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## How can tertiary and secondary education help better develop strategic management skills of business graduates?

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## **HOW CAN TERTIARY AND SECONDARY EDUCATION HELP BETTER DEVELOP STRATEGIC MANAGEMENT SKILLS OF BUSINESS GRADUATES?**

### **Introduction**

The nineties have seen the (re-)emergence in strategic management of the emphasis on competence building and the rise to prominence of the holistic, or open systems, approach to this area of management. Due to the relative recency of this trend and the complexity of its implications, this perspective appears not yet to have had any significant impact on the teaching of strategic management in formal award courses, such as MBAs or, we suspect, executive short courses. Since an important part of managerial learning occurs in formal education programs (Midgley 1994), this perspective could not yet by the end of this century have significantly influenced the practice of strategic management in a large number of organisations, either.

Our reflection on the deficiencies in the current strategic management education encouraged us to investigate its content and delivery, in the light of this emerging theory. This paper provides an empirical investigation of the capacity of current strategic management education practice to support the learning required for a competence-based theory of strategic management. The findings are based on a survey of 27 subject outlines of the teaching of strategic management at post-graduate level in Australia and compare current practice with our interpretation of competence-based strategic management theory. While we anticipate that many of our findings will apply to other countries whose education systems have some common roots with ours, it will be incumbent on the readers from outside Australia to verify our findings against their own strategic management education and practice.

The paper begins with a brief outline of the emerging competence-based theory of strategic management. We then suggest the skills, which would be required of managers to operate successfully in accordance with this new paradigm. Next, we report on the survey of 27 subject outlines of post-graduate teaching of

strategic management, noting the gaps between current educational practice and those managerial skills required. Finally, we suggest a possible skills-based model for the teaching of strategic management, appropriate for the competence-based paradigm. Adoption of this model, we think, is likely to have certain beneficial consequences for the strategic management performance of organisations where ideas coming from the competence-based strategic management education would be applied.

### **Teaching influences, student thinking modes and learning patterns and their impact on strategic management education**

Successful adoption of a dynamic, systemic, cognitive and holistic approach to strategic management (Heene and Sanchez 1997) and its associated competences depends on an appropriate, consistent teaching methodology. It would be wrong to assess the quality of the new theory solely on its anticipated capacity to explain and predict organisation performance. Students' ability to acquire an adequate stock of knowledge, skills and attitudes for dealing with complex strategic management problems would be, we suggest, a more appropriate success measure. That may well mean a need to substantially adapt the teaching approach in many existing courses, though not all. A crucial part of the proposed teaching approach is captured by the following statement by an Australian university:

*'...we believe our students should not have to contend with an ivory tower; they need to be able to work within the chaos and dynamism of the „real world“ if they are to recognise and develop opportunities which will work in that world.'*<sup>1</sup>

Given the existence of a number of competing strategic management schools of thinking (Mintzberg 1990), schools which have not communicated with each other very well, given the existence of *bounded rationality* (Cyert and March 1992) and that each teacher has their own background experience and consequent mental model, strategic management students are normally offered a learning experience based on only one of the traditional schools of thought. This is usually the one that their teachers subscribe to themselves, or adopt for their course.

In the classroom, students rarely have the time to learn about other schools of thought, let alone think about their implications. Most of them will consequently end up being ignorant of other possible perspectives, much as these may be present in business practice.

Under time pressure themselves, students also prefer single to multiple courses of investigation, and simple rather than complex answers because the latter would normally require considerable additional reading and intellectual effort to formulate (Koch and Rodger 1995). Worse, students may form an illusion that there exist a (not very large) number of effective categories of strategies, and that strategy choice in practice is simply a matter of mimicking strategies discussed in the classroom. Yet, few of their teachers would dispute that their students are

unlikely to be confronted in their lifetimes with two truly identical strategic decision situations.<sup>2</sup> Generating a number of competing solutions and choosing the most viable one for the management problem at hand often requires considering multiple perspectives represented by the different strategic management schools of thought (Mintzberg 1996).

