

Intensive teaching formats: A review

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This paper reviews the literature on the use of intensive teaching formats in the tertiary sector. The paper begins with a summary of recent changes in higher education which have led to the consideration of intensive teaching as a mode of learning. The paper then addresses two principal issues: the advantages and disadvantages of intensive teaching formats and the main learning issues involved. The paper will identify some of the main themes in this literature concentrating on the literature in the tertiary sector. It then draws some tentative conclusions about the advantages and disadvantages of intensive teaching formats.

Introduction

The global context of education is changing. Globalisation is having an impact on higher education similar to its influence in other spheres of life. One measure of this is the way universities have had to become responsive and attentive to international trends. Tertiary institutions are now more concerned about their international standing than ever before. Comparative rankings of institutions such as those found in the *Times Higher Education Supplement*, and the *Shanghai Jiao Tong* are subject to close scrutiny (and, when favourable, used in marketing and promotional documents). International developments in higher education, such as the Bologna declaration, are likewise studied with interest both in Australia and elsewhere (Litjens, 2005). The University of Melbourne has recently mentioned these agreements in recent, well-publicised moves to shift to a 'graduate school' US model of tertiary education (Hoare, 2005). If implemented, this change will mean that Melbourne will be the first university in Australia to go down this path — a move largely in response to international trends elsewhere.

The financial constraints on universities have also changed dramatically. The traditional model of largely autonomous, predominantly government-funded institutions is in decline. The Australian Federal government now micro-manages universities in a way that was unthinkable in the past. It threatens to withhold grant income unless universities comply with government demands in terms of courses — witness, for example, the debate about *cappuccino courses* (Nelson aims the axe at 'cappuccino' uni courses, 2003) — but also in areas such as research and teaching performance. Governments are also forcing universities to shift from an 'elite' to a 'mass' to a 'universal' education system, and to be more market-

responsive in the process (Trow, 2005).¹ Universities are now supposed to “satisfy both the invisible hand of uncertain markets and the long arm of micro-managing governments”; a situation likened to a government simultaneously “floating the dollar and fixing the exchange rate” (*Growing Esteem: Choices for the University of Melbourne*, 2005).²

Government funding has in fact been decreasing for the past two decades, down from 90% in 1981 to 40% now (AVCC, 2003). Universities have been forced to become more entrepreneurial (Davies, 1999, 2000). As a consequence, universities have become market-driven, commercial organisations largely dependent on their funds from their ever-increasing numbers of international students (mainly from Asia). At last count international students provided 15% of all university revenue (Department of Employment, 2005; Deumart, Marginson, Nyland, Ramia & Sawir, 2005). International students made up 24 percent of the student body in 2004 and fee income from students grew from \$30 million in 1996 to \$200 million in 2004. The target for 2007 is around \$270 million (Deumart, et al, 2005; *Growing Esteem*, 2005). Nation-wide, the figures are startling: education is now Australia’s second largest export industry within the services sector and the fourth largest export earner overall (Simmonson, 2005). It contributes more than 6 billion dollars to the Australian economy (Davis, 2004). International students are expected to inject \$38 billion into the economy by 2025 (Roach, 2003). In fact, demand for educational services to international students is expected to rise dramatically over the next twenty years when there is expected to be 7.2 million students from Asia studying here. By 2025, Australia’s share of the global demand for educational services is expected to increase from 3 percent in 2000 to more than 8 percent (Bohm, Davis, Meares & Pearce, 2002; Davis, 2004). This has led, naturally enough, to a focus on ‘customer satisfaction’ as much as promoting good teaching and learning. In response, national agencies such as the independent Australian Universities Quality Agency (AUQA) have been formed to regulate and foster good practices in the tertiary sector.

The character and composition of students is also changing. Universities are no longer in the business of preparing school leavers for the job market. They now have to service mature-age and life-long learners. At the postgraduate level in particular, students are increasingly professionals undertaking study on a part-time basis, either by distance or on-campus learning, while they balance demands of family, work and their studies (Curtis, 2000; Hammon & Albiston, 1998; Pitman, 1997). As noted

¹ These terms have been defined as follows: ‘Elite’: Shaping the mind and character of a ruling class; ‘Mass’: transmission of skills and preparation for a broader range of technical and economic elite roles; ‘Universal’: adaptation of the whole population to rapid social and technological change (*Growing Esteem*, 2005).

