

A Colourful Approach To Reducing Examination Anxiety

Catherine Sutton-Brady, (E-mail: c.sutton-brady@econ.usyd.edu.au), University of Sydney, Australia

Nicole Stegemann, (E-mail: n.stegemann@uws.edu.au), University of Western Sydney, Australia

ABSTRACT

This paper examines the use of visual aids in examinations and provides interesting and innovative ideas for educators in higher education institutions. It shows a clear link between the use of colour and technology and the reduction of examination anxiety. Traditionally examinations tended to be in written format only, questions were multiple choice, short answer, essay or case study based. This paper showcases an innovative approach to examinations where videos and photos are used to supplement traditional methods. A sound theoretical foundation is provided to support the use of the innovative methods utilized. The paper not only provides information for educators on how to approach this idea but more importantly documents student feedback on the successful implementation of the concept.

INTRODUCTION

This paper documents the use of advertisements in the form of photographs and video clips from case studies in examinations. Traditionally in marketing education examinations tended to be in written format only, questions were multiple choice, short answer, essay or case study based. This paper takes an innovative approach to assessment by going beyond traditional examination methods and supplementing it with the use of visual aids in the form of photographic advertisements and video clips.

The study took place over three semesters at an Australian university. The approach was tested utilizing 2nd year undergraduate students studying marketing communications and brand and product management as part of their business/commerce degree. These subjects are compulsory subjects for the students concerned. Within the subject marketing communications a combination of different assessment methods are used; advertisement portfolio (individual task), marketing communications plan (group task) and final examination, additionally in Brand and Product management the assessment includes case study analysis (individual task), marketing plan (group task) and final examination. In both subjects all these assessment tasks were designed in line with Bloom's taxonomy of cognitive learning (Bloom 1956).

The paper begins with an investigation of the existing literature on assessment, most specifically examinations. It also looks at the use of technology in the classroom. Building on the available theory the innovative approach to examination is presented, outlining exactly how the approach was developed and implemented. Finally the results of the approach are discussed in light of the students' comments and feedback.

TRADITIONAL ASSESSMENT METHODS

One of the greatest challenges facing any teacher is how to effectively assess the learning outcomes of their subject. The realm of testing has, throughout the years in business schools and departments, encompassed many different forms of testing. Traditionally assessment approaches have included multiple choice tests, short answer tests, essay tests, cases, projects, presentations and simulations (Hartley et al 2002). Many academics have used combinations of these approaches in an attempt to assess the learning outcomes most effectively. Many researchers have examined the relative advantages and disadvantages of the various methods (Bacon 2003). Others have endeavored to strive for innovation in their assessment approaches in an attempt to successfully enhance student learning and more fully engage students in the learning experience. Pearce and Sutton-Brady (2003) successfully developed an innovative approach to assessment with the use of drama in their International Marketing subject. They found that students who became immersed in the learning experience gained a greater understanding of the subject matter while having a more enjoyable learning experience.

There has been much criticism of various assessment approaches and on the other hand support for other assessment forms. Indeed literature can be found for example to support multiple choice tests (Bacon 2003) and likewise literature which puts the case for the need for more in-depth and differing approaches. (Krishan and Porter 1998). It is not within the realm of this paper to debate the pros and cons of the various approaches rather to take one traditional approach and using innovative methods make it a more effective assessment method.

The traditional method we are going to investigate is the short answer examination. In a standard short examination students are given a series of questions to test their knowledge and understanding of the subject matter. These questions are usually in written form and printed on standard paper in black and white. Short answer examinations have long been preferred by academics since there is a perception that multiple choice testing does not give a deep enough assessment of learning outcomes (Bacon 2003). Additionally short answer examinations are felt to be more in line with Bloom's taxonomy of cognitive learning (Bloom 1956). Assessment methods used in this subject were designed in line with the six levels of the taxonomy Level 1, knowledge-remembering facts, terms principles, definitions, etc.; Level 2, comprehension- translating ideas from one context to another, interpreting, extrapolating etc.; Level 3, application – using rules and principles in certain situations; Level 4, analysis – breaking down and making clear the nature of components and the relationship between them; Level 5, synthesis – arranging and assembling the elements to develop a new statement, plan or conclusion; Level 6, evaluation- assessing the value of methods or approaches regarding internal accuracy and consistency.