Another aspect of current teaching, driven by the institutional desire for efficiency, is the use of a standardised teaching approach and delivery method, regardless of differences in students' background, career needs and individual learning styles. Over the last twenty years, many authors (eg. Timmons 1978; Hornaday 1982; Brockhaus and Hurwitz 1986; Fillion 1995) have, for instance, shown that it is wrong to standardise cases used in teaching strategic management. Fillion (1995) points out, for instance, that the self-awareness of entrepreneurs differs much from that of managers; the former is focused on defining context, the latter on resource organisation. Thus, he argues, management education that aims to achieve at least the more prevalent objectives of students has to be prepared, and able, to introduce, on an ongoing basis, necessary variations to its content and delivery. If strategic management subjects are meant to help in forming a highly competent business executive, then a more individualised, more effective, if „less efficient“ approach is needed. Fillion shows the implications of the differences in the activity systems for the profile of, and approach to, management education for these two categories of students (see Table 1).

**Table 1. Key differences between Managerial and Entrepreneurial education**

Managerial education	Entrepreneurial education
Affiliation culture supported	Leadership culture supported
Centred on group work and group communication	Centred on individual progression
Works on the development of both sides of the brain with emphasis on the left side	Works on the development of both sides of the brain with emphasis on the right side
Develops patterns that seek abstract, general rules	Develops patterns that seek concrete, specific applications
Based on the development of self-awareness with emphasis on adaptability	Based on the development of self-awareness with emphasis on perseverance
Focused on acquisition of know-how in management of resources and own area of specialization	Focused on acquisition of know-how directed towards the definition of contexts that lead to the occupation of a market space

Source: Fillion 1995, p. 92.

Some insight into the current mix of teaching methods and objectives used in strategic management education have been provided by, among others, Byrne (1993), Fillion (1995), Gasse (1992), Jennings (1995) and November (1993). A recent survey of UK-based lecturers involved in postgraduate and post-experience managerial education (Jennings 1995) revealed that, in using case studies as part of the teaching method, six broad categories of objectives were pursued. They were: illustrative (34% of the objectives listed), integrative (12%), information skills related (4%), strategic analysis/strategic thinking (18%), communication and interpersonal skills (15%) and pedagogic experience (16%). The highest level of success was reported for communication and interpersonal skills related objectives (91% of answers indicating a „very high“ or „high“ level of success).

Many other learning methods are used in strategic management education: lecture with discussion, guest speakers, videos, tutorials (based on current issues, or based on articles), seminars (subject or company-focused), business games, company-based projects and consultancy projects. All were reported to have strengths and weaknesses (Jennings 1995: 236). Importantly, cases were found a relevant teaching method, regardless of the school of thought represented by the respondent.

Some of the teaching philosophy and delivery espoused by American strategic management education providers may raise concerns. Harvard's situation may be symptomatic. In his critique of the Harvard School of Business' educational philosophy and performance, Byrne (1993) suggested that the near-total reliance on one method of teaching, the case-study method, with too few group assignments offered, has resulted in deficient leadership and team-working skills of its graduates. Byrne suggested that the Harvard MBA course makes students prone to underestimate the complexity of analysis involved in designing and evaluating business strategies. Byrne quoted Mintzberg: *'Harvard MBAs go through case after case and become experts trained to pronounce on companies they know nothing about.'* Thus it comes as no surprise that more than half of HBS graduates are reported to go to work in investment banking and consulting. Their success there simply does not depend much on those of their skills, which are perceived by Byrne, and Mintzberg as only marginally improved by their education.