² This quotation comes from Margaret Gardner, Inaugural Vice Chancellor’s Lecture, RMIT University.

elsewhere, higher education institutions are now required to “adapt objectives, content and presentation for this group of motivated learners who have decided to return to study, usually to further their careers and to update their knowledge in educational methods and theories” (Anderson & Askov, 2001; Swenson, 1998). The changing student mix has also prompted recent moves to ‘commodify’ education, and to assess it in terms of outcomes (ie, what learners can *do* which what they know) rather than inputs (content needing to be acquired). ‘Outcomes-based’ education is most visible in the secondary sector but is becoming more recognised in the tertiary sector. It has been the subject of much heated discussion (Berlach, 2004; Evans, 1994; Killen, 2000; Kohn, 1993; Spady, 1994).

In an environment undergoing rapid transformation, it is not surprising that teaching methods have also been changing. As a part of the process of adapting to changing student demands, universities have had to consider new ways of delivering course content. A very practical example of this is consideration of moves from traditional to ‘intensive’ modes of teaching. Standard day-time teaching practices, in the form of weekly lectures and tutorials, are no longer convenient for today’s students. They require more flexible modes of delivery which fit with demands at work and at home. Intensive modes of teaching seem to be an idea whose time has come.

This paper is a review of the literature in this area. The paper first defines intensive teaching. Second it outlines where such forms of teaching are practised. Third, it reviews the literature on intensive teaching including a review of the empirical data. Fourth, the paper discusses problems in interpreting the empirical data, and then outlines the learning issues involved. It then makes tentative conclusions about the overall advantages and disadvantages of intensive teaching. The argument made is that research indicates intensive teaching has demonstrable advantages overall. However, some important caveats in the implementation of intensive teaching are also stressed.

What is Intensive teaching?

Intensive teaching models, otherwise known as ‘accelerated’, ‘time-shortened’, ‘block format’, ‘compressed’ courses or ‘intensive modes of delivery’ (IMD), have been defined in various ways. The definitions, and the different terms used, are crucial. Some of the definitions follow.

Block Teaching has been defined as: “a daily schedule that is organised into larger blocks of time (more than sixty minutes) to allow flexibility for a diversity of instructional activities” (Cawelti, 1994). Block teaching is a practice more suited to the high school sector. It consists of *longer than usual classes* held during a conventional timetabled schedule. Trials have been conducted with block teaching in the tertiary sector, ie, 2 eighty-

minute blocks per week as opposed to three fifty-minute blocks per week. These trials have met with some success (Gaubatz, 2003). Given its principal use outside the tertiary context, this kind of intensive teaching format is not dealt with further in this paper. However, it is important to mention it here to be comprehensive.

Accelerated or *Intensive teaching* have been defined as being offered in less time than normal and involving *fewer contact hours* (for instance, twenty hours of class time over five weeks or eight weeks as opposed to forty-five hours of class time over sixteen weeks) (Scott & Conrad, 1992; Wlodkowski, 2003a). Usually, IMD formats involve *compressed* teaching formats involving weekend and evening classes, and possibly workplace programs. These courses are more suited and relevant to the tertiary sector. As we shall see, most of the studies which compare intensive teaching formats with traditional length formats either show a) no difference in learning outcomes or, b) improved learning outcomes using IMD formats. However, there are some concerns related to learning issues and the reliability of the data which will be dealt with later in this paper.

The extent to which programs of study are 'accelerated' or 'compressed' varies from subject to subject, and institution to institution. In addition to the format mentioned above, the following IMD formats are also common (Finger & Penney, 2001).

- *Week-long mode*: 5 or 6 consecutive days from 8.30-4.30 pm (Clark & Clark, 2000; Grant, 2001)
- *Two or three week-long mode* (Petrowsky, 1996; van Scyoc & Gleason, 1993)
- *Weekend mode*: eg, weekends in weeks 3, 6 and 9 in semester
- *Weekend and evening mode*: a mixture of weekends and allocated evening classes
- *Less orthodox modes*: 3 hours per day for 18 days (Gose, 1995); Weekly classes of 3 hours (Henebry, 1997); 4 hours per week for 5-10 weeks (Jonas, Weimer & Herzer, 2004).

We could possibly clarify these different teaching formats with the following terminology.

