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Evidence-Based Administration in the Teaching of Business Ethics

Julio García del Junco
University of Sevilla, Spain

Juan García Álvarez de Perea
University Pablo de Olavide, Spain

Abstract. The literature has recognised the fundamental role of teaching business ethics to students earning business administration degrees, but it is hard to find a methodology for teaching this topic successfully. We propose a new management tool—evidence-based administration—for the study of business ethics. The method developed on the basis of this management tool provides a practical vision to the students, motivates them, and favours the development of multiple facets of their education.

Keywords: evidence based administration, information and communications technology, business ethics teaching.

1. Introduction

Nowadays, students working toward a business administration or management degree must acquire decision-making skills that exploit the resources of information and communications technology (ICT). This study describes a method—*evidence-based administration* (EBA)—that adapts teaching to ICT, exploits some of the resources that these technologies offer, and facilitates student adaptation to a rapidly changing environment. Our description of the method is based on classroom use from 1999 to 2003 and involves students in the final year of their business administration or management degree, or in postgraduate courses. We believe that the results obtained after implementing EBA during these four years provide sufficient data and experience to develop the method further.

There are a variety of views as to what the objectives of teaching business ethics should be (Felton and Sims 2005, Bampton and Maclagan 2005). Herndon (1996) and Richards et al. (2002) advocate formulating business ethics objectives that are rooted in the components of ethical decision-making models. We have found that EBA is a very useful method for applying theory to reality, in accord with Acebedo's (2001) approach, and for developing critical thought and the skills required for decision-making. EBA permits the generation of knowledge

through strong student involvement, which facilitates the solving of problems presented in case studies. Students who use the method experientially assimilate models to follow in the future. The method permits autodidactic learning under the educator's guidance. The students discover; the educator does not impose upon them. EBA is a generator of knowledge because the method creates synergies among the three types of learning that it promotes—feedback learning, based on information; cognitive learning, based on mental models; and social learning, generated by interacting with others and combining thought and concept.

One of the current model's contributions is its application to an important area of study—business ethics. Callan (1992) points out that a large number of analyses predict, on the basis of socio-demographic factors and job characteristics, the ethical values of employees and specific training needs in ethics. Carlson and Burke (1998), in turn, highlight the serious disagreements that exist with respect to when and how to teach ethics in business. But there is a broad consensus, supported by empirical evidence, that courses and training modules should include ethics in their syllabi.

A common premise for teaching methods in ethics is that personal values are the same, regardless of the cultural and geographic context in which they develop; the context merely helps us to understand the details surrounding ethical behaviour (Spence 2000). The core of the problem lies in the following question (Sims 2002): how can business ethics be taught to business students so that effective learning takes place? Since the students are working professionally in business, they should learn to recognise the ethical nature of the various situations they encounter—what Shaub et al. (1993) label "ethical sensitivity". The need for research work along this line, apart from plain common sense, is also evident in Borkowski and Ugras' (1998) complex meta-analytical technique, which reveals the large gaps that exist in the literature on the question.

The work described here assumes that students participate in ethical decisions by becoming involved in the process.

2. Literature Review

The literature describes many methods for teaching business ethics, reflecting considerable research effort. For example, Fraederich and Guerts (1990) and Rice (1994) list various methods for teaching ethics by incorporating role play. Garaventa (1998) proposes the games method. Adams et al. (1998) present "role set analysis", a technique to encourage students to deal with ethical questions that occur early in their career. Polansky (1998) uses a process approach to incorporate ethics into student research projects. Berger and Pratt (1998) describe a method based on films. Greenwood (2000) uses the fiction narrative combined with the traditional case study. Coate and Mitschow (2002), making use of the New Testament, explain how parables can provide a guide to ethical business practices. Buerk (2000) integrates ethics into applied computer science

technology. McWilliams and Nahavandi (2006) propose the use of live cases (real situations occurring at the time) as a dynamic and powerful method for teaching the subject. Finally, Watson's (2003) method examines the values present in personal stories, using many examples of admirable actions.

From a critical perspective, researchers have condemned classical teaching methods as theoretical and unworkable (Gunz and McCutcheon 1998). Watson (2003) questions the theoretical teaching of ethics, and whether the analysis of case studies and discussion of ethical dilemmas can lead to the development of capabilities. He believes that this method no longer provides the desired results in the context of the new information society.

Given all this, the search for methods that integrate teaching into the information and knowledge society is a highly useful challenge in the field of ethics. Business education in this new context requires the development of methods based on experiences, practice, and experiments, as well as a new integration of business ethics into syllabi (Park 1998). We feel that the teaching process in business schools and universities needs renovating. The renovation must help students fill the gaps arising between theory and practice by using the new information and communications technologies. Along the same line, many authors stress the need for teaching that focuses on situations from real life (see Furman 1990, Schaupp and Lane 1992, among others) and for a review of current methods in light of the new needs (Sims 2002).

3. Information and Communication Technology and Education

The influence of ICT in society is undeniable, because the technologies are modifying the structure of our interests, the character of our symbols, the nature of community, and the space in which our thinking develops (Postman 1994). As a logical consequence, the academic and professional literatures are paying particular attention to the use of these technologies in education and training (Benbunan-Fich 2002), stressing their frequent application in universities, business schools, and post-graduate courses. This increasing interest is motivated primarily by the contribution of the new technologies to facilitating and enriching the teaching-learning process (Benbunan-Fich, 2002), which favours the creation of new educational environments (Webber 2003, Wulf 2003).

The characteristics of these new technologies, such as immateriality, interactivity, speed, influence on the processes, automation, and diversity, generate a large number of changes that pose significant challenges to the field of education. The 1990s saw a number of phenomena that boosted ICT, such as the creation of simpler operating environments, generalised access to the new technologies, and the creation of information highways (AlHashim et al. 2003).

ICT is provoking significant changes in the field of education. These technologies help educators focus more on imparting skills to students, thus displacing the master class (Katz 2003). They permit a more individualised style of teaching, which favours the integration of less advanced students. The student

becomes an active participant in the instruction process, and evaluation systems can focus more on each student's progress and effort (Pan, 2003). These technologies also facilitate working in groups, which encourages cooperation, enriches participants, and permits the verbal and visual integration of the ideas of the different members (Markham et al. 2003).

Benbunan-Fich (2002) notes that these new technologies modify the roles of both educator and student in the teaching-learning process. The former abandons the role of mere transmitter of information and acquires other roles, such as resource provider, organiser, tutor, investigator, or facilitator, while the latter becomes an active information processor and problem solver.

As mentioned above, these changes pose important challenges, which do not derive from ICT itself, but rather from the way these technologies are used (Wulf 2003). Quality university teaching must contemplate the new technologies, because they have the potential to notably improve teaching-learning processes and facilitate effective learning of very diverse material (Hill 2002). The ultimate goal of ICT in education is to bridge the gap that frequently exists between knowledge acquired in the classroom and its application (Simpson 2002).