For any teaching model to be an effective tool of imparting knowledge and enhancing learners' competence, it also has to take into account their *thinking modes* and *learning patterns*. As individuals follow their particular ways of recognising, interpreting and interacting with their environment, they reveal some distinct patterns of thinking and acting. These patterns will often be situation specific and change as individuals acquire new experience. According to Wynd and Bozman (1996: 232), students learn using one or more of four different patterns: by concrete experience (they call these students *accommodators*), by using deductive reasoning to create theoretical models (*assimilators*), by focusing on specific pro-

blems and excelling in the practical application of ideas (*convergers*), or by using imaginative ability in looking at concrete situations in different ways to develop ideas (*divergers*). The above dispositions are not mutually exclusive. Most students are prepared to use two or more of these patterns, provided the learning situation permits it and an improved effectiveness of learning is anticipated. Individual patterns will contain elements of some, sometimes all, of the above-mentioned learning patterns, but the proportions will vary vastly between individuals, groups and situations.

Table 2. „Colours” of thinking

	Uses	Deployment stage	Dominant mode
<b>Red thinking</b>	Facts and problems	Analyzing situation	Analyzing
<b>Green thinking</b>	Ingenuity and imagination	Generating strategies	Creating
<b>Blue thinking</b>	Judgments and opinions	Strategy selection and implementation	Decision making

Source: Rhodes and Tame 1989.

The non-interactive methods of teaching, which would be most applicable these days in distance education courses, tend to cater, in most situations, for *assimilators*’ needs. Interactive activities help *accommodators* and *convergers*. Holistic theory will, we believe, support *divergers*’ learning. On the other hand, students may use, in one learning task, various *modes of thinking* in trying to make sense, analyse and suggest the solutions to the strategic management problems. Rhodes and Tame (1993) refer to these modes as ‘*colours of thinking*’ (see Table 2).

### Individual managerial skills required for competence-based strategic management

Strategic management education is not only about knowing the elements of the strategic planning process, knowing generic and product-market strategy categories, understanding an implementation framework and knowing what analytical tools are most widely used in strategic management. Competence-based strategic management theory does not throw out these basic and important concepts and techniques. It simply argues that, by themselves, they are insufficient for a *dynamic, systemic, cognitive* and *holistic* theory and practice of strategic management.

For instance, understanding Porter’s five forces industry analysis becomes even more useful a tool if its users focus on industry change (dynamism), on how the particular industry is linked to other industries (systemic), how managers in that industry actually conceive of their industry (cognitive) and as a result how they are likely to act or how the particular industry fits into the community, country, international and global economic, political and cultural framework (holistic).

Skills in using standard techniques and tools should then be enhanced and complemented by new skills to cover all required competences. What then might be the inventory of skills that are required by managers who practise strategic management, and how well does the current strategic management education system provide learning opportunities to develop those skills? The inventory we generate here (see Table 3) is meant to be comprehensive but not exhaustive.<sup>3</sup> Some skills are applicable to a great variety of areas of human pursuit. Some of them are more specific to strategic management and some kindred pursuits. There is also a degree of overlap between some of them in terms of what they connote. *Shared reflection*, for instance, would be regarded by most as a form of interactive learning. The overriding concern for us was to not leave out of this inventory any skill considered of significance for strategic management. Finally, no ranking of the proposed skills has been attempted, as its results are context-dependent.

Table 3. Essential skills in competence-based strategic management education

No.	Skill	Dynamic	Systemic	Cognitive	Holistic
1.	Coping with complexity	X	X	X	X
2.	Coping with uncertainty	X		X	
3.	Coping with ambiguity	X		X	
4.	Thinking long-term	X			
5.	Reliable perception	X		X	
6.	Efficient information gathering	X	X	X	
7.	Efficient information evaluation	X	X	X	X
8.	Contingency-based thinking	X			
9.	Contextualising		X		
10.	Critical evaluation of ideas			X	X
11.	Good communication skills	?	X	X	?
12.	Sharing reflection	X		X	X
13.	Problem finding/definition		X		X
14.	Opportunity finding				X
15.	Using models, construction of rules		X	X	X
16.	Recognising trends, patterns	X			
17.	Reliable perception	X		X	
18.	Empathy		X	X	
19.	Self-awareness		X		
20.	Self-criticism		X		X
21.	Bias controlling		X	X	X
22.	Accommodating different perspectives			X	X
23.	Interactive learning	X			



While some of these skills are easily understood as being relevant to strategic management (eg. *coping with ambiguity, coping with complexity*), others may be less so. For instance, *sharing reflection* is important because, in order to understanding others' views, and for others to understand our views, reflection of those views to others is important. This enables us to take account of a variety of views (holistic), to understand the views of others (cognitive), to adjust our views (dynamic) and to understand interrelationships from the way in which various views are formed (systemic).

