

Title: An Instructional Model of Problem Solving Processes in Mathematics by using Modeling, Individualized and Group Instruction for Students at the Higher Vocational Education Certificate Level

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Abstract :

We are moving into the Information Age. The Traditional educative approach of training a person for a lifetime occupation must be replaced by the concept of learning empowerment. Learning empowerment is predicated on the ability to comprehend and to communicate, changing conditions compel an urgent and complete redesign of the content of mathematics education and of the teaching of Mathematics.

We urgently need both the curriculum and the appropriate forms of Instruction that will provide students

with the opportunity to learn the practical mathematical concepts and skills that are needed for every day life . for intelligent citiZenship. for vacations an for the development of human culture in the now dawning are of information technology.

For this reason. alternative strategy of teaching are being developed. Based on Bandura's Social Cognitive theory, a number of teachers were gathered to express their thinking in solving mathematics problems out loud for the purpose of illustrating their thinking processs. This exercise has become a good model for students. As a consequence, students themselves will be given the oportunities to practice their skills in solving mathematical problems in the same way as modeled by their teachers, both individually and in groups . This process will be discussed in further details at the conference.