

Exam notes

Week 1 sample

Based on facts, rules and skills (Goos, 2007). Content focused with an emphasis on performance. Mastering skills, passive reception of knowledge. Teacher is questioner of students most of the time. Teacher is the source of mathematical ideas.

Theoretical basis of a skills-based lesson is learning the skills rather than just the concepts. This type of lesson reflects Skemp's notion of instrumental understanding. According to Skemp, instrumental understanding teaches students what to do in order to complete a mathematical task. Students actions are driven by the goal of getting the correct answer.

Advantages

1. Easier to understand
2. Rewards are more immediate and apparent
3. Answer can be obtained more quicker

Disadvantages

4. Applicability is limited to a specific range of tasks (Goos)
5. Students find it difficult to solve novel or non-routine problems (Goos)
6. Difficult to recall knowledge in future

Week 2

Instructional understanding - drill and practice are used for learning and memorizing

- Student knows how to do the drill
- Undertake the same thing (drill and practice) so that they know the procedure.
- Cookbook procedures – practice which is believed that understanding mathematical concepts is hard whereas following rules or procedures isn't (Skemp).
- They are integral

Relational understanding

- drill and practice are used to develop fluidity
- they are important
- 'repetition with variation'.
- they practice with questions that are unusual. Out of the box. The practice helps challenge their understanding ie tests how good they are with the road map. The questions show the flaws of the routine.

Week6

Briefly explain the rules of the travel game

1. Put your marker on the box called START.
2. The first player to land on FINISH is the winner.
3. On each turn to move you must throw the dice and based on the number thrown answer a question from the answer sheet and give the correct answer. The number on the die gives the column for the question and the person with the answer sheet chooses the row and asks the question. A correct answer moves the counter one place.
4. The next player has the answer sheet and checks the correctness of your answer. (Incorrect answers the group usually decides either you stay where you are or you go back one space).
5. When you land on a box TAKE A CARD, then take a card and answer it. If you are correct you may move ahead one extra space. Take cards from the top of the pile and return them to the bottom.
6. When you have finished your turn, hand the dice to the next person who also hands on the answer sheet. That person then has a turn and so on.