

**ASSESSING MATHEMATICAL THINKING AND ITS CORRELATION WITH  
PROGRAMMING AMONG PART TWO (SEMESTER JANUARY-APRIL 2007)  
COMPUTER SCIENCE STUDENTS OF UTM KELANTAN**



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## Abstract

In 2020, Malaysia's vision is to be a developed country based on Information Communication Technology (ICT). Malaysia can achieve this vision if the nation is able to produce quality and competent graduates who are capable of inventing advanced technologies like computer systems and robotics. According to researchers like Mason (1982), Henderson (2000) and Beaubouef (2002), the knowledge and competency in mathematical thinking is very important to venture into ICT world particularly in producing quality programmers. They argued that mathematics is fundamental in beginning, intermediate and advanced programming courses. In Malaysia, many employers complain that our higher learning institutions which running courses in computer science and information technology have failed to produce quality programmers. One of the main reasons highlighted by researchers that contribute to this problem is that the candidates failed to be aware of the role of mathematical thinking in programming. Therefore, this study attempts to identify the respondents' knowledge on mathematical thinking and its concepts and is there any relationship between mathematics and programming. This research adopts the quantitative approach with a population of about 40 part two computer science students selected as the respondents. The data were collected through a self administered questionnaire and were analyzed using SPSS. The result of this research shows that there are students who do not know much about mathematical thinking and its aspects. Meanwhile, majority of the respondents agreed that mathematical thinking plays a very important role in programming. Furthermore, it also shows that there is a weak relationship between

mathematics and programming. Therefore, it is suggested that further research should be conducted to identify the other contributing factors of this problem.

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