ABSTRACT

We will demonstrate a new, cross-functional computerised business simulation environment, called Vision+, and discuss how it can be used for tertiary-level teaching and in the business world.

INTRODUCTION

Vision+ is a business simulation environment being developed by VALU Ltd, based at the University of Auckland. It allows small teams to act as managers of manufacturing firms, which are competing in a market. Each period the teams make a set of decisions. These decisions are then analyzed, results computed and reported back to the teams, ready for the next period’s decision. Players enter their decisions through a Windows application, which has been written specifically for the task. Reports are generated through a separate Excel-based module.

PRIMARY OBJECTIVES OF A VISION+

• To improve understanding of strategic planning and implementation.
• To improve the integration of the different functional areas: product development, marketing, distribution, production, manufacturing capacity and process, and finance.
• To develop understanding of the role of team dynamics in effective decision-making.
• To provide practice in the use of computer systems in making decisions.

A STANDARD SCENARIO

A standard scenario has been developed for use with Vision+. It has been set up to model a bicycle industry similar in size, scope and culture to that of Australia and New Zealand. We call the country in which it exists “New Australia” for the lack of a better name. It requires each team to make decisions for a specific company, which they manage. All companies start out as identical, giving them equal opportunity to explore different strategy options. They take the company on as a going concern and must leave it as a going concern.

TEACHING USES

During September and October 1994, a beta version of Vision+ was run with a class of executive MBA students using the bicycle scenario. The simulation formed part of a one-semester course on “Advanced Strategic Management”. The program’s remote access system enabled simulation decisions and results to be quickly communicated.

An initial briefing document describing the scenario was distributed a few days before the first class. Along with logistics the first class also included a presentation covering the key aspects of the scenario. The first decision was due later the same day. From then on, the decisions were due twice a week. Although this put the students under time pressure, it was necessary to have at least seven decision periods to allow the strategic nature of the scenario to unfold sufficiently.

In conjunction with the decisions, teams completed assignments analyzing their decision-making processes and their companies’ strategies. This was to encourage them to reflect on the experience as it progressed, and to improve their learning.

At the conclusion of the simulation, students received a debrief of the logic of the model underlying the simulation. This was in preparation for an exam question requiring them to prepare a Vision+ decision for a company in a similar situation to those they had faced in the simulation.

An important point is that students received marks only for their assignments and the exam. It was made very clear that no marks were allocated to their company’s performance during the simulation. This was to encourage experimentation and to de-emphasize the competitive nature of the situation.

TEACHING RESULTS

At time of writing a Masters thesis is being completed, evaluating the effectiveness of the exercise as a
learning experience for an executive MBA class. We expect to have results from this thesis to present by March. However the following are some observations that may be made at this stage:

• A high level of “buy-in” was achieved as indicated by time spent on the exercise. Students indicated that they were spending 6-10 hours a week on the simulation (in addition to class time).
• A high overall rating of the experience. Of a class of around 45 students, all except three rated the learning experience as “Very Good” or “Excellent”.

TEACHING PLANS

Although the executive MBA class rated the exercise a success, there are several ways to improve it as a learning experience. These include:

• An initial familiarization phase before starting the simulation proper.
• Running the simulation over a longer time period, reducing time pressure on individual decisions.
• Incorporating teaching modules addressing specific areas related to the simulation, such as strategy formulation, team processes, marketing, production, and finance.
• For a few periods focus on specific areas in turn, by restricting the decision set available.

WHAT DIFFERENTIATES VISION+?

Vision+ is:

• Windows-based.
• Designed to be used on a network.
• Produces Excel spreadsheets as outputs.
• Team-oriented.
• Stores its data in a standard database format, allowing flexible retrieval for experimental analysis.

BIOGRAPHIES

Pete Mazany
PhD (Management Science, Yale University), BSc, MCom(Hons) (University of Auckland).

Pete Mazany is currently a Senior Lecturer in the Management Science and Information Systems Department at the University of Auckland, New Zealand, and is Managing Director of The Veritas Accelerated Learning Unit (VALU) Ltd, a small company that specializes in facilitating the development of strategy in mid-size organizations. His research interests include the use of experiential tools (outdoor and interactive workshops, computer simulation) for strategy development and team building. He received his PhD in Operations Research from Yale University in 1987, and then worked for the Boston Consulting Group, before returning to New Zealand.

Andrew Sharpe
BSc (Hons) Computer Science, BCom (University of Auckland).

Andrew Sharpe is a full-time member of the VALU team. His work areas include the implementation of PC networks and Performance Measurement/Executive Information Systems in mid-size organizations, and the development of a computerised business simulation: Vision+.

Andrew is a graduate of both the Science and Commerce Faculties and hence is at home in both technical and commercial environments. His underlying strengths are in the area of analysis and modellings.