.

32:P1 : oh; it is clear now.

32 : T : O.K.: factorise $x^2 - 8x + 16$.

33:P1: $x^2 - 8x + 16 = (x-4)(x-4)$.

34 :T : factorise $x^2 + 10x + 25$?

35:P2: $(x+5)(x+5)$.

36:T: Now; open your textbook page 82; and solve 1, 3, 6, and 7.

The lesson plan:

Objectives:

1)Factorise the quadratic equations.

2)Solve the textbook problems.

Method:

The teacher makes a discussion among pupils about some concepts that she considered the pre-learning for the topic.

The teacher gives each pupil a role to participate in the lesson.

The pupils solve some activities under the supervision of the teacher.

The teacher uses some materials and visual aids to demonstrate some concepts of the topic.

The teacher offers some problems for the pupils as a challenge to achieve the goals and to motivate them to do something very wonderful from their perspectives.

Evaluation:

- 1)Observe the pupils during the lesson activities.
- 2)Solve the textbook problems.

4.1.2.6 The case of Hayat 6

The title : Trigonometry of angles, grade 10

Transcription of the lesson

01:T : What is Cos 45 ?

01:P1: $\frac{1}{\sqrt{2}}$

02:T : What Sin 45 ?

02:P2: again $\frac{1}{\sqrt{2}}$.

03:T : what is Tan 45 ?

03:P3 : it is 1.

04:T : what is Sin 30 ?

04:P4 : 0.5 half.

05:T : what is Cos 30 ?

05:P5: $\frac{\sqrt{3}}{2}$.

06:T : what is Sin 60 ?

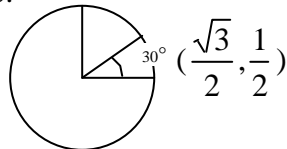
06:P6: it is $\frac{\sqrt{3}}{2}$.

07:T : what is Cos 60 ?

07:P7: it is $\frac{1}{2}$.

08:T : Now; who can draw a sketch for a point that is related with angle 30 in unity circle?.

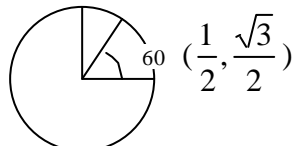
09:P8:



The unity circle.

11:T . Who can draw the situation of angle 60 ?

12:P9:



14:T: Remember the positive signs of trigonometry into quarter of the XY-plane ?

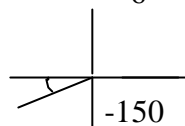
| | |
|-----|-----|
| Sin | All |
| Tan | Cos |

16:T : Now we begin solve the problem of a textbook on page 90:

17:T: Q1: find trigonometry of angle $-\frac{5}{6}\pi$

18:P1: $-\frac{5}{6}\pi$ ($180/\pi$) = -150.

-150 related to angle 30.



20:P2 : $\sin -150 = -\sin 30 = -1/2$.

21:P3: $\cos -150 = -\cos 30 = -\frac{\sqrt{3}}{2}$.

22:P4: $\tan -150 = -\tan 30 = -\frac{1}{\sqrt{3}}$.

23:P5: $\cot -150 = 1/\tan 30 = \sqrt{3}$.

24:P6 : $\csc -150 = 1/\sin 30 = -2$.

25:P7: $\sec -150 = 1/\cos 30 = \frac{2}{\sqrt{3}}$.

26:T: O.K. question 2?

If $360 \geq a \geq 0$. and $\cos a = -1/2$, find a?

27:P : $\cos 60 = 1/2$, related angle to a = 60.

In 2nd. quarter $\cos a$ is negative then a = $180 - 60 = 120$.

In 3rd. quarter $\cos a$ is negative then a = $180 + 60 = 240$.

T : Is there any question ? any comments .O. K. next question.

28:Q3: if $360 \geq a \geq 0$, $\sin a = 1/2$; find a?

28:P : $\sin a = 1/2$ then a = 30 and related angle is equal to 30.

In 1st. quarter a = 30.

In 2nd. Quarter a = $180 - 30 = 150$.

29:T : there are two variations for a : 30 & 150.

T : O.K.. Next question.

30:Q4: $360 \geq a \geq 0$. and $\csc a = -\sqrt{2}$, find a?

31:P1: $\csc a = -\sqrt{2}$, $1/\sin a = -\sqrt{2} \Rightarrow \dots\dots\dots -\frac{1}{\sqrt{2}} = \sin a \Rightarrow$ related angle = 45.

32:P2 : $\sin a$ is negative in 3rd. quarter then a = $270 - 45 = 225$.

32:P3 : $\sin a$ is negative in 4th. quarter then a = $360 - 45 = 315$.

32:T : Look to 3rd. quarter; is the answer right ?

33:P4 : Yes the answer is 225.

33:T : the answer is o.k. but the way of working it, is not correct .

34:P5 : Yes; here a = $180 + 45 = 225$.

35:T : Very good; always we deal with X- axis in all cases:

180 - related anglein 2nd. quarter.

180 + related angle.....in 3rd. quarter.

360 – related anglein 4rth. quarter.

The lesson plan:

Objectives:

- 1) The pupils apply the trigonometry of angles.
- 2) The pupils solve the textbook problems.

Methods:

The teacher revises the topic before solving problems as class work.

The important strategy is to make the pupils participate in the activities. Performance is started on the board, while the pupils do the activity individually in their notebooks.

The important thing that should be done by the teacher is giving a specific role to the pupils, to perform the activities, while the role of the teacher is just supervision.

Evaluation:

- 1)Note the performance of the pupils.
- 2)Solve the textbook problems.

4.1.2.7 The case of Yassmeen 7

The title : The Multiple of Algebraic Terms, grade 8

Transcription of the lesson

01:T: what is algebraic term ?

02:P : Unknown numbers or letters used in terms .

03:T : I mean $4x$; this term has an unknown value ; and we use letters for variables.

04:T : suppose there is a rectangle with x cm. length and 5 cm. width, what is the Area

?

05:P : Area = x times $5 = 5x$ cm².

05:T : o.k. suppose that you have a square with y cm. a side, what its Area ?

06 : P : $A = y$. $y = y^2$ cm².

07:T: Now, try to find $x(x+5)$?

08:P1 : multiple of x and y such that $x+5 = y$.

09:P2 : $x \cdot x$ & $x \cdot 5$ then $x^2 + 25$.

10:T : o.k. we need a second solution; and it is called the distribution law .

11:T : find $(x+5)(x^2 - 4x + 5)$?

12: P1 : $x(x^2-4x + 5) + 5(x^2-4x + 5) = x^3 - 4x^2 + 5x + 5x^2 - 20x + 25$.

13:T. O:K: this is not completely correct.

14: P2: $x^3 - 4x^2 + 5x - 20x + 25 = x^3 + x^2 + 15x + 25$.

15: T: This is good but there is something wrong, who can find it?

16: P3: $x^3 + x^2 - 15x + 25$.

16: T: Find $(2x+2)(4x^2 + 2x+2)$?

17:P4 : $2x \cdot 4x + 2x \cdot 2x + 2x \cdot 2 = 8x^3 + 4x^2 + 4x$.

18:T: Is this the solution ?

19:P5 : no; this is part of solution ; and $8x^2 + 4x + 4$ then $8x^3 + 4x^2 + 8x^2 + 4x + 4 = 8x^3 + 12x^2 + 8x^2 + 4$.

20:T : this is still wrong; who can find what is wrong ?

21:P6 : $8x^3 + 12x^2 + 8x + 4$.

22:T : Open your book on page 73 and solve the first question in your copybook.

During this time (3 minutes) the student teacher walking around the class without bothering to follow up for pupils' work.

25:T : who can solve it on the board ?

26:P7 : $(4x^2 - 6)(5 - 3x) = 4x^2(5 - 3x) - 6(5 - 3x) = 20x^2 - 12x^3 - 30 + 18x$.

27:T : You can order it to be $-12x^3 + 20x^2 + 18x - 30$.

27:T :How many of you solved this correctly ?

The student teacher counts 7 out of 35 .

28:T : Look at me; close your textbook: to find $(x^2 - 4x + 5)(x + 5)$?

Step 1: $x^2 - 4x + 5$

$x + 5$

$x^3 - 4x^2 + 5x$

step 2 : $x^2 - 4x + 5$

$x + 5$

$x^3 - 4x^2 + 5x$

$5x^2 - 20x + 25$

step3 :add the results in steps 1 & 2 to get the answer ; $x^3 + x^2 - 15x + 25$.

They found some difficulties in $-4x^2 + 5x^2 = x^2$ and $5x - 20x = -15x$.

And it took a lot of time for some of the pupils to understand this.

The lesson plan:

Objectives:

1)To find the product of the two algebraic terms.

2)To solve the textbook problems.

The teacher organizes a discussion about some important concepts; operations; that represented the pre-knowledge of this topic.

The teacher offers some activities for the pupils.

The pupils perform those activities under supervision of the teacher.

The pupils should solve question number one on page 73, while the teacher follow up them one by one.

Evaluation:

1)Observe the pupils doing the activities.

2)Solve the textbook problems.

4.1.3 The third video(V3)

This video is a whole lesson. It is about 45 minutes long. The student teacher should perform the best that can be done as a teacher. During the last period of the training course, we look at his/her performance completely as well as a performance of teacher with full responsibility. This video was the final exam for the trainees. The university accepted this video as a final exam for them, they were not informed that this performance to be the final exam before they had performed this video.

4.1.3.1 The case of Samer 1

The title : Congruent Triangles, grade 7

Transcription of the lesson

01:T : How many elements does a triangle have?

02:P : 6 elements; 3 angles; and 3 sides.

03:T : Today we take 2 cases of congruent triangles.

04:T : Open your notebook and draw two triangles:

Triangle ABC ; where $AB=9$ cm; $BC =8$ cm; and $AC =7$ cm.

Triangle EFG ; where $EF=9$ cm; $FG =8$ cm; $EG =7$ cm.

Using a protractor measure corresponding angles into two triangles.

The pupils started drawing triangles and measuring angles within 10 minutes.

14:T : what is your result ? what do you notice ?

15:P1 : $B = F =50^\circ$.