*Empathy* is another example. Strategic management provides a ground for the encounter between various viewpoints and interests represented by all stakeholders, both insiders and outsiders to the company. Stakeholders bring views and perceptions, which are formed by their everyday experience, primary responsibilities and perception of their own internal or external interests. If the individual's approach is based on win-lose rather than win-win games, chances for developing a strong sense of shared future and overriding common interests are pretty slim. A strong *empathy* skill allows a greater likelihood that others' views will be considered in strategic processes and decision-making.

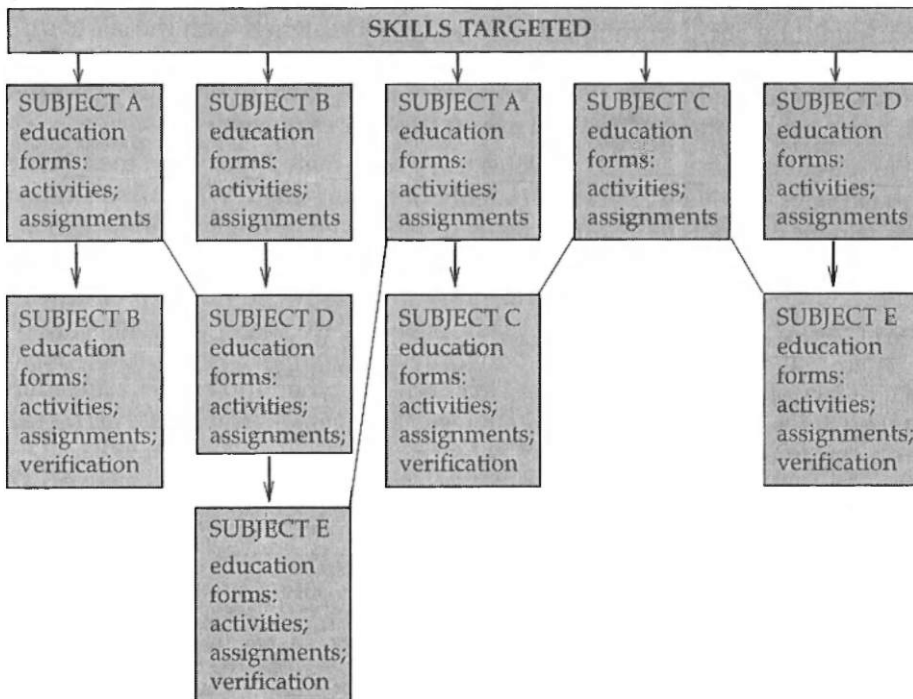


Figure 1. Skill enhancement logic in strategic management education



The proposed skills in Table 3 can be developed to the required levels through various forms of instruction, activities and subjects undertaken throughout a student's course (see Figure 1).<sup>4</sup> Some of the subjects do not need to be strategic management subjects. They may be from organisation behaviour, human resource management, marketing, accounting or other subject areas. For some skills it may take one subject to bring a student to a desired level, but for others it may take several. Some skills may be needed as a basis on which to develop other skills. Such dependence would exist, for instance, between *reliable perception* and *evaluation of information*. The latter cannot be done reliably and efficiently unless an appropriate level of skill with regard to the former has been achieved. Obvious implications for the sequence in which education emphasis should shift from some skills to some others would ensue for courses every time such determinations have been made.