Apart from the above-mentioned aspects, another important challenge is that ICT requires those intervening in the teaching-learning process to change their culture and mentality. This change not only implies adopting the methodology, but also making an enormous effort, on the part of both educator and student. Both the academic and business worlds are adapting to constant innovations, putting new ways of solving problems into practice, and experiencing new cause-effect relations, while firms are refining new forms of analysis for their various functional areas (Guan et al., 2003). The knowledge and skills of managers and educators can consequently become outdated very quickly. Indeed, employees often possess knowledge and skills that are not only useless to their firm, but that can even become harmful. These employees must then "unlearn" such knowledge and skills. Both educators and managers must be aware that knowledge deteriorates over time, with a consequent deterioration in performance (Prahalad and Bettis 1986).

In this context, it is important that decision-makers deal with innovation and emergent problems more easily and with greater chance of success, which will in turn have positive implications for their firm's performance in the market (Tippins and Sohi 2003). In view of this, we consider EBA to be an educational method that familiarises students with the new management systems based on the new technologies. Use of EBA helps achieve the following objectives (Garcia del Junco et al. 2000, 2004):

- Improving the use of ICT in organisations.
- Using a management tool that, from its roots, recognizes the need to adapt to a new conception of the business environment.

- Exploiting the simplification that the information and communication tools bring to the business world.

- Providing a foundation for the adaptation of training to any type of organisation that uses the new telecommunications resources.

- Creating and favouring a receiver-compiler core of the organisation's main information needs, and then proceeding to structure them and offer easily accessible solutions.

- Updating the main management theories, techniques, and data in specific fields, offering a practical, real, and viable perspective, a process that will require filtering by external agents.

- Offering a management and training tool to organisations with fewer resources, such as small and medium-sized enterprises and non-profit organisations, which lack the resources and information available to large companies.

Specifically, EBA motivates the search for information through the acquisition of knowledge in the area of telematics, databases, and the use of the new technologies. The system also forces students to practise using these new technologies with a basic level of knowledge, thus increasing their familiarity with them, familiarity that will sooner or later be necessary in a global economy (Raymond 2003).

EBA therefore favours the use of ICT as decision-making tools, and it facilitates effective decision-making through the management of technology (communication channels), computing (hardware and software), and information (storage and digitalised processes). In short, the use of technology, computing, and communication improves decision-making. Decision-makers evaluate various options, and the system ensures that the decisions taken are more likely to be satisfactory (Tapscott and Caston 1995).

4. Evidence-Based Administration, Evidence-Based Management, and Evidence-Based Education

EBA (Garcia del Junco and Casanueva 2000) provides methodological support for decision-making that can be defined as the conscientious, explicit, and judicious use of current best evidence in making decisions. The method will be justified and explained below.

Evidence-based management refers to managerial decisions and organizational practices informed by the best available scientific evidence

(Pfeffer and Sutton 2006, 2006b). In their seminal book *Hard Facts, Dangerous Half-Truths and Total Nonsense: Profiting From Evidence-Based Management*, they made a "call for evidence-based management, a case for its potential impact, and a guide on how to use it." However, the movement is still far from being consolidated. To the extent that academics can begin to develop research findings that focus on implementation and help to improve actual organizational decisions, their research is more likely to have powerful effects on managerial perceptions of its value (Cascio 2007). This kind of evidence-based management research will successfully reach managers.

As Thomas and Pring (2004) state, the movement toward *evidence-based education* (EBE) remains quite controversial. Hargreaves (1996) started the debate in the United Kingdom with a lecture exploring the possibilities of evidence-based education, which was subsequently contested by Hammersley (1997), with a rejoinder by Hargreaves (1997). Hammersley's main critique questions the possibility of finding evidence for "what works" in teaching, in the sense of something that furnishes proof and is necessary to measure the outcome of the teaching activity in question, as well as the possibility of procedures that establish an evidential relation between measured outcomes and the teaching activity. Davies (1999) is even more permissive with respect to the variety of procedures and hence voices a broader conception of educational outcomes.

Thomas and Pring (2004) compile some arguments for and against the EBE movement. Major concerns arise about the validity of adopting a methodology used in medicine to educational policy, the transferability of research findings to practice, and how evidence is defined and chosen. Latter (2004) argues that the movement towards "evidence-based policy and practice" oversimplifies complicated problems and is being used to justify governmental intrusion in the form of legislation that mandates scientific method. A special issue of *Learning and Education* (Ashkanasy 2007) goes through the pros and cons of evidence-based management and its application to learning. Managers and management educators make limited use of the behavioural science evidence base that is relevant to effective organizational practice (Pfeffer and Sutton 2007, Rousseau and McCarthy 2007). If management education is centered on evidence, managerial decision making may improve, and better organizational outcomes may be obtained. EBM can reduce the use of unsuccessful management practices while making effective approaches more extensive (Rousseau and McCarthy 2007).

In what may be the main contribution to the EBE dialog, Rousseau and McCarthy (2007) explain what ought to be the principles of evidence-based teaching.

5. Evidence-Based Administration as a Process

The definition of EBA used here was inspired by the seminal work of Sackett (1995, 1996, 1997), creator of *evidence-based medicine*, which gave rise to EBA.

EBA can be defined as *the conscientious, explicit, and judicious use of current best evidence*[1] *in making decisions. The method involves integrating the best available evidence from valid and reliable information into management activity.* EBA is consequently a methodological tool for decision making that helps ensure that the decision process complies as far as possible with the Law of Proportionality of administration theory (i.e, balance between efficacy and efficiency).

But why transfer evidence-based medicine to business administration and management? Running a business involves diagnosis and decision. Medicine, as a science, has been doing the same for centuries, and the field has recently started using ICT in these diagnoses and processes. Theorists and practitioners consider business administration as likewise both an art and a science. The field is a very young branch of knowledge that can advance by assimilating ideas from other sciences. It is therefore a good area in which to apply an adapted form of evidence-based medicine. The main drawback of doing so, however, is that while medicine has access to highly structured, abundant, and reliable information, the science of business administration has some way to go to reach this point.

So, what can evidence-based medicine offer EBA? Four fundamental elements: inspiration, method, order, and precision. Students can use this method to study many topics in the area of business administration, provided they possess a minimum number of skills, including a basic theoretical foundation, the ability to work in teams, and a solid experience in using ICT. Combining these capabilities appropriately through a simple process gives rise to the application of EBA.

EBA is guided by three maxims:

- Administration is a combination of art and science. Getting the right combination differentiates good administrators from those who are less adept.

- The process of administration (planning, organisation, management, coordination, and control) is the fundamental subject matter of administration theory.

