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USING ACCELERATED, WHOLE-OF-BRAIN LEARNING TECHNIQUES IN HIGHER EDUCATION: PRINCIPLES AND PRACTICE

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ABSTRACT

Accelerated learning is an integrative method of learning, combining both sides of the brain to strengthen a student's relationship with self, teacher, subject matter and other students, and so assists students to achieve deep, rather than surface, learning. While the approach has been used to teach school pupils and trainees in the corporate world, its use in marketing education in universities is limited, and there are no reports of studies focusing on its use in postgraduate coursework degrees. Thus this paper examines how accelerated learning could be used in teaching marketing at universities at the MBA level. Some techniques are synthesised from the literature that are particularly appropriate for the students and constraints of an MBA program in a university. We conclude that accelerated learning techniques can be used and are effective in a MBA program. Essentially, accelerated learning incorporate many, already known ideas but it is a useful comprehensive framework.

INTRODUCTION

Enrolments in Australian higher education sector have increased over the past twenty years. Indeed, at any one time more than one in three Australians are a student, with increasing numbers of them being mature age and working full- or part-time (Harker, Slade and Harker 2001). One of the problems faced by academics in Australia in the 21st century is to facilitate *deep* learning with a changing profile of students, in bigger and bigger classes. That is, designing and conducting teaching to facilitate deep learning (Light and Cox 2001), is a challenge in this context of busy, critical students, ready to brand-switch between classes and universities.

Accelerated learning is one way of achieving this deep learning. It is an integrative method of learning that combines both hemispheres of the brain to strengthen a student's relationship with self, teacher, subject matter and other students (Farmer 1996a). In this way, accelerated learning assists students to achieve *deep*, rather than *surface*, learning (Biggs 1999). The approach has been used extensively to teach school pupils and in corporate training with short, intense behavioural courses such as sales training. However, research about its use in marketing education in universities is limited (Farmer 1996b), and there are no reports of studies focusing on postgraduate coursework courses such as the Master of Business Administration (MBA). MBA courses are expected to develop knowledge and cognitive skills and so are different from those situations where accelerated learning has been established. Moreover, MBA students are all adults with some work experience and an undergraduate degree, many of whom want the knowledge for their own, different jobs, and attend classes that can range in size from about 30 to 40 students to several hundred students. As well, the teaching sessions are usually three-hour blocks every week for 12 weeks or so. It should not therefore be surprising that there are no articles about accelerated learning in the *Journal of Marketing Education*.

PRINCIPLES OF ACCELERATED LEARNING

Accelerated learning means using both hemispheres of the brain for memory and understanding to achieve deep learning. The left-brain emphasises emotions and holistic viewpoints, while the right brain is more analytical and reductionist. Accelerated learning emphasises the importance of an initial right brain visualisation that is then evaluated logically by left-brain processes. That is, the foundation for learning is the non-verbal side of our brain (Rose 1985 p. 17), but synergy is achieved when the two hemispheres work together, when they perform better than one (Rose 1985 p. 16). There is evidence of the success of accelerated learning, with increases in learning of 200 to 300 percent being reported in schools and training programs. For example, 'it produces at least 300% improvement in the speed and effectiveness of learning'; 'the accelerated learning group learned at least 2-3 times faster'; and 'students gained nearly twice as much ...' (Rose 1985 pp. 2, 118, 119). The process of accelerated learning can be modelled into four stages for each weekly topic in an MBA program.

Stage One: Settling In and Setting Out

Relaxed awareness is the preferred context for learning and occurs when the right brain is more active. Horseshoe desks or Harvard-style seminar rooms improve the physical context and ice-breaker exercises are essential to build the bridges between students that are a core of accelerated learning. Music creates the ambience for learning, *baroque* music especially for it has the 7.5 cycles per second that match the frequency of the human mind in a meditative state (Rose 1985).