### **A survey of post-graduate strategic management teaching: a skills assessment**

Our survey of teaching objectives and student learning methods was addressed to all universities teaching post-graduate strategic management in Australia. It provided us with a snapshot of the current situation of what skills are currently being sought by our peers and showed how they matched with the set of skills required under a competence-based theory. We sought only post-graduate responses because students in these courses are more likely to be actual managers with more immediate need for, and use of, strategic management skills.

We sought copies of subject outlines using an e-mail directory of members of the Australian and New Zealand Academy of Management who listed strategic management (but not necessarily post-graduate level) as their teaching area and follow-up letters to Deans or Course Directors of what we perceived to be appropriate faculties and courses. We surveyed 23 universities and received responses from 17 universities and 27 courses. This included two of our own subject outlines, since neither of us had, at this point, prepared outlines with a competence-based theory of strategic management in mind. Two other universities also replied that they did not have post-graduate strategic management teaching. This seemed to be a reasonable sample.

From the subject outlines we received, we firstly examined the aims, objectives and outcomes sections. We looked for key words or phrases that indicated what the lecturer expected students to achieve from the course. We were particularly interested in the outcomes section, since that would provide us with a direct view of the skills which the lecturers were seeking for students to be able to demonstrate.

We secondly examined information about the assessment process for the subject. Since the assessment process should reflect the objectives, aims and outco-

mes that the lecturer was aiming to achieve, this gave us a second cut at the type of skills, which the subject aimed to develop. The difficulty was that we would have to infer specific skills from generic types of assessment. For instance, the use of cases could, as we have already shown, be used to develop a variety of skills. However, it is clear that, for instance, business game simulations would lead to a different set of skills than would written analysis of cases. We felt we would be able to get an idea whether or not there was at least a consistent approach to assessment, and by implication skills sought, or whether a wide variety of approaches were being followed.

## Results

**Aims, Objectives and Skills.** Table 4 shows the list of aims, objectives and skills which were included in the 27 subject outlines, together with the number of times those aims and objectives were listed. We originally listed „skills” as a separate classification from aims and objectives, but found that the three were inextricably mixed, so we treated skills as part of the aims and objectives. Apart from the common aims of understanding, analysing and applying concepts, implementation of strategy and integration of conceptual material, amongst the many other aims and objectives, only a few directly reflected the competences listed in Table 3. These were:

- Think strategically (a proxy for long-term thinking)
- Coping with ambiguity and complexity
- Thinking holistically
- Self-management
- Presentation skills (a proxy for communication skills, verbal in particular)
- Team work (a partial proxy for sharing reflection)
- Frame the question (a proxy for problem finding)

We saw nothing about the following competences (our comments in brackets after each reflect possible reasons):

- Communication (not considered part of strategic management?)
- Reliable perception (assumed as part of the analytical process?)
- Self-awareness (not considered part of strategic management?)
- Self-criticism (not considered part of strategic management?)
- Bias controlling (not considered part of strategic management?)
- Empathy (covered in teamwork?)
- Construction of rules (not considered a particular part of strategic management?)

Table 4. Aims/Objectives/Skills in course outlines

Aims/Objectives/Skills	No. Responses (n = 27)
Think strategically	4
Understand concepts	14
Analyse concepts	17
Apply concepts/formulation	18
Implementation	17
Integration	13
Literature review	5
Decisionmaking	5
Industry analysis	3
Alliances, networks	1
Leadership/General management	6
Board of directors	2
Prepare a business plan	8
Ethics, social responsibility, values	3
How change occurs	2
Apply to Australia	3
Apply to region	1
Apply to international	2
Apply to non-business	1
Cope with ambiguity, complexity	5
Think holistically	1
Self-management	2
Presentation skills	2
Team work	1
Frame the question	1

From Table 4, the very wide range of aims/objectives/skills sought can be seen with no more than 18 of 27 (67%) of subject outlines mentioning even the most common aspects. There was little agreement on the specific issues, suggesting that each teacher had some specific issues or ways of teaching that were unique. From this, it appears, based on the formally stated aims and objectives, several of the competence-based skills required by individual managers are not being developed currently in strategic management education. It is possible, however, that these objectives have tended to be rather general and have not even dealt with

the desire to acquire specific techniques. Hence, it may not be surprising that there is a limited relationship between current subject outline objectives and required skills. We are loath, however, to draw the conclusion at this stage from this information that these skills are not being sought by course designers.