- The existing evidence base is one factor that can support decision making. ICT equipment is an essential tool that has converted knowledge management into a key element of business.

The mechanisms that govern decision-making in business management are often difficult to understand, and so the teaching of ethics is not an exact or

1. *Evidence* is quality information available from any data source, for example from presentations at a congress or an online database, that can best help shape the solution to a correctly posed problem.

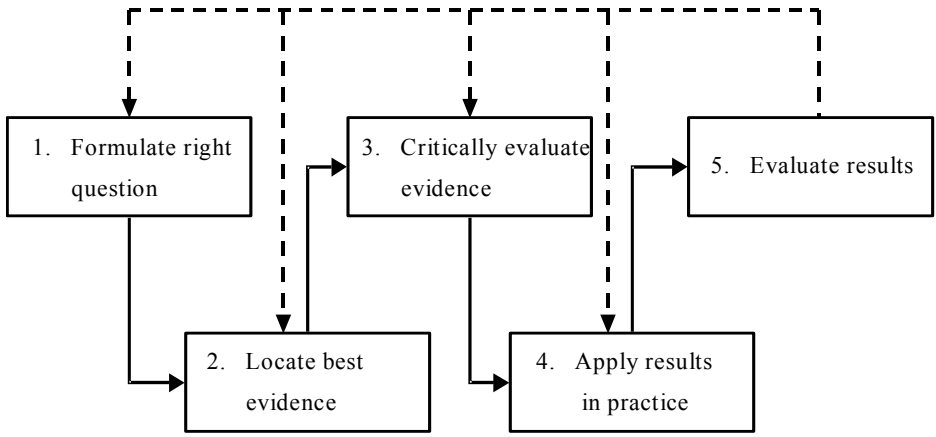
reproducible phenomenon. Effective and highly satisfactory decisions are undoubtedly made, but determining the mechanism for taking these decisions is difficult. Indeed, the consequences of the various options are often unknown, and so a wide margin of confidence is necessary. We therefore concur with Hoff (2001) that teaching ethics should involve teaching students to make commitments to personal values, and not just teaching theories.

6. The Stages of Evidence-Based Administration

This work conceives EBA as a process consisting of a series of steps or stages (see Figure 1).

1. Formulate the right question.
2. Locate the best evidence.
3. Critically evaluate the evidence.
4. Apply the results in practice.
5. Evaluate the results.

Figure 1: EBA as a process



Source: Sackett et al. (1997)

Stage 1: Formulating effective questions

This stage converts the student/decision-maker's need for information and new knowledge into precise questions that are likely to have a specific answer. They will serve as a guide to initiate the search for the best evidence or answer.

To formulate questions that appropriately centre on the problem and its analysis, it is best to break the stage down into four elements:

(a) Define the problem in the most precise and accurate way, in particular stressing the subject(s) or units that the problem involves.
(b) Propose what action to take to answer the question.
(c) When appropriate, compare between various feasible actions.
(d) Establish indicators to measure and assess the result of the action.

A correctly posed question allows decision-makers to get to the core of the problem and precisely identifies the information they must locate.

Stage 2: Selective search for evidence

In this stage, the decision-maker locates the best evidence or information. Most questions that are posed have an answer, or at the very least, information exists that can help the decision-maker reach the right decision.

The decision-maker must take three points into account:

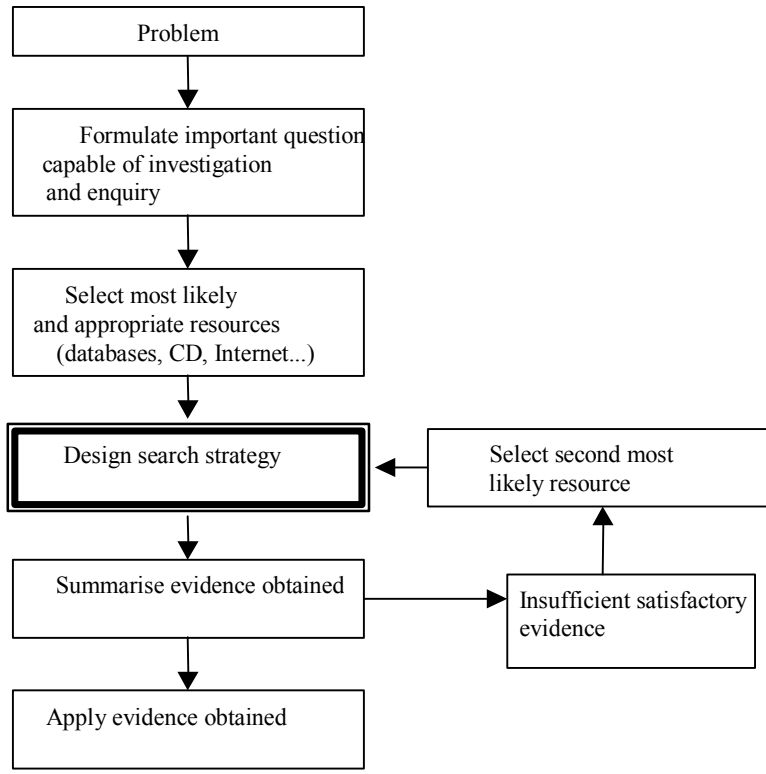
- The question that requires investigating and answering.
- The best answers currently available to solve the problem.
- The sources of evidence that the decision-maker can consult to find the most appropriate answers. This is a critical point, because it gives meaning to EBA. The evidence sources should exploit the synergies generated by the combination of technology, computing, and knowledge.

Students should be aware of the databases that are available and how they are organised, the search terms they should use, and how search software works. Starting from these requirements, Figure 2 below shows a possible general search strategy.

Solving a specific problem requires having precise knowledge of the objectives, evaluating the consequences of a poor decision, and selecting the right information. In most cases, the difficulty lies in defining the problem correctly. A well-posed problem is effective at guiding the actions one takes in search for solutions. Decision-makers should therefore formulate important questions that are likely to have an answer.

After defining the problem correctly, the decision-maker should transform the problem into specific questions, so as to access the right information. The decision-maker then selects the most appropriate search resources or evidence source—textbooks, databases, electronic media, diskettes, CD-ROM, or the Internet. Figure 3 below shows the design of this search strategy.