Clearly our key aim is that the students gain knowledge, our examination is one way of testing the level of knowledge they have gained, but also it goes beyond that in ensuring comprehension, application and synthesis. Many researchers have discussed the relevancy of learning outcomes (Kennedy et al 2001; Baker et al 2003) and there has been much discussion in the literature on reality based learning and how that can encourage relevancy in teaching and assessment (Smith and Van Doren 2004). Smith and Van Doren (2004) in particular posit that the learning techniques must maximize the student learning, it is our belief that this must be taken one step further and that the assessment approach should maximize the evaluation of the learning outcomes. In order to achieve these objectives the use of new technology in teaching and learning is required.

USE OF TECHNOLOGY IN TEACHING AND LEARNING

Much research has been undertaken into the use of technology in the classroom and learning environment (Ueltschy 2001; Clarke et al 2001; Hadwin et al 2005). Students in our classrooms nowadays have an expectation of technology use. We may have come from a basic level of using PowerPoint presentations to the use of interactive software, but over time students have in a sense come to expect that their lecturers are technologically proficient. In any given marketing class a lecturer will use a myriad of technological tools to enhance the learning experience. These can include PowerPoint presentations, web based discussion boards and chat rooms, provision of class resources on web platforms such as Blackboard or WebCT, video, DVDs, CDs used to present relevant cases, advertisements movies and music. Overall our use of technology has increased significantly over the years. Indeed Smart et al 1999 highlighted the fact that students are demanding more visually stimulating material and technology based tools in class to maintain interest and concentration. Clarke et al 2001 also stated that if technology is used effectively it can open doors that would otherwise have not been opened and learning will definitely be enhanced by the experience. They also say that one of the major challenges in the use of technology is discovering innovative ways that it can be applied in the classroom. Their overriding conclusion is that technology used to its fullest extent is one of the most powerful tools educators have discovered.

Interestingly though while a considerable amount of research can be found on the use of technology in the classroom and its ability to enhance the learning experience of students, there is a dearth of research on the use of technology in assessment most specifically in examinations. There is some research available on the use of interactive technology in multiple choice or true/false tests but no studies could be found addressing the use of technology and visual aids in short answer or essay examinations. Ueltschy (2001) in her study of interactive technology in examinations did have some very interesting findings which are seen as having relevance for this study. Her study involved the use of wireless keypads in a classroom environment, while they were used on an ongoing basis one of the main aims was their use in true/false examinations. Ueltschy found that students' attention was maximized by the visual and physical stimuli; it increased comprehension levels and increased the students' enjoyment of learning. It is clear from the literature that there is an important role for technology not just in the classroom but also in testing. One of the issues to come out of all this is that students' enjoyment is

enhanced; it is felt that this may also have a positive impact on their examination performance and anxiety levels which often tend to inhibit performance.

EXAMINATION ANXIETY

There is a clear body of work which has highlighted the issue of examination anxiety and its impact on examination performance (Martin 1997; Cassaday et al 2002; Roney et al 2003). As educators we must be conscious of the impact of examination anxiety on our students and find ways to minimize the anxiety. This is an important issue because the idea behind testing and assessing students is not to catch them out but rather to evaluate whether they have achieved the learning outcomes we initially set for them in this subject. By providing a relaxing environment we are giving them the best chance of showing us what they have learnt over the course of the subject.

Cassada et al (2002) in their study note that test performance can be impaired by raised anxiety levels but posit that providing a relaxed environment can actually not just reduce anxiety but also improve retrieval cues. Their research is based on context dependent memory “where material is best remembered if the circumstances of learning and retrieval are the same. Thus the presence of (at least some of) the cues that were around at encoding provides an effective reminder”.

Considering the findings in the literature to date we felt encouraged to redesign our final examination format. It was felt that by incorporating the issues highlighted in the literature we could develop an examination which not only allowed students to showcase their learning but to do so in a relaxing environment, thereby reducing stress and anxiety and allowing for increased performance overall. The additional benefit of student interest and enthusiasm was also considered when redesigning the examination.

RESEARCH QUESTION

Given that we made a decision to redesign the assessment in light of the literature the following research questions came to mind. Will more interesting and student adequate assessment methods improve students’ understanding of the context and aim of the exam questions, will it reduce stress and anxiety symptoms, and ultimately will it produce better learning outcomes and therefore examination results?