**Assessment.** Table 5 summarises the types of assessments in use. Once again, it reflects a wide variety of assessments, with no more than 18 of the 27 outlines (67%) supporting any one method of assessment. This represents remarkable diversity. The main types are the integrative project (27%), cases (24%) and exams (20%). The average number of assessment elements used was 3.3.

**Table 5. Assessment: Assignment type**

Assessment Type	No.Using	Average (%)
Cases – written	18	21
Cases – oral	7	3
Project – written	8	7
Project – oral	4	2
Participation	9	6
Integrative Project – written	16	24
Integrative Project – oral	6	3
Business Game – written	4	4
Business Game – oral	5	2
Learning Contract	2	5
Exam	13	20
No. of elements used		3.3

The fact that an integrative project and cases are the main forms of assessment suggests support for several of the required managerial skills (eg. complexity, ambiguity, integrative, efficient information gathering, and interactive learning). The role of exams is unclear in the development of managerial skill. While exams can develop some of the above skills, exams are more likely to be used as a control mechanism to guard against individuals passing the subject on the basis of group work, rather than on their own ability. The limited emphasis on oral skills (eg. participation) is noticeable. This would suggest that communication and sharing reflection skills would receive limited development in existing courses.

In summary, the wide range of assessments used is consistent with both the diversity of the subjects themselves and the attempt to assess a wide range of managerial skills. Exams may be over-emphasised from a managerial skill perspective, with oral skills somewhat under-represented.

**Assessment Type.** Table 6 shows the split between individual and group assessment. It is clear that the major emphasis is on assessing the individual, but the role of the group (teamwork) is significant, with 16 of the 27 outlines including group work.<sup>5</sup>

**Table 6. Assessment type: Individual, Group, Written, Oral**

Assessment Type	Percentage	Range
Individual	74%	0 - 100%
Group	26%	0 - 60%*
Written - individual	65%	0 - 100%
Written - group	19%	0 - 85%
Oral - individual	8%	0 - 50%
Oral - group	8%	0 - 30%

\* Excluding one outlier.

Table 6 also shows the split between written and oral assessment. The strong weighting for written work again reinforces the fact that oral communication skills are given relatively little weight in the skill development assessment system. The range for each factor is, however, extremely wide, even for individual written assessment, further confirming the wide range of approaches which are taken.

In summary, assessment heavily reflects an emphasis on individual, and written, work. Oral and group work, while favoured by some, are given little emphasis by many others. Hence, the likely skill development will be individual and related to written – analytical – reporting, which provides little role for communication, sharing reflection, empathy and other group and oral skills.

### **A possible model for strategic management education**

It seems that there are significant gaps between the current aims and objectives of strategic management education and the required individual skills needed for strategic management competence. We therefore suggest a tentative model for a competence-based strategic management subject outline. We do this to identify this issue as crucial for improving the quality of strategic management, and to raise the issue for formal discussion, not in the belief that we have the „perfect“ model.

The following aims and objectives, skills and assessment processes cover, we believe, all the competences required:

**Aims and Objectives.** To be better able to think and act strategically by:

1. Understanding a variety of theoretical approaches to strategy.

2. Integrating information from a wide variety of sources to develop systemic models of the organisation in its specific environment.
3. Understanding and being able to analyse and apply strategic concepts to strategy formulation and implementation, in a variety of contexts.
4. Understanding the dynamics of change, within and outside the organisation.
5. Making and implementing decisions in complex, uncertain, ambiguous environments.