1. *Block modes*: Very large chunks of teaching time, for example whole day sessions, offered in week-long mode, two or three-week long mode and weekend mode.
2. *Mixed modes*: where teaching is spread over weekends and evenings in moderately large time chunks but less than day-length.
3. *Sporadic modes*: where teaching is offered in smaller time chunks over longer time periods (eg, 18 days or 5-10 weeks).

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4. *Sandwich modes*: where block modes are offered at the front and back end of a semester course with shorter periods of traditional teaching in between to allow for consolidation and reflection.

These forms of teaching are in contrast to ‘traditional’ teaching formats of hour-long lectures during semester-length courses (Jonas et al., 2004). Of course, what is or is not ‘traditional’ varies between institutions to some degree as well. At the University of Melbourne, for example, traditional teaching occurs over a 14-week period. Other institutions have different practices.

IMD might involve on-line learning as well as, or in place of, face to face teaching, but the *time taken*, not the technologies used, is critical here. Similarly, debates about IMD formats are not exactly the same as debates in ‘flexible learning’, even though it could be argued that IMD formats are a form of flexible learning. The flexible learning literature is mainly concerned with the use and adoption of new technologies (videoconferencing, computer mediated communications, etc.) in teaching and learning (Beattie & James, 1997). It does not specifically address IMD formats.

Many leading research institutions in the UK and Canada use a range of intensive formats to teach Economics and Commerce students.³ It is in these discipline areas where intensive teaching is most common, though they are increasingly being used in other disciplines (see *The literature on intensive teaching* later in this paper). In Australia, intensive teaching has been used by most business schools for local as well as offshore programs, and the Macquarie Graduate School of Management started using intensive teaching formats as early as 1991 (Burton & Nesbit, 2002). It appears that intensive teaching formats are now a widely used, alternative way of delivering high quality learning (Daniel, 2000).

Where are intensive modes of delivery practiced?

As already noted, IMD formats are being used in many institutions already, and Australian tertiary institutions have been quick to adopt them. In addition, Wlodkowski and Kasworm note the following points.

³ For example, the International Masters in Practicing Management (IMPM) at McGill University and their MBA Japan program in subjects ranging from management to finance and accounting. Warwick Business School regularly teaches intensive modules, usually of one week duration. Other UK universities that use intensive teaching include: the London Business School, Nottingham University, Manchester Business School, Aston University, Imperial, and Said Business School. (I thank Cynthia Hardy for these points.)

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- A not-for-profit accelerated degree university in the US with over 130,000 students (NB: This is the University of Phoenix: <http://www.phoenix.edu/index.asp>).
 - 250 US colleges and universities with accelerated programs
 - 13% of all adult students in the US are enrolled in accelerated degree programs
 - Universities with accelerated degree programs on four continents
 - 73% of all US students as non-traditional learners, who do not fit into the typical instructional delivery system of most institutions (Wlodkowski & Kasworm, 2003).

Recent updates on these statistics indicate that there are now more than 320 US institutions which practice accelerated learning (Wlodkowski, *pers. comm.* 24/2/05). Colorado College and Concordia University (<http://www.csal.csp.edu/>) are frequently mentioned. The University of Calgary in Canada (<http://www.ucalgary.ca/>) is reputed to have used IMD formats for more than 25 years (Grant, 2001).

The Centre for the Study of Accelerated Learning (CSAL) has a comprehensive website listing all US institutions which practice IMD format teaching available at <http://www.regis.edu/regis.asp?sctn=rsr&p1=csal>. This institution is part of a wider organisation, The Commission for Accelerated Programs (CAP): <http://www.capnetwork.org/>. C.A.P has a range of research papers and documents pertaining to the use of different forms of accelerated learning.⁴

The literature on intensive teaching

Research in this area is not extensive. It is frequently in the form of doctoral dissertations, Faculty reports, conference proceedings, unpublished papers and college journals, and not published in top-tier research journals. There is a great deal of “grey” literature on instruments for obtaining feedback on teaching generally (Richardson, 2005). However, academic research in the area is growing. A key recent publication is Wlodkowski and Kasworm (2003). Another very useful recent publication is Gaubatz (2003). The attached reference list indicates the range of papers published on this topic. An additional comprehensive list of primary and secondary sources on the topic is available from the University of Michigan at:

<http://www.cel.cmich.edu/ontarget/aug02/CRAL-bibliography.pdf>

⁴ I am informed by the Director of this Unit that ‘best practice’ and benchmarking arrangements are the subject of future research. This is not available at present: “because the field is so new we’re not sure what the best practices would be” (Wlodkowski, *pers. comm.* 24/2/05). Note that there are access restrictions to the published data on these websites and not all research is publicly available.