Figure 2: General search strategy

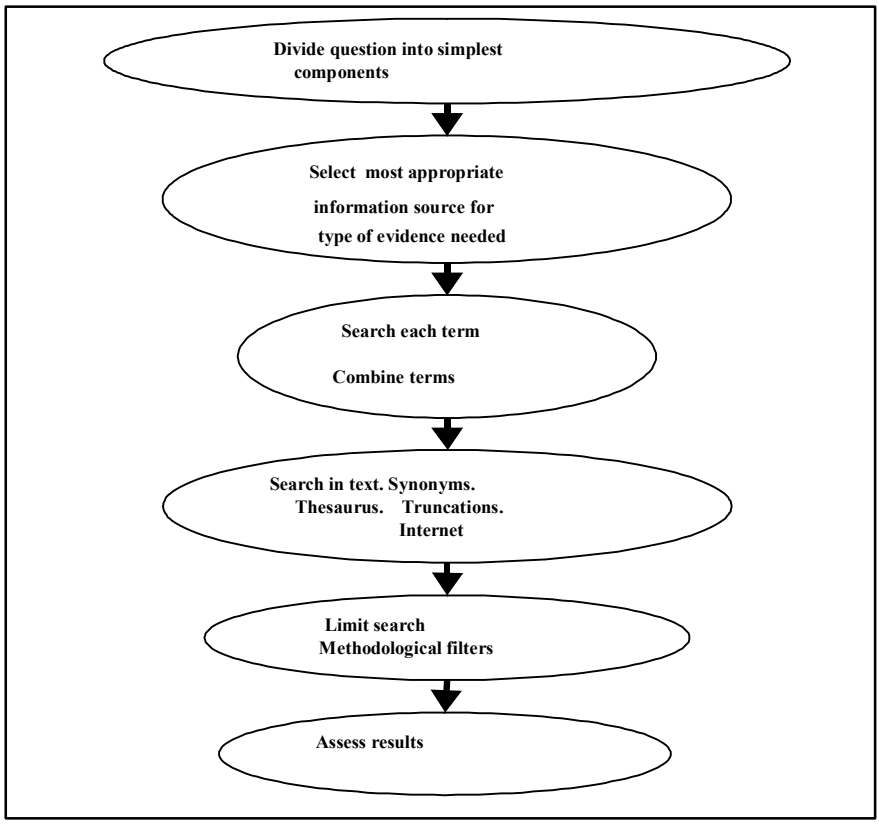


Source: Sackett et al. (1997)

After the search, the decision-maker summarises the evidence obtained and transforms the evidence into operational data. Throughout this process, EBA aims to elaborate and access effective sources of evidence. In other words, the aim is to avoid information that is secondary, redundant, or superficial, try to identify clichés, determine the true effectiveness of fads in the business literature, and make abstract investigations more specific. EBA aims for effectiveness in practical application rather than scientific rigour. For this reason, application of the evidence is the final result of the search process.

The process is iterative, and so if the evidence gathered in the summary is insufficient or inappropriate, the decision-maker should return to the previous step, select the second best evidence, and start a new search strategy accordingly.

Figure 3: Design of search strategy



Stage 3: Critical evaluation of the evidence

After selecting the best available evidence, the decision-maker should then re-evaluate the evidence before checking the fit between it and the problem at hand. This re-evaluation or critical evaluation of the evidence uses two criteria, their order being unimportant: its validity or proximity to the truth, on the one hand, and its usefulness or importance for solving the problem, on the other. This is not an exhaustive and detailed examination, but rather a quick, critical evaluation of the evidence.

Stage 4: Application of the evidence to the specific case

After finding evidence that is valid and important for solving the problem under investigation, the decision-makers must first decide if the evidence is applicable to the particular case of interest, and second, whether they can integrate that

evidence into their skills and solve the problem. If the answer is yes in both cases, the decision-makers then simply put into practice the action derived from the external evidence found.

This application of evidence to the specific situation, and its relation to the students who are solving the problem, is one of the most interesting questions surrounding EBA, as it reflects the whole of its philosophy of solving problems on the basis of the decision-maker's previous knowledge, intuition, skills and mastery.

Some researchers criticise this application stage, saying that evidence from one firm should not be applied to another, since they represent two totally different realities. If each firm is different, must not each solution to the problem also be different? But this premise would prevent managers from exploiting good practices learned from outside the firm, and managers would undervalue rigorous studies aiming to test certain relations.

Stage 5: Self-evaluation

The last step is self-evaluation. The best way to exploit EBA in the classroom is to test the application of the proposed solution, making a hypothetical extrapolation of what would happen if the selected evidence were applied. This extrapolation allows decision-makers to correct possible errors and perfect their own development, adjusting it to the needs of their investigation. An orderly way of carrying out this evaluation is to evaluate the four keys upon which EBA is founded: (1) the relationship with questions likely to have an answer; (2) the search for the best external evidence; (3) critical evaluation of the validity and potential utility of the evidence; and (4) integration of the critical evaluation when applying the result to management.

Decision-makers can carry out a series of critical evaluations of each of these four aspects, and these evaluations can provide a good guide for an initial assessment. This does not preclude the possibility that individual educators will, in later stages, adjust the EBA process of evaluation and control to suit their own needs.

The four types of evaluation are as follows (Sackett et al. 1997):

- Self-evaluation with respect to the formulation of *questions likely to have answers*:
  - o Do you at any time ask questions?
  - o Do you tend to ask the other students what evidence they are basing their decisions on?
  - o Have you improved your success in posing questions likely to have answers?

- Self-evaluation with respect to the *search for the best external evidence*:

- o Do you at any time carry out searches?
- o Do you know the best current sources of evidence for your studies?
- o Are you obtaining satisfactory results in the search for hardware, software, and the best sources for learning?
- o Do you find useful external evidence in an increasing range of sources?
- o Are your searches becoming more effective?
- o Are you using dictionaries, limiters, and free text in your searches?

- Self-evaluation with respect to the *critical evaluation of the validity and potential utility of the evidence*:
  - o Do you at any time make a critical evaluation of the external evidence outside the material you study?
  - o Do you have your own criteria for carrying out a more effective critical evaluation?

- Self-evaluation with respect to the *integration of critical evaluation in the application of the result to your education*:
  - o Do you at any time integrate your critical evaluation into your learning?
  - o Are you improving the precision and efficacy of your adaptation of some of the critical evaluation measures to the needs of your training?

Many people may think that EBA's application to teaching is quite similar to *problem-based learning*, an approach that confronts students with problems from practice to motivate learning (Johnston 2000). The main difference between EBA and problem-based learning is that the former need not propose any problem to be solved, because the goal is to learn from the best practices developed by others, which sometimes cannot be framed in terms of a problem (García del Junco et al. 2000, Pfeffer and Sutton 2006). The emphasis in EBA is not placed on specifying the problem, but rather on identifying the best information, a sort of "benchmarking" task. Secondly, EBA is adapted from evidence-based medicine, which reaches more information in less time thanks to ICT.

The development of ICT has generated controversy in the field of teaching and learning. The literature shows that more research is needed to improve the expectations and effectiveness of ICT provision and utilisation (Reynolds et al. 2003). ICT remains a contentious issue for many teachers at the point of implementation (Reynolds et al. 2003), which is also the case in business ethics. The relationship between ICT and business ethics has not yet been sufficiently clarified (Lozano et al. 2003), and defining the context in which IT is to be used

is key (Lozano et al. 2003). The use of ICT within the EBA framework does not prevent courses from remaining face-to-face, although they could become entirely virtual. ICT is part of the EBA method because it allows one to gather the best available evidence in the shortest time. But ICT also provides an opportunity for students to learn and use this technology and gain positive externalities for future career paths (Agarwal and Day 1998).