15:P2 : $C = G = 70^\circ$.

15:P3 : $A = E = 60^\circ$.

16:P4 : each two corresponding angles in two triangles are equal.

17:T : As a result of this we say triangles ABC , EFG are congruent by three corresponding equal sides, and we conclude that corresponding angles are equal to two triangles.

19:P : I have a question; could we draw a segment 7cm by a ruler and from the second centimetre make a line

5 cm perpendicular to a line of 7cm. and then construct a triangle.

21:T : there is no procedure like this.

22:T : O.K.; Now two congruent triangles by two sides and an angle lies between them. Given two triangles ABC : $AB = 7$ cm. , $BC=5$ cm., $B=30^\circ$.&

XYZ: $XY =7$ cm. , $YZ = 5$ cm. , $Y= 30^\circ$.

ABC ; XYZ are two congruent triangles. If you measure angles : Z; X; A; and C; and measure the length of XZ

,AC; what do you notice ?

25:P1 : I found $XZ = AC$, $A= X$; $C = Z$.

26:T : O.K. So, the result of congruency is two corresponding angles are equal and corresponding sides are ... equal in length.

28:T:Open your textbook on page 92 and try to solve the problems on your notebook.
(the application started from minutes 28 until 45 at the end of the lesson.)

The lesson plan:

Objectives:

- 1)Congruent triangles.
- 2)Prove the situation of two congruent triangles.
- 3)Solve the problems of the textbook.

Method:

The teacher guides the class, which divided into groups of two, each group performs the activities under the supervision of the teacher;

The teacher makes a discussion about the results that are raised from the groups and the pupils declare the general results about the situations of congruent triangles.

Evaluation:

- 1)Observe the pupils during their performance in groups.
- 2)Solve the first problem of the textbook.

4.1.3.2 The case of Dana 2

The title : Linear Inequality(s) in two variables, grade 9

Transcription of the lesson

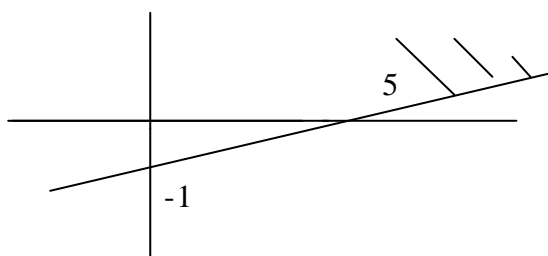
01:T: What is the type of this inequality: $2x - 10 \leq 7y$?

02:P : linear inequality in two variables.

03:T : who can solve it ?

04:P1: yes; $2x - 10 \leq 7y \Rightarrow 2x - 7y \leq 10$ and then focus on line $2x - 7y = 10$: if $x = 0$ then $y = -10/7$ and if $y = 0$

then $x = 5$; we represent these order- pairs as follows :



07:P2: $(0,0)$: $2(0) - 10 \leq 7(0) \Rightarrow -10 \leq 0$. yes.

Then we shaded the above region of a line $2x - 7y = 10$; as shown above.

10:T :Does the point $(5,0)$ belong to the solution set ?

11:P3: Yes, it is included because $2(5) - 7(0) \leq 10$. Yes.

13:T : What is the conclusion for this situation ?

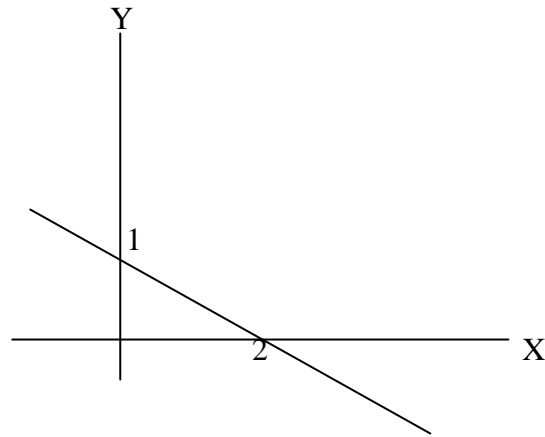
15:P4 : All points that lie on the line are included in the solution set.

16:T : O. K; Now; Find the solution set of inequality $x + 2y \leq 2$; Show the region of the solution set with a diagram.

Do this task in your notebook. You have 6 minutes.

During this time the student teacher follow up the work of pupils one by one.

22:P5 : Firstly; we use the line $x + 2y = 2$ and focus on two main points; if $x = 0$ then $y = 1$: $(0,1)$ and if $y = 0$ then yields to $x = 2$. which means $(2,0)$ the second points.
 25:P6 : we represent those points in XY-plane as follows:



$(0,0)$: $0 + 2(0) \leq 2$; yes: so; the region is under the line $x + 2y = 2$, as shown in the figure.

28:T: O.K.; Now; Find the solution set for $8x - x \leq 3$ & $7x - 2y \geq 3$.

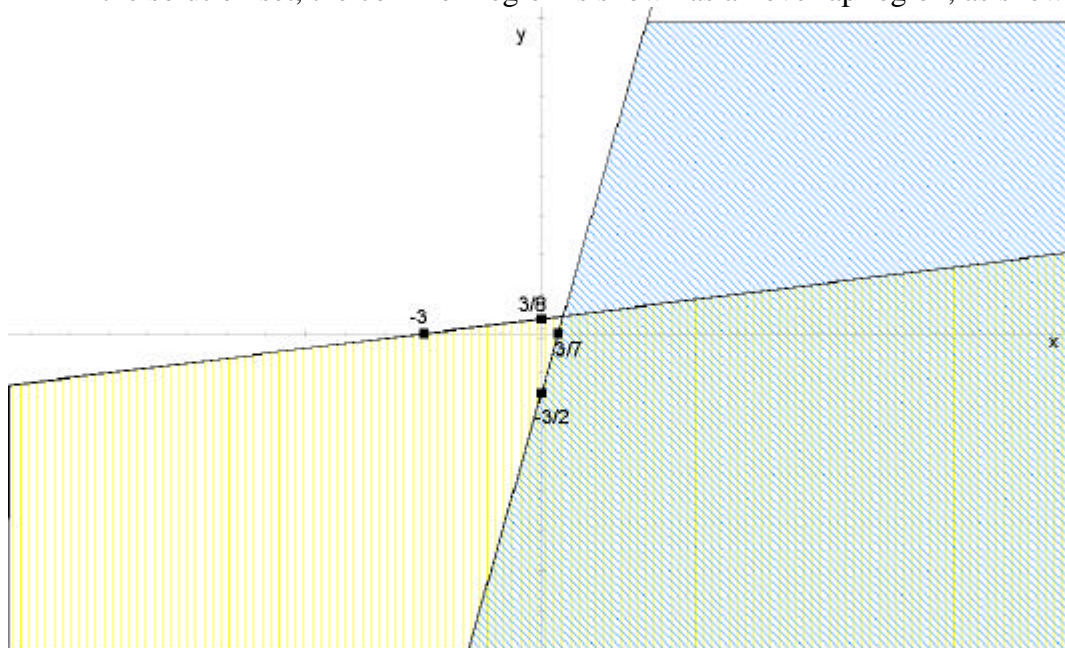
30:P7 : $8y - x = 3$: if $x = 0$ then $y = 3/8$; if $y = 0$ then $x = -3$.we represent $(0, 3/8)$, $(-3, 0)$ on the plan.

$(0,0)$: $8(0) - 0 \leq 3$: yes. All the area above the line $8y - x = 3$ is included in solution.

33:P8 : $7x - 2y = 3$: if $x = 0$ then $y = -3/2$ and if $y = 0$ then $x = 3/7$; we represent $(0, -3/2)$

$(3/7, 0)$ on the plan.

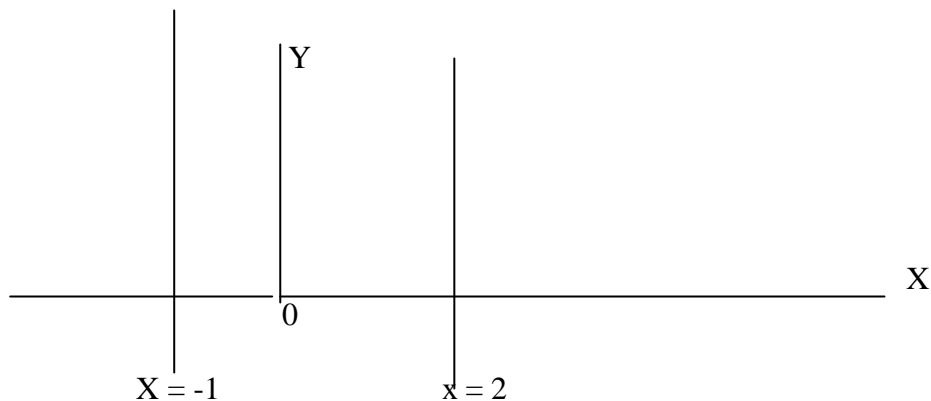
$(0,0)$: $7(0) - 2(0) \geq 3$; no. All the area under the line $7x - 2y = 3$ should be included in the solution set, the common region is shown as an overlap region, as shown:



37:T: find the solution set of $-1 \leq x \leq 2$?

38:T: This inequality means $x \geq -1$ & $x \leq 2$.

The common region is between two lines $x = -1$ & $x = 2$; its overlap region as shown in the following figure :



(The end of the lesson was 43 minutes.)

The lesson plan

Objectives:

- 1) Find the solution of linear inequality(s) in two variables by representing the inequality(s) in XY-plane.
- 2) Solve the textbook problems.

Method:

The teacher started the lesson with pre-learning activities from the previous lesson.

The pupils do the activity under the supervision of the teacher.

The teacher extends the situation to two inequalities in two variables;

The pupils try to do that with help of the teacher who follows up their work one by one.

The teacher offers some activities during the lesson as special cases, and are done completely by the teacher.

Evaluation:

- 1) Notice how the pupils perform while solving classroom activities.
- 2) Assign homework: 1; 3; and 5 from the textbook.

4.1.3.3 The case of Fuad 3

The title : Quadratic Equation and its factors, grade 8

Transcription of the lesson

01:T : find $x (x-3)$?