Much of the research in the area of accelerated learning emanates from the secondary sector, though it has relevance to other sectors. Where the tertiary sector is discussed the research is mainly in disciplines other than Economics and Commerce, despite the fact that it is Commerce-related areas in which intensive teaching formats are frequently trialled and used. Research using intensive teaching can be found in Language teaching (Buzash, 1994; Deveny & Bookout, 1976; Eller, 1983; Frank, 1973; Keilstrup, 1981), Art Education (Mims, 1983), Literature (Scott, 1994), Engineering and Computer Science (Masat, 1982), Mathematics (Caskey, 1994; Mayo, 2003), Pharmacology (Bester, 1965), Psychology (Ray & Kirkpatrick, 1983), Earth Science (Waechter, 1967), Nursing (Sakalys, 1995) and Education (Austin, Fennell & Yaeger, 1988; Brackenbury, 1978; Finger & Penney, 2001; Lombardi, Meikamp & Weinke, 1992), or cross-disciplinary (Daniel, 2000). From the list above, a considerable amount of the literature on IMD appears to exist in academic areas where *skill acquisition* is paramount, rather than discursive, conceptual learning. This point may be critical is assessing the value of intensive teaching in various subjects.

There have been relatively few studies done on the use of intensive teaching formats in the areas of Business, Economics or Commerce, even though it is in these disciplines in which intensive teaching is often practised. However, a few papers do exist (Burton & Nesbit, 2002; Henebry, 1997; Jonas et al., 2004; Petrowsky, 1996; van Scyoc & Gleason, 1993). As Burton and Nesbitt note, "Block teaching has been so successful that it has been copied by most business schools in Australia for their local and/or offshore programs" (Burton & Nesbit, 2002). 'Successful' in this context, means 'influenced others', not 'led to improved learning outcomes'. Burton and Nesbitt cite data, indicating that in 1999 there were 581 block teaching programs offered offshore by Australian Universities (International Relations Strategic Plan, 2000). However, they also note that, "block teaching has received very little attention in the academic literature" (Burton & Nesbit, 2002). Similarly, Kasworm notes that, "While there is recent significant growth of accelerated degree programs, there is little empirical research regarding the quality and impact of accelerated degrees on adult learning" (Kasworm, 2001). It is clearly a relatively new area of research.

Comparisons between IMD and traditional formats

The following summary of IMD formats comparing different kinds of formats in terms of student outcomes, has been provided in Finger and Penny (2001) and adapted from Scott and Conrad (1991, p.75). The studies listed were conducted in a variety of discipline areas in the tertiary sector. Finger and Penny use the terminology *Summer*, *Modular*, *Regular Term* and

Weekend. This is equivalent to my terminology: *Block*, *Sporadic* and *Mixed modes*, respectively. It will be noted that many of the studies found no significant difference in terms of student learning outcomes between traditional and IMD formats, and only one study found in favour of traditional teaching format in terms of student outcomes. This represents a *prima facie* case in favour of IMD formats.

Table 1: Summary of IMD formats
(Finger & Penney, 2001, Adapted from Scott & Conrad, 1991)

Study	Type of Format	Outcome*			
		NS	+I	+T	CS
Summer					
Austen, Fennell & Yeager, 1988	1 week, 2½ weeknd: 5 weeknd: and 5-week classes	X			
Bester, 1965	6 week and 16 week classes	X			
Boddy, 1985	5, 8 and 16 week classes	X	X		
Deveny & Bookout, 1976	8 week class				X
Eller, 1983	8 week class				X
Gleason, 1986	3, 5 and 15 week classes	X	X		
Keilstrup, 1981	6 week class				X
Masat, 1982	3, 6 and semester length classes	X			
Troiani, 1986	10 day class				X
Modular					
Kuhns, 1974	Modular and semester classes		X		
Haney, 1985	Modular and semester classes	X			
Regular Term					
Richey, Sinks & Chase, 1965	13 day and 17 week classes	X	X	X	
Frank, 1973	One semester class				X
Brackenbury, 1978	7, 8, 15 and 4 weekend classes	X			
Kirby-Smith, 1987	Intensive and 15 week classes	X			
Weekend					
Brackenbury, 1978	7, 8, 15 and 4 weekend classes	X			
Shapiro, 1988	2, 3, and 9 week and 4 weekend classes	X			
Austen et al., 1988	1 week, 5 week, 2½ weekend and 5 weekend classes	X			