7. The Application of EBA to an Ethical Dilemma

Our experience with EBA over seven years allows us to say with confidence that it is useful in education. Our aim is to transmit the method to other educators so that it might improve their work.

We used questionnaire and interview data to follow the learning experiences of participants in the course. Several instruments, such as teaching evaluation questionnaires, records of tutorial attendance kept by tutors and students, and direct interviews with students allow us to make some useful observations about applying EBA in the classroom:

- Students correct their approach to the problem as they apply the method. They centre on the heart of the question, discovering its causes and its fundamental aspects, and at the same time they re-orient their position and end up focusing on what is important and ignoring what is secondary.

- The method is more practical than theoretical.

- Heterogeneity in the group enriches the result. Working in a heterogeneous group is like viewing a prism through the largest possible number of faces at the same time.

- EBA encourages innovation and creativity.

- EBA helps students propose different paths for the proposals they come up with.

- An EBA-based solution tends to be broader, more reasoned, and better argued, and it tends to go beyond what was initially envisioned. This shows how the students conceptualise what they learn.

The case presented was as follows:

> The advertising manager of a magazine was looking through the galley proof of the articles to appear in the next edition. Suddenly, he sat paralysed in his chair

at the sight of one article about monopolistic behaviours in the oil industry, which the article criticised fiercely. He sighed deeply, and said to himself: "There goes another full-page advertising contract! This article will frighten the life out of old Morley and he'll pull his ad."

What should he do? He picked up the phone and asked if he could speak to the author of the piece; he would invite her to withdraw it. There was no response. "What will the editor think about all this?" he asked himself—and decided to go and see him. He went to his office and asked, "Ben? Have you ever had something just about to close and so finish it off successfully after a long time?"

"Yeah, of course, Red. Why're you asking? Is there a problem?"

"Well, yes," said Red, a bit affected. "Look, Pool Petroleum is about to sign a contract with me for a full-page colour ad in the next edition. The operation's taken five years of difficult negotiations, because Morley is a tough customer. And now, just now, when he decides to place his ad, we go and run a long article attacking the activities of these same oil firms in the very same edition! I think we should pull the article. And if we sign this contract with Morley, then another one with Lippert—you know, their subsidiary—will almost certainly come after. Anyway, I don't think this article should appear… but you're the boss.

Ben, the editor, understood perfectly, and the article in question was delayed for another few months. Red, satisfied, thanked Ben for his understanding. And he had done it without needing to pressure him too much, just talking, negotiating.

What did the students do?

1. *Formulate the right question to address the problem*. After a debate of approximately 45 minutes, the students came up with the following questions: Can you hide information from the customer? To what extent can you mislead the customer? Is betraying your customer valid in business in the name of profitability? Is lack of transparency in business right?

In this stage, the ethical dilemma or the perception of the ethical problem emerged. Authors consider this to be the catalyst in the ethical decision-making process (Hunt and Vitell 1986, Vitell and Festervand 1987, Ferrel et al. 1989, Treviño 1998).

2. *Selective search for evidence*. The students had one week to carry out individual searches, and then they worked in groups. Working in groups strengthens student capacity for moral sensitivity as they confront the feelings and experiences of others. The students should become aware of the moral or immoral impact of their actions (Rossow 2002).

Although evidence-based research can be carried out individually, working first individually and then in groups favours the integration of all members. Also, group discussion gets everybody involved in the learning process.

3. *Critical evaluation of the evidence found.* The groups worked to select the best evidence by means of discussions and evaluations. They found the evidence they selected (summarized below) on the Internet and elsewhere. This led them to have to compare right versus wrong rather than right versus right (Badaracco and Web 1995).

4. *Application of the evidence.* All ethical dilemmas require a critical approach for their evaluation. This can be accomplished by analysing ethical problems and their real solutions in different organisations, for which the Internet offers useful, quick, and recent information. At this stage, the students started to feel satisfaction in seeing the practical application of what they had learned. This is consistent with Bishop's (1992) view that although teaching and guidance are important in the study of ethics, business students must practise what they learn.

8. Examples of Evidence in Ethics

Students can easily find examples on the Internet of organisations that behave ethically. To illustrate the ethical behaviour found by the students, this section details some of the evidence that was fundamental for the students in solving the above case using EBA.

Patrick E. Murphy[2] cites *American Express* as a responsible firm in privacy matters, because the company refused to sell its list of customers to third parties, as well as *eBay*, which in 1999 prohibited trading of several product categories on its website, including firearms, alcohol, and tobacco.

Sondak[3] explains that obtaining profits is not a firm's only mission, but only necessary for its survival. Its real mission is to make a voluntary exchange of goods and services possible. This means there is virtue in honesty, because if a firm lies to its customers, the transaction will no longer be a transaction but a deception. Sondak uses the case of *Johnson & Johnson* as an example. J&J withdrew Tylenol® after a tragic poisoning case, although the firm knew that the seals had been tampered with outside company control. Top executives at the company did not see this problem in terms of profit maximisation, but instead asked themselves whether J&J would have sufficient financial resources to survive the recall. They put customer protection first, and accepted costs of 100 million USD.

An important source of evidence was an ethics centre,[4] which offers practising and student scientists and engineers examples of moral leadership. The

2. Patrick E. Murphy, *Marketing Ethics at the Millennium*, www.Ethicalbusiness.nd.edu/research/Marketing_Ethics_Millenium.pdf, 20 October 2003.
3. Harris Sondak, *Die Rolle der Ethik im Management und in der Ausbildung von Managern*, www.nzz.ch/dossiers/shareholder/share280996.html
4. National Academy of Engineering, Online Ethics Center, *Engineers and Scientists as Moral Exemplars*, http://onlineethics.org/moral/index.html, 20 October 2003.

cases include Roger Boisjoly and the *Challenger* disaster, William LeMessurier and the architecture of the *Citicorp* tower, *Inez Austin's* ethical conviction in the protection of public safety, and *Rachel Carson*, who fought against the use of pesticides until her death. These are only a few of the cases of people who were guided only by ethical principles rather than economic interest.

Among the evidence found by the students, the *Enron*[5] case is the most frequently mentioned in web pages on business ethics, along with the accountancy firm involved in the scandal, *Arthur Andersen*. Many ethical dilemmas arise in this case. Enron's CEO announced to employees that the firm was healthy, only for the company to be declared bankrupt two months later. Was that honest? The company also violated its own ethical code by "falsifying" balance sheets. Was that responsible? The firm's employees could not sell their shares, while the top executives could. Was that respectful? Arthur Andersen destroyed Enron-related evidence in its possession, an act that was not only unethical but also illegal. There is also the case of Enron vice-president Sherron S. Watkins, who risked her career by telling the truth. This is a case as full of hypocrisy as it is devoid of honesty and respect, and which ended up destroying a huge business empire.