OUR SPECIFIC OBJECTIVES WERE:

Produce clearer examination questions and facilitate students’ understanding of the questions. In order to give meaning to and or make sense of the examination questions, students have to be active knowers who can participate in the construction of their own knowledge (Pearce & Sutton-Brady 2003). In order to achieve a better understanding of examination questions, the questions are provided through different contexts and application of appropriate styles, as individuals learn and understand best and put situations into context if they can see, listen, and read about it (Dacko 2001).

Make it more interesting and relate to students’ total sum of experiences. Often examination questions are set from the examiners’ point-of-view, which relates to the examiners’ total sum of experiences and interests, and often does not overlap with the student ones. In order to ensure that students can relate to context and topic of the examination questions, a students’ perspective has to be applied to the questions without compromising examination quality and expectations.

Reduce students’ examination anxiety. The demands and expectations of academics and examiners have increased due to improved ways of teaching and learning methods, which often puts students under increased stress and anxiety situations. New examination approaches have to be developed in order to reduce these symptoms and to create a better examination environment.

PROPOSED INNOVATION IN ASSESSMENT

As it has been shown that students positively react to assessment adaptations (Nelson 2000), we have road-tested different ways to improve the ways in which students are assessed in written examinations. Our study spanned two semesters of the subject Marketing Communications and one semester of Brand and Product Management at undergraduate level. These subjects are semester long subjects and by carrying out the study over

three semesters and two subjects we were able to refine our innovative approach and improve it in light of student feedback. Our objectives were to facilitate students' understanding of examination questions through the use of different contexts, provide an examination context that relates to the students total sum of experiences and interests, and reduce stress and anxiety conditions through improved examination conditions.

IMPLEMENTATION


In the first two semesters, we used advertisements taken from a variety of sources that familiar to our undergraduate students. The sources, which include magazines, leaflets, websites, etc., were chosen on the basis of the ones students used and brought to class. Additionally, the marketing communication portfolios that students were required to submit at part of their assessment were used as a further point of reference. These portfolios require students to collect different types of advertising exhibits throughout the semester. Additionally students are also required to bring advertising material to class on regular occasions. For the examination questions the same sources were used, however, different advertisements, which had not been discussed during the semester were chosen.


For the purposes of the examination copies of the advertisements were included below the corresponding questions so that students could read and understand the question by simultaneously referring and incorporating the advertisement into their thinking process. Often students were presented with a variety of advertisements from an advertising campaign for individual questions in order to facilitate better understanding of the design of the campaign. This was considered important since advertising campaigns are not always consistently designed. As differences and inconsistencies not only exist in the way the individual advertisements have been put into context and layout, but also the use of colour, shades and lights, it is crucial that students are able to see and analyse these differences.

As colour, different shades, and positioning of advertisements is crucial to fully understand advertisements and their power of persuasion, the advertisements were shown as a PowerPoint presentation in loop mode on the screen. The display time for each advertisement was set at 10 seconds.

During the semester, students were informed of the examination format and the types of questions as well as our expectations, but obviously not the topics. Before the beginning of the official examination time, students were given 10 minutes reading time so that they could make themselves familiar with the context and questions through brief explanations of the context of each question. While referring to the questions, the students were introduced to colour advertisements shown on the screen. (See ACTIV example below) This process was chosen in order to make students more comfortable with the examination environment, and to take their minds off any stress and anxiety thoughts. This has been confirmed by literature clearly showing that memory retrieval is improved if the context to the examination is similar to the learning context (Cassaday 2002). During the examination students could constantly refer to and analyse the advertisements in order to get a better understanding of the marketers intended advertising message.

In the second semester, we kept the same format, however, we added a couple of television commercials to the examination. Students had to answer a question relating to the 'Integrated Marketing Communications' concept, and therefore, it was crucial to present the company's full marketing campaign. The print advertisements (See Domestos example below) were included as copies in the exam, and also shown on the screen in loop mode. The television commercial was shown to them at the beginning of the exam and repeated once they had the opportunity to read the examination questions.