*NS = non-significant differences in outcomes

+I = findings in favour of intensive formats

+T = findings in favour of traditional formats

CS = case study – all case studies favoured intensive formats

A recent review of the literature looking at a number of facets of intensive teaching has been conducted at the University of Melbourne by Zelinna Pablo. Pablo has reviewed studies noting the qualitative responses in relation to a number of criteria including: STO (delivering short-term outcomes in student grades); LTO (delivering long-term outcomes in student grades); CRP (having an impact on course requirements and

practices); SA (influencing student attitudes); FIV (factors influencing variance in student attitudes); FAT (faculty attitudes towards intensive teaching). Pablo has also itemised a number of studies reporting improvements, losses and no difference in student outcomes in a variety of subjects as a result of intensive teaching. The results are summarised below. For further details, see:

http://tlu.econ.unimelb.edu.au/academic_resources/

Table 2: Impact of intensive teaching on student outcomes

Subject	Findings			
	Improvement Intensive	Loss Intensive	No Diff	Not Specified
Psychology	✓		✓	
Macroeconomics	✓			
Spanish	✓			
Unspecified subject			✓	
Computer Science	✓			
French, German, Russian, Spanish	✓			
Unspecified subject			✓	
Algebra/English/Political Science Languages		✓	✓	
Research Methods			✓	
Statistics				
Human Sexuality	✓			
German	✓			
Philosophy of Education			✓	
Business Administration			✓	
Statistics				✓
Reading			✓	
General Education programming	✓			
Algebra and Accounting			✓	
Unspecified subject				
Business Administration	✓		✓	
Earth Science			✓	
Macroeconomics			✓	
Microeconomics			✓	
TOTALS	9	1	13	1

Table 2 shows the results of the impact of intensive teaching on reports of student outcomes in certain subjects. The survey was conducted by Zelinna Pablo (2005). The survey reviewed papers by Daniel, (2000) and Scott and Conrad, (1991).

Problems interpreting the data on intensive teaching

The studies which have attempted to assess differences in learning outcomes by comparing IMD and traditional teaching formats are problematic for several reasons.

1. Ratings of student evaluation are to some degree biased. IMD programs are usually self-selected by students. None of the studies comparing intensive and traditional courses randomly assigned students to courses (Daniel, 2000).
2. The self-selection of the teaching format cannot reliably be separated from the evaluation given *about* the teaching format by students (in other words, how do we distinguish students' preferences for intensive formats from their estimation of them?)
3. Students also may select the teaching format that suits their learning style, giving an inaccurate assessment of the benefits of IMD formats (Burton & Nesbit, 2002).
4. Data is generally taken immediately after a period of intensive teaching ends. This may or may not accurately reflect the long-term learning outcomes achieved (Daniel, 2000).
5. While most studies note that the learning outcomes of students from IMD and traditional formats to be comparable (or in favour of IMD formats), it is not clear what is being measured, and whether this is a long-term outcome of the teaching method used. Students completing IMD format courses tend to be older (Caskey, 1994), more motivated (Christy, 1991) and better prepared (Smith, 1988), and thus, more likely to succeed regardless of the time-format. This makes any interpretation of the benefits of IMDs problematic.

On the last point, it is also unclear whether and to what extent the method of delivery of course material, ie, the instructional approach, has a major bearing on learning outcomes. As Beattie and James (1997) note, with the development of new forms of flexible delivery methods:

[the] responsibilities of teachers and learners have shifted subtly, the actual location of learning is now more varied than it has ever been, and modes of delivery are employed in various combinations. In these circumstances, it is very important that *we not equate innovation with improvement or effectiveness* (Beattie & James, 1997, p. 191, italics mine).