Security is an important concept in accelerated learning, so in this stage lecturers show enthusiasm and confidence that students *will* learn and enjoy the classes. These suggestions enter the right brain and also drive powerful non-verbal signals; in effect, the lecturer is the 'coach' of a learning, winning team (Kiyosaki 1991 p. 143). Next, a specific objective is set for the session, along with concrete case story of this core issue and a stress on the importance of the key themes for the students (internal motivation/emotional meaning). Finally, an agenda for the week's topic is provided.

Stage Two: Associations and Structure

Stage two is filling in the 'big picture' of the week's topic, emphasising associations between the parts. Learning depends on strong encoding, and strong encoding depends to a large extent on creating strong *associations*. Strong encoding is achieved by creating concrete images of sights, feelings, sounds, taste and smell as 'hooks' for memory. The stronger the original encoding, the better the ultimate recall (Rose 1985). For example, can you remember where and when you first heard about the events of 11 September 2001? In contrast, can you remember where you were on 11 September 2000?

Therefore, lecturers must have a structure that facilitates associations. One way of achieving this is to *chunk* information in packets of no more than seven items so that association between them is possible – 'more information can be packed into larger chunks but not more chunks' (Rose 1985 p. 58). The lecturer should explain links between as many concepts as possible, for example, use patterns/diagrams and mind maps of associated ideas.

Stage Three: Involvement and Articulation

Evidence suggests that 15 minutes is the longest tolerance for a single input source if learning is required and this affects higher learning goals with passive audiences (Gibbs and Jenkins 1984), beyond that learning is lost because attention is lost. Thus only 15-20 minutes or so can be spent on the second stage of associations and structure before moving on to the third stage of accelerated learning. Involvement and articulation are keys to memory in this stage. Most people learn 20 percent of what they hear, 30 percent of what they see, and 80 percent of what they use and do (Biggs 1999 p. 78) – it is this 80 percent that is the target of stage three.

Example exercises that could be used in this stage, in both large and small classes, are:

- *small group discussion* of a question has more involvement and articulation, for example, 'What is the most important thing you learned in this session?' 'What is uppermost now in your mind?' (Biggs 1999);
- in *groups*, discuss small *cases* from a textbook, especially those with a picture; and
- discuss *videos* with a 'big picture' introduction at the beginning and end.

Examples of other exercises for this third stage are provided below.

Stage Four: Embedding and Reviewing

After a stage three exercise that is involving and requires articulation, the final stage for student learning moves what has been learnt in stages two and three from short to long term memory, by *embedding* and *reviewing*. For example, lecturers could have the main points on whiteboard/ butcher paper at each session and refer to them frequently, and have these sheets of paper from previous sessions blue-tacked on to the wall. As a general rule, spend at least three minutes of review for each 20-minute session of topic material, *immediately* and also at the start of each following session. In other words, this step is the last covered in a session and the first revisited at the start of the next session.

ACCELERATED LEARNING – SOME APPLICATIONS AND EXAMPLES

Principles of accelerated learning within an MBA course at a university were outlined above. How are these principles put into practice? Essentially, a lecture session should commence with stage four of embedding and reviewing the learning from previous sessions. This process is started with the right brain, for example, drawing a mind-map or a picture of the key concepts that we covered in the last session. Then, the lecturer leads students into stage one for the week's new topic, settling in (getting comfortable with the environment) and setting out (the big picture and core issue to be covered). Then it is time to introduce the new materials in detail in stage two. Lecturers should aim for a 15-20 minute lecture of 'content', with 20 or less *PowerPoint* slides, citing the pages in the textbook and other sources for later reference by the students. As a practical example of the accelerated learning process in this stage, a simple communications model of sender-message-receiver is used in many business courses.. Traditional, left brain teaching would reveal the model element by element, using the mouse to activate each element before it is discussed. However, an accelerated learning approach would reveal *all* the elements of the whole model (equivalent to stage one) *before* each element was discussed.