	<p>QUESTION</p> <p>Accordingly to the integrated model of persuasion, companies generally have different options to persuade consumers, and influence their attitudes and hopefully their behaviour.</p> <p>Distinguish between message arguments and peripheral cues as fundamental determinants of persuasion, explain in what way they can persuade consumers.</p> <p>With respect to the ACTIV advertisement, which route did this company choose to persuade consumers. Explain your conclusions.</p>
---	---

	<p>QUESTION</p> <p>Discuss the five components of the MECCAS (Means-End Conceptualisation of Components for Advertising Strategy) approach to the creation of advertising messages.</p> <p>Describe the 'Domestos' advertisement in terms of the five components of the MECCAS model.</p>
--	--

In the third semester, using the subject brand and Product Management we added a case study to the examination. The case study was presented to the students as an actual video clip, a written case study and a related press release. Students were informed and introduced to the new format, throughout the semester, by showing them and discussing with them case studies and video clips in tutorial sessions. Additionally their individual assessment task for this subject was a case study analysis, which meant they should have been very comfortable and familiar with the process of case study analysis. Before the start of the exam, we again explained the structure of the exam, which started with showing the video clip followed by a 10 minute reading period. Afterwards, we showed the video clip for a second time, this allowed students the opportunity to familiarise themselves with the written material, and the examination questions. We were conscious of not overwhelming the students by showing too many different types of visual and audio items. Again, students were asked to apply the theory they had learnt.

PART D - CASE STUDY - Value 20 marks

You will be shown a video clip, and you have the written information below. Your response to this case study question, should relate to both forms of information.

Case study “Branding Australia”

Written by N. Stegemann

Copyright McGraw-Hill 2004.

Understanding consumers, not only requires knowing them with respect to their demographics, but also analysing why and how they make purchase decisions - about products and services - many of which are branded. This case study shows how the tourism industry presented Australia as a branded destination, and so influenced consumer behaviour through advertising campaigns positioning Australia as a unique holiday destination.

The Australian Tourist Commission (ATC) is a statutory body, responsible for encouraging tourism through promotion to likely target markets. For many years it has been successfully selling Australia as a unique holiday destination to tourists by reinforcing Australian images and icons.

In 1984, the ATC introduced an advertising campaign featuring the actor Paul Hogan (Crocodile Dundee) as a spokesperson endorsing Australia as a holiday destination for Americans. Paul Hogan invites Americans to have a holiday in the "land of wonder" using popular Australian images of the great outdoors with sunshine, beaches, mountains and farms; with activities such as surfing, snorkelling and bushwalking; and icons such as the koala and kangaroo. The Sydney Opera House and the glamour of the cities are further highlights tourist know of and don't want to miss, even if they don't think that they are the "true Australia". The ads also attempt to build up a personal relationship with Australia and play on Australian expressions such as "say G'day".

Through the advertising campaigns, Australia has become a brand with which tourists have built an emotional relationship. Tourists come to Australia and look for the experience, the essence of Australia. For them, it is about the experience - they want something that is authentic - they want to learn about their idea of Australia and get the "real deal".

Tourism has become one of Australia's biggest industries, and not only businesses in tourism have jumped on the bandwagon to brand Australia. Rural areas, providing some of the most marketable images of Australia, invite tourists to learn about the Australian life. For example, farmers offer tourists the experience a staying at a farm, such as a sheep station, where they can become involved in authentic rural activities, such as shearing and mustering. Tourists become part of farm life, even if it is just for one or two days.

Press release from 15 May 2004 - The Australian

Copyright 2004 News Ltd. All Rights Reserved

TWENTY years after Paul Hogan first threw a shrimp on the barbie, the world will be invited to holiday Down Under by celebrities including Delta Goodrem, Richie Benaud, Les Murray and Jonathon Coleman in a \$360million global sales pitch to be launched next week.

The centrepiece of the Australian Tourist Commission marketing campaign, its most expensive ever, is not the famous faces but Australia as a sensory experience.

Each commercial has its star spruiking their vision of Australia in a variety of settings, such as rainforests, deserts and shops.

The slogan for the international campaign will be "Australia - a different light", a reference to both seeing the country in a different way and an acknowledgement of the unique quality of our light.

Australians will also get to see the ads, with the bulk of them to be aired locally.

The Benaud advertisement shows the former Australian cricket captain (and umpire) walking through a series of settings and making his trademark comment, "marvellous". Goodrem sings in her commercial, while Coleman walks through a vineyard, enjoys a wine in the desert and, wearing a tuxedo, buys a pie from Harry's Cafe de Wheels in Sydney.

It will be Australia's biggest tourism rebranding exercise in almost a decade.