While intensive modes of teaching are certainly to be encouraged as another way in which learning can be more flexible in response to changing student demands, this does not necessarily imply that these methods necessarily promote better learning outcomes. Even in the tables cited earlier, most studies report 'no significant difference' between intensively- and traditionally-taught methods in terms of learning outcomes (Table 1), and a greater number of studies indicate 'no difference' in student outcomes in relation to different subjects (Table 2). Given the points just raised, this does not represent unambiguous support for IMD formats.

Reliability and validity of the tests are also a matter of concern. Post-tests given at the end of a semester-length course requires a longer retention

period than a post-test administered after a two-week IMD (Daniel, 2000). The studies comparing academic performance also compare semester-length courses with a range of different IMD formats: two weeks (Petrowsky, 1996), three weeks (van Scyoc & Gleason, 1993); 2- 15 weeks (Lombardi et al., 1992); 5- 10 weeks (Kanun, Ziebarth & Abrahams, 1963); 9-18 weeks (Waechter, 1967). No sensible comparisons can be made in these circumstances.

Some studies have compared the learning outcomes of young students who have completed sixteen week courses with adult students who have completed five week courses (ie, the same courses in different formats, or traditional versus IMD). They show that the learning outcomes to be either indistinguishable, or greater in favour of IMD formats (Wlodkowski, Maudlin & Iturralde-Albert, 2000; Wlodkowski & Westover, 1999). This data does not unambiguously support the value of IMD programs however, as the moderating variable of *student age* in these studies might have influenced the results. Indeed, in most studies supporting IMD formats, there are just too many unconstrained variables to yield reliable results.

Other studies have compared the results from summative learning assessments of generic skills (such as critical thinking) over three different university subjects in two different countries. They found that the students studying in different teaching formats — traditional and IMD — met the same standards (Wlodkowski et al., 2000; Wlodkowski & Westover, 1999). Once again, however, the student cohort was not identical. Adults completing IMD programs were being compared with younger students completing traditional programs. Wlodkowski (2003) notes that comparisons of students at the same age level is needed. “Researchers have had difficulties finding large enough samples of adults below the age of twenty-five in accelerated courses to make the comparisons” (2003, p.13).

Another study found that the key to successful learning outcomes was not the time taken as much as the presence of certain key factors in the learning experience. These include instructor enthusiasm and expertise, classroom interaction, collegial atmosphere, student input into class discussions, active learning, a relaxed learning environment and good course organisation. These factors determined whether an IMD program catalysed learning and made for a good learning experience, or whether it was “painful and tedious” (Conrad, 1996; Wlodkowski, 2003b). Other studies have found that for an IMD format to be successful requires “good planning, well-organised and structured activities, a multitude of teaching strategies, a focus on learning objectives, and accurate assessment” (Daniel, 2000, p. 6).

The above points are not meant to suggest that IMD formats are inappropriate or without value. There is too much literature that suggests otherwise. Daniel notes that the use of IMD formats:

... does not seem to be a faddish educational innovation designed solely to make higher education more convenient for adult and part-time students. There are indications that this format will continue to grow and offer not only convenience, but an alternative method of delivering high quality learning in a variety of disciplines (Daniel, 2000, p. 7).

However, just because something is convenient does not make it appropriate or suitable. Daniel also notes that one of the institutions cited earlier as being a major proponent of intensive teaching (Colorado College) has recently started reconsidering the intensive format “because of student and faculty concerns” (Daniel, 2000; Gose, 1995). More research is clearly needed comparing IMD formats and other traditional forms of learning in particular subject areas. As we have seen, the data on intensive teaching is complex. It is hard to compare results across studies, harder to compare results in different subject areas, and there is a need to make judgements on the basis of individual contexts. This review is an attempt to outline the issues in an overall sense and to allow readers to draw their own conclusions, and to prompt more detailed studies.

Learning issues

In terms of the relevant learning issues involved, the following are the most commonly-cited criticisms of IMD programs.

1. IMD programs “stress convenience over substance and rigor” (Wolfe, 1998). They do not allow the necessary reflection and analysis of the material being taught. (Traub, 1997; Wolfe, 1998). This is particularly important in areas where learning discursive material is required. Many of the studies in support of IMD formats are in academic areas where *skill acquisition* is critical (language teaching, mathematics, nursing, pharmacology). Clearly, more time for discussion is needed in more discursive academic subjects (such as management, philosophy and literature).
2. Those critical of IMD programs argue that the compressed nature of the courses do not produce learning outcomes of consistent educational value, resulting in cramming by students (Shafer, 1995)
3. It is argued that lecturers cannot cover sufficient content in a shortened timeframe, resulting in superficial content coverage (Wlodkowski, 2003b).
4. It is also claimed that IMD programs tacitly endorse the ‘commodification’ of education focusing on output of students, and catering for customer satisfaction (short and convenient courses), or a

McEducation approach instead of meeting the intrinsic learning needs of students (Traub, 1997).