02:P1 : $x^2 -3x$.

03:P2 : $x^2 +2x +2x +4 = x^2 +4x +4$.

04:T : $(x+3)(x+3) =?$

05:P3 : $x^2 +3x +3x +9 = x^2 + 6x + 9$.

06:T : What is $(x + a)^2$?

07:P4: $x^2 +2ax +a^2$.

08:T : Why did you put the answer directly ?

09:P4: Its reputation.

- 10:T: Any way, $(x + 5)^2 = ?$ I need the answer directly.
- 11:P5: $x^2 + 10x + 25$.
- 12:T: Now; $(x - 4)^2 = ?$
- 13:P6: $x^2 - 8x + 16$.
- 14:T: $x^2 + 2ax + a^2$ is called full square or completely square; which means:
 $x^2 + 2ax + a^2 = (x + a)^2$.
- 16:T : Our lesson today is : How to factorise quadratic equation ?
- 17:T : factorise $x^2 + 16 - 8x$?
- 18:T: $x^2 - 8x + 16 = x^2 - 2(4)x + (4)^2 = (x - 4)^2$.
- 19:T: Area of a square is $(x^2 + 10x + 25)$ cm² ; Find its side ?
- 20:P7 : Area = L . W : $x^2 + 10x + 25 = x^2 + 2(5)x + (5)^2 = (x + 5)^2$;
 implies $x + 5 = L = w$ then the side is $x + 5$ cm.
- 22:T : $x^2 + 6x + 9$ is a full square ?
- 23:P8 : $x^2 + 2(3)x + (3)^2 = (x + 3)^2$; yes it is .
- 24:P9 : It is not necessary to factorise; just $6 = 2a$ then $a = 3$ and $(3)^2 = 9 = a^2$; so it is a full square.
- 25:T : Test whether the following are full square or not :
 $x^2 + 4$, $x^2 - 4$, $x^2 - 1$, $x^2 - 2x + 1$.
- 26:P10 : $x^2 + 4$ is not full square because $x + 4$ is not equal to $(x + 2)^2$.
- 27:P11 : $x^2 - 4$ is not full square because $x - 4$ is not equal to $(x - 2)^2$.
- 28:P12 : $x^2 - 1$ is not full square because $x - 1$ is not equal to $(x - 1)^2$.
- 29:P13 : $x^2 - 2x + 1$ is a full square; it is equal to $(x - 1)^2$.
- 30:T : Open your textbook on page 78; solve questions : 1 , 2 on your notebook.
 (The end of the lesson was 45 minutes.)

The lesson plan

Objectives:

- 1) Factorise quadratic equation into its factors.
- 2) Test whether the equation represents full square or not.
- 3) Solve the problems of the textbook.

Method:

The teacher has a discussion about some activities (simple cases) on the board as pre-learning.

The teacher explains one example on the board.

The pupils do some activities on the board.

The pupils do questions 1; and 2 in their notebook.

Evaluation:

- 1) Observe the pupils performing their activities.
- 2) Solve some problems of textbook.

4.1.3.4 The case of Ibteham 4

The title : Area of Trapezoid, grade 6

Transcription of the lesson

01:T : What is the Area of a parallelogram ?

02:P : multiple of base and height .

03:T : Who will draw a parallelogram ?

04:P : he drew it on the board.

06:T : Who can give me a definition of parallelogram ?

08:P : Its quadrilateral with each two-side parallel, and equal.

09:T : Suppose that we split parallelogram into two parts, what is the name of each parts ?

10:P : two triangles.

11:T : what is the relation between each triangle and parallelogram ?

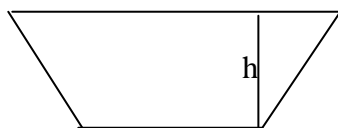
12:P1 : Area of triangle = half area of parallelogram.

13:P2 :We can say: Area of triangle = $\frac{1}{2}$ (base) (high) of a parallelogram.

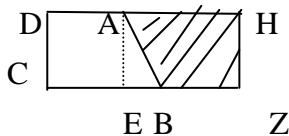
14:P3 :So; Area of triangle = $\frac{1}{2}(b)(h)$ for the triangle. Such that b, h are common between them.

16:T : you are very good.

17:T : Look to this trapezoid : it has two parallel bases, and the heigh is the short distance between parallel bases;



The student teacher uses the visual aids on the board; it was very clear for the pupils; and helps them to understand:



ABCD, ABZH are congruent and make a rectangle:

Area of rectangle = 2 (Area of trapezoid).

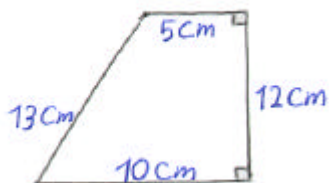
Area of trapezoid = $\frac{1}{2} \times AE \times CZ$

$$= \frac{1}{2}(AE)(BZ + AH)$$

$$= \frac{1}{2} (\text{high})(\text{Sum of parallel bases}):$$

25:T: given a trapezoid in the figure: find its area?

trapezoid in the figure : find its area ?



27:P: Area = $\frac{1}{2} (12)(5+10) = 6 (15) = 90 \text{ cm}^2$.

29:T: Very good; Find the area of trapezoid ABCD such that BC =12 cm; AD = 8cm;and its 6 cm height?

30:P: Area = $\frac{1}{2} (6) (8 + 12) = 3 (20) =60 \text{ cm}^2$.

33:T: Open your textbook and solve Q4: Find the area of a trapezoid that has a sum of parallel bases of 24 cm and its height 12 cm.?

After one minutes; many pupils say the answer is 144 cm², which is right.

(Pupils continue solving the problems until end of the lesson.)

The lesson plan

Objectives:

- 1)Find the area of a trapezoid when base and height are known.
- 2)Solve the problem of textbook.

Method:

The teacher starts with pre-learning.

The pupils participate in the discussion about pre-learning.

The teacher tries to demonstrate an activity to derive the formula of trapezoid by using visual aids, which are prepared for this purpose. The pupils have a major role during the demonstration. The teacher offers some applied activities after the demonstration and follow up their performance. The teacher gives them a chance to start solving question number four from the textbook.

Evaluation:

- 1)Notice the performance of pupils.
- 2)Solve the problems of textbook.

4.1.3.5 The case of Hyamm 5

The title : Area of the circle, grade 6

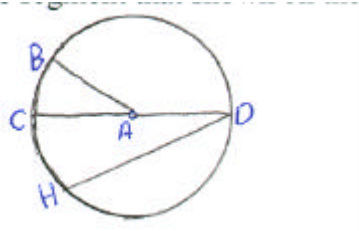
Transcription of the lesson

01:T: What is the circumference of a circle?

02:P: Circumference = $2\pi r$; where r is the radius.

03:T: Draw a circle with radius 4cm? One on the board by a one pupil; the other drew on notebook.

05:T: Nominate the segment that is shown on the figure:



07:P: The names are: AB: radius; CD: diameter; and HD: chord.

09:OT: What is the shaded region in each figure:



11:P1: half circle.

12:P2: fourth circle.

13:P3: eighth circle.

14:T: What is the shaded line in the following figures:

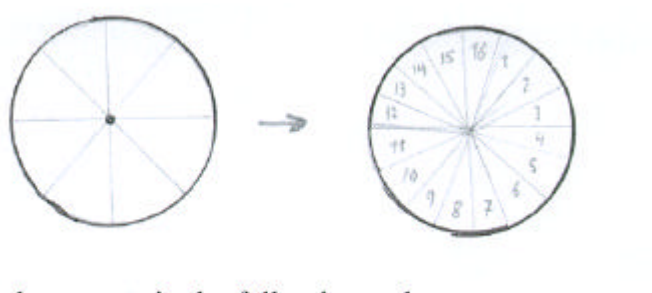


16:P1: half of circumference.

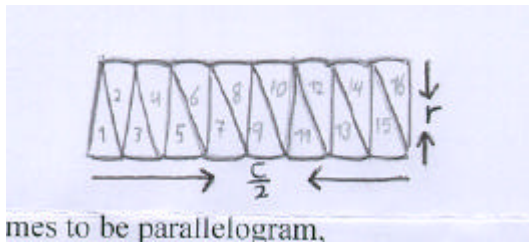
17:P2: third fourth of circumference.

18:T: We will try to find the Area of a circle from known knowledge.

Here is a circle; we split into eight equal parts; each one is split again into two equal parts; you will have sixteen equal parts as shown in figure:



Rearrange those parts in the following order:



This order becomes a parallelogram,

What is the Area of the parallelogram? P: base \times height.

So; Area of a circle = Area of a parallelogram.

= $r \times 1/2 c$; where r: radius of circle & height of parallelogram, C: circumference of circle & base of parallelogram.

$$= r \times 1/2 \times 2\pi r.$$

$$= \pi r^2; \pi = 3.14$$

29:T: find Area of a circle with $r = 5$ cm. ?

30:P: Area = $22/7 (5)(5) = 550/7 = 78.57 \text{ cm}^2$

32:T: find the area of a circle that has circumference of 12.56 cm.?

33:P: $C = 2(3.14) r$ then $12.56 = 2 (3.14) r \Rightarrow r = 12.56 / 6.28 = 2$ cm its radius.

$$\text{Area} = 3.14 (2)^2 = 12.56 \text{ cm}^2.$$

35:T: find the Area of a circle with diameter 20 cm.?

36:P: $r = 10$ then Area = $3.14 (10)^2 = 314 \text{ cm}^2$.

37:T: Open your textbook and put a sign on questions 2, 3, 4, and 7 as homework.

And start solving it now.

The lesson plan:

Objectives:

- 1) Derive the formula of the area of a circle.
- 2) Find the area of a circle with given radius.
- 3) Solve the problem in the textbook.

Methods:

The teacher makes a discussion among pupils about the circumference of a circle and some important information.

The teacher makes a demonstration for the derivation for the formula of circle's area.

The teacher gives a chance to the pupils to do some activities under her supervision.

The pupils do the activities in the class while the teacher follow up their performance one by one.

Evaluation:

- 1) Not the performance of the pupils during the lesson.