The *Bridgestone/Firestone*[6] case represents another example of poor ethics in business. In 1978, the firm had to recall 14.5 million tyres, a situation that occurred again in the 1990s. A large number of accidents involving Firestone tyres and problems with a specific car model manufactured by *Ford* led insurance companies to analyse the cases. The investigations led Ford and Bridgestone/ Firestone to recall 6.5 million tyres in 2000. The fact is that Bridgestone/Firestone knew that the tyres in question were dangerous as early as 1994, but did nothing. Both companies lost value in the stock exchange, but more importantly, lost the trust of their customers.

9. Solution of the Ethical Dilemma

With regard to the case of interest here, which involves an ethical dilemma for a magazine staff, students also found information of relevance.[7] Volker Herres, chief editor of *NDR* (German public television), presented ten theses on journalism in a 1997 forum. He first mentioned the power and influence that the press now wields, which must come with a corresponding duty—ethics and responsibility in journalism. Herres defines this as the journalistic ethic of "not watering the wine" (equivalent to the doctor's ethic of "informing the patient

5. Rushworth Kidder, *Ethics at Enron*, www.globalethics.org/newsline/members/pastissue.tmpl?id=01210218015717&issucid=1/21/2002
6. Dana Schubert and O. C. Ferrell, *Danger on the Highway*, e-businessethics.com/firestone.htm
7. Volker Herres, *Zehn Thesen*, www.igmedien.de/publikationen/m/1997/11/06.html, 15 October 2003.

about the risks of a treatment") and such professional standards as telling the truth, doing one's work carefully, and being upright. In his third thesis, Herres argues that ethics is more than just a question of personal morality in the communications media, because it depends on the information system and each journalist's limited scope to act independently. This limited scope constrains the journalist socially, subjecting him or her to the firm's rationale and objectives. Herres' eighth thesis concerns the media's role in the 21st century, arguing that media companies should provide a public service with regard to perspective, understanding, and scepticism, helping people to not be confused by superfluous information. At the end, the editor asks politicians to build the conditions within which journalists can behave ethically.

Another media case is that of the Swiss independent newspaper *Mythenpost*,[8] which shows that publishing the truth sometimes means making sacrifices. An advertiser threatened to withdraw its advertising from the newspaper because of an article about poor conditions in pig slaughterhouses. The newspaper remained loyal to its principles, stating that *Mythenpost* preferred to take losses if this was necessary to produce sincere, upright, and positive journalism, rather than sell out.

After reviewing the previous evidence, the students concluded:

> …the main ethical failing committed here is lying to the oil firm/customer about the placement of an advertisement in the magazine. The magazine hides the existence of the article attacking oil firms' monopoly behaviour from the customer, as well as its intention to publish the article once the advertising contract is agreed upon. On the other hand, the magazine lies to its readers, since the magazine does not give them the opportunity to read the information in the article at that time. In any case, the case is full of lies to exploit the customer that is about to place the ad and later surprise the firm with its publication, which will harm the interests of its sector.

The students stated that the ethical lesson they learned after using the EBA technique to search the Internet consisted of the importance of telling the truth, because the truth is for everybody and forever, as well as the personal value of caution, which helps people work in transparency and authenticity.

10. Conclusion

According to Tissen et al. (2000), students gain valuable knowledge through the interaction of three types of learning: feedback, cognitive, and social learning. We believe that EBA leads to these three types of learning simultaneously and therefore facilitates the creation of tacit knowledge and its conversion into explicit knowledge.

8. *Mythenpost*, www.mythenpost.ch/datei_mp_11_97/profit_wichtiger_mp_11_97.htm

We conclude with the contributions of this method, both at the individual and group level. At the individual level, the most important contributions are:

- *A cognitive tool*. EBA is an effective tool for the student. Using EBA provides information within a context, helping students understand the cognitive aspects of each situation. This cognitive development has a substantial influence on student decisions about what is good or bad (Kohlberg 1981).

- *An instrument of perception*. Students see certain things and not others, on the basis of their mental models and the resulting expectations. EBA not only increases the student ability to see new evidence, but also expands their mental models. The method is therefore a way to enrich these mental models, providing them with accessible indicators that serve as references when the students encounter ethical dilemmas in their professional life.

- *An instrument of cognitive reflection*. The EBA process helps students to develop a more effective mental process, hence going some way to meeting Solverg, Strong and Mcguire's (1995) recommendation that training/education in ethics should allow students to live ethics rather than learn ethics.

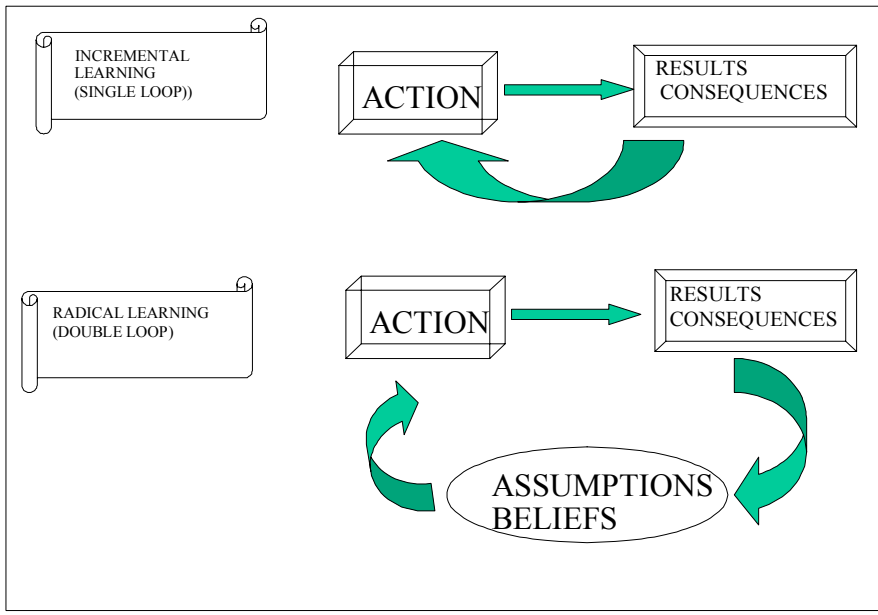
At the group level EBA is:

- *A provider of useful information*. EBA supports strategic conversation through its management of information sources, which can generate both tacit and explicit knowledge.

