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A workshop on the use of an interactive multimedia environment for learning the basics of network diagram construction in project management.

Rogerson, Alan (ed.), The mathematics education for the future project. Proceedings of the 13th international conference 'Mathematics education in a connected world', Catania, Sicily, Italy, September 16–21, 2015. Münster: WTM-Verlag (ISBN 978-3-942197-44-1/pbk; 978-3-942197-86-1/ebook). Conference Proceedings in Mathematics Education 1, 275-277 (2015).

Summary: Constructing a Network diagram using the critical path analysis methods is an important task in planning a project systematically. For details of Project management, see [*R. Burke*, Fundamentals of project management: tools and techniques. Melbourne, Victoria: Burke Publishing (2010)] and [*J. Gido* and *J. P. Clements*, Successful project management. 5th edition. Mason, OH: South-Western Cengage Learning (2012)]. This task involves some basic and very practical mathematical modeling in determining the total project time; the earliest and latest start and finish times for activities; and the critical activities which constitute the critical path. Hence, procedures such as forward and backward passes would be necessary in these calculations. The interactive multimedia environment presented in this workshop has been based on an approach developed, tested and taught by the author for several years. The approach is structured on the three main phases of formulation, solution and interpretation. In recent years, this approach was incorporated into a multimedia environment. It was then made available as an application for students to download and use it to simulate a typical face to face lecture on their chosen device at their chosen time. The learning outcomes have demonstrated the system's effectiveness.

Classification: U50
Keywords: network diagram; interactive multimedia environment; learning by guidance; basic mathematics