Stage two would take about 20 minutes of lecturing and follow the principles noted above, like chunking the material into no more than seven associated blocks. Then it is time for stage three of involvement and articulation, that is, the session becomes more learning-oriented rather than teaching-oriented (Cunningham 1999 p. 690). An example exercise for this stage three is the game of 'Chinese whispers'. This exercise can be used in classes of more than 200 students. Students sitting at the end of a row of seats on one side of the lecture theatre think of a short sentence to do with the material presented in stage two. They then whisper the sentence to the person next to them, the second person whispers what they have heard to the third person and so on until the message reaches the other end of the row. Students are involved, and invariably the material is explained and associations made to facilitate deep learning.

Another idea for stage three in smaller classes is a team debate that emphasises involvement and articulation and is quick and flexible. The typical debate lasts about 30 minutes, with the other team's interrogators attacking *each* speaker supported by all his/her colleagues, after they have spoken.

Some empowering principles to use in these stage three activities are:

- Have teams of 2 or more students for each role or team, to reduce stress on them and foster articulation.
- Have a strong exercise *structure already prepared* for the students, in writing; and/or a figure. An example of this structure for a debate was provided above.
- Have similar teams prepare in a separate room, to allow them to collaborate in their common goal of beating the other team, for example, all 'A' teams in a debate would prepare in one room.
- Talk with them during this preparation time, giving them ideas and 'pumping' them up like a coach by saying how good their position is and the others' is not.
- Set up the activity rooms (with chairs and a table) before the actual activity, lead the teams to the right rooms, start them off, then *disappear* for about 2 to 3 minutes, to show them that they are responsible for their own learning. Return for a short time then to add sparkle with 'hear, hear!' 'shame!' or clapping. Once they start to get involved themselves in this way, leave again for 5 minutes or so.
- Have one or two students responsible for running the activity to the times set down, for example, for the debate speeches and interrogations.
- Run a plenary debrief, with reports from each activity room.

Finally, stage four reviews what has been done in the previous stages of the topic.

Accelerated Learning and Assessment

Although the accelerated learning approaches above can be used in an MBA class, assessing the students in an accelerated learning way is far more difficult. Contrary to normal university assessment, accelerated learning emphasises collaboration between students. That is, collaboration and learning should not equal 'cheating' as it is called in universities, indeed, teachers must not be set up to be both 'educators and executioners' (Kiyosaki 1992 p. 311). These principles of accelerated learning are

difficult to apply in a university course where individual students need an individual grade to help them get an individual job in a competitive job market. Indeed, how to assess individual students in a class based on accelerated learning is a difficult task that we have not yet solved.

Student Feedback About Accelerated Learning

A focus group of all students in one MBA class of about 30 students was conducted at the end of a 13-week semester where these principles and practices were developed and trialed. The students thought that accelerated learning had *definitely* improved their learning. This finding has been confirmed in an intensive offering of the unit over eight days, where an independent evaluator confirmed its perceived effectiveness by the class. Furthermore, using the principles of accelerated learning in other classes has seen far higher attendance at lectures right throughout the semester, than before they were used.

The students in the focus group of the MBA class especially appreciated the stage two *PowerPoint* slides for associations and structure for each topic, and the exercises for stage three of involvement and articulation. The accelerated learning literature had not covered some of the stage three items used in the sessions like videos and guest lecturers from industry, but the students considered them to be important. This importance suggests that the 'articulation' in stage three can be imaginary as well as actually done in an exercise like a debate or a role play, and/or it demonstrates that the left brain 'involvement' aspect of stage three can be more powerful for learning than the right brain 'articulation' aspect.

CONCLUSION

The aim of this paper was to explore how accelerated learning could be used in teaching marketing at universities at the MBA level. This has been accomplished through the development of principles and practice in the context of the higher education sector in Australia. The mechanics of the process have been outlined, together with some actual examples and outcomes of using them. In summary, accelerated learning techniques can be used in MBA programs and do work. The techniques incorporate many already known ideas but they form a *comprehensive framework* that provides reasons for doing things. Appealing to both sides of the student brain to help memory and understanding facilitates deep learning. Orchestrating many stimulating elements in MBA classes, such as emotional, physical and mental energies, helps to 'elicit the brain's full capabilities' (Rose 1985 p. 121).

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