2) Solve some problems in the textbook as homework.

4.1.3.6 The case of Hayat 6

The title of the lesson was Congruent triangles, grade seven

Transcription of the lesson

01:T: We can review cases of congruency.

02:T: Who can tell me; the first case of congruency?

03:P: two triangles are congruent with 3 corresponding equal sides.

04:T: who can tell me the second case?

05:P: two sides and an angle lies between them.

06:T: what about third case?

07:P: two angles and one side.

08:T: fourth case?

09:P: side and

10:T: Now; we start solving problems from textbook.

11:P1: He reads the problem: Prove that $MB = MC$ in the following figures:

12:P2: $AB = AC$ (given); $AM = AM$ (common side); $\angle AMB = \angle AMC = 90^\circ$.
IS perpendicular CB?

16:P3: So; $\triangle AMB, \triangle AMC$ are congruent triangles and yields $BM = MC$.

19:T: question number two:

20:P4: $\triangle ABC$ triangle; m is midpoint of BC ; mn is perpendicular AB ; and mt is perpendicular AC , where $mn = mt$. Prove that $\angle B = \angle C$.

24:P5: we try to make triangles $\triangle nmb$, and $\triangle tmc$: congruent,

$mn = mt$ (given), $\angle n = \angle t = 90^\circ$ (right angles), $mb = mc$ (m is midpoint).

So; $\triangle nmb, \triangle tmc$ are congruent triangles, and yields $\angle B = \angle C$.

28:T: Now question number three:

29:P6: $\triangle ABC$ is an isosceles triangle, $AB = AC$, BD is perpendicular AC and CE is perpendicular AB , Prove that $BE = CD$.

33:P7: $\angle B = \angle C$ (given); $\angle E = \angle D = 90^\circ$ (right angles); $CB = CB$ (common side). So; $\triangle CEB, \triangle BDC$ are congruent triangles, yields $BE = CD$.

37:T: Draw the following diagram; name pairs of congruent triangles from the diagram.

38:T: do this at home.

The lesson plan

Objectives: 1) To review the cases of congruent triangles. 2) To solve problems of the textbook.

Method: The teacher organizes the discussion about cases of congruency of triangles by using questions. The pupils participate in this discussion.

The pupils started solving problems on a board under the supervision of the teacher.

Evaluation:

- 1) Solve the textbook problems in the right way.
- 2) Not their performance as they work individually and in groups.

4.1.3.7 The case of Yassmeen 7

The title: Volume, Surface Area, and the Whole Area of the Cone, grade 7

Transcription of the lesson

01:T: Our lesson today is the cone, look at this cone. Who can determine its head, radius, and hypotenuse?

One pupil goes into front of class and locates each of head, high, and hypotenuse of a cone.

04:T: suppose that we split the cone into two parts as follows:



06:T: what is the volume of cone?

07:P: volume = $\frac{1}{3} \pi r^2 h$.

09:T: what is the volume of this part?



11

11:P: volume of big cone – volume of small one.

12:T: what is the surface area of a cone?

13:P: surface area = πRL : where R, L are located in diagram.



15:T: Find the surface area of a cone that has $L = 10$ cm and $r = 7$ cm?

17:P: surface area = $22/7(7)(10) = 220$ cm².

19:T: what is the shape of cone base?

20:P: it's a circle.

21:T: Find the area of cone-base for the following cone?



23:P: area of a cone-base = $22/7 r^2 = 22/7 (7)(7) = 154$ cm².

25:T: What is the whole area of a cone?

26:P: it consist of circular-area and base-area: then equal to $\pi rL + \pi r^2$.

28:T: suppose you have a cone with 13 cm height and radius 5 cm: find the whole area of the cone?

29:P: circular-area = $3.14 (5)(13) = 204.1$ cm²;

Base-area = $3.14 (5)^2 = 78.5$ cm²;

Whole-area = $204.1 + 78.5 = 282.6$ cm².

32:T: who can repeat the rule of whole-area of cone?

More than three pupils repeated the formula.

35:T: Suppose that we have a cone with 6 cm high and 3 cm radius;

Find the whole-area of the cone?

36:P1: by Pythagoras theorem $L = \sqrt{6^2 + 3^2} = 3\sqrt{5}$.

38:P2: circular area = $\delta(3)(3\sqrt{5}) = 9\sqrt{5} \delta$ cm².

40:P3: base area = $\delta (3)^2 = 9\delta$ cm².

41:P4: whole area = $(9\delta + 9\sqrt{5} \delta)$ cm².

42:T: find the whole area of a cone with $L = 13$ cm and diameter = 15 cm?

Do this at home. Open your textbook on page 90 and solve questions 3 and 7.

The lesson plan

Objectives:

- 1) To find the volume of the cone.
- 2) To find the surface area of the cone.
- 3) To find the whole area of the cone.

Method:

The teacher guided the class during the discussion by using visual aids while the pupils had the chance to participate in the lesson.

The teacher offered some activities for the pupils.

The pupils apply and perform the activities under the supervision of teacher.

The pupils did some applications (3 & 7 page 90) in the classroom while the homework was assigned at the end of the lesson.

Evaluation:

- 1) Observe the performance of the pupils in the lesson.
- 2) Solve the textbook problems.

4.2 Interviews

These interviews were organized with co-operating teachers (mentors). The interviewer was the researcher, and each trainee's case (student teacher) were discussed on an individual basis; the time of interview was about 20 to 30 minutes. The questions used in each interview are listed in Chapter Three.

The Interviews were organized under six headings representing the interview questions, those headlines are: Lesson plan, Content knowledge (related subject), Methods of teaching, Dealings with pupils and teachers, Assessment of teaching, and Classroom management.

There were seven interviewees (co-operating teachers) whom were involved very deeply in the training course, and they are ordered with respect to the student teachers' cases.

4.2.1 The first co-operating teacher of Samer

Lesson Plan

“He was weak at the beginning of the training course, preparing the lesson plan. He trained to write the plan many times to get an acceptable one. It was after one month of a course in which he prepared the lesson plan, that the objectives became very clear.

He selected suitable activities to verify the objectives but sometimes he couldn't cover the topic, as I wanted. He did not care about management of time, using materials, media, and the basic knowledge of previous lessons. I noticed always he went directly to the new topic without any attention to the pre-learning. He preferred the presentation and more talk instead of pupils' activity”.

Content Knowledge

“I think he is very qualified and he knows very well the content knowledge even more to the textbook level. I found him always highlighting the topic by some extension ideas, and activities of the lesson”.

Methods of Teaching

“He has a problem with methods. He likes presentation more than anything else, many times I advised him to change, but he didn't care. Sometimes he used the questioning technique, but not in the right way. If he asked the pupils and no responses came from the pupils, he directly answered and moved to another question.

Sometimes he gave the pupils some opportunities; doing an activity in the class and he followed up their work only one time he prepared materials for the lesson which was attended by the supervisor, but he stopped this later”.

Dealings with Pupils and Teachers

“He was familiar with the pupils and the teachers, he was lovely from the pupils. He often motivated them to learn more and encouraged them to do the homework. He followed up the pupils activities from time to time without any negative side. He made use of positive feelings towards the Mathematics lesson. He passed in two classes by using this method”.

Assessment of Teaching

“Indeed, he taught me how to built a good exam in mathematics, his way was unknown to me and to all my colleagues in the school. He studied it in the university from his supervisor. So I gave him the chance to build the Math-exam more than one time and for more than one class. I found him using a fair technique in marks and an exciting way to classify the questions of the exam to be rejected or accepted questions by using some norms. It was new for me, but I learnt it very fast because I will use it in the future ”.

Classroom Management

“He can guide all my classes without any problems, but I remembered once when he hadn’t prepare the lesson plan for a whole day, he made a confusing situation for a few minutes, he said to me; another time I didn’t enter the class if I hadn’t prepare the lesson plan.

I found him many times following up the pupils and observed them without any stress or tension. It is interesting to remember his saying [stop talk; chalk; just looking] this was when the class was confused.”

4.2.2 The second co-operating teacher of Dana

Lesson Plan

“Firstly she has some problems in writing the lesson plan; especially selecting activities, managing the time, and writing the objectives.

Indeed she always used the activities of the textbook, which were not good. She was weak in preparing the pre-learning of the topic.

I said that, “you have to show me your lesson plan daily at morning before the class”. Of course, we negotiated about the lesson plan in advance”.

Content Knowledge

“The student teacher should read the textbook very well for all classes that he/she deals. She didn’t make any mistake during her practice, but I always was afraid from this, and I put in my consideration to avoid her to do this. So; my advice to her and to all student teachers is to read the lessons from the textbook in advance and then to make the lesson plan. I can confirm that she developed with time”.

Methods of Teaching

“She used many materials, listened to pupils, and was interested in their responses. She can’t use group work as well as the teacher can, because our classes are already a small size (15 – 25 pupils), but we concentrate in discussing and questioning techniques. Her ideas became sequential with respect to time.

I can say: at the end of training course, she became a teacher not a trainee,. She focused on theory of learning by doing and used it in last two months”.

Dealings with Pupils and Teachers

“She was closer to the pupils and to the teachers. They liked her, and she was very social which was very important for the student teacher to become a teacher. She built a good relation with all members of the school, she was known to all the teachers, they dealt with her as a colleague, she made a dialogue with them about teaching/learning issues”.

Assessment of Teaching

“I gave her opportunities to prepare some small exams. She managed all the process of exams, she can build a good exam in Mathematics for all my classes. I gave her the role of evaluation because her work was very satisfactory. Moreover, she analysed the results of the exams by using the way that was very exiting, she was very capable in the assessment of mathematics teaching”.

Classroom Management

“To teach in Model School is not easy; your work in this school depends on your strategies of teaching and the personality of the teacher, in the case of Dana; she used a good strategy that depending on the questioning technique and her personality was very balanced between the content knowledge and the methodology that used in the class.

I can say she passed very well in the classroom management during a whole week when I was ill. She covered the textbook material for that period of time”.