The new campaign will be unveiled by federal Tourism Minister Joe Hockey on Tuesday in Sydney and flows from the Government's industry White Paper released late last year, which boosted international and domestic funding for marketing. Tourism to Australia has been hit hard in recent years by terrorism and SARS.

International visitors dropped by more than 100,000 in 2003 but preliminary Bureau of Statistics released yesterday confirmed a rebound, with numbers up 24 per cent in April compared with the same time last year.

At the same time, domestic tourism has remained flat.

The \$360million, 4 1/2-year campaign will be shown internationally first in Britain, Singapore and Italy and will cover television, cinema, outdoor and print.

Your Tasks

- a. You will be shown a video clip and you have some written information on the Australian Tourist Commission's (ATC's) "Branding Australia" program, which has been used for the past 20 years.

Provide an analysis of the case study "Branding Australia" paying particular attention to analyse "Branding Australia" as an example of an overall marketing strategy.

Specific attention should be given to market definition, market segmentation, selection of target market, product & brand positioning and the marketing mix.

- b. The press release from 15 May 2004 indicates that the ATC is once again repositioning the Australian Brand. Explain why you think the new branding strategy has become necessary, and whether or not you think it will be successful.

As much as possible your analysis (in both parts a. and b.) should illustrate your knowledge of the theory of Brand and Product Management.

FINDINGS

To assess the success of our innovative approach we informally asked students for feedback. We felt since this was a new approach it was inappropriate in terms of the students for us to be seen to be researching its validity and success. Students were told before the examination began that we would welcome any feedback on this approach. They were given the opportunity to submit anonymous comments either in writing or on our Blackboard site. We were overwhelmed with feedback, most of which was extremely positive, there was however some negative feedback, which allowed us to refine the process. The following discussion will highlight the feedback specifically in relation to our original objectives.

Throughout the semester, during the process of explaining the format and structure of the examination including the examination questions, students were positively engaged in the examination process. This process gave students a sense of ownership of the assessment in this subject. It also helped them to better understand the exam questions. Students' comments included:

"It was great that we knew exactly what the exam would be like"

"the objectives were really clear, knew exactly what was expected in the exam"

"This was an awesome exam, it's the first time a lecturer let us help decide what would go in an exam"

"No surprises here it was great"

"for once didn't feel like the lecturer was trying to catch us, really got to show what I knew"

"only way this could have been better was if we saw the ads before the exam"

In the examination context while the process required the students' full attention it allowed the creation of enough distraction with respect to their concerns and fears, which resulted in reduction of the common stress and anxiety conditions. The literature clearly states that providing a relaxing environment reduces exam anxiety (Cassaday et al 2002). Students' comments in support of this:

"this didn't feel like an exam"

"watching the ads was really relaxing, made me forget about the exam in a way, weird isn't it?"

"this was the best exam I ever had to do, didn't feel like an exam"

"first time I enjoyed an exam"

By using examples that students were likely to be familiar with this added to the relaxation aspect in the examination. In addition, a lot of the theory has referred to the idea of context dependant memory. The idea is that students are more likely to remember what they have learnt in an exam context if it is the same context in which they first learnt the theory. Throughout the semester in both subjects students were shown advertisements and video clips to reinforce the theory. In the examination the questions were asked in the context of the advertisements and the video clips. So as well as using materials they would be familiar with we also used a similar context allowing students to more easily retrieve what they had learnt from memory. Students' feedback which relates to this aspect:

"the exam was good because we had done a lot of stuff like this in class beforehand"

"it just felt like being in a tutorial answering questions"

"it was easy to remember what I learnt because it was just like class"

As well as eliciting student feedback we also compared the exam results with previous semesters and found in the three cases an improvement of over 10% on the exam component of assessment. It is clear from this alone that learning outcomes have been improved for students. This improvement supports the idea that the use of technology can enhance learning outcomes. Coupled with a more relaxing and familiar environment the use of technology improves overall exam performance and increases learning through enjoyment and engagement.

We did have some feedback that could be considered negative. Some students in particular commented on the looping of the advertisements. Their complaint was that they did not have enough time to look at the colour version. In order to overcome this problem, we plan to put up large poster size versions of the colour copies around the exam venues.

CONCLUSIONS

Our research has shown that the use of technology can clearly facilitate learning and positively impact on the assessment outcome. Using technology in a new and innovative manner in assessment not only elicits positive feedback from students but by comparing their exams results we have also seen the positive impact on performance.

