RYERSON UNIVERSITY

Methods of Classroom Instruction

Alex Ferworn

Department of Computer Science

Topics

- Motivation for Good Teaching
- Principles of Instruction
- The Use of Questions



Motivation for Teaching Well

- You don't want to be a "war story"
- You want to be remembered for good reasons
- Your students are a reflection of you
- You don't want to be hit by a plane

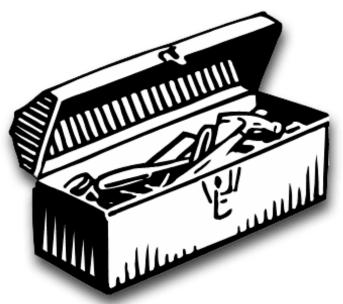




Principles of Instruction

- Students learn
- In the cla learning
- Principle: manager
- At best

 facilitate
- At worst



process of

; for Learning

called teaching)

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- Prevent you norm screwing up learning

Interest

- Create and maintain interest given the "2 minute rule"
- This can be done through
 - Explaining advantages of knowing something
 - Instructor Enthusiasm
 - Appealing to many senses
 - Competition, games
 - Surprise
 - Voice variation
 - Eye contact
 - Questioning Technique







Comprehension

- You must
 - Start at the level of understanding
 - Proceed at the rate of comprehension
- Go from easy to difficult
- Review what students already know
- Review what is being presented
- Be aware of student expressions







Emphasis

- Emphasis placed on what is important
- Not everything is important
- Repetition == emphasis
- Examples == emphasis
- Review == emphasis
- Handouts == emphasis
- Did I mention the importance of emphasis?



Emphasis

Thelaboreduseofmeaninglesswordsflustersandconfusest heaveragestuc ningswesaybut ifwesaytoomuc udentsdontkn owwhattodowi ykeepingthere talkingltreallyi eyesopenandt sawonderwhyt tupwithusinho ywillneverhav pesthatwewillh etoseeusagair allrememberth ewordsIquitWe nhowemphasi sworksbyhidin otinthismessof wordsthatseen ghtsonacomp uterwithabroke © Original Artist

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Participation

- There must be meaningful participation
- Questioning technique
 promotes participation
- Move participation around the class





Accomplishment



- Must feel like they have achieved something after the lesson
- Communicate how you felt the class did
- Praise good work but always provide feedback



Confirmation

- You must know what they know by confirming that they know it
- Avoids misunderstandings
- Ask questions
- Get students to explain
- Confirmation happens
 - At the beginning
 - In the middle
 - At the end





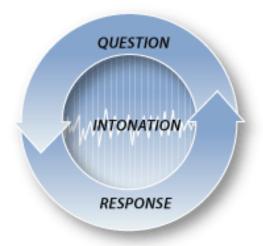
ICEPAC

- The principles of instruction are
 - Interest
 - Comprehension
 - Emphasis
 - Participation
 - Accomplishment
 - Confirmation
- They are mutually supporting
 - When a student participates, emphasis happens, generating interest enhancing comprehension which you confirm providing a sense of accomplishment to the student.



Questions

- Asking questions supports the principles of instruction
- Asking questions requires practice as you
 - must think quickly
 - be in front of the class





The Purpose of Questions

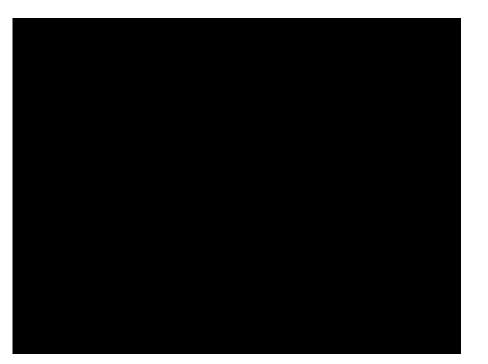
- Promote Mental Activity
- Arouse and maintain interest
- Guide thought
- Evaluate learning
- Promote problem solving
- Guide lesson progression





Lead off

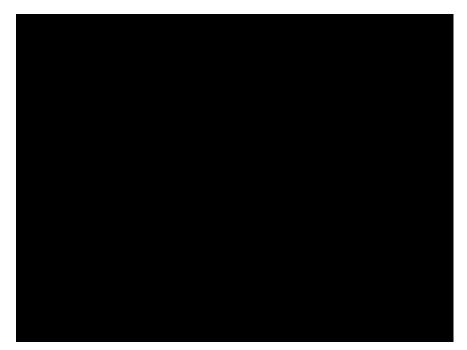
- Directed at the group at beginning of lesson or main point
 - Designed to generate discussion.





Follow up

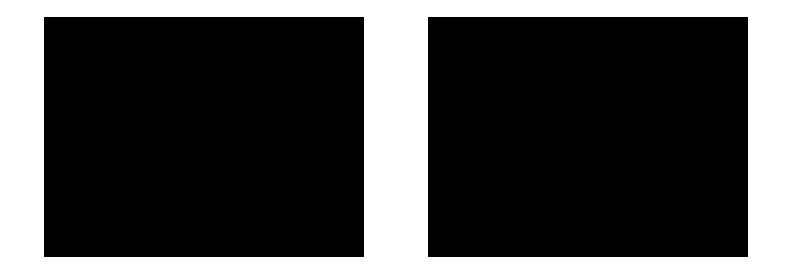
- Used to probe the student's thoughts
 - Encourages further thinking.





Direct

- Asked of a specific individual
 - Restores attention

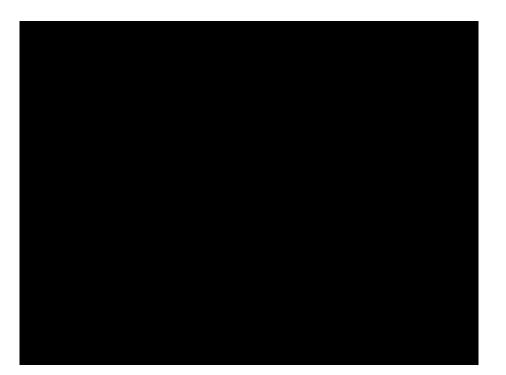


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Overhead

- Asked of the group
 - Creates interest and fear



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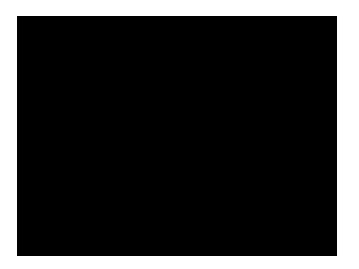
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Reverse and Relay

- Returning the student's question back at them or to others
 - Promotes discussion (but be careful)





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Qualities of good questions

- Easily understood
 - Brief yet complete with clear meaning
- Composed of Common Words
 - Avoid jargon and technical language if possible
- Thought Provoking
 - Avoid obvious answers and those whose answers can be guessed
- Related to Major Teaching Points



Procedure for Asking Questions

- Ask the question
- Pause
- Indicate the student who should answer
- Listen to the answer
- Confirm the correct response



Student Questions

- Encourage questions
- Occasionally pass a question on to other students
 - Not too often!
- Reject questions not related to the lesson
- Don't bluff
- Ensure everyone hears the question

Conclusion

- The principles of Instruction are mutually supporting concepts for managing learning
- Every lesson should contain elements of these principles
- Questions and questioning technique are a good way of achieving ICEPAC