4.2.3 The third co-operating teacher of Fuad

The co-operating teacher was different from all the other cases; this teacher has a negative attitude towards the school of education, he said to the supervisor: this is the last time of cooperation between me and your student teachers; I can’t accept a trainee to take my role in a class. Next semester I don’t like seeing trainees because I don’t like this process of training.

The supervisor tried to satisfy him, but he failed. The supervisor got a conclusion from his dialogue with him “ the teacher thought that Mathematics teacher should be a graduate of Mathematics School not Education School; by the way: he was graduate of Mathematics School with MS degree”. Unfortunately; these things discovered at the end of the training course. Any way; his opinion and his perspective towards the student teacher is in the following paragraphs:

Lesson plan

“He used a notebook for the lesson planning; his planning was very exciting for me; may be better than my planning. The important thing was: how to apply the plan? He applied his plans very well; I don’t remember any case, in which there was a mistake in his work. He focused on the textbook, which was bad; it is a must to select the activities from outside the textbook; this was the unique negative point in relation to him. Timing was very good during the whole course”.

Content Knowledge

“I can’t permit him doing mistakes in content knowledge, he knew the content very well. All the time; our discussion about the content and the design of activities, he worked with me very well, but not as I wanted; I need the teacher to be a hard worker”.

Methods of Teaching

“His methods were different from one class to another and from a topic to another which was good. He used the questioning technique and he can answer the questions of pupils. He listened to them and his reaction with pupils was surprised me because it was interesting me. I have seen important things with his methods, especially sequential ideas and its logical way”.

Dealings with the Pupils and the Teachers

“He dealt very sharply with pupils from the first day as well as I do, so no contradiction in our ways of dealings with them.

He has a good relation with the teachers; our relation was very good: the best teacher of mathematics who knows Mathematics very well as well as he knows his pupils ”.

Assessment of Teaching:

“His way of assessment of teaching was not so good, he made a mixture of questions; easy and difficult questions, he used a technique gained from school of education, but the best exam should be from the main ideas of the lesson not all the ideas, and they should be difficult; because I need to challenge the pupils and then motivate them to be good thinkers.

According to his way of exams, half of the pupils pass, how can I imagine that happened, it is a must to fail 25% or 30% of the pupils, if you asked me why? The answer: this manner is the best to give them feelings of the importance of mathematics”.

Classroom Management

“Because he was strict; so everything was going easily. He made his lesson very well; the pupils participated many times in good constructive way without any problems or confusion. He was successful in classroom management; so that his agenda of the lessons were fulltime; no time to spread and all the time of the pupils was busy with activities and work. I can say if you busy the pupils most time your classroom management should be successful; Moreover, you can verify your goals.

This was what happened with me and with my student teacher during this semester; the theory of teaching is coming from experience of the teachers not from researchers”.

4.2.4 The fourth co-operating teacher of Ibtesam

Lesson plan

“She wrote a lesson plan with perfect objectives, methods, materials, and the kinds of activities were from outside the textbook but not much different.

She made a good introduction for the topic; which meant more concern to pre-learning at the first of the lesson by using the questioning technique. The lesson was always rich with the visual aids and appropriate materials. She managed the time as well as the teacher. She prepared the lesson plan daily and I stressed with her the important comments before the school day is starting, sometimes; we had a conversation about the lesson plan”.

Content Knowledge

“I can confirm that she has high level of content knowledge; she didn't differ from my content knowledge as a teacher.

She used the textbook & the guide-teacher-book; I think she was a good reader for the textbook and the guide-text-book”.

Methods of Teaching

“She used the questioning technique and gave the pupils the opportunities to participate in the lessons, she organised the situations of problem-solving approach by giving them problems in a limited time and then explained the solving individually with who finished the task firstly. Her ideas were ordered and sequential, she encouraged the strategy of learning by doing; she interested to hear and to listen to the pupils”.

Dealings with Pupils and Teachers

“At the beginning of the training course her dealings were not as I need. I tried to orient her to foster the pupils' concerns as well as the teachers, she began to know their names which supported them to continue in a good way, and she got more successful dealings with the pupils.

She joined one of my classes in their trip; which made her closer to them, they started to like her, they need her to teach them before starting in her schedule time from the university. Their feelings towards her were very clear; I think they will like the mathematics lesson and their attitudes should change to a positive direction”.

Assessment of Teaching

“She started to make small exams (quiz) and she followed up the pupils' performance. At the midpoint of semester; she made an exam by a new technique; I shared her in the exam; I found her work was very new in our school. She corrected the exam and gave them written feedback on their performance. After this moment I gave her the whole responsibility to prepare the final exam for all my classes; she has done perfectly, so; it was the reason for getting graduation of the Ministry Supervisor's of Mathematics”.

Classroom Management

“She controlled the class because her mastering of content knowledge was very good, she managed the class by a gentle process; relaxing; and without any tension or stress. She focused on getting the pupils to participate in the task by nominated them by their names, she gave them the chance to perform a certain role during the lessons which created the situation of responsibility among the class”.

4.2.5 The fifth co-operating teacher of Hyamm

Lesson Plan

“At the beginning; she was weak in writing objectives: one objective has many issues; and sometimes these aims are not measurable.

At the end of the training course; she was able to prepare a good lesson plan. But she didn't care to use the aids; just the chalkboard. But during the time she progressed very well, pre-learning became good and stayed that way.

So, writing the lesson plan started irregularly and became daily”.

Content Knowledge

“Her mastering of content knowledge was excellent from the beginning, as a result, I decided to give her a chance to teach all my classes. But one at a time; she made a mistake (scientific fault) in geometry, and the pupils wrote it on their notebooks, next lesson; she corrected it firstly, and talked to them there was second way better than the previous one, you have to change it. This was unique time during her practice; but she competent never the less”.

Methods of Teaching

“At the beginning her methods was lecturing; and later on she gradually started to ask questions, but she didn't wait enough time for the answer, quick questions. After that; she started to manage the questioning technique in a good way, latter on, she used accumulative revision at the beginning of the lesson. She started to use worksheets at the end of topic. Moreover; she started to prepare the materials and the aids with a good function in use in Math-lesson, especially in group work. So, her methods were variable from time to time and from topic to another. At the same time, she took care of pupils; especially individual differences”.

Dealings with Pupils and Teacher

“Actually, she developed a good relation at the beginning of her arrival at school, she had the idea that the teacher could develop through a good relation with pupils, just one week, I have seen her in teacher's room and talked to most of them; she was very social and natural. The pupils accepted her and like her, they asked about her when she was absent”.

Assessment of Teaching

“She asked me to make an exam; I gave her the chance; she made the exam very well, the pupils liked this exam. She explained the results of the exam among the pupils, which gave me a good idea about her ability in this region. From this moment; I gave her the opportunity to evaluate the pupils in all phases even

though the final exam. Really, I satisfied with my colleagues in school in the process that used in the evaluation; her work was great”.

Classroom Management

“She controlled the class, I meant she can taught without problems or tensions; the process of teaching go through relax situation from both sides: the teacher and the pupils. Really I didn’t expect she will manage the classroom in a good way from the beginning period, you know she was trainee, but this case was unique. She has a good personality; she was born social which support her to deal with the pupils in a good way”.

4.2.6 The sixth co-operating teacher of Hayat

Lesson Plan

“According to the forming objectives at the beginning of the training was somehow, she didn’t know much about the lesson plan. So; I used extensive work in this area, after that time; she wrote the lesson plan daily in the notebook and I have to see it before the school day at the morning. After three weeks of the partial practice, she prepared the lesson plan very well: clear objectives; materials; appropriate activities; and the pre-learning issues. But time management still a problem until the end of the training course; indeed; pre-learning took more than 15 minutes and latter on it was good as to finish the aims and started to do a part of the exercises in the class.

I want to say; I guided her that activities should variable and some of the activities should prepared from outside the textbook, she understood me very quick, she used the aids, but not always, and just in seventh grade, not in 10th”.

Content Knowledge

“I have to say; she was perfect in grade seven; but not in 10th. Her story with class ten; summarized in some words: “Once a time, she made small mistake, immediately I corrected it, she became afraid to meet them; at the same time they were young; really she afraid to face them”. By the way, in the last month, she said to me; she was relaxed when she entered grade seven but she can taught grade ten. This saying happened after the feedback from the supervisor when he attended in grade ten, she was performed very well”.

Methods of Teaching

“At the beginning, she started explaining as spoon feeding, but later on; exactly after her talk with the supervisor, who consider this situation was not positive point, she started the discussion method and let the class talk more than her, She started to listen to them, to accept their opinions, and to search for different responses during the discussion. She used the questioning technique in a good way; especially the searching for variations solutions among the pupils”.

Dealings with Pupils and Teachers

“I noticed her little rigid in the teacher’s room and shy. In spite of all; she was social and lovely from all pupils, her interaction with the environment was acceptance. Because she was closer to pupils and they love her, so she gave them her concerns and she motivated them towards the mathematics lesson, she built positive attitudes towards mathematics as a subject. She accepted pupil’s ideas

and she encouraged them to participate during the discussions. She has a trend in reinforcing pupils responses”.

Assessment of Teaching

“I gave her a chance to prepare one exam; but under my supervision; she prepared the exams of grades seventh A; B from the beginning of training course. I found her hard worker in preparing exams; the final exam prepared by her and it was good.

I think, she developed her work very quick; because she focused on her practice in seventh grade (2 sections)”.

Classroom Management

“She entered the class with a situation of relax and prepared appropriate climate then started the lesson by quick revised the previous topic and go through a dialog into the new topic. She gave the pupils the chance to ask her and to give comments through the dialog by systemic way. She interested in following up the pupils during their doing tasks in the class, I have seen many times she wrote the feedback in their notebook about their performance”.

4.2.7 The seventh co-operating teacher of Yassmeen

Lesson Plan

“She was not good in writing the lesson plan; especially the objectives; activities; and time management. In general her performance in the class was very weak. But after two months, she started to improve her work; she became a new one.

At the end of practice teaching; I found her performance very good especially in preparing the lesson plan and implementing it in the class”.

Content Knowledge

“She was very good in content knowledge; but she sometimes afraid; especially when there was a guest in our class. Indeed; she know every thing in the textbook and outside the book that related to the topic. You have to know she afraid to practice when the visitors attended the class”.