Caution must be exercised though, because while students are clearly open to adaptation in assessment and examinations, it must be introduced to them in a thorough and logical way. Students must be made to feel comfortable about the change and see the benefits for them otherwise they can tend to be wary. However, our study has shown that clear concise instructions throughout the semester as well as additional reading and viewing time in the examinations can allay a lot of fears. It shows that positively engaging them in the change process gives them a sense of ownership and they feel their opinions are valued. This engagement also has a positive impact on their learning outcomes. As with all assessment methods they must have a very good idea of expectations and objectives of the assessment task.

Using technology in the exam not only provided a more relaxing environment but in terms of retrieval cues allowed them to be in a context they were familiar with. It was therefore easier for them to remember the theory they had learnt since the familiarity not only relaxed them but their learning context had been similar. This is confirmed by the context memory dependant theory, which tells us that replicating the context, in which they learnt, is an important issue in enhancing memory retrieval.

Overall this paper has showcased a new and innovative approach to examinations. It has shown how it was successfully implemented and while the informal feedback may not be statistically significant or valid it does give a very good indication of how the approach was received by students. Future research is planned to test the innovation in a more structured and formal way but this paper in its own right has made a valuable contribution to marketing education theory and a previously unresearched area of assessment.

REFERENCES

1. Bacon, D.R. (2003) Assessing learning outcomes: A comparison of multiple-choice and short-answer questions in a marketing context *Journal of Marketing Education*, Vol. 25, No. 1 p.31-36.
2. Bloom, B.S. (Ed.) (1956) *Taxonomy of Educational Objectives: cognitive domain*, MacKay, New York.

3. Cassaday, H.J., Bloomfield, R.E., and Hayward, N. (2002) Relaxed conditions can provide memory cues in both undergraduate and primary school children, *British Journal of Educational Psychology*, Vol. 72, p. 513-547.
4. Clarke III, I., Flaherty, T., and Mottner, S. (2001) Student perceptions of educational technology tools *Journal of Marketing Education*, Vol. 23, No. 3, p.169-177.
5. Dacko, S.G. (2001) Narrowing skill development gaps in marketing and MBA programs: The role of innovative technologies for distance learning *Journal of Marketing Education*, Vol. 23, No. 3 p.228-239.
6. Hadwin, A.F., Winne, P.H., and Nesbit, J.C. (2005) Roles for software technologies in advancing research and theory in educational psychology, *British Journal of Educational Psychology*, Vol. 75, p. 1-24.
7. Kennedy, E.J., Lawton, L., and Walker, E. (2001) The case for using live cases: Shifting the paradigm in marketing Education *Journal of Marketing Education*, Vol. 23, No. 2 p.145-151.
8. Martin, M. (1997) Emotional and cognitive effects of examination proximity in female and male students *Oxford Review of Education*, Vol. 23, No. 4.
9. Menzel Baker, S., Schultz, S., and Bennion, M. (2003) What do they know? Integrating the core concept of customer value into the undergraduate marketing curriculum and its assessment *Journal of Marketing Education*, Vol. 25, No. 1 p.79-89.
10. Nelson, J. (2000) Student Preferences for adaptations in Classroom testing, Remedial & Special Education 21(January - February) p. 41-52.
11. Pearce, G. and Sutton-Brady, C. (2003) International Business Theatre (IBT): An alternative assessment method for enhancing student learning in *International Marketing Assessment & Evaluation in Higher Education*, Vol. 28, No.1, 2003 pp.3-15
12. Roney, S.D. and Woods, D.R. (2003) Ideas to minimize exam anxiety *Journal of Engineering Education* Vol. 92, No. 3.
13. Smart, D.T., Kelley, C. A., and Conant, J. S. (1999) Marketing education in the year 2000: Changes observed and challenges anticipated, *Journal of Marketing Education*, Vol. 21, No. 3 p.206-216.
14. Smith, L.W. and Van Doren, D.C. (2004) The reality-based learning method: A simple method for keeping teaching activities relevant and effective *Journal of Marketing Education*, Vol. 26, No. 1 p. 66-74.
15. Ueltschy, L.C. (2001) An exploratory study of integrating interactive technology into the marketing curriculum *Journal of Marketing Education*, Vol. 23, No. 1 p.63-72.

NOTES

NOTES