**Skills.** At the end of this subject, the participant will have an improved ability to:

1. Apply conceptual models to complex information, recognising the organisational context.
2. Cope with complexity, uncertainty, ambiguity and dynamic organisational situations.
3. Efficiently gather and evaluate information, taking account of a wide variety of differing perspectives.
4. Make long-term decisions, which take account of the views and situations of a wide variety of stakeholders.
5. Creatively seek new and different ways to address issues and solve problems.
6. Communicate one's own and reflect others' viewpoints to persuasively argue a tenable, realistic position.
7. Have an improved understanding of one's own values.
8. Lead a team and be a team member of a high performing team.

**Assessment.** A wide variety of assessment types can be used to address the above aims, objectives and skills. No assessment method by itself will adequately cover all elements required. Therefore the key elements of an assessment plan should be:

1. A variety of assessment types – a minimum of four seem necessary to cover all elements.
2. A reasonable balance between individual and group assessment. While we believe that individual work should form the majority of the assessment, since it is individual skills which are being assessed, a significant amount should be based on group work, given the importance of teamwork in implementing strategy within organisations. We suggest a minimum of 30% for group work.
3. A reasonable amount of oral assessment is included. Since oral skills are clearly important in decision-making in organisations, a heavy reliance on written work, while valuable in testing individual understanding and individual analytical skills, is of limited value for practical strategic managers. We suggest a minimum of 20% for oral assessment. A difficulty with oral assessment is the sheer time taken for it and its perceived subjectivity – oral assessment is very

costly. Were this not the case, we would suggest a much higher weighting, as we believe this skill is highly under-rated in strategic management education.

4. The opportunity for participants to customise some part of the learning experience, to address their specific needs. Participants enter a subject with a wide variety of background experience, learning styles and learning desires. Since it is clearly impossible to impart the complete field of knowledge within any one, or any number of, subjects, providing choice will make the subjects more valuable than if all participants undertake a lock-step procedure.

What is abundantly clear from the above proposal is that it is highly unlikely all these issues can be covered in a one-semester subject. We previously noted that some skills could be developed slowly in a variety of linked subjects. For instance, integration requires the participant to bring a variety of knowledge and tools from other functional subjects before they can possibly „integrate“ all the assumed material into a holistic, systemic understanding. Unfortunately, unless the whole course is highly linked and is itself holistic, systemic, cognitive and dynamic (which would make it an ideal course), it may be unwise to assume that other subjects will adequately provide the ideal preparation for strategic management. Even if they did, it is certain that the complete strategic management course cannot be taught in one semester. It follows that either individual subjects must compromise, or a stream of strategy subjects must be developed. In fact, in some of the institutions which submitted subject outlines, there were two subjects in the course and, seen together, these two-subject outlines were able to provide a more rounded and complete strategic management education.

### **Implications for the secondary education**

Results of our analysis of the current tertiary education outcomes and needs in the area of the capstone unit of Strategic Management will now provide a platform for our general suggestions of the desirable enhanced inputs of the secondary student knowledge and skills. As we have not known of any matching research having been recently conducted at the secondary level, we could look, exclusively or indeed inclusively, at:

- those skills that, due to their character, usually take longest to get developed,
- those skills that, according the available research results, often show the largest deficit, either at the point of entry, or exit from the tertiary education, or both,
- those skills that enable, or facilitate, acquisition of other essential skills by the future business professionals.

Given that deficit in skills depends on the selection of benchmarks, on the measurement method, and besides, is likely to vary substantially between countries and even individual universities, we considered it appropriate to not make recommendations for the secondary education based on the perception of skill deficits. Instead, we concentrate on the two other criteria of the *amount of time*



required to develop a skill and enabling or facilitating relationships that exist between some of the selected skills considered essential in building the strategic management competence. This emphasis is likely to make the following recommendations much less dependent on particularities of educational contexts and, whenever possible, universally applicable.