Methods of Teaching

“She likes to present the class; to inform the pupils the information. We were talking about that, she became totally used the questioning technique and group work .she made a good arrangement of her ideas to be a sequential. She started to use the materials; the discussion among pupils; and she fostered the pupils’ concerns about learning situations. Many times, her performance was very good especially when she used teaching groups in a successful way”.

Dealings with Pupils and Teachers:

“Her personality was very simple, she look like the children, which was lovely. But this type of personality is not understanding by others. She dealt with the pupils softly and friendly. The pupils found her as a friend; she became more concerns about the pupils and their learning .she motivated them to answer her questions. She used reinforce pupil’s responses.

Her dealings with other teachers was formal, I hesitated to push her to make a good relation with the teachers, and the teachers themselves don't like to spread much time with others".

Assessment of Teaching

"Firstly, she corrected the papers of exams. After that she prepared one exam and applied it under my supervision; I found her ability in assessment of teaching was good, then; I gave her the chance to do another exam for another class, and she made it very well. At the end of the semester she prepared all my exams for all my classes".

Classroom Management

"Firstly she focused on presentation without any care of classroom management. After that: day by day; she became more concern about the pupils situations, about their setting in the class, and about their dealings among each other.

At the last month; I found her concerns directed to pupils' learning. Really she became control her class in a good way. Look: she needs more time; just one month, she will be a teacher".

4.3 Questionnaires

The researcher designed seven questions (open questions) given to the student teachers at the end of the training course, these questions were developed in order to explore some issues that could not cover by the other tools used in this research. Actually these questions designed in this way in order to gather distinguish

1. Evaluate your experience with your supervisor.
(What do you like to say about the supervisor's role during your practice teaching?).
 2. Evaluate your experience with your cooperating teacher.
(What do you like to say about the cooperating teacher's role towards you during practice teaching?)
 3. Did you find yourself acquiring knowledge about pupils during your practice teaching? How was it? And did you use that knowledge to modify and reconstruct your personal image of self as a teacher?
 4. How did you see your classroom management?
Did you develop standard procedural routines that integrate classroom management and instruction?
 5. Did you think this job is suitable for you?
 6. How many classroom-visits did you have from the supervisor during practice teaching? Do you think these visits are enough to have a feedback about your performance? How did you find the supervisor's feedback, useful or not?
 7. After your graduation: Have you got a motivation to work as a Mathematics teacher?
- The following paragraphs show us the student teachers' answers.

4.3.1 The case of Samer 1

1. The supervisor was friendly; I dealt with him as well as I did with my brother, he gave me useful feedback; especially when he attended my classes. I could not continue my practice teaching without the orientations of the

supervisor. We developed a system of practice information during our meeting in a weekly seminar (The meeting 2 hours weekly hold in the university). The meeting was useful and characterised practice so that the discussions of our lessons that performed in the schools.

2. The co-operating teacher was old; she retired from public school and work in a special contract with this private school. My relation with her was formal; because I didn't find any common issues to be closer or to be friendly. She gave me the role to teach immediately from the beginning of the training course; she forced me to start the teaching during the period of observations. Her opinion in that; the experience from day to day learn the teacher many thing; how to teach the pupils, and give him supporting about his work. She did not give me negative points about my performance (my lessons) during practice teaching; she always said that you are good; later you will be better. More lessons enable you to be rich experience and to be a good teacher. She forced me to go through the lessons faster in order to cover the content of the textbook on time; she did not like to make the details and to make the discussion for the same reason.

3. May be this happened in the last month of the training course, so that I discovered some techniques that help the pupils to communicate each others and towards teacher, so; I found these methods as a results of more interaction between pupils and me as a teacher, really; I found myself used the same language of pupils which gave me the support and the confidence towards my personality as a teacher, which facilitated the classroom management in the coming days.

4. I think my classroom management influenced by two points: First; the level of mastering of content knowledge, I was prepared each lesson daily in deeply way so that I have ability to answer pupil's questions. Second; the environment of the class was comfortable for both the pupils and me, which found a common language between them and me.

5. Yes; this job was suitable for me; because I like the teaching; especially; for classes 5 to 10. I had a good contact with old teacher (my father) talking about teaching situations; he was a teacher for 25 years; he retired from 5 years ago. Many times; the advice that came from the supervisor took place already in our discussion at the home.

6. I had 9 classroom visits from the supervisor during the training course; all these visits were useful for me; the feedback was highlighting my way in teaching.

7. Well; I am waiting this day, to be full responsible teacher. I like this job very well.

4.3.2 The case of Dana 2

1. My experience with the supervisor was very exiting, especially; his weekly meeting which represented to me a good chance to explain and to discuss many practice issues, this meeting gave me a chance to hear the problems of my colleagues; sometimes it's as well as my problems and then we negotiated about these problems practically; which supported me in the future teaching. The type of feedback was very useful; I wanted to say our supervisor was our resource in the practice teaching.

2. My co-operating teacher was very rich experience teacher; he is intelligent person, understanding man, I found him as a friend.

He gave me weekly paper that has written feedback for my performance during my practice teaching. Really I found his feedback very useful and I could be understand what was (were) the purpose(s) for each point. He was a model for me in every thing.

3. Well; our pupils in this school (Model School) are clever, actives, and more movement during the lesson. So; I had to manage myself in a way of understanding them more than expectations, which gave me the chance to acquire a practice knowledge of the pupils (their characteristics); that help me: how to deal with each one individually. This new situation of dealings with them; put me immediately in a new form (model) of human being, I became more flexibility teacher; I found myself a new teacher; it's lovely form.

4. My strategies in classroom management were developed during the observations month of the training course; I had a good relation with all classes, the most pupils said to me; please teach us immediately, we expected that you are a good mathematics teacher, they motivated me to start the teaching early; and finally; the supervisor satisfied to give me a permission to start the partial performance, I had done practice before my colleagues do it, which gave me positive feelings about myself that I am different from each other. I respected my pupils as well as they did; they participated in my lessons as I expected, I was very surprised when I heard some teacher complained about one pupil in the class; because my strategies of classroom management were smoothly and go through relax and comfortable way.

5. Of course; it was very suitable for me and still; I like the pupils, and I like teaching mathematics very much. I found the group of mathematics in the Model School supported me beside the co-operating teacher, which made me happy and motivated me to prove myself as a teacher.

6. I had 7 visits; but I had hotline telephone with the supervisor when I need him for urgent cases; the feedback of the supervisor was much practical; it's very useful and meaning full to me.

7. I hope so; I like to be a mathematics teacher, I have a motivation to continue my study in Math-Education area in parallel with a job of teaching at schools as a teacher.

4.3.3 The case of Fuad 3

1. I have got positive relation with all my teachers in the university; especially the supervisor of Mathematics; he prepared effective practical issues during the weekly meeting which supported our practice in the schools. Moreover, he demonstrated an exciting analysis for examinations, how to prepare mathematics exams? how to implement them in the classroom?; and how to analysis the results by using a mixture of qualitative and quantitative methods?, which was very important for me and for all my colleagues. Although; the discussion of the lessons that hold through some videos (micro-teaching) was very useful and meaning full.

2. The co-operating teacher was young; he has a master degree in a pure mathematics; he was graduated recently of math-school, he hadn't studied any course of education; from this point; I discovered a big gap between me and him and this happened later; after two months of the training course; while no one knew about the situation even the supervisor; I was suffer silently. I was depending on the supervisor more than others. All my questions and my demands should be shifted to the supervisor who supported me; especially when he knew about my situation. I felt the gap completely filled by the efforts of the supervisor and other qualified teachers in the Model School.
3. No; I don't acquire knowledge of the pupils; because it was a sharp period for me, may be at the end of the practice teaching; I had got some characteristics of the pupils in some classes that helped me in my work as a teacher.
4. Because the co-operating teacher was tuff and very sharp in dealings with the pupils, thus; the pupils found me closer and friendly by comparing with him. As a result, I found myself going through the positive conditions which influenced my classroom management to be relax and comfortable for the pupils; really I didn't had any problem in controlling of classroom. On the contrary; themselves controlled them; not by my authority, they satisfied by my methods of teaching.
5. No, it was not suitable for me, just I need the certificate and I will work in another area. I can't imagine myself work a teacher as well as my co-operating teacher did with the pupils, the teachers, the head-teacher, and the learning/teaching process.
6. I had 11 visits, I was need those visits very much; at least to fill the gap which happened; because the experience of the co-operating teacher was null; he always listened to the advances of my supervisor as well as I did.
7. Actually; I like mathematics, but I didn't like to teach it, I don't know exactly why, but I can said, my situation during practice teaching didn't supported me and didn't motivated me to be a mathematics teacher.

4.3.4 The case of Ibtessam 4

1. My experience with the supervisor of mathematics was very interesting and exciting, I loved his way in speaking; and his talking about practice teaching as well as I need exactly, his speech reflected what we need as trainees in our new work. Thus; it was a must to keep in touch with this type of experts, I found him qualified teacher; councillor; giver feedback; qualified supervisor; and human being. We acquired communication skills through the focusing and the reflecting into the videos as a microteaching.
2. She was looked like my sister, friend, and colleague; she supported me all the time of the training course. She gave me the direction of the work when she guided me in preparing the lesson plan and through the implementing of the lesson inside the classroom. She introduced me to the teachers as well as respective way; she was closer to me more than others who involved in the training course.

3. Yes; I found my self acquired knowledge of pupils because I found me going deeply into dealings with the pupils which help me to modify the ways of treatment with them to be in comfortable situation for both me and them.
4. Classroom management was not so good, at least at the beginning of the training course, but when I developed a good relation with the pupils and I knew them very well; I achieved to stable situation in classroom management; it's characterised by: interaction; friendship; respectable; and acceptable. Now, I teach them in comfortable management of classroom.
5. Of course; this job was very suitable for me, because I like the teaching and the pupils, it was interesting to deal with them.

Yes, I contacted some members of the staff in Faculty of Education who taught me the theoretical courses, but no one of them helped the supervisor as well as the co-operating teacher and me.