- *A vehicle for transmitting knowledge*. The EBA approach systematises the discussion of relevant aspects of the topics being taught in a context in which knowledge is handled rigorously. With regard to understanding, humans are social by nature, because to master rationality, develop language, and not remain trapped in the mechanisms of their own information handling system, humans need others (De Andrés 2002).

- *A developer of radical learning*, in the sense of Argyris and Schön (1978), Bierly and Chakrabarty (1996), and Hall and Adriani (2003). Incremental learning increases current knowledge, while radical learning also questions and changes basic assumptions (See Figure 4).

Figure 4: Incremental vs. radical learning



In the case study presented above, incremental learning occurs when students realize that hiding the truth from readers, and from the customer intending to place an advertisement, is an unethical action. Before using EBA some students were not aware that lying to clients is unethical. Radical learning occurs when students also change their beliefs, learning the link between not lying and the value of caution (Pieper 1972). Learning that if I lie (action) then I am not behaving ethically (result) is an example of incremental learning, whereas radical learning also implies learning that ethical behavior leads to cautious behavior, the latter being an important value for the organization.

References:

Acebedo, A. (2001), "Of fallacies and curricula: A case of business ethics", *Teaching Business Ethics,* 5(2): pp. 157-170.

Adams, J. S., C. Harris, and S. S. Carley (1998), "Challenges in teaching business ethics: Using role set analysis of early career dilemmas", *Journal of Business Ethics*, 17(12): pp. 1325-1335.

Agarwal, R., and A. E. Day (1998), "The impact of the Internet on economic education", *The Journal of Economic Education*, 29(2): pp. 99-110.

AlHashim, D. D., S. Sankaran, and E. J. Weiss (2003), "The right tech global accounting classroom in the 21st century", *Journal of American Academy of Business*, 3(12): pp. 21-32.

Argyris, C., D. A. Schön (1978), *Organizational Learning*, Reading, MA: Addison-Wesley.

Ashkanasy, N. M. (2007), "From the Editor. Evidence-based inquiry, learning, and education: What are the pros and cons?", *Academy of Management Learning and Education*, 6(1): pp. 5–8.

Badaracco, J. L., and A. Web (1995), "Business ethics: The view from the trenches", *California Management Review*, 37(2): pp. 5-26.

Bampton, R., and P. Maclagan (2005), "Why teach ethics to accounting students? A response to the skeptics", *Business Ethics: A European Review* 14(3): pp. 290–300.

Benbunan-Fich, R. (2002), "Improving education and training with IT", *Association for Computing Machinery, Communications to the ACM*, 45(6): pp. 94-102.

Berger, J., and C. Pratt (1998), "Teaching business-communication ethics with controversial film", *Journal of Business Ethics*, 17(16): pp. 1817-1823.

Bierly, P., and A. Chakrabarty (1996), "Generic knowledge strategies in the U.S. pharmaceutical industry", *Strategic Management Journal*, 17: pp. 123-135.

Bishop, T. R. (1992), "Integrating business ethics into an undergraduate curriculum", *Journal of Business Ethics*, 11(4): pp. 291-299.

Borkowsky, S. C., and Y. J. Ugras (1992), "The ethical attitudes of students as a function of age, sex and experience", *Journal of Business Ethics*, 11(12): pp. 961-979.

Buerk, J. (2002), "Ethics: A curriculum enhancement initiative in applied computer science technology degree programs", *Teaching Business Ethics*, 6 (2): pp. 167-177.

Callan, V. (1992), "Predicting ethical values and teaching needs in ethics", *Journal of Business Ethics*, 11(10): pp. 761-769.

Carlson, P., and F. Burke, F. (1998), "Lessons learned from ethics in the classroom: Exploring student growth in flexibility, complexity and comprehension", *Journal of Business Ethics*, 17(11): pp. 1179-1187.

Cascio, W. F. (2007), "Evidence-based management and the marketplace for ideas", *Academy of Management Journal*, 50(5): pp. 1009–1012.

Coate, C., and M. Mitschow (2002), "Business ethics, business practices, and the power of the parable", *Teaching Business Ethics*, 6(1): pp. 127-135.

Davies, P. (1999), "What is evidence-based education?", *British Journal of Educational Studies*, 47(2): pp. 108-121.

De Andrés, T. (2002), *Homo cybersapiens: La inteligencia artificial y la humana*, Pamplona, Spain: Ediciones Universidad de Navarra.

Felton, E. L., and R. R. Sims (2005), "Teaching business ethics: Targeted outputs", *Journal of Business Ethics* 60: pp. 377–391.

Ferrel, O. C., L. G. Gresham, and J. Fraedrich (1989), "A synthesis of ethical decision models for marketing", *Journal of Macromarketing*, 9(2): pp. 55-64.

Fraederich, J., and M. Guerts (1990), "Ethic awareness for the classroom: A framework", *Journal of Education for Business*, 66 (2): pp. 88-93.

Furman, F. (1990), "Teaching business ethics: Questioning the assumptions, seeking new directions", *Journal of Business Ethics*, 9(4): pp. 31-38.

Garaventa, E. (1998), "Drama: A tool for teaching business ethics", *Business Ethics Quarterly*, 8(3): pp. 535-545.

Garcia del Junco, J., and C. Casanueva (2000), "La administración basada en la evidencia", *Alta Dirección*, 36: pp. 53-64.

Garcia del Junco, J., C. Casanueva, and J. I. Rufino (2000), "Case method and evidence-based administration (EBMA)", *in* H. E. Klein, *Complex Demands on Teaching Require Innovation:*