The main problems mentioned above all turn on the *time taken* to teach students in IMD programs. Against this, it could be argued as follows.

1. The issue of time taken to teach a course is not an unambiguous measure of the *quality* of the course. If the retention of quality is ensured through following departmental guidelines, receiving Faculty endorsement, appointing able lecturers, adopting good teaching practices and so on, time-taken should not be a critical issue. In short, longer is not necessarily better. Wlodkowski describes traditional length courses and their influence on course quality as little more than a “strong intuitive notion” in higher education (Wlodkowski, 2003b).
2. Time taken during a course is, according to some studies, not a strong measure of student learning achievement in any case. It is argued that the evidence on the relationship between time and learning is not clear (Karweit, 1984; Wlodkowski, 2003b). “Time is a necessary but not a sufficient condition for learning” (Walberg, 1988; Wlodkowski, 2003b). There is no *a priori* reason why a well-constructed IMD could not overcome problems associated with meeting student learning outcomes.
3. There are no compelling reasons for thinking that a traditional program necessarily engages students more than an intensive program. *Time on task* is, of course, a different thing from time in the classroom. Intensive and traditional teaching all assume an additional workload beyond the classroom. But the amount of contact hours (hours taught by an instructor) and the amount of spent by students in independent study is an issue worth further discussion. It certainly requires careful investigation in the context of intensive versus traditional teaching formats. To date this work has not been done. Intuitively, intensive modes of teaching arguably require *more* student engagement outside class time than traditional formats (because there are less contact hours, students might, plausibly, do more independent study to compensate). However, there is little substantive published research on this subject to assess if this is true. One study investigating the gap between expectations of students and the academic reality students faced, found that students completing an intensive summer course expected to study much *less* in terms of independent study than they actually did (Wayland, Chandler & Wayland, 2000). Does the format of teaching assume different levels of student engagement in terms of time spent studying? We simply do not know. But there seems to be no

principled grounds to assume that IMDs necessarily engage students less.⁵

4. The factors determining student learning are wide-ranging, and do not depend *exclusively* on the time taken in teaching the course (though this is certainly one factor). Other factors including the level of student motivation, the expertise of the instructors and the competence of the students themselves are critical variables (Wlodkowski, 1999). Another major factor is the *relevance* of the learning material to students' lives, a point reinforced by recent brain research in the cognitive sciences (Ratey, 2001).

Advantages of intensive formats can be both pedagogical and logistical. They can accrue to both student and instructor. They revolve around increased motivation, commitment, and concentration, diversity of teaching methods, stimulation and enthusiasm, stronger relations among students, and flexibility. Considerations that instructors need to take into account when engaging in intensive teaching include: the greater intensity of workload and fatigue; insufficient time for reflection and analysis of the material being taught (Traub, 1997; Wolfe, 1998); cramming by students (Shafer, 1995); curtailed content and superficial content coverage (Wlodkowski, 2003b). Time alone does appear to be either the key or the barrier to effective teaching, and it seems that *any* form of teaching, whether traditional or intensive, is associated with particular advantages and disadvantages, the latter of which should be factored into subject planning and design.

Conclusion

As noted in the introduction, intensive modes of teaching seem to be an idea whose time has come. It appears, however, that the arrival of intensive teaching on the tertiary stage has little to do with good pedagogy. It is principally due to institutions being more attentive to meeting the needs of their 'clients' (students) in a changing world. Whether we like it or not, the university is now a corporate entity. It has to consider the needs of its customers. Universities are much more sensitive to the opportunities presented by a changing student population and the new 'markets' they are now serving (part-time postgraduates, professional students, life-long learners, international students in increasing numbers, and so on.)

⁵ Similarly, we are not certain whether intensive teaching in the form of compressed semesters (with reduced contact hours) is different from undertaking more hours concurrently in the same subject area. There have been no detailed studies on what exactly might be influencing student performance, ie, is it compression or intensity? Steven Spurling has examined this issue in detail, noting two hypotheses, the *compression* hypothesis and the *intensity* hypothesis. He notes that "the hypotheses of compressed semesters and intensity of study may not be unrelated; in fact, they may be different forms of the same phenomena" (Spurling, 2001).