6. I had 9 visits, yes they were enough to have a useful feedback, and really I had got a meaningful feedback during my practice teaching.
7. Of course; I had a motivation to achieve my dream as a mathematics teacher.

4.3.5 The case of Hyam 5

1. My experience with the supervisor was rich and positive, at the beginning of the training course, the supervisor was sensitive towards me; this was my feelings. I thought; he didn't like to see my face at all; but these feelings were going a way through the first month of the observation. I have seen many practical forms of teaching through the weekly meeting; the supervisor had a rich experience, so; he is qualified and professionally worker.
2. My co-operating teacher was looked like my sister, and still for ever; she supported me more than my expectations, she was my advisor in each step of the training course, whenever and whatever I need her help. She played the role of the qualified teacher, supervisor, and councillor; she encouraged and motivated me to do the best performance during the practice teaching.
3. Of course; I was a good listener to the pupils and councillor for their problems. Thus; I made a good relation with them; which helped me to know many things about the pupil's situations, this knowledge of the pupils supported me to reorder my management; moreover I made a reflection for myself as a teacher.
4. Classroom management for me was a simple task; because I was closer to the pupils; I like them; and they like me. As a result; and among these conditions; my role as a teacher was going very smoothly and very effectively.
5. Yes: I like this job; I am waiting the day that I will be a teacher. The most staff of Faculty helped me; especially the specialists people in Math-Education including the supervisor of Mathematics.
6. I had 8 visits in the classroom from the supervisor and 5 visits during the observation stages. The useful and practical feedback had gotten during those visits.
7. I have a motivation to work a mathematics teacher. The models of my co-operating teacher and supervisors influenced me in the teaching career.

4.3.6 The case of Hayat 6

1. My experience with the supervisor of Mathematics was good and very exciting experience. He demonstrated many techniques that helped us and supported our practice teaching. During this course the student teachers need practice knowledge more than theoretical; this was what we found it into the supervisor experience. I wanted to say; many issues learnt in school you couldn't find it in the courses at the university; thus; the supervisor was a suitable person who filled partially the gap between the theory and the reality.
2. My co-operating teacher was hard worker; she likes her work, pupils, and me as a trainee. In spite of this; she didn't give me the chance to practice in all her classes; just one grade (two sections), sometimes I performed some practice in grade ten.
3. In case of grade seven; yes I acquired knowledge from the pupils; practice knowledge of the teaching: the best methods of teaching; interactions; and classroom management. I wanted to say; if you wanted to answer any questions related with teaching; you have to be closer to learner: how they interacted with the lesson, which way is the efficient to achieved the goals of the lesson.
4. Classroom management was very smoothly for me; especially in class seven (2 sections) which was familiar with me, but I faced a problem with class ten; when the co-operating teacher asked me to teach them, I found myself couldn't deal with this group of pupils; they didn't care about my lesson as well as the situation of their interest about her lesson. I never seen them busy themselves during her lesson; I don't know why they made this with me; may be; I was come to them one lesson weekly.
5. I don't know; if I am suitable or not for this job. I think you know more than me as a supervisor. Look; if I will have classes like class seven; I say it's suitable for me to be a teacher; otherwise; it's not. I prefer lower classes; look like class seven.
6. I had 11 visits inside the classroom from the supervisor during my practice teaching. I have gotten a useful feedback, the supervisor encouraged me to focus on practice in more than one grade, but she forced me to reject this advice from the supervisor. I made agreement with him to make one lesson weekly in grade ten in addition to all the lessons daily (of two sections of grade seven).
7. Of course: I need the work; I will be a teacher at public school in my city not in Amman. Really they need me at my city; because there is a lack of mathematics teachers in our area, (south of Jordan).

4.3.7 The case of Yassmeen 7

1. The supervisor's relations were formal with the student teachers; if I have a problem or an issue about the training process; I will ask him, otherwise; I wait to the weekly meeting, which contained many practical issues related to our practice teaching. I considered the supervisor the main resource of practical knowledge for my colleagues and me. His visits to me in the classroom were very important to discuss all my questions, emergent issues, and the feedback that followed his attending my lessons.

2. My co-operating teacher was tuff with me, she likes the hard worker people, she always said about my negative points about my practice teaching. Moreover, she said to me, [you have to improve yourself] but she didn't give me away or a process or procedure to start the first step, and how to improve myself, [her saying]; is still without answer, looked like academic people at the university whom concentrate on the theory more than the practice.
3. I am not social, so; I felt myself outside the system of the school, the distance between me and the pupils was very big; but it is decreasing with time. In this case; I made the best of my capacity to pass through this issue, beside that; the interaction in my class was not bad; thus: I failed to understand the pupil's behaviours, as I need.
4. Classroom management was changeable from time to time, it depends on the situations of pupils; types of class; arrangement of the lesson in the timetable (schedule); and the mode of the teacher. I can say; I can teach without problems; moreover, they can interact as well as the co-operating teacher takes the role in her classes.
5. Yes; this job is suitable for me, I can teach Mathematics very well if there is a good pupils; I meant when there are pupils need to learn immediately I am able to teach them as well as possible. My father was a teacher; he encouraged me to continue this road.
6. I had 9 visits in the classroom during the training course; and 4 visits outside the classroom. Those visits were enough to had a feedback, the feedback was very useful and it has a full meaning for me.
7. Yes; I have a motivation to work in a broad as a mathematics teacher; I meant in Golf Countries.

4.4 Self-Reports

An important part of the work for the student teachers during their practice teaching (training course) in school is to write a self-report. This report shall reflect the student teacher's attitudes and development during his/her practical work." writing the report, student teacher has to make observations, critical reflection and express an understanding of the process of teaching and learning. It should reflect the following components:

1. Progressive issues as aspects of performance related to what does the student teacher feel.
2. Documents that he/she used in his/her practice teaching.
3. Reflections. By reflecting on the teaching practice, student teachers develop autonomy, engage in thinking about what they were doing, and how they could develop.
4. Self-evaluation; they should describe two cases diagnosing, his/her performance, the first about concerning a situation of weakness from his/her perspective, and the second one about a situation of strong performance.

(The University of Jordan, 1996).

4.4.1 The case of Samer 1

The first week in school it looks liked being guests. It was " I am new, they looking at me as unknown or strange". I had many difficulties to start my way in school, I was afraid for the next few days.

My feeling; all things are important; coming on time in morning; having a programme for observations; lesson planning; and dealing with pupils. I wasn't ready to deal with all these things. The supervisor visited me during this week, which gave me support and confidence to continue; he talked with me about my needs and my new situation in school

The first chance to talk with pupils was very hard; but later every thing was going smoothly, the first visit of the supervisor to me inside the classroom characterised my situation by a lot of talking which means more talking and more explaining instead of pupils doing. Any way; during a time; I made two scientific mistakes in my class, no body informed me about them; I discovered them by myself.

I couldn't create a discussion among pupils, just give them the main ideas of the topic, I didn't care about variations of the solution; just one solution; let me say; just my solution.

I passed through the stage of being afraid, my awareness was directed to the best lesson; which comes from discussions among pupils by using questions techniques, during this period my interest is: how the pupils explore or discover the fact and the concept that was included in the topic. I started to involve the highest number of pupils in one question that I asked them. I was interested to hear their answers; many variations; not one response from one pupil, which means many answers from many pupils as many as possible. I started preparing the lesson plan daily; I have got the satisfaction that a bad lesson should be a result of a bad lesson plan or no plan at all.

I feel my pupils changed their dealing with me in a better way. In spite of this situation, I feel; I still have a problem in controlling the class; they don't accept my rules during the class. Classroom management is still a problem with me as well as with the co-operating teacher.

Last month of practice teaching:

I feel; I have more coherence with pupils, my methods in teaching changed to a new direction which gave the pupils the opportunity to participate in the lesson as well as the teacher, talking with each other to develop their opinions; moreover; I have to take into consideration their contributions during the discussion which gave them more confidence and kept their interested in classroom interaction.

During this month; I take more independence from the co-operative teacher who asked me to prepare exams for some classes, which wrote very well. The school consider me a teacher; they nominated me to participate in two trips with pupils, after those trips; I found myself closer to the pupils; really; every thing has changed after those trips. The pupils started to listen to me; my task in teaching as a teacher became easier; my teaching became more efficient. Today; I can prepare a good lesson plan and I can manage the situation of implementing it so that it would be successful work.

I have got many useful things from my practice teaching; especially; in a personal dimension.

4.4.2 The Case of Dana 2

At the beginning; the language of interaction with the pupils was a main difficult that faced, I know who is in this school; but I am unknown to all of them; I was a strange. The observations stage is so long without any contact with pupils, which bored us and gave the pupils negative attitudes towards us as trainees.

During the partial performance; when I started to hold the lessons; the relation with pupils improved step by step; when they felt the importance of my lesson and talked about it their interest was there to continue with me. They started to participate in all activities of the lessons, I feel there is a problem with grade five, sometimes; they said that they do not understand; I answered them: because you did not care about the lesson and did not concentrate. The supervisor advised me to work with him or her by using „work- sheets“; it was efficient; each pupil worked alone; and he/she wants to prove his/her work as a complete work. During this time the supervisor visited me in the classroom; and after our talking about the lesson; I asked how is my work going on and how should I do it? This visit was very important for me; it corrected many issues, which were going the wrong way.

The co-operating teacher wanted every thing go through his hand; which made me just a machine without any reaction, any way; I started preparing weekly work sheets for grades 5 and 9. I followed up those sheets by written feedback for their performance. Now; every thing is going as I need it; except one thing which is motivation, it is not easy work to motivate pupils to learn, especially; Model School's pupils, those kind of pupils are special in every thing, they like to move in class and talk with each other; they answer questions without orders, they are clever but they are careless. Thus; they need some special teachers to deal with this special situation.

The last month:

It was an interesting month; I made some development in many aspects of teaching; methods; group work; individual work (work-sheets); small group (group of two); and some techniques in classroom management; play role; give them responsibility; make them the importance of their contributions; and keep them busy all the time by satisfying work.

I asked the co-operating teacher to observe me during my practice teaching and write a feedback for me daily. I became aware about using enforcement; feedback systems with pupils; and individual differences.