Case Method & Other Techniques. World Association for Case Method Research & Application, Boston: Needham.
Garcia del Junco, J., A. Calvo de Mora, and J. I. Rufino (2004), "Evidence-based administration and case method for management knowledge," in H. E. Klein, *Creative Teaching. Act 7*, World Association for Case Method Research & Application, Boston: Needham.
Greenwood, M. (2000), "The study of business ethics: A case for Dr. Seuss", *Business Ethics: European Review*, 9(3): pp. 155-168.
Guan, J., W. Nunez, and J. Welsh (2003), "Institutional strategy and information support: The role of data warehousing in higher education", *Campus-Wide Information Systems*, 19(5): 168-179.
Gunz, S., and J. McCutcheon (1998), "Are academics committed to accounting ethics education?" *Journal of Business Ethics*, 17(11): pp. 1145-1154.
Hammersley, M. (1997), "Educational research and teaching: A response to David Hargreaves' TTA lecture", *British Educational Research Journal*, 23(2): pp. 141-162.
Hall, R., and P. Adriani (2003): "Managing knowledge associated with innovation", *Journal of Business Research*, 56: pp. 145-152.
Hargreaves, D. (1996), *Teaching as a Research-based Profession: Possibilities and Prospects*. London: Teacher Training Agency.
Hargreaves, D. (1997), "In defense of research for evidence-based teaching: A rejoinder to Martyn Hammersley", *British Educational Research Journal*, 23(4): pp. 405-419.
Herndon, N. C. Jr. (1996), "A new context for ethics education objectives in a college of business: Ethical decision–making models", *Journal of Business Ethics*, 15: pp. 501–510.
Hill, J. (2002), "Teaching with technology", *Presentations*, 16(10): pp. 28-36.
Hooft, S. (2001), "Overcoming principles: Dialogue in business ethics", *Teaching Business Ethics*, 5(1): pp. 89-106.
Hunt, S., and S. Vitell (1986), "A general theory of marketing ethics", *Journal of Macromarketing*, 6(1): pp. 5-16.
Johnston, C. G., R. H. James, J. N. Lye, and I. M. McDonald (2000), "An evaluation of collaborative problem solving for learning economics", *The Journal of Economic Education*, 31(1): pp. 13-29.
Katz, R. (2003), "Balancing technology and tradition: The example of course management systems", *EDUCAUSE Review*, 38(4): pp. 48-56.
Kolberg, L. (1981), *The Meaning and Measurement of Moral Development*, Worcester, MA: Clark University Press.
Lather, P., (2004), "Scientific research in education: a critical perspective", *British Educational Research Journal*, 30(6): pp. 759-772.
Lozano, J. M., C. Folguera, and D. Arenas (2003), "Setting the context: The role of information technology in a business ethics course based on face-to-face dialogue?", *Journal of Business Ethics*, 48: pp. 99-111.
Markham, S., W. Kordsmejer, and R. Gatlin-Watts (2003), "Computer availability and applications in selected european business schools", *Journal of Information Systems Education*, 14(2): pp. 173-185.
McWilliams, V., and A. Nahavandi (2006), "Using live cases to teach ethics", *Journal of Business Ethics*, 67: pp. 421–433.
Pan, W. (2003), "The challenges of teaching statistics in the current technology environment", *Journal of American Academy of Business*, 3(1/2): pp. 351-359.
Park, H. (1998), "Can business ethics be taught: A new model of business ethics education", *Journal of Business Ethics*, 17(3): pp. 965-977.
Pfeffer, J., and R. Sutton (2006), *Hard Facts, Dangerous Half-Truths & Total Nonsense: Profiting from Evidence-Based Management*, Boston: Harvard Business School Press.
Pfeffer, J., and R. Sutton (2006b), "Evidence-based management", *Harvard Business Review*, 84(1): pp. 63-74.
Pfeffer, J., and R. I. Sutton (2007), "Suppose we took evidence-based management seriously: Implications for reading and writing management", *Academy of Management Learning & Education*, 6(1): pp. 153–155.
Pieper, J. (1972), *Uber Die Liebe*, Munich: Kösel-Verlag GmbH.

Polansky, M. (1998), "Incorporating ethics into business student's research projects: A process approach", *Journal of Business Ethics*, 17(11): pp. 1227-1241.
Postman, N. (1994), *Tecnópolis: La Rendición de la Cultura a la Tecnología*. Barcelona: Círculo de Lectores.
Prahalad, C.. and R. Bettis (1986), "The dominant logic: A new linkage between diversity and performance", *Strategic Management Journal*, 7: pp. 485-501.
Raymond, L. (2003), "Globalization, the knowledge economy, and competitiveness: A business intelligence framework for the development SMES", *Journal of American Academy of Business*, 3(1/2): pp. 260-279.
Reynolds, D., D. Treharne, and H. Tripp (2003), "ICT—The hopes and the reality", *British Journal of Educational Technology*, 34(2): pp. 151–167.
Richards, C. H., J. Gilbert, and J. R. Harris (2002), "Assessing ethics education needs in the MBA Program", *Teaching Business Ethics* 6: pp. 447–476.
Rice, J. (1994), "Learning ethical business through role play", *Business Ethics: A European Review*, 3(3): pp. 156-159.
Rossow, G. (2002), "Three approaches to teaching business ethics", *Teaching Business Ethics*, 6(4): pp. 441-443.
Rousseau, D. M., and S. McCarthy (2007), "Educating managers from an evidence-based perspective", *Academy of Management Learning & Education*, 6(1): pp. 84–101.
Sackett, D. (1995), "Applying overviews and meta-analyses at the bedside", *Journal of Clinical Epidemiology*, 48(1): pp. 61-66.
Sackett, D., W. Rosenberg, J., Gray, R. Haynes, and W. Richardson, (1996), "Evidence based medicine: What it is and what it isn't", *British Medical Journal*, 312(7023): pp. 71-72.
Sackett, D., W. Richardson, W. Rosenberg, and R. Haynes (1997), *Evidence-Based Medicine. How to Practice and Teach*. London: Churchill-Livingstone.
Schaupp, D., and M. Lane (1992), "Teaching business ethics: Bringing reality to the classroom", *Journal of Business Ethics*, 11(2): pp. 225-229.
Simpson, R. (2002), "The virtual reality revolution: Technology changes nursing education", *Nursing Education*, 33(9): pp. 14-15.
Sims, R. (2002), "Business ethics teaching for effective learning", *Teaching Business Ethics*, 6(3): pp. 393-410.
Shaub, M., D. Finn, and P. Munter (1993), "The effects of auditors' ethical orientation on commitment and ethical sensitivity", *Behavioural Research in Accounting*, 5: pp. 145-169.
Solverg, J., K. Strong, and C. McGuire, Jr. (1995), "Living (not learning) ethics", *Journal of Business of Ethics*, 14(1): pp. 71-81.
Spence, L. (2000), "Teaching business ethics: Are there differences within Europe, and is there a European difference?", *Business Ethics: A European Review*, 9(1): pp. 58-64.
Thomas, G., and R. Pring (2004), *Evidence-Based Practice in Education*, Open University Press, Buckingham.
Tippins, M., and R. Sohi, (2003), "IT competency and firm performance: Is organizational learning a missing link?", *Strategy Management Journal*, 24(8): pp. 745-768.
Tissen, R., D. Andriesen, and F. Lekanne (2000), *The Knowledge Dividend*. London: Financial Times and Prentice-Hall.
Treviño, L. (1996), "Ethical decision making in organizations: A person-situation interactionist model", A*cademy of Management Review*, 11(3): pp. 601-617.
Vitell, S., T. Festervand (1987), "business ethics: Conflicts, practices and beliefs of industrial executives", *Journal of Business Ethics*, 6(2): pp. 111-122.
Watson, C. (2003), "Using stories to teach business ethics: Developing character through examples of admirable actions", *Teaching Business Ethics*, 7(2): pp. 93-105.
Webber, C. (2003), "New technologies and educative leadership", *Journal of Educational Administration*, 41(2): pp. 119-129.
Wulf, W. (2003), "Higher education alert: The information railroad is coming", *EDUCAUSE Review*, 38(1): pp. 12-21.