**Table 7. Recommended skill development emphasis for the secondary education**

No	Skill description	Teaching recommendations
1.	<i>Cope with complexity, uncertainty, ambiguity and dynamic organisational situations</i>	Group study of increasingly complex issues, their dynamics, in particular; exposing secondary students to, and gaining their acceptance of, ambiguity; acquainting them with a wider range of tools to deal with uncertainty conditions
2.	<i>Efficiently gather and evaluate information, taking account of a wide variety of differing perspectives</i>	Discussing the need to evaluate information; methods of gathering and evaluating information; presenting their relative strengths and weaknesses; information pitfalls to be expected
3.	<i>Make long-term decisions which take account of a wide and situations of a wide variety of stakeholders</i>	Understanding interdependence and trade-offs that exist between the short-term, and long-term, and long-term, objectives; the need for and technics of reconciling conflicting interests of various people
4.	<i>Have an improved understanding of one's own values</i>	An in-depth reflection, written and/or oral, on one's own intellectual habits, values and resulting views and preferred courses of action
5.	<i>Creatively seek new and different ways to address issues and solve problems</i>	Group projects and discussions of alternative perceptions of problem and different proposed resolutions
6.	<i>Communicate one's own and reflect others' viewpoints to persuasively argue a tenable, realistic position</i>	Establishing and developing the capacity to find and understand the implicit assumptions behind someone else's perceptions of, and proposed solutions to, a problem
7.	<i>Lead a team and be a team member of a high performing team</i>	Nurturing self-criticism and individual desire to excel; developing and enhancing student's capacity to organise and motivate their teams to excel

The two selection criteria have been applied to the list of Aims and Objectives and Skills that resulted from our empirical research. This has produced the list of skills that we believe secondary education would need to put an increased emphasis on to help tertiary education achieve the desirable improvement of strategic management competence of its graduates.

The education emphasis recommended in Table 7 addresses the skills, and their gaps in business graduates, which are recognised as most important (Berry 1993; Byrne 1993; Fillion 1995; Gasse 1992; Hotch 1992; Jennings 1995; Lundstrom et al 1996; Midgley 1995; Mintzberg 1996; November 1993; Porac et al 1989; Ramocki 1994; Reger and Huff 1993; Shannon et al 1996; Takeuchi 1997; Wynd and Bozman 1996). The effectiveness of recommended teaching methods and activities will obviously depend on students' previous learning conditioning, their level of commitment and their responsiveness. It will also depend on the skill and on the resources at their teachers' disposal.

## Conclusion

This paper has suggested a set of individual managerial skills required to develop the competences required for strategic managers in a competence-based theory of strategic management. Our survey of post-graduate strategic management education in one country, Australia, has suggested that there are significant gaps between what is being taught and what is required by the theory. We have suggested a model education outline that provides a starting point for discussion about the appropriate educational program to develop the required competences. Further, we have made certain recommendations to secondary education as to the desirability of increased emphasis there on the development of certain skills, from the point of view of tertiary business education. We hope our ideas will become part to the ensuing debate and will help further improve strategic management education and, as a consequence, the practice of strategic management.

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### Endnotes

- <sup>1</sup> „Turning Opportunities into Realities“ (1996), Swinburne University of Technology/Ernst and Young Centre of Innovation and Enterprise.
- <sup>2</sup> See eg. Byrne's critique of the Harvard School of Business' MBA teaching approach and outcomes. The authors' own experience in teaching management students from well over dozen countries confirms that this anticipation is quite representative: developing proper contextualisation skills takes a fairly long time.
- <sup>3</sup> Specific, well-defined strategic management contexts may call for addition of some extra skills of significance. Due to the volume limitations of this article, only some skills are discussed here: they come underlined. Some of the proposed skills may contain elements of other skills; due to terminology discrepancies we preferred however to quote all original terms, if only they were considered important enough, rather than modify the terms to avoid overlaps.

- <sup>4</sup> It would appear reasonable to recommend here that most of the class activities and assignments should focus on the development of these strategic management skills.
- <sup>5</sup> Since a small number of courses were for external delivery (distance education), it is unlikely that group work would be incorporated in those. Hence, the percentage using group work is higher than it appears to be.

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