I started to prepare exams in cooperating with the teacher. Moreover; I made one exam for one grade by myself, which was suitable for the pupils as the co-operating teacher told me. He gave me the authority to correct all the papers of the pupils; it was a problem to satisfy the pupils though their marks, which they got in the exams. The co-operating teacher supported me more than I had expected. He asked the pupils to return to me for every thing; he gave me full responsibility as a teacher to decide many issues related with the pupils and the school.

Really; now; I can consider myself a teacher, in spite of lack of classroom management of grade five; some pupils of grade five are careless in most others lessons; where most teachers who teach this class said the same

thing about those pupils of grade five. I classified the problems of those pupils (7 pupils out of 32; the whole class) as follows:

1. Talking any time with each other without paying attention to the teacher; don't care about what is going on the lesson.
2. They aren't concentrated on the discussion among pupils or during teacher's talk.
3. They are sometimes working and busy themselves in some meaningless things or plays during the lesson.
4. Some teachers try to help them or change their situations but they failed to make any progress.

4.4.3 The case of Fuad 3

At the beginning; I was scared; and confused; because I am the only male among the trainees. Shocked when I entered school because I expected something more than this, I found no interaction or response from the school side which disappointed me.

During the observation stage (the first month); no participation almost; not saying any word; I was killed, bored, and out of spirit.

When I started the partial performance, I got self-confidence from being addressed as (a teacher) which made me concentrate more on my behaviour dealing with my pupils. The supervisor visited me in the classroom; is encouraged me; and asked me to meet any time to make up the role of co-operating teacher who was new at that time. As I pointed before I had a problem with the co-operating teacher, so; lesson planning was my biggest problem.

The regular visits of the supervisor enlarged my insight as to being aware of the negative and positive points in my performance in the classroom. I became a really hard worker preparing lessons in advance to get my supervisor's and pupils' trust. All of this improved my performance in the classroom and the interaction with the pupils to the point that I was helping the co-operating teacher in some aspects of teacher education; in methods of teaching based on a good coordination with the supervisor.

The last month:

My responsibility increased by even playing the role of co-operating teacher of a full teaching load (22 lessons weekly). I started to plan the worksheets with the support of the supervisor.

I felt the pupils became closer to me throughout their co-operation; which gave me a push forward. But at the same time, the supervisor was not satisfied, on the contrary he wanted more, which urged me to work harder and harder to prove something in the school. i.e.: my existence as a teacher.

I finished the curriculum in the given time, when I did the final exams and the school accepted that without any modifications.

4.4.4 The case of Ibtessam 4

The first week at school was very hard for me, I felt the others didn't like me, but the second week was better so that the supervisor visited me, he talked with the head-teachers and some teachers about our situation. Immediately the

head-teacher organized a meeting for all teachers and all trainees which give us an opportunity to talk directly to the teachers about our situations in the school and about issues of the training course; we gave them what the university expected from us during this training course, Really after this meeting: we felt every thing changed into a positive direction. More interaction with teachers, which brought us more closely to the pupils during the partial performance stage. But I have to say; I was afraid to face a class, not a single pupil, the co-operating teacher helped me to pass through this critical period; Moreover, she motivated me to make whole lesson; not partial lesson as the regulations of University expressed. Any way; this meant for me to prepare a lesson plan for 45 minutes.

Really I taught a whole lesson of 45 minutes without difficulties, where the co-operating teacher played the role of supervisor by observing me and writing a feedback about my performance during the lessons that I performed. During this time the supervisor visited me in the classroom who attended a lesson in grade six, he supported me when he explained all the points that were written in his agenda; his feedback was useful; especially when he pointed out the participation of the pupils during the lesson; such that it was a point I hadn't cared about it.

I started a new strategy; which gave the pupils the chance to participate in a discussion and followed up their responses during the lesson.

The last month:

I used the visual aids; I considered it as a part of my lesson; and used some materials when it's available, which influenced the preparation of the lesson plan to a high level.

I used group work very well for many times, I felt my awareness progressed in some issues; methods; communication skills; and classroom management. My concerns changed towards pupils as learners; now; I am looking for best learning from them. My interests concentrated toward their needs and responses. From time to time check their learning progress by some short exams, then I shifted the process of teaching to achieve my goals. Today; I focused my work on preparing tasks for individual work and for group work.

4.4.5 The case of Hyam 5

The first three weeks were very critical, was confused and scared. My role during observation month was just listening and observing which was boring, long periods, and not useful at all.

I started entering the classes instead of some teachers who were absent for whatever reason; so; I had to fill the gap; I performed some mathematics lessons this way without any lesson plan, I know it was not so good, but not bad, I couldn't stand in front of class without any action; they know that a teacher; how come are staying in the classroom without teaching. Any way I felt that talking too much; which emphasises that „teaching without lesson plan is just talking“ wastes the time of the lesson.

I have heard from my colleges about their problems in classroom management; but I didn't have any problems in the classroom, every thing was going smoothly in my classes.

My situation in general is good, but I am afraid when I face the class with some visitors; especially the supervisors; the co-operating teacher sometimes

took the role from me during my lesson when she made some comments, sometimes she re-explained the main ideas of the lesson. Really this was a problem for me but she didn't care about my comments; or my needs.

During this time the supervisor visited me in the classroom; he gave me useful feedback; at the same time; he encouraged me to continue in the same direction; which made me more comfortable and confided in myself. The supervisor asked the co-operating teacher to play the role of supervisor during my performance in the classroom. She gave me written feedback daily; which helped me in the future practice teaching.

The last month:

The pupils informed me about their feelings towards me, which made me very happy. They became more interested in my teaching, the co-operating teacher asked me to prepare some exams for some of her grades, I made two exams; and more than 5 worksheets for each grade.

I have been in "interesting situations" during my last practice teaching as a teacher; especially when the supervisor attended a lesson and said that "you are a teacher". I started using visual aids, and some materials in some cases.

I started using the reflection technique, which gave me more awareness about my role as a teacher, really; I go deeply into some details of executive lessons, I achieved the situation of self-evaluation.

The co-operating teacher was absent for one week; which meant taking her role in teaching a full load in all her classes. The co-operating teacher encouraged me to prepare the final exams for all her classes; she said to me "you teach them then you have to evaluate them".

4.4.6 The case of Hayat 6

The first month of observation was boring for me, just sitting there without talking or comments, when I complained about this period to the supervisor; he said to me this is a regulation of the university; you have to write your comments during the observations and every thing you have seen in the lessons applied by the teachers.

I have good relations with most of the teachers, pupils like me as well as I do, I was afraid to face the class ten; the pupils are young; they are looking like me. They refused me as a teacher; this is what I have found out.

I started my work partially, just 15 minutes such as a discussion or preface to the new topic. I performed just in small classes; but not in grade ten; my role in this grade is just observation and I performed one lesson weekly, during this month; I have got a permission to perform whole lessons; which made me very happy in grade seven.

The interaction in my class was very exiting; they motivated me to prepare good activities for them as well as I motivated them to participate in the lessons.

I already entered the stage of this month very early; I meant perform to whole lessons. Now I have the ability to prepare a lesson plan very well, which made me more confident towards myself and in front of my pupils. I started some performance in grade ten, in this comfortable situation, they found me suitable as a teacher; they asked me to continue with them; the co-operating teacher said to me step by step; not all steps at once. I felt as a teacher;

especially when the co-operating teacher inform me; I will continue the curriculum with grade seven and her role in this grade is just supervision. All the time she observed my lessons and wrote a feedback to me daily.

The last month of practice teaching

The confidence in myself is increasing day by day, especially when the supervisor visited me in grade seven; he characterised my work as “ awareness work”. Although once he attended my lesson in grade ten; when my performance was poor; I couldn’t verify the goals, which made me I feel depressed. The supervisor understood my bad health situation; he asked me to prepare myself on next week; really; next performance changed to a good point which means excellent situation for me and for my supervisor.

Once a time; I made a mistake during the lesson. One of pupils corrected me immediately; but the co-operating teacher didn’t hear or see this miserable situation.

The co-operating teacher was absent for some days; the head-teacher asked me to take the role of her, which means more confidence to me. I performed this task very well especially in class ten, at the same time; I prepared the final exams for all classes including class ten, which was accepted completely by the school.

4.4.7 The case of Yassmeen 7

The beginning at school was causing trouble, it wasn’t easy at all. The observation month is too long; it was boring, tiring, because there was no role for the student teacher; just as an observer. There is no interaction between the school; and me because you can’t find your position during this month.

The co-operating teacher was a human being; friendly; and familiar with me during this time, she shares some tasks with me.

It is not easy to face the pupils in the class as a group, but the time is just 15 minutes; any way I suffered very much during this period, my voice was not heard; and my movement was not sufficient, I couldn’t ask questions even though I asked them about their needs. All those things were requirements for effective teaching as they told us at the university.

The co-operating teacher pushed me to teach one section A and she taught the other section B; and then we had a discussion about our performances. I found this technique useful to acquire new skills in teaching.

The supervisor visited me in one class; he encouraged me but he oriented me to foster the pupils’ role; give them more opportunities to work in groups or individually. I started a new feeling towards school, teachers, pupils, and my work itself. I changed my methods in teaching because I needed more participation from the side of the pupils. I wanted them to produce more responses. Question technique became a main activity in my lessons. My questions were not clear but now they are very precise closer to the pupils’ mentality.

As a result; the interaction in the classroom and classroom management have automatically progressed and improved in the way the co-operating teacher wanted it.

The last month of the training course:

I found myself closer to the pupils; the co-operating teacher; and I became friend with them; really, I loved them. I understand the views of the co-operating teacher in most issues.

She started considering me as a teacher; I taught all her classes and she played the role of the supervisor; she gave me written feedback for each lesson daily.

During this time; the supervisor visited me two times; he encouraged me and motivated me to be a teacher in the future, which made me more relaxed and comfortable.

So; I felt myself as a teacher, especially when I prepared the final exams for all her classes, which the school accepted without any modification.

I want to say that; the weekly meeting, which were held at the university, was one of the most important resources that supported and improved my performance during my practice teaching.