Students now clearly require more options than traditional, semester-length teaching formats. In the current university environment, it is to be expected that universities are rising to the challenge of providing more intensive modes of delivery, and that these methods are becoming more popular. It is in this context that intensive teaching has become relevant. This change in emphasis has implications for all sectors of the university that deal with students: instructional designers, teachers, institutional managers and student advisors.

But this change is more than a matter of satisfying the customer. IMDs also meet the needs of universities undergoing a rapid realignment of institutional priorities. Flexibility and choice are now a condition of the modern age, for both institutions and their customers. Universities are not exempt from this. As already noted, universities are now more outcomes focused, and are concerned with the alignment of outcomes and practices. With IMDs it becomes easier to evaluate the extent to which particular teaching practices influence the outcomes expected from a course of study (whether they be for a professional affiliation or a set of specific, or generic, skills). Intensive courses are shorter and more targeted. Students and their demands are now being matched to learning approaches more than ever before. It is not the time taken in a course of study that is central, but the outcomes achieved. In this sense, IMDs are entirely consistent with the recent emphasis on outcomes-based education (Berlach, 2004; Evans, 1994; Killen, 2000; Kohn, 1993; Spady, 1994).

Fortunately, the literature does appear to show considerable literature in support of IMD formats. Principles of good teaching and learning are not being abandoned in the process. However, the following *caveats* are important.

1. Very little published literature is available on the impact of IMD formats on *postgraduate* student learning outcomes (most of it is at undergraduate/college level). (However, see Barclay, 1990; La Fountain, 1995).
2. There is little research on the impact of IMD formats on *adult* learning. Exceptions to this are papers by Kasworm (2001) and Kasworm, Wlodkowski, Donaldson and Graham (2001).
3. There is very little Australian data. Most of it emanates from the US which has a rather different academic system. Finger and Penney's (2001) and Burton and Nesbitt's (2002) papers are exceptions to this. This is a good reason to pursue such research locally.
4. There is very little research on IMD formats in the Economics and Commerce field (Burton & Nesbit, 2002; Grant, 2001; Henebry, 1997; Jonas et al., 2004; Petrowsky, 1996). Research in other fields may or may not translate well into the domain of Commerce.

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5. The arguments against IMD formats should be taken seriously when designing an IMD format course. Shortening a course *may* curtail positive learning outcomes if done badly. It may also result in cramming, loss of opportunities for active discussion and superficial treatment of content. However, equally, it may not. As reported, many studies indicate that, on a range of measures (academic performance, student commitment, measures of interaction in class), IMD programs result in comparable, if not better, learning outcomes (Daniel, 2000; Grant, 2001; Henebry, 1997; Scott, 1994; Scott & Conrad, 1991). If these concerns are addressed, there are no reasons why a course in intensive format cannot also be a good course in terms of learning outcomes.

In short, there is nothing in the research to indicate that intensive teaching need not be a successful and effective mode of delivery. Intensive modes of delivery may result in considerable advantages for students when used by effective teachers in appropriate subjects. However, as we have seen, any implementation of IMD requires care. This paper is a 'call to arms' for more research on this issue in the various areas mentioned.

Coda

Perhaps the best conclusion to come to on this matter is the same as Beattie and James in a slightly different context (namely, the move to flexible delivery teaching modes in postgraduate coursework programs).

Ultimately, effective teaching arises not only from *how a teacher instructs*, but also from *what he or she understands about student learning* ... the message here is not to disregard particular delivery methods, but that it is necessary to incorporate alternatives which complement and compensate. ... The process of opening up postgraduate course delivery, while preserving its advanced educational characteristics and status, needs to be managed with respect and care (Beattie & James, 1997, pp. 191-193, italics mine).

Acknowledgments

I acknowledge Cynthia Hardy for comments on an early draft of this paper and Zelinna Pablo from the Department of Management for providing some data. The paper formed the basis for a working party report to the Faculty of Economics and Commerce at the University of Melbourne which was subsequently accepted by Graduate Studies Committee on 11th May, 2005. I also acknowledge the very useful comments by two anonymous reviewers for